SEE SHEET 4 FOR INDEX OF SHEETS

SEE SHEETS 5-13 FOR LOCATION MAPS

THE CONTRACTOR SHALL MAKE HIS OWN INVESTIGATIONS AND ARRANGEMENTS FOR DELIVERY OF MATERIALS.

REQUIRED SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT BARRICADE AND CONSTRUCTION OR BC SHEETS AND THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED
STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT NO. F 2021(829), ETC

BOWIE COUNTY, ETC.
US 67, ETC.

FOR THE CONSTRUCTION OF HAZARD ELIMINATION AND SAFETY

CONSISTING OF PROFILE EDGELINE AND CENTERLINE MARKINGS

FEDERAL AID PROJECT NO.			
F 2021(829), ETC			
CONT	SECT	JOB	HIGHWAY
0010 etc.	12 etc.	074 etc.	US 67 etc.
DIST	COUNTY		SHEET NO.
ATL	BOWIE etc.		1

TITLE SHEET
1 OF 3

FINAL PLANS

LETTING DATE: _____

DATE CONTRACTOR BEGAN WORK: _____

DATE WORK WAS COMPLETED & ACCEPTED: _____

FINAL CONTRACT COST: $ _____

CONTRACTOR : _____

CONTRACTOR ADDRESS: _____

LIST OF APPROVED FIELD CHANGES: _____

BOWIE COUNTY
CSJ 0010-12-074

US 67
FROM: FM 2149
TO: 1.367 MI E. OF FM 991
PROJ. LENGTH: 4.732 MI.
PROFILE EDGELINE AND CENTERLINE MARKINGS

BOWIE COUNTY
CSJ 0010-13-096

US 67
FROM: 1.367 MI E. OF FM 991
TO: FM 2148
PROJ. LENGTH: 3.948 MI.
PROFILE EDGELINE AND CENTERLINE MARKINGS

BOWIE COUNTY
CSJ 0046-05-051

US 82
FROM: SS 86
TO: FM 1398
PROJ. LENGTH: 4.436 MI.
PROFILE EDGELINE MARKINGS, PROFILE CENTERLINE MARKINGS

CAMP COUNTY
CSJ 0083-07-047

SH 11
FROM: FM 21
TO: SL 179
PROJ. LENGTH: 3.500 MI.
PROFILE EDGELINE AND CENTERLINE MARKINGS

TITUS COUNTY
CSJ 0083-09-036

SH 11
FROM: CAMP COUNTY LINE
TO: MORRIS COUNTY LINE
PROJ. LENGTH: 4.380 MI.
PROFILE EDGELINE AND CENTERLINE MARKINGS

HARRISON COUNTY
CSJ 0096-07-051

US 80
FROM: FM 450
TO: GREGG COUNTY LINE
PROJ. LENGTH: 7.629 MI.
PROFILE EDGELINE AND CENTERLINE MARKINGS

HARRISON COUNTY
CSJ 0208-02-048

SH 43
FROM: SP 449
TO: FM 2682
PROJ. LENGTH: 2.051 MI.
PROFILE EDGELINE AND CENTERLINE MARKINGS

BOWIE COUNTY
CSJ 0217-01-035

US 59
FROM: ARKANSAS STATE LINE
TO: 1.524 MI N. OF IH 30
PROJ. LENGTH: 3.954 MI.
PROFILE EDGELINE AND CENTERLINE MARKINGS

CASS COUNTY
CSJ 0218-05-034

SH 11
FROM: FM 130
TO: 2.568 MI N. OF FM 130
PROJ. LENGTH: 2.563 MI.
PROFILE EDGELINE AND CENTERLINE MARKINGS

CASS COUNTY
CSJ 0218-06-028

SH 11
FROM: SH 49
TO: 2.568 MI N. OF FM 130
PROJ. LENGTH: 7.010 MI.
PROFILE EDGELINE AND CENTERLINE MARKINGS

MORRIS COUNTY
CSJ 0222-03-061

SH 11
FROM: 1.545 MI W. OF CASS C/L
TO: CASS C/L
PROJ. LENGTH: 1.546 MI.
PROFILE EDGELINE MARKINGS, PROFILE CENTERLINE MARKINGS

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, MAY 2012)

EXCEPTIONS: NONE
EQUATIONS: NONE
RAILROAD CROSSINGS: NONE

THE CONSTRUCTION WORK WAS PREFORMED IN SUBSTANTIAL COMPLIANCE WITH THE CONTRACT.

P.E. _____ DATE _____

RECOMMENDED FOR LETTING: 6/3/2021

DocuSigned by:
Deanne Simmons, P.E.
929084EF4AF345A...

DISTRICT DIRECTOR OF TRANSPORTATION
PLANNING AND DEVELOPMENT

APPROVED FOR LETTING: 6/3/2021

DocuSigned by:
0EAA5DC25F0F45E...

DISTRICT ENGINEER

DATE: 6/2/2021 3:14:05 PM
FILE: T:\Engdata\Traffic\DGN\D197520Garrett\TEXTURIZING PROJECTS\Aug 2021\TS.dgn

COUNTY BOWIE etc. PROJ. NO. STP 2012(830)HES
HWY. NO. US 67 etc. LETTING DATE AUGUST 2021
DATE ACCEPTED

MARION COUNTY
CSJ 0223-01-035
SH 49
FROM: FM 134
TO: 0.629 MI W. OF SH 43
PROJ. LENGTH: 11.851 MI.
PROFILE EDGELINE MARKINGS,
PROFILE CENTERLINE MARKINGS

MARION COUNTY
CSJ 0223-02-031
SH 49
FROM: 0.629 MI W. OF SH 43
TO: SH 43
PROJ. LENGTH: 0.628 MI.
PROFILE CENTERLINE & EDGELINE
MARKINGS CENTERLINE BARS &
EDGELINE MARKINGS

UPSHUR COUNTY
CSJ 0248-04-078
US 271
FROM: 5.9 MI. N. OF SH 155
TO: 1.5 MI. N OF SH 155
PROJ. LENGTH: 4.400 MI.
PROFILE EDGELINE MARKINGS,
PROFILE CENTERLINE MARKINGS

MORRIS COUNTY
CSJ 0277-01-031
SH 77
FROM: US 259
TO: CASS COUNTY LINE
PROJ. LENGTH: 5.992 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

BOWIE COUNTY
CSJ 0330-02-020
FM 44
FROM: RED RIVER COUNTY LINE
TO: FM 992
PROJ. LENGTH: 7.743 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

PANOLA COUNTY
CSJ 0424-06-007
FM 348
FROM: SH 315
TO: RUSK COUNTY LINE
PROJ. LENGTH: 4.258 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

UPSHUR COUNTY
CSJ 0520-02-063
SH 155
FROM: FM 1404
TO: US 80
PROJ. LENGTH: 7.948 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

UPSHUR COUNTY
CSJ 0520-02-064
SH 155
FROM: US 80
TO: SMITH COUNTY LINE
PROJ. LENGTH: 1.966 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

HARRISON COUNTY
CSJ 0569-04-023
SH 43
FROM: MARION COUNTY LINE
TO: SP 449
PROJ. LENGTH: 2.767 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

HARRISON COUNTY
CSJ 0632-02-031
FM 134
FROM: MARION C/L
TO: SH 43
PROJ. LENGTH: 8.127 MI.
PROFILE EDGELINE MARKINGS,
PROFILE CENTERLINE MARKINGS

HARRISON COUNTY
CSJ 0632-03-050
FM 134
FROM: SP 449
TO: FM 1999
PROJ. LENGTH: 5.048 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

CAMP COUNTY
CSJ 0633-03-015
FM 21
FROM: TITUS C/L
TO: SH 11
PROJ. LENGTH: 3.581 MI.
PROFILE EDGELINE MARKINGS,
PROFILE CENTERLINE MARKINGS

CASS COUNTY
CSJ 0812-01-038
FM 251
FROM: FM 785
TO: FM 125
PROJ. LENGTH: 14.749 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

HARRISON COUNTY
CSJ 0843-02-028
FM 450
FROM: FM 449
TO: US 80
PROJ. LENGTH: 7.780 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

HARRISON COUNTY
CSJ 0843-08-012
FM 2625
FROM: US 59
TO: FM 31
PROJ. LENGTH: 6.564 MI.
PROFILE EDGELINE MARKINGS,
PROFILE CENTERLINE MARKINGS

UPSHUR COUNTY
CSJ 0964-02-034
FM 2088
FROM: FM 556
TO: WOOD COUNTY LINE
PROJ. LENGTH: 5.038 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

UPSHUR COUNTY
CSJ 1018-01-032
FM 1795
FROM: FM 49
TO: FM 1002
PROJ. LENGTH: 6.245 MI.
PROFILE EDGELINE MARKINGS,
PROFILE CENTERLINE MARKINGS

CAMP COUNTY
CSJ 1019-01-033
FM 556
FROM: FM 1519
TO: UPSHUR COUNTY LINE
PROJ. LENGTH: 5.910 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

BOWIE COUNTY
CSJ 1214-01-019
FM 992
FROM: 11.7 MI. N. OF US 82
TO: US 82
PROJ. LENGTH: 11.737 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

BOWIE COUNTY
CSJ 1215-01-023
FM 992
FROM: US 82
TO: THREE SIDES RD
PROJ. LENGTH: 10.243 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

TITUS COUNTY
CSJ 1226-02-026
FM 1735
FROM: 2.1 MI. S. OF SH 49
TO: SH 11
PROJ. LENGTH: 6.051 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

CAMP COUNTY
CSJ 1232-03-027
FM 1520
FROM: FM 1521
TO: SH 11
PROJ. LENGTH: 6.970 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

BOWIE COUNTY
CSJ 1381-01-013
FM 1398
FROM: 4.2 MI. N. OF US 82
TO: US 82
PROJ. LENGTH: 4.168 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

UPSHUR COUNTY
CSJ 1385-01-040
SH 300
FROM: FM 3358
TO: GREGG COUNTY LINE
PROJ. LENGTH: 5.920 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

TITLE SHEET
2 OF 3

Texas Department of Transportation

PROJECT NO.			
CONT	SECT	JOB	HIGHWAY
0010 etc.	12 etc.	074 etc.	US 67 etc.
DIST	COUNTY		SHEET NO.
ATL	BOWIE etc.		2

FILE: T:\Engdata\Traffic\DGN\D197520Garrett\TEXTURIZING PROJECTS\Aug 2021\TS.dgn
DATE: 6/2/2021 3:16:49 PM

BOWIE COUNTY
CSJ 1569-01-013
FM 1398
FROM: US 82
TO: 6.3 MI. N. OF US 82
PROJ. LENGTH: 6.308 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

CASS COUNTY
CSJ 1571-01-017
FM 74
FROM: SL 236
TO: FM 251
PROJ. LENGTH: 2.466 MI.
PROFILE EDGELINE MARKINGS,
PROFILE CENTERLINE MARKINGS

CASS COUNTY
CSJ 1572-01-024
FM 96
FROM: FM 2791
TO: US 59
PROJ. LENGTH: 8.813 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

CASS COUNTY
CSJ 1573-01-019
FM 130
FROM: FM 250
TO: SH 11
PROJ. LENGTH: 13.255 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

BOWIE COUNTY
CSJ 1620-03-012
FM 1701
FROM: RED RIVER COUNTY LINE
TO: US 259
PROJ. LENGTH: 6.599 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

HARRISON COUNTY
CSJ 1759-01-013
FM 1793
FROM: FM 134
TO: US 59
PROJ. LENGTH: 10.101 MI.
PROFILE EDGELINE MARKINGS,
PROFILE CENTERLINE MARKINGS

UPSHUR COUNTY
CSJ 1762-01-004
FM 1795
FROM: FM 1002
TO: WOOD C/L
PROJ. LENGTH: 1.432 MI.
PROFILE EDGELINE MARKINGS,
PROFILE CENTERLINE MARKINGS

UPSHUR COUNTY
CSJ 1896-03-019
FM 726
FROM: US 271
TO: SH 300
PROJ. LENGTH: 4.127 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

CASS COUNTY
CSJ 1957-01-010
FM 1766
FROM: SH 77
TO: FM 994
PROJ. LENGTH: 6.631 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

UPSHUR COUNTY
CSJ 2157-01-021
FM 2685
FROM: SH 155
TO: FM 1404
PROJ. LENGTH: 6.593 MI.
PROFILE EDGELINE MARKINGS,
PROFILE CENTERLINE MARKINGS

BOWIE COUNTY
CSJ 2526-01-010
SH 98
FROM: US 82
TO: FM 1840
PROJ. LENGTH: 2.548 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

MARION COUNTY
CSJ 2685-01-011
FM 2683
FROM: SH 43
TO: FM 248
PROJ. LENGTH: 5.914 MI.
PROFILE EDGELINE AND
CENTERLINE MARKINGS

TITLE SHEET
3 OF 3

Texas Department of Transportation

PROJECT NO.			
CONT	SECT	JOB	HIGHWAY
0010 etc.	12 etc.	074 etc.	US 67 etc.
DIST	COUNTY		SHEET NO.
ATL	BOWIE etc.		3

	SHEET	DESCRIPTION
	I.	GENERAL
	1-3	TITLE SHEET
	4	INDEX OF SHEETS
	5-13	LOCATION MAP
	14, 14A - 14C	GENERAL NOTES
	15, 15A - 150	QUANTITY SHEET
	16-26	QUANTITY SUMMARY
	27-33	PAVEMENT MARKING DESCRIPTIONS
	II.	TRAFFIC CONTROL PLAN
#	34-45	BC(1)-21 THRU BC(12)-21
#	46	TCP(1-1)-18
#	47	TCP(1-2)-18
#	48	TCP(1-4)-18
#	49	TCP(3-1)-13
#	50	TCP(3-2)-13
#	51	TCP(3-3)-14
#	52	TCP(3-4)-13
#	53	TCP (ATL-10)-14 (ATL DIST STD)
#	54	WZ(RS)-16
	III.	TRAFFIC ITEMS
#	55-57	PM(1)-20 THRU PM(3)-20
#	58	CPM (1)-14
#	59-63	RS(1)-13 THRU RS(5)-13
	64	IN-LANE OR TRANSVERSE RUMBLE STRIP DETAIL
	65	MOBILE RETROREFLECTIVITY TABLE
	IV.	ENVIRONMENTAL ISSUES
	66	TXDOT STORM WATER POLLUTION PREVENTION PLAN (SWP3)
	67	ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

STATE OF TEXAS
CHRISTINA N. TROWLER
114588
LICENSED
PROFESSIONAL ENGINEER

THE STANDARD SHEETS SPECIFICALLY IDENTIFIED ABOVE BY AN # HAVE BEEN ISSUED BY ME AND ARE APPLICABLE TO THIS PROJECT.

Christina N. Trowler, P.E.

06/01/2021
DATE

INDEX OF SHEETS

Texas Department of Transportation

PROJECT NO.			
CONT	SECT	JOB	HIGHWAY
0010	12	074 etc.	US 67 etc.
DIST	COUNTY		SHEET NO.
ATL	BOWIE etc.		4

FILE: T:\Enggdata\Traffic\DGN\D197520Garrett\TEXTURIZING PROJECTS\Aug 2021\TS2.dgn
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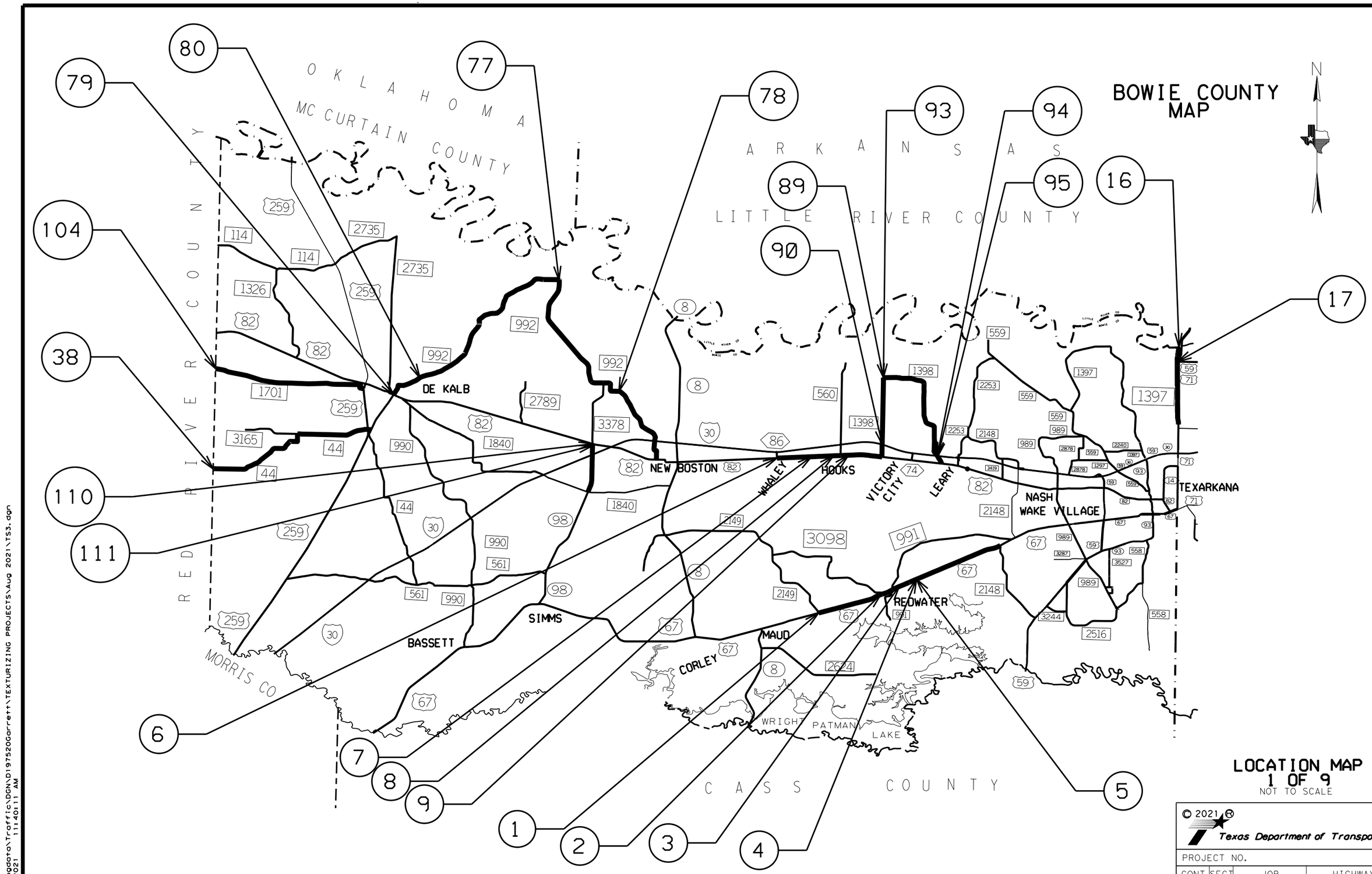
BOWIE COUNTY MAP



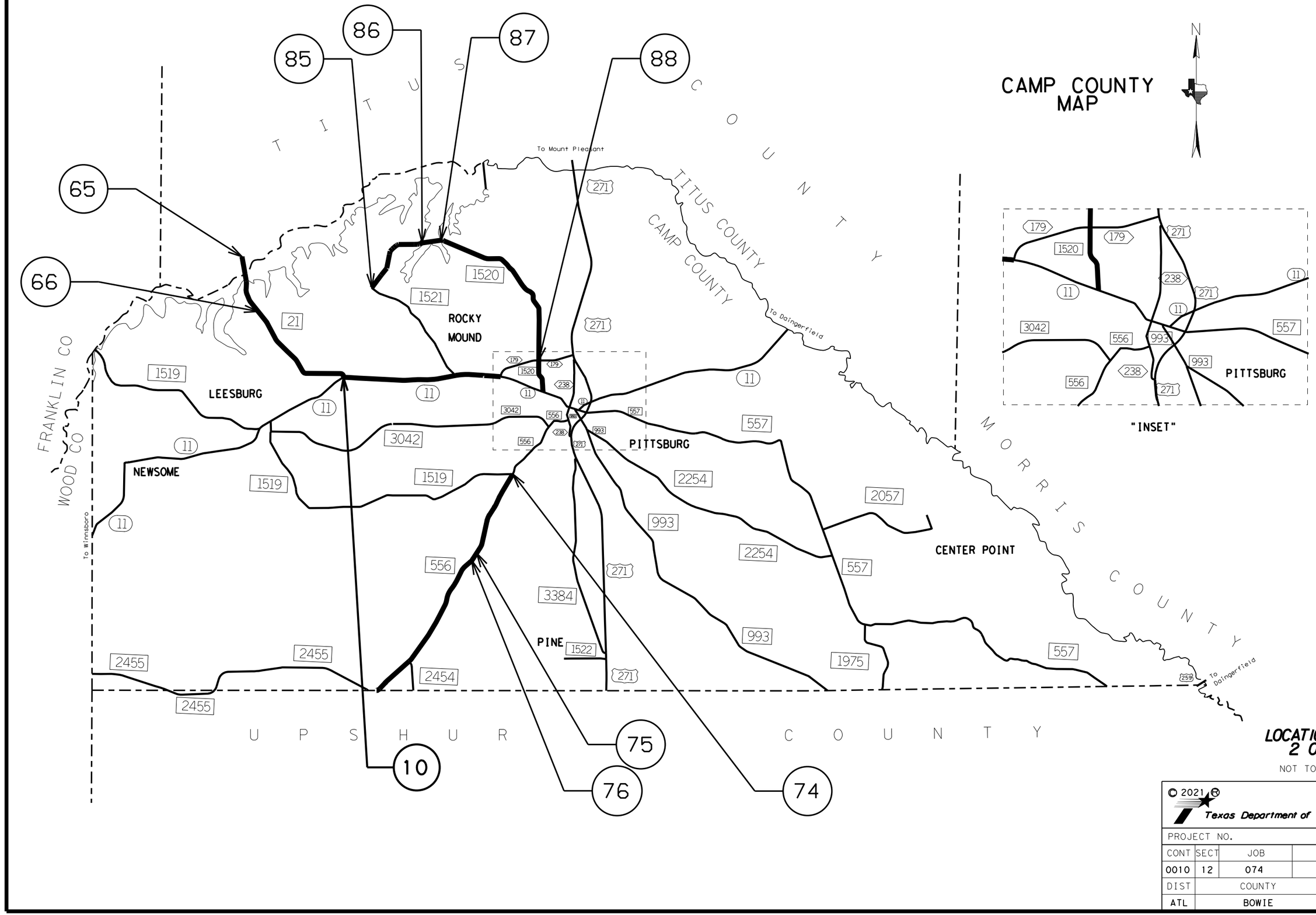
LOCATION MAP
1 OF 9
NOT TO SCALE

Texas Department of Transportation

PROJECT NO.			
CONT	SECT	JOB	HIGHWAY
0010	12	074	US 67
DIST	COUNTY		SHEET NO.
ATL	BOWIE		5

FILE: T:\Engaga\Traffic\DGN\D197520Garrett\TEXTURIZING PROJECTS\Aug 2021\TS3.dgn
DATE: 5/5/2021 11:40:11 AM

CAMP COUNTY MAP



"INSET"

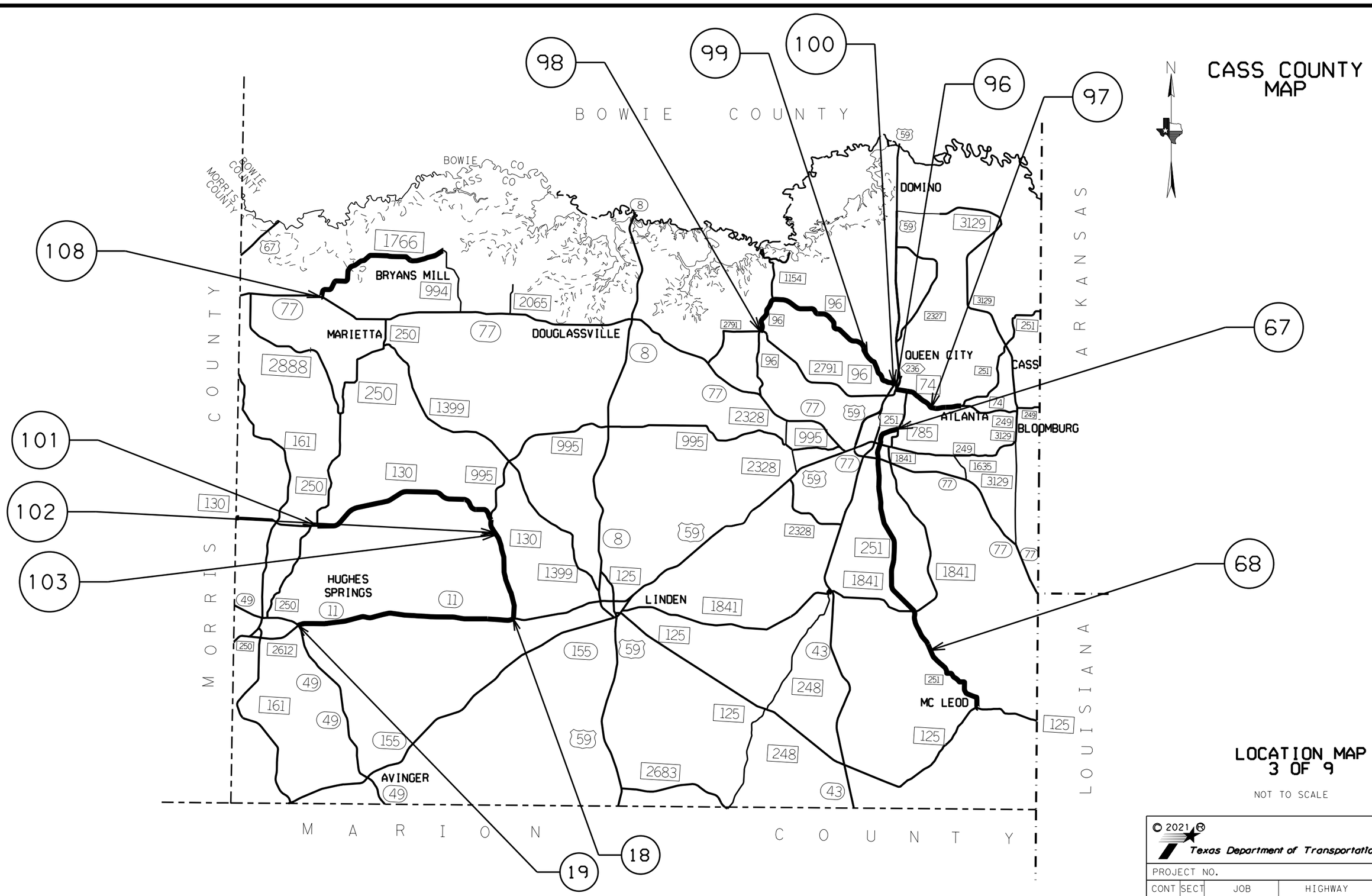
LOCATION MAP 2 OF 9

NOT TO SCALE

PROJECT NO.			
CONT	SECT	JOB	HIGHWAY
0010	12	074	US 67
DIST	COUNTY		SHEET NO.
ATL	BOWIE		6

FILE: T:\Engdata\Traffic\DGN\D197520Garrett\TEXTURIZING PROJECTS\Aug 2021\TS3.dgn
DATE: 5/5/2021 11:40:13 AM

CASS COUNTY MAP



LOCATION MAP
3 OF 9

NOT TO SCALE

Texas Department of Transportation

PROJECT NO.			
CONT	SECT	JOB	HIGHWAY
0010	12	074	US 67
DIST	COUNTY		SHEET NO.
ATL	BOWIE		7

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DATE: 5/5/2021 11:40:15 AM

HARRISON COUNTY MAP

MARION CO

UPSHUR CO

GREGG CO

RUSK CO

PANOLA CO

CADDO PARISH LOUISIANA

HARLETON

WOODLAWN

NESBITT

MARSHALL

KARNACK

LEIGH

HALLSVILLE

WASKOM

N

LOCATION MAP
4 OF 9
NOT TO SCALE

PROJECT NO.			
CONT	SECT	JOB	HIGHWAY
0010	12	074	US 67
DIST	COUNTY		SHEET NO.
ATL	BOWIE		8

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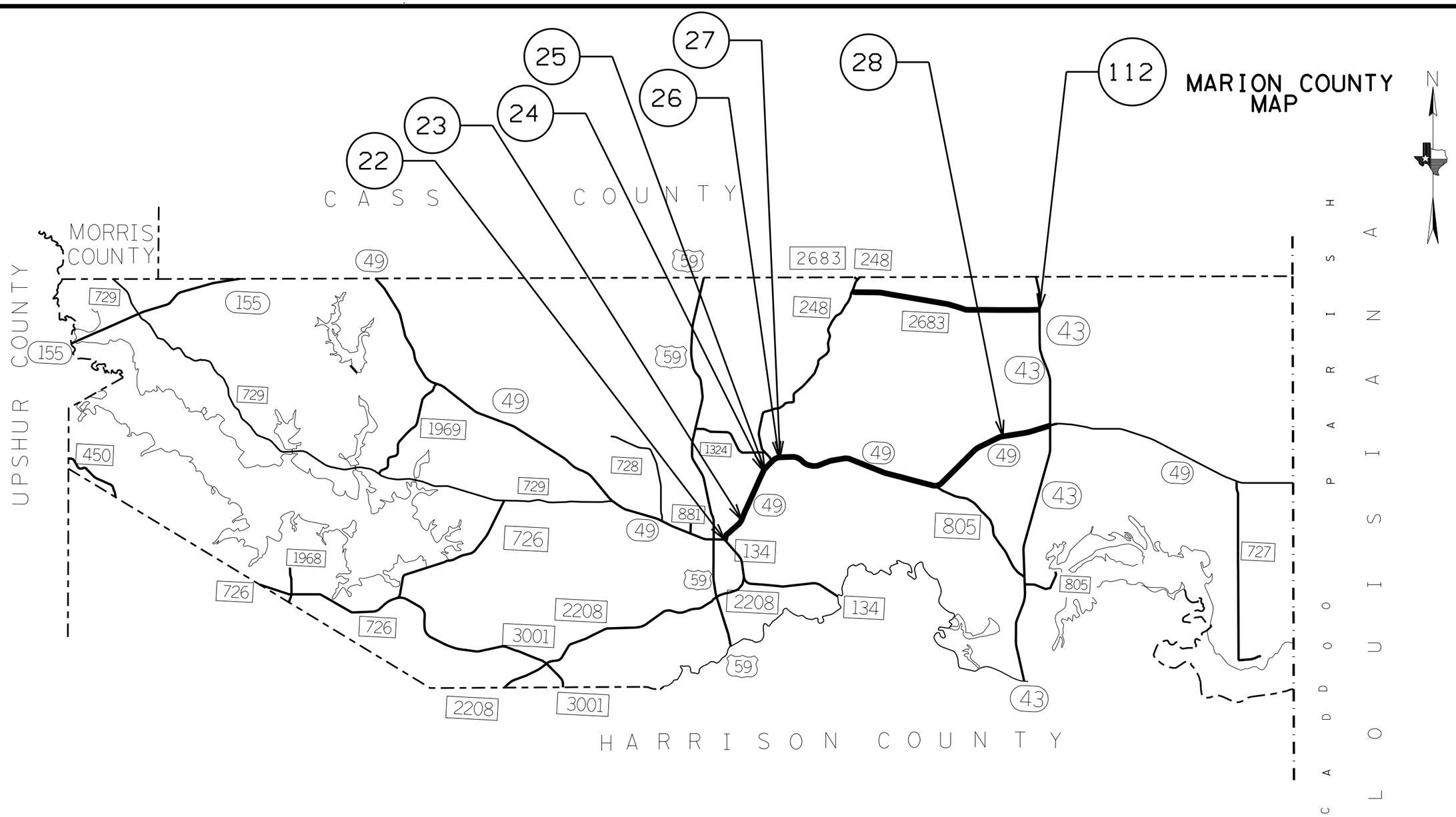
MARION COUNTY MAP



LOCATION MAP
5 OF 9
NOT TO SCALE

Texas Department of Transportation

PROJECT NO.			
CONT	SECT	JOB	HIGHWAY
0010	12	074	US 67
DIST	COUNTY		SHEET NO.
ATL	BOWIE		9

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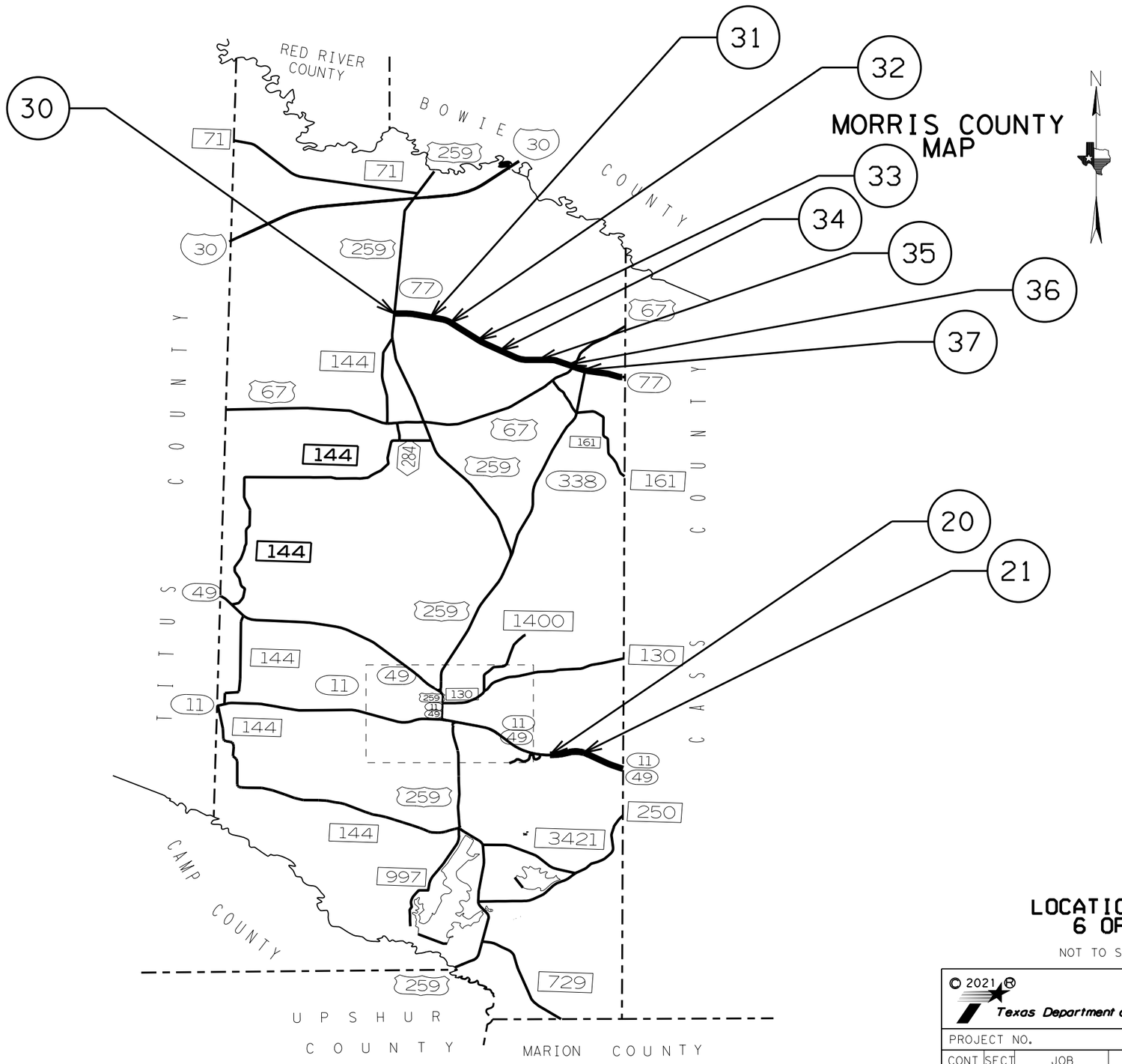

LOCATION MAP
6 OF 9

NOT TO SCALE

Texas Department of Transportation

PROJECT NO.			
CONT	SECT	JOB	HIGHWAY
0010	12	074	US 67
DIST	COUNTY		SHEET NO.
ATL	BOWIE		10

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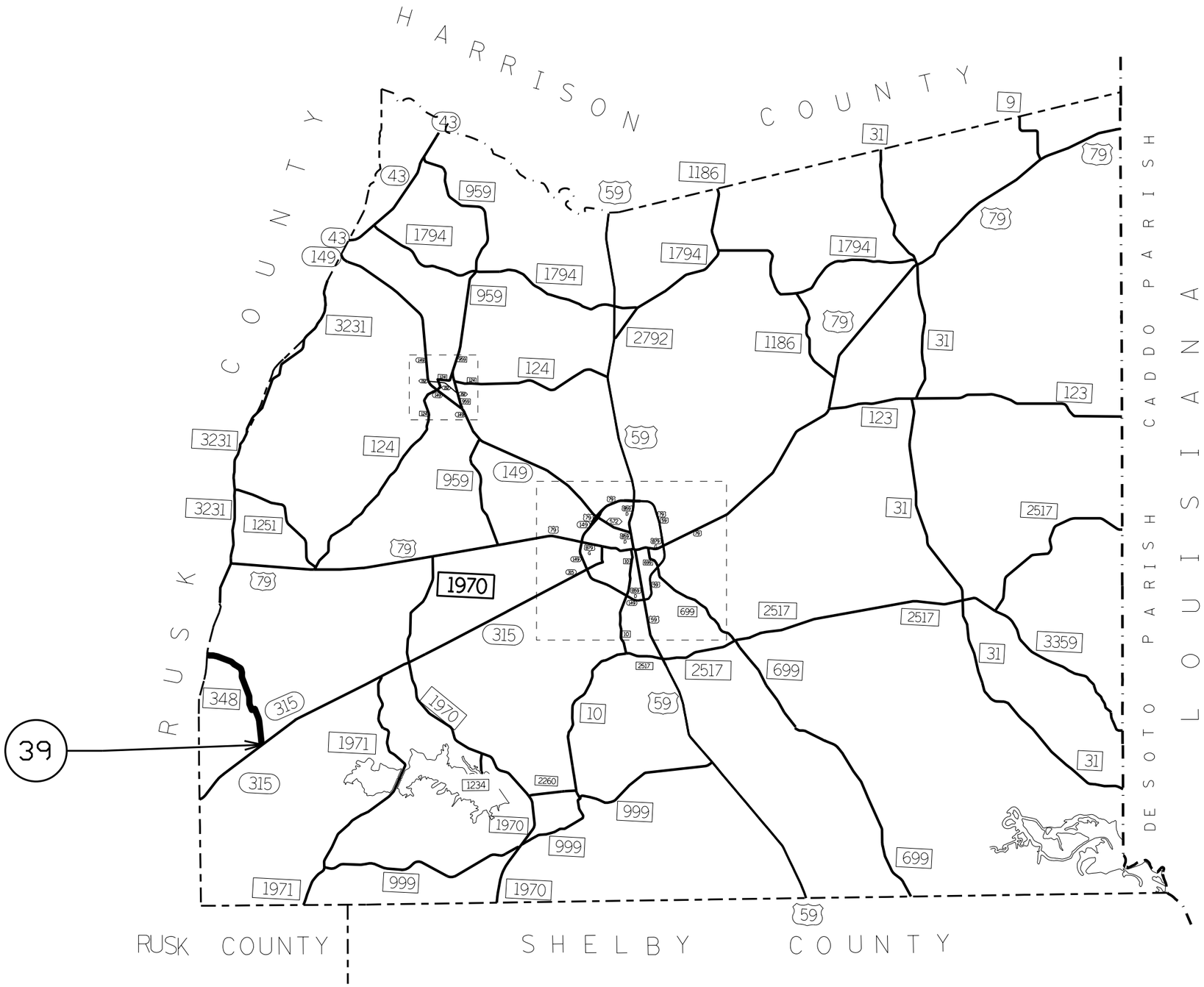
PANOLA COUNTY MAP



LOCATION MAP
7 OF 9

NOT TO SCALE

Texas Department of Transportation

PROJECT NO.			
CONT	SECT	JOB	HIGHWAY
0010	12	074	US 67
DIST	COUNTY		SHEET NO.
ATL	BOWIE		11

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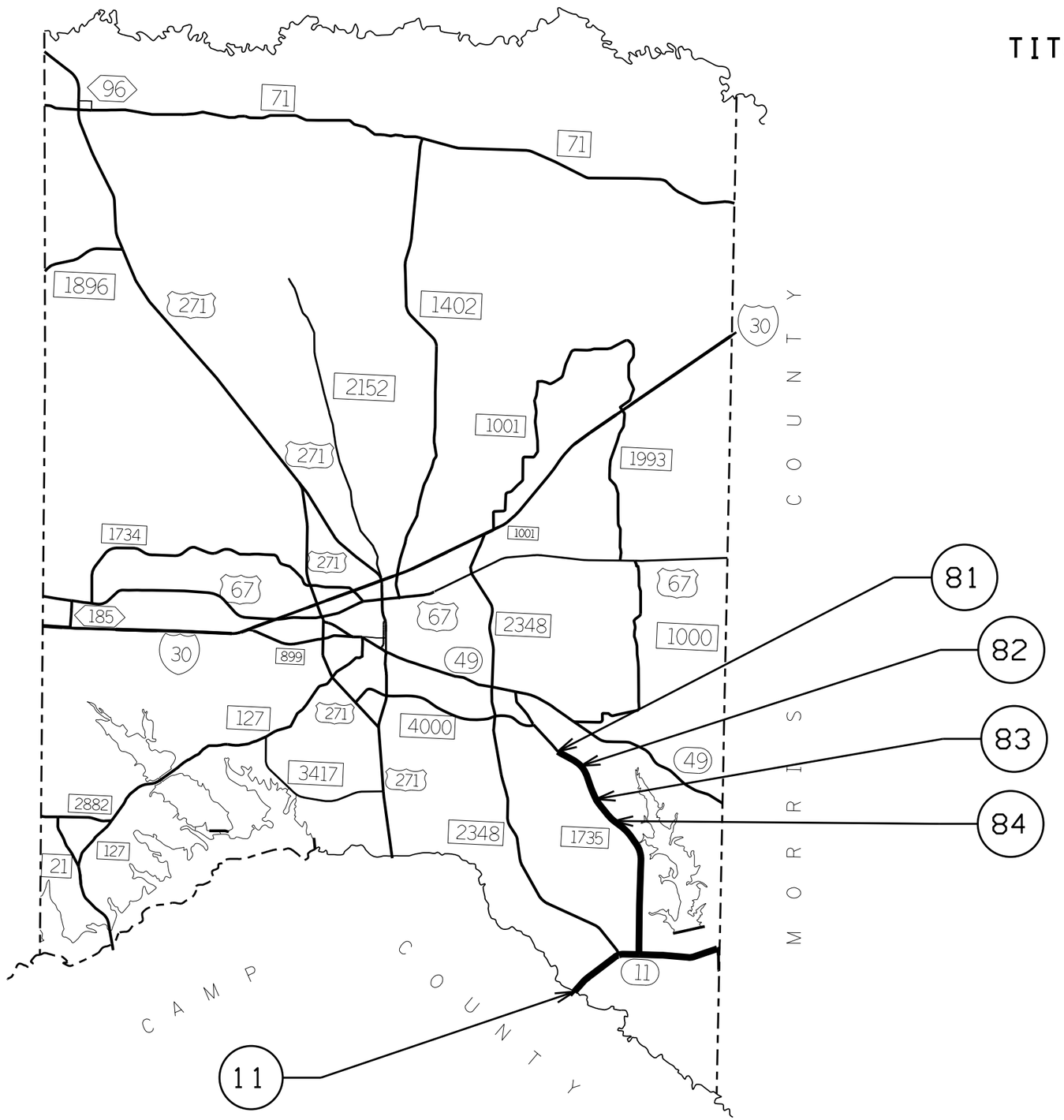
TITUS COUNTY MAP



LOCATION MAP
8 OF 9

NOT TO SCALE

Texas Department of Transportation

PROJECT NO.			
CONT	SECT	JOB	HIGHWAY
0010	12	074	US 67
DIST	COUNTY		SHEET NO.
ATL	BOWIE		12

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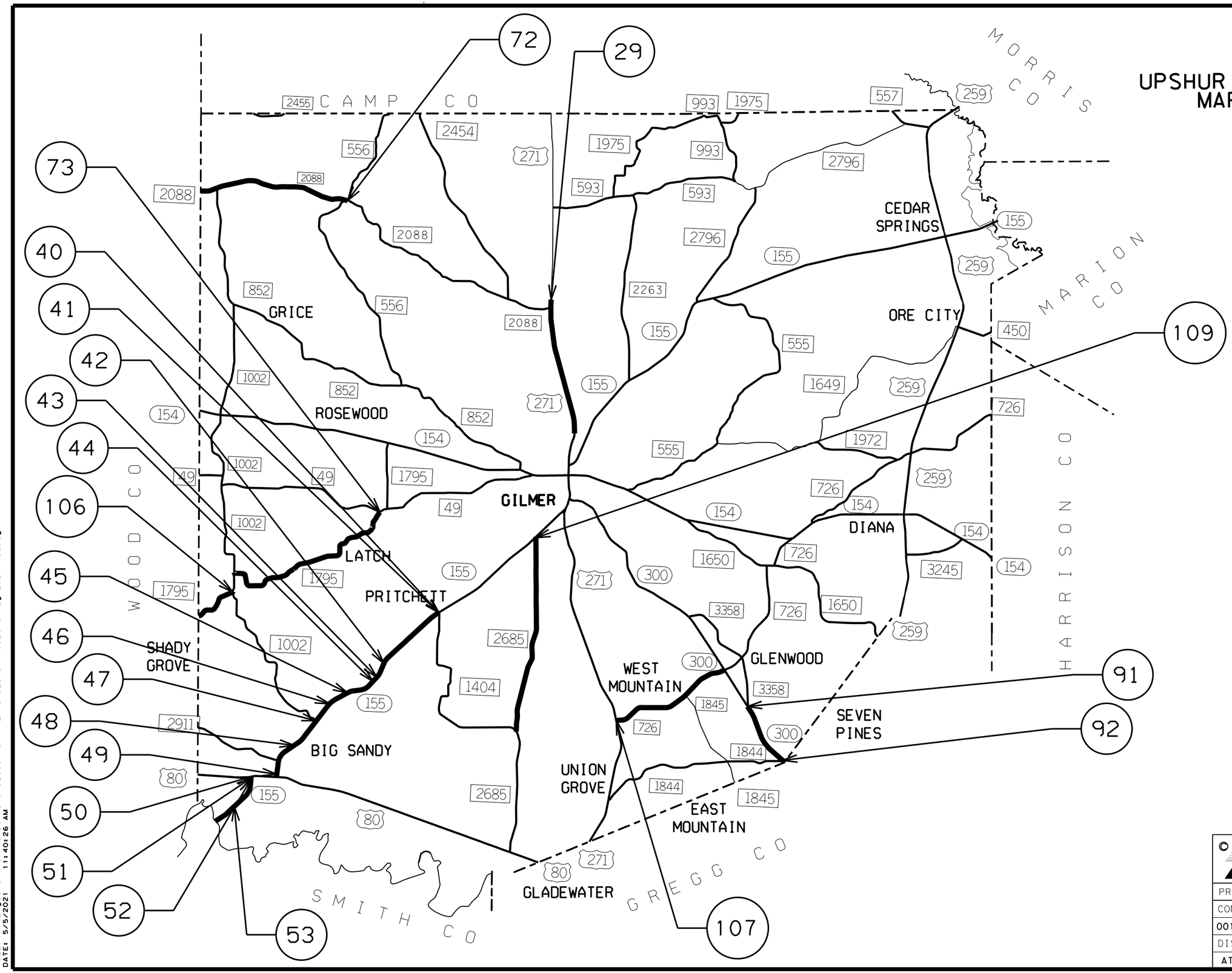
UPSHUR COUNTY MAP



LOCATION MAP 9 OF 9

NOT TO SCALE

PROJECT NO.			
CONT	SECT	JOB	HIGHWAY
0010	12	074	US 67
DIST	COUNTY		SHEET NO.
ATL	BOWIE		13

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DATE: 5/5/2021 11:40:26 AM

GENERAL NOTES:

GENERAL:

Contractor questions on this project are to be emailed to the following individuals:
Rebecca L. Wells, P.E. – Director of Transportation Operations
Rebecca.wells@Txdot.gov
Christina N. Trowler, P.E. – District Traffic Engineer
Christina.trowler@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.

Each contract awarded by the Department stands on its own and as such, is separate from other contracts. A Contractor awarded multiple contracts must be capable and sufficiently staffed to concurrently process any or all contracts.

Notify the Engineer or his representative by 8:15 a.m. on any day when working in the District.

Clean up and remove all loose material resulting from contract operations each day before work is suspended for that day.

Repair all pavement damaged by the Contractor's forces during construction. Such repair is to be considered incidental to the various bid items in the project and must be approved by engineer.

Plans are required for this project.

The roadways that are noted in the plans as following seal coat shall not get texture or stripe before March 2022. Time will be suspended if all other work is complete to await the March timeframe.

ITEM 4:

These plans are for furnishing and placing reflectorized pavement markings at locations indicated by the plans. Shoulders and centerlines will be texturized as indicated in the plans.

ITEM 6:

When requesting payments for material on hand, contractor's material storage facility will be within the Atlanta District.

Pre-qualified products can be found at http://www.txdot.gov/business/resources/producer-list.html.

ITEM 7:

This project is considered a maintenance activity and is exempt from the Construction General Permit (CGP) coverage.

No significant traffic generator events.

ITEM 8:

Provide progress schedules meeting the requirements of Section 8.5.2 in 2014 Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges.

Working day charges will be charged in accordance with Section 8.3.1.4 "Standard Workweek."

Work on the roadway will not begin until thirty (30) minutes after sunrise and will end on the roadway by thirty (30) minutes before sunset or as directed by the Engineer.

For this project, place the In-Lane or Transverse Rumble Strips before performing any long line striping, pre-fabricated pavement markings, or placing raised pavement markings.

ITEM 9:

For all pay items, a daily email shall be sent to the inspector with the item number, quantity, and location description or reference.

ITEM 502:

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.

Install temporary rumble strips in accordance with WZ(RS) wherever short duration or short term stationary lane closures are in place and workers are present.

There may be ongoing contracts on the roadways included in this contract. Coordinate work with these projects and consult with the Engineer when developing sequence of work.

If applicable, do not perform work until 14 days after seal coat is placed, unless otherwise directed by the Engineer.

There may be ongoing contracts on several of the roadways included in this contract. Coordinate work with these projects and consult with the Engineer when developing sequence of work.

The Traffic Control Plan for this contract consists of the installation and maintenance of warning signs and or other traffic control devices shown in the plans, specification data which may be included in the general notes, applicable provisions of the Texas Manual on Uniform Traffic Control Devices (TMUTCD), traffic control plan sheets included in the plans, standard BC sheets and Item 502 of the standard specifications.

The traffic control plan sheets when shown in the plans for handling traffic through the work area. The signing arrangement and spacing shown may be varied as necessary to fit field conditions; however, any proposed changes in the traffic control plan must be approved by the Engineer prior to implementation

A Type B flashing arrow panel will be required on this project when a lane of traffic is to be closed for any duration of time.
Anytime equipment encroaches into a travel lane as shown on WZ BTS and TCP standards shown in this project, the Contractor will be required to have at least one shadow vehicle with a truck mounted attenuator as directed.

Notify inspector prior to any planned lane closures. Lane closures must be entered in the HCR (Highway Condition Report) 48 hours prior to beginning work.

All flaggers will be properly attired, orange or fluorescent type III vests and white hard hats are required. Proper flagging procedures must be demonstrated by all workers in accordance with the "Texas Manual on Uniform Traffic Control Device." A list of all qualified flaggers will be furnished by the Contractor before beginning work. This list will be updated as flaggers become qualified.

Provide flaggers at the ends of work areas and at all other points of conflict with roadway machinery and roadway traffic when and as directed.

No equipment will be left within 30 feet of the travel way. Equipment and/or obstructions within 30 feet of the travel way will be removed or clearly marked by warning lights and barricades, as directed.

Place construction fencing a minimum of 4 feet high around bore pits open over night for pedestrian safety. Use appropriate post to install fencing around open pits, do not use equipment as part of post or fencing system.

In urban areas and high speed areas the contractor will be required to set up full lane closures when working at intersections as directed by the Engineer.

With reference to WZ (BTS-1), typical hanging signal installations, the Contractor may be required to close a traffic lane(s) as directed.

ITEM 506:

It is the intent of this contract that no disturbance of vegetation occurs as a result of roadway operations. In the event vegetation is disturbed, place erosion or pollution control measures deemed necessary by the Engineer. Work performed for which there are no applicable pay items in the contract will be reimbursed in accordance with Article 9.7, "Payment for Extra Work and Force Account Method".

ITEM 666:

The final profile pavement marking shall consist of a wet reflective pavement marking and the profile shall be equal to the width of the pavement marking.

Centerline and edgeline rumble strips or profile markings shall not be placed on bridges or roadways with a posted speed limit of 45 MPH or less.

Furnish and place a double drop of Type II and Type III drop-on glass beads.

A mobile unit will be required to take reflectivity readings, readings will be taken on all lines in both directions. The mobile reflectivity readings will not be paid for separately, but will be subsidiary to this bid item. Strict compliance with report output will be exercised in accordance to this general note. Information for each road must be together in the same file and submitted on a USB thumb drive. Submit a table of contents for each USB thumb drive . Each thumb drive will contain a customer interactive report that generates a color coded map where the user can verify passing and failing sections of roadway. The color coded map should match the color coded graphs generated by the data in the computer. The graphs should have a color coded portion or shaded area representing failing and passing. The map should be standard Google earth maps or equal. Reports need to be in numerical order by reference number, concurrent with direction, labeled and separated by color, and include the posting date. The format will require prior acceptance by the Engineer.

ITEM 668:

Prefabricated Pavement Markings will be placed at locations as directed.

ITEM 672:

Use a crew experienced in the work of installing reflective pavement markers and will supply all equipment and materials necessary for placement of the markers. The crew and equipment arrangement must be capable of placing an average of 1,000 markers per working day. Backup mixing equipment will be available for replacement of malfunctioning equipment within 24 hours.

For sections of roadway that call for Transverse Rumble Strips in the centerline, do not remove and replace raised pavement markers until these applications are completed for the entire roadway.

Remove existing Raised Pavement Markers before placing new raised pavement markers. Patch spalled or damaged areas of the pavement, caused by marker removal, with Bituminous materials.

Avoid placing Raised Pavement Markers on or across pavement joints.

Place Raised Pavement Markers in a Bitumen layer of sufficient thickness so that the Raised Pavement Markers are not in direct contact with the pavement surface after placement. Do not twist during placement.

Place one raised pavement marker at twenty foot spacing inside of the 8-inch white line as show on standard PM (3).

ITEM 677:

Furnish a high pressure water blasting system for removing paint, thermoplastic, epoxy, and preformed tape materials from the following surfaces without causing any grooves or trenching of that surface, including asphalt, concrete, friction coarse asphalt, grooved asphalt, and grooved concrete.

Use a high pressure water blasting system that consist of a vacuum recovery system that must provide for a nearly dry surface eliminating the possibility of uncontained run-off blasting water and or debris.

All components required for the complete operation of the water blasting system – Ultra High Pressure (UHP) pump, vacuum system, clean water supply, vacuum recovery storage, blasting components will be mounted and transported on a single, fully self-contained and supporting single truck chassis, thereby eliminating the need for any additional water, vacuum, or other transport vehicles.

ITEM 6056:

Supply all equipment and materials necessary for placement of In-Lane or Transverse Rumble Strips.

Use transverse rumble strips as centerline rumble strips and edge line rumble strips. The rumble strips will be black in color.

Use in-lane rumble strips for intersection advance warnings as shown on standard RS(5).

Ensure strict placement for centering and aligning all centerline transverse rumble strips. Placement of material will be strictly enforced. Irregular bars not centered or aligned properly will not be accepted.

Do not place pavement markings until rumble strips are accepted by written acceptance.

Provide a 90-day performance period that begins the day following written acceptance for each separate location. The written acceptance does not constitute final acceptance.

Replacement of all In-Lane or Transverse Rumble Strips within in a separate location will be required when 30% loss of an individual rumble strips exists on 20% of the length of a location or when 500 mil thickness is not maintained. Visual evaluation will be used for these determinations. Upon request, the Engineer will allow a Contractor representative to accompany the Engineer on these evaluations.

Replace all In-Lane or Transverse Rumble Strips identified during the performance period within 30 days after notification. The end of the performance period does not relieve the Contractor from the performance deficiencies requiring corrective action identified during the performance period.

No additional payment will be made for replacement of In-Lane or Transverse Rumble Strips failing to meet the performance requirements.

Centerline and edgeline rumble strips or profile markings shall not be placed on bridges or roadways with a posted speed limit of 45 MPH or less.

ITEM 6149:

A mobile unit will be required to take reflectivity readings, readings will be taken on all lines in both directions. The mobile reflectivity readings will not be paid for separately, but will be subsidiary to this bid item. Strict compliance with report output will be exercised in accordance to this general note. Information for each road must be together in the same file and submitted on a USB thumb drive. Submit a table of contents for each USB thumb drive . Each thumb drive will contain a customer interactive report that generates a color coded map where the user can verify passing and failing sections of roadway. The color coded map should match the color coded graphs generated by the data in the computer. The graphs should have a color coded portion or shaded area representing failing and passing. The map should be standard Google

earth maps or equal. Reports need to be in numerical order by reference number, concurrent with direction, labeled and separated by color, and include the posting date. The format will require prior acceptance by the Engineer.

Use a mobile retroreflectometer that is prequalified at the Texas A&M Transportation Institute test facility. The prequalification is at the contractor's expense.

The required values of wet and dry readings will be strictly measured within this contract as per manufacturer's recommendations.

Adjustments to locations of no passing zones will be determined by the Department.

Install a seal coat RPM cover or any other method approved on any line having Raised Pavement Markers. Remove and dispose of the covers after the stripe is complete.

Placement of markings in proper alignment will be strictly enforced. Irregular lines placed on both sides of the existing markings or pilot line will not be accepted.

ITEM 6185:

The shadow vehicle with truck mounted attenuator (TMA) will not be optional but will be required as shown on the appropriate traffic control plan sheets.

A total of two (2) shadow vehicles with TMA will be required for Pavement Marking Operations.

Control: 0010-12-074, etc. **Sheet: 14C**

Highway: US 67, etc. **County: Bowie**, etc.

General Notes

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta

COUNTY Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

HIGHWAY FM 130, FM 134, FM 1398, FM 1520, FM 1701, FM 1735, FM 1766, FM 1793, FM 1795, FM 2088, FM 21, FM 251, FM 2625, FM 2683, FM 2685, FM 348, FM 44, FM 450, FM 556, FM 726, FM 74, FM 96, FM 992, SH 11, SH 155, SH 300, SH 43, SH 49, SH 77, SH 98, US 271, US 59, US 67, US 80, US 82

			CONTROL SECTION JOB		**0010-12-074**		**0010-13-096**		**0046-05-051**		**0083-07-047**		**0083-09-036**		**0096-07-051**	
			PROJECT ID		**A00133940**		**A00133947**		**A00066560**		**A00133954**		**A00133953**		**A00134048**	
			COUNTY		**Bowie**		**Bowie**		**Bowie**		**Camp**		**Titus**		**Harrison**	
			HIGHWAY		**US 67**		**US 67**		**US 82**		**SH 11**		**SH 11**		**US 80**	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	500-6001	MOBILIZATION	LS	100.00%											
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	10.000											
	666-6030	REFL PAV MRK TY I (W)8"(DOT)(100MIL)	LF											230.000	
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF	275.000				410.000		760.000		660.000		5,645.000	
	666-6224	PAVEMENT SEALER 4"	LF												
	666-6225	PAVEMENT SEALER 6"	LF												
	666-6226	PAVEMENT SEALER 8"	LF												
	666-6227	PAVEMENT SEALER 10"	LF												
	666-6230	PAVEMENT SEALER 24"	LF												
	666-6231	PAVEMENT SEALER (ARROW)	EA												
	666-6232	PAVEMENT SEALER (WORD)	EA												
	666-6283	REF PROF PAV MRK TY I(W)4"(SLD)(090MIL)	LF												
	666-6285	REF PROF PAV MRK TY I(W)6"(SLD)(090MIL)	LF											72,380.000	
	666-6289	REF PROF PAV MRK TY I(Y)6"(SLD)(090MIL)	LF											73,080.000	
	668-6002	PREFAB PAV MRK TY B (W)(4")(SLD)	LF												
	668-6007	PREFAB PAV MRK TY B (W)(6")(SLD)	LF												
	668-6010	PREFAB PAV MRK TY B (W)(6")(BRK)CNTST	LF												
	668-6041	PREFAB PAV MRK TY B (Y)(4")(BRK)	LF												
	668-6043	PREFAB PAV MRK TY B (Y)(4")(SLD)	LF												
	668-6044	PREFAB PAV MRK TY B (Y)(4")(BRK)CNTST	LF												
	668-6045	PREFAB PAV MRK TY B (Y)(6")(BRK)	LF												
	668-6047	PREFAB PAV MRK TY B (Y)(6")(SLD)	LF												
	668-6076	PREFAB PAV MRK TY C (W) (24") (SLD)	LF	270.000				220.000				30.000		670.000	
	668-6077	PREFAB PAV MRK TY C (W) (ARROW)	EA	7.000				4.000		5.000		2.000		17.000	
	668-6078	PREFAB PAV MRK TY C (W) (DBL ARROW)	EA											1.000	
	668-6084	PREFAB PAV MRK TY C (W) (NUMBER)	EA											4.000	
	668-6085	PREFAB PAV MRK TY C (W) (WORD)	EA	3.000				4.000		5.000		2.000		34.000	
	668-6089	PREFAB PAV MRK TY C (W) (RR XING)	EA	2.000								2.000			
	668-6092	PREFAB PAV MRK TY C (W) (36")(YLD TRI)	EA											377.000	
	672-6007	REFL PAV MRKR TY I-C	EA	8.000				48.000		38.000		34.000		988.000	
	672-6009	REFL PAV MRKR TY II-A-A	EA	682.000		530.000		814.000		878.000		690.000		1,186.000	
	672-6010	REFL PAV MRKR TY II-C-R	EA											677.000	
	677-6001	ELIM EXT PAV MRK & MRKS (4")	LF												
	677-6002	ELIM EXT PAV MRK & MRKS (6")	LF												
	677-6003	ELIM EXT PAV MRK & MRKS (8")	LF												
	677-6004	ELIM EXT PAV MRK & MRKS (10")	LF												
	677-6007	ELIM EXT PAV MRK & MRKS (24")	LF												

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta

COUNTY Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

HIGHWAY FM 130, FM 134, FM 1398, FM 1520, FM 1701, FM 1735, FM 1766, FM 1793, FM 1795, FM 2088, FM 21, FM 251, FM 2625, FM 2683, FM 2685, FM 348, FM 44, FM 450, FM 556, FM 726, FM 74, FM 96, FM 992, SH 11, SH 155, SH 300, SH 43, SH 49, SH 77, SH 98, US 271, US 59, US 67, US 80, US 82

				CONTROL SECTION JOB	**0010-12-074**		**0010-13-096**		**0046-05-051**		**0083-07-047**		**0083-09-036**		**0096-07-051**	
				PROJECT ID	**A00133940**		**A00133947**		**A00066560**		**A00133954**		**A00133953**		**A00134048**	
				COUNTY	**Bowie**		**Bowie**		**Bowie**		**Camp**		**Titus**		**Harrison**	
				HIGHWAY	**US 67**		**US 67**		**US 82**		**SH 11**		**SH 11**		**US 80**	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**		EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	677-6008	ELIM EXT PAV MRK & MRKS (ARROW)	EA													
	677-6012	ELIM EXT PAV MRK & MRKS (WORD)	EA													
	6056-6001	PREFORMED IN-LANE(TRANS) RUMBLE STRIP	LF		7,580.000		7,486.000		6,196.000		8,910.000		8,442.000			
	6056-6002	PREFORMED CENTERLINE RUMBLE STRIP	LF		4,445.000		3,952.000		5,164.000		4,704.000		4,470.000		270.000	
	6149-6001	REFL PAV MRK AWT (W) 4" (SLD) (100MIL)	LF		47,740.000		37,430.000		44,790.000		44,550.000		42,210.000			
	6149-6002	REFL PAV MRK AWT (W) 4" (BRK) (100MIL)	LF						590.000							
	6149-6004	REFL PAV MRK AWT (W) 6" (SLD) (100MIL)	LF												7,240.000	
	6149-6005	REFL PAV MRK AWT (W) 6" (BRK) (100MIL)	LF												16,040.000	
	6149-6007	REFL PAV MRK AWT (Y) 4" (SLD) (100MIL)	LF		22,410.000		16,080.000		46,260.000		32,260.000		29,920.000			
	6149-6008	REFL PAV MRK AWT (Y) 4" (BRK) (100MIL)	LF		7,100.000		4,250.000		8,540.000		3,280.000		2,380.000			
	6149-6010	REFL PAV MRK AWT (Y) 6" (SLD) (100MIL)	LF												11,500.000	
	6149-6011	REFL PAV MRK AWT (Y) 6" (BRK) (100MIL)	LF													
	6185-6005	TMA (MOBILE OPERATION)	DAY		145.000											
	18	SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS				1.000									

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta **COUNTY** Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

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				CONTROL SECTION JOB		**0208-02-048**		**0217-01-035**		**0218-05-034**		**0218-06-028**		**0222-03-061**		**0223-01-035**	
				PROJECT ID		**A00133961**		**A00134051**		**A00133950**		**A00133951**		**A00066451**		**A00066202**	
				COUNTY		**Harrison**		**Bowie**		**Cass**		**Cass**		**Morris**		**Marion**	
				HIGHWAY		**SH 43**		**US 59**		**SH 11**		**SH 11**		**SH 11**		**SH 49**	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	500-6001	MOBILIZATION	LS														
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO														
	666-6030	REFL PAV MRK TY I (W)8"(DOT)(100MIL)	LF														
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF			3,590.000						100.000		110.000			
	666-6224	PAVEMENT SEALER 4"	LF													1,580.000	
	666-6225	PAVEMENT SEALER 6"	LF														
	666-6226	PAVEMENT SEALER 8"	LF														
	666-6227	PAVEMENT SEALER 10"	LF														
	666-6230	PAVEMENT SEALER 24"	LF														
	666-6231	PAVEMENT SEALER (ARROW)	EA														
	666-6232	PAVEMENT SEALER (WORD)	EA														
	666-6283	REF PROF PAV MRK TY I(W)4"(SLD)(090MIL)	LF														
	666-6285	REF PROF PAV MRK TY I(W)6"(SLD)(090MIL)	LF														
	666-6289	REF PROF PAV MRK TY I(Y)6"(SLD)(090MIL)	LF														
	668-6002	PREFAB PAV MRK TY B (W)(4")(SLD)	LF													790.000	
	668-6007	PREFAB PAV MRK TY B (W)(6")(SLD)	LF														
	668-6010	PREFAB PAV MRK TY B (W)(6")(BRK)CNTST	LF														
	668-6041	PREFAB PAV MRK TY B (Y)(4")(BRK)	LF														
	668-6043	PREFAB PAV MRK TY B (Y)(4")(SLD)	LF													790.000	
	668-6044	PREFAB PAV MRK TY B (Y)(4")(BRK)CNTST	LF														
	668-6045	PREFAB PAV MRK TY B (Y)(6")(BRK)	LF														
	668-6047	PREFAB PAV MRK TY B (Y)(6")(SLD)	LF														
	668-6076	PREFAB PAV MRK TY C (W) (24") (SLD)	LF			60.000						25.000					
	668-6077	PREFAB PAV MRK TY C (W) (ARROW)	EA									1.000					
	668-6078	PREFAB PAV MRK TY C (W) (DBL ARROW)	EA									2.000					
	668-6084	PREFAB PAV MRK TY C (W) (NUMBER)	EA														
	668-6085	PREFAB PAV MRK TY C (W) (WORD)	EA									2.000					
	668-6089	PREFAB PAV MRK TY C (W) (RR XING)	EA														
	668-6092	PREFAB PAV MRK TY C (W) (36")(YLD TRI)	EA			302.000											
	672-6007	REFL PAV MRKR TY I-C	EA			181.000						6.000					
	672-6009	REFL PAV MRKR TY II-A-A	EA	256.000				308.000		838.000						10.000	
	672-6010	REFL PAV MRKR TY II-C-R	EA			483.000											
	677-6001	ELIM EXT PAV MRK & MRKS (4")	LF													1,580.000	
	677-6002	ELIM EXT PAV MRK & MRKS (6")	LF														
	677-6003	ELIM EXT PAV MRK & MRKS (8")	LF														
	677-6004	ELIM EXT PAV MRK & MRKS (10")	LF														
	677-6007	ELIM EXT PAV MRK & MRKS (24")	LF														

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta

COUNTY Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

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			CONTROL SECTION JOB	**0208-02-048**		**0217-01-035**		**0218-05-034**		**0218-06-028**		**0222-03-061**		**0223-01-035**	
			PROJECT ID	**A00133961**		**A00134051**		**A00133950**		**A00133951**		**A00066451**		**A00066202**	
			COUNTY	**Harrison**		**Bowie**		**Cass**		**Cass**		**Morris**		**Marion**	
			HIGHWAY	**SH 43**		**US 59**		**SH 11**		**SH 11**		**SH 11**		**SH 49**	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	677-6008	ELIM EXT PAV MRK & MRKS (ARROW)	EA												
	677-6012	ELIM EXT PAV MRK & MRKS (WORD)	EA												
	6056-6001	PREFORMED IN-LANE(TRANS) RUMBLE STRIP	LF	4,080.000		7,522.000		5,142.000		14,644.000		2,971.000		23,161.000	
	6056-6002	PREFORMED CENTERLINE RUMBLE STRIP	LF	2,150.000		3,856.000		2,706.000		7,412.000		2,788.000		11,808.000	
	6149-6001	REFL PAV MRK AWT (W) 4" (SLD) (100MIL)	LF	20,400.000				25,710.000		73,220.000		14,855.000		121,735.000	
	6149-6002	REFL PAV MRK AWT (W) 4" (BRK) (100MIL)	LF									4,050.000			
	6149-6004	REFL PAV MRK AWT (W) 6" (SLD) (100MIL)	LF			37,610.000									
	6149-6005	REFL PAV MRK AWT (W) 6" (BRK) (100MIL)	LF			9,650.000									
	6149-6007	REFL PAV MRK AWT (Y) 4" (SLD) (100MIL)	LF	17,670.000				17,310.000		50,600.000		5,650.000		87,320.000	
	6149-6008	REFL PAV MRK AWT (Y) 4" (BRK) (100MIL)	LF	710.000				1,820.000		4,110.000		2,930.000		9,270.000	
	6149-6010	REFL PAV MRK AWT (Y) 6" (SLD) (100MIL)	LF			38,560.000									
	6149-6011	REFL PAV MRK AWT (Y) 6" (BRK) (100MIL)	LF												
	6185-6005	TMA (MOBILE OPERATION)	DAY												
	18	SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS												

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta

COUNTY Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

HIGHWAY FM 130, FM 134, FM 1398, FM 1520, FM 1701, FM 1735, FM 1766, FM 1793, FM 1795, FM 2088, FM 21, FM 251, FM 2625, FM 2683, FM 2685, FM 348, FM 44, FM 450, FM 556, FM 726, FM 74, FM 96, FM 992, SH 11, SH 155, SH 300, SH 43, SH 49, SH 77, SH 98, US 271, US 59, US 67, US 80, US 82

			CONTROL SECTION JOB	**0223-02-031**		**0248-04-078**		**0277-01-031**		**0330-02-020**		**0424-06-007**		**0520-02-063**	
			PROJECT ID	**A00066838**		**A00066562**		**A00133952**		**A00133964**		**A00133984**		**A00134076**	
			COUNTY	**Marion**		**Upshur**		**Morris**		**Bowie**		**Panola**		**Upshur**	
			HIGHWAY	**SH 49**		**US 271**		**SH 77**		**FM 44**		**FM 348**		**SH 155**	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	500-6001	MOBILIZATION	LS												
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO												
	666-6030	REFL PAV MRK TY I (W)8"(DOT)(100MIL)	LF											110.000	
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF			105.000		3,065.000						605.000	
	666-6224	PAVEMENT SEALER 4"	LF												
	666-6225	PAVEMENT SEALER 6"	LF											1,040.000	
	666-6226	PAVEMENT SEALER 8"	LF											85.000	
	666-6227	PAVEMENT SEALER 10"	LF											130.000	
	666-6230	PAVEMENT SEALER 24"	LF											90.000	
	666-6231	PAVEMENT SEALER (ARROW)	EA												
	666-6232	PAVEMENT SEALER (WORD)	EA												
	666-6283	REF PROF PAV MRK TY I(W)4"(SLD)(090MIL)	LF							80,660.000					
	666-6285	REF PROF PAV MRK TY I(W)6"(SLD)(090MIL)	LF												
	666-6289	REF PROF PAV MRK TY I(Y)6"(SLD)(090MIL)	LF												
	668-6002	PREFAB PAV MRK TY B (W)(4")(SLD)	LF												
	668-6007	PREFAB PAV MRK TY B (W)(6")(SLD)	LF											520.000	
	668-6010	PREFAB PAV MRK TY B (W)(6")(BRK)CNTST	LF											130.000	
	668-6041	PREFAB PAV MRK TY B (Y)(4")(BRK)	LF												
	668-6043	PREFAB PAV MRK TY B (Y)(4")(SLD)	LF												
	668-6044	PREFAB PAV MRK TY B (Y)(4")(BRK)CNTST	LF												
	668-6045	PREFAB PAV MRK TY B (Y)(6")(BRK)	LF												
	668-6047	PREFAB PAV MRK TY B (Y)(6")(SLD)	LF											520.000	
	668-6076	PREFAB PAV MRK TY C (W) (24") (SLD)	LF					24.000						90.000	
	668-6077	PREFAB PAV MRK TY C (W) (ARROW)	EA			1.000		3.000						12.000	
	668-6078	PREFAB PAV MRK TY C (W) (DBL ARROW)	EA												
	668-6084	PREFAB PAV MRK TY C (W) (NUMBER)	EA												
	668-6085	PREFAB PAV MRK TY C (W) (WORD)	EA			1.000		6.000						4.000	
	668-6089	PREFAB PAV MRK TY C (W) (RR XING)	EA												
	668-6092	PREFAB PAV MRK TY C (W) (36")(YLD TRI)	EA					5.000							
	672-6007	REFL PAV MRKR TY I-C	EA			586.000		432.000						350.000	
	672-6009	REFL PAV MRKR TY II-A-A	EA			944.000		714.000						1,324.000	
	672-6010	REFL PAV MRKR TY II-C-R	EA												
	677-6001	ELIM EXT PAV MRK & MRKS (4")	LF												
	677-6002	ELIM EXT PAV MRK & MRKS (6")	LF											1,040.000	
	677-6003	ELIM EXT PAV MRK & MRKS (8")	LF											85.000	
	677-6004	ELIM EXT PAV MRK & MRKS (10")	LF											130.000	
	677-6007	ELIM EXT PAV MRK & MRKS (24")	LF											90.000	

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta

COUNTY Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

HIGHWAY FM 130, FM 134, FM 1398, FM 1520, FM 1701, FM 1735, FM 1766, FM 1793, FM 1795, FM 2088, FM 21, FM 251, FM 2625, FM 2683, FM 2685, FM 348, FM 44, FM 450, FM 556, FM 726, FM 74, FM 96, FM 992, SH 11, SH 155, SH 300, SH 43, SH 49, SH 77, SH 98, US 271, US 59, US 67, US 80, US 82

			CONTROL SECTION JOB	**0223-02-031**		**0248-04-078**		**0277-01-031**		**0330-02-020**		**0424-06-007**		**0520-02-063**	
			PROJECT ID	**A00066838**		**A00066562**		**A00133952**		**A00133964**		**A00133984**		**A00134076**	
			COUNTY	**Marion**		**Upshur**		**Morris**		**Bowie**		**Panola**		**Upshur**	
			HIGHWAY	**SH 49**		**US 271**		**SH 77**		**FM 44**		**FM 348**		**SH 155**	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	677-6008	ELIM EXT PAV MRK & MRKS (ARROW)	EA												
	677-6012	ELIM EXT PAV MRK & MRKS (WORD)	EA												
	6056-6001	PREFORMED IN-LANE(TRANS) RUMBLE STRIP	LF	1,246.000		9,285.000		11,899.000				8,801.000		12,705.000	
	6056-6002	PREFORMED CENTERLINE RUMBLE STRIP	LF	658.000		5,664.000		6,228.000		8,106.000		4,490.000		9,409.000	
	6149-6001	REFL PAV MRK AWT (W) 4" (SLD) (100MIL)	LF	6,230.000				59,495.000				44,005.000			
	6149-6002	REFL PAV MRK AWT (W) 4" (BRK) (100MIL)	LF	70.000				5,560.000							
	6149-6004	REFL PAV MRK AWT (W) 6" (SLD) (100MIL)	LF			44,825.000								65,765.000	
	6149-6005	REFL PAV MRK AWT (W) 6" (BRK) (100MIL)	LF			11,600.000								6,240.000	
	6149-6007	REFL PAV MRK AWT (Y) 4" (SLD) (100MIL)	LF	4,070.000				40,580.000		52,730.000		35,680.000			
	6149-6008	REFL PAV MRK AWT (Y) 4" (BRK) (100MIL)	LF	630.000				4,060.000		5,350.000		1,980.000			
	6149-6010	REFL PAV MRK AWT (Y) 6" (SLD) (100MIL)	LF			50,040.000								64,350.000	
	6149-6011	REFL PAV MRK AWT (Y) 6" (BRK) (100MIL)	LF			1,650.000								7,240.000	
	6185-6005	TMA (MOBILE OPERATION)	DAY												
	18	SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS												

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta

COUNTY Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

HIGHWAY FM 130, FM 134, FM 1398, FM 1520, FM 1701, FM 1735, FM 1766, FM 1793, FM 1795, FM 2088, FM 21, FM 251, FM 2625, FM 2683, FM 2685, FM 348, FM 44, FM 450, FM 556, FM 726, FM 74, FM 96, FM 992, SH 11, SH 155, SH 300, SH 43, SH 49, SH 77, SH 98, US 271, US 59, US 67, US 80, US 82

				0520-02-064		0569-04-023		0632-02-031		0632-03-050		0633-03-015		0812-01-038	
		CONTROL SECTION JOB													
		PROJECT ID		A00134077		A00133960		A00066274		A00133983		A00066542		A00134046	
		COUNTY		Upshur		Harrison		Harrison		Harrison		Camp		Cass	
		HIGHWAY		SH 155		SH 43		FM 134		FM 134		FM 21		FM 251	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	500-6001	MOBILIZATION	LS												
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO												
	666-6030	REFL PAV MRK TY I (W)8"(DOT)(100MIL)	LF												
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF	870.000		875.000								440.000	
	666-6224	PAVEMENT SEALER 4"	LF					1,540.000		1,340.000					
	666-6225	PAVEMENT SEALER 6"	LF	8,600.000											
	666-6226	PAVEMENT SEALER 8"	LF					70.000							
	666-6227	PAVEMENT SEALER 10"	LF	960.000											
	666-6230	PAVEMENT SEALER 24"	LF												
	666-6231	PAVEMENT SEALER (ARROW)	EA												
	666-6232	PAVEMENT SEALER (WORD)	EA												
	666-6283	REF PROF PAV MRK TY I(W)4"(SLD)(090MIL)	LF											136,120.000	
	666-6285	REF PROF PAV MRK TY I(W)6"(SLD)(090MIL)	LF												
	666-6289	REF PROF PAV MRK TY I(Y)6"(SLD)(090MIL)	LF												
	668-6002	PREFAB PAV MRK TY B (W)(4")(SLD)	LF					1,140.000		820.000					
	668-6007	PREFAB PAV MRK TY B (W)(6")(SLD)	LF	3,820.000											
	668-6010	PREFAB PAV MRK TY B (W)(6")(BRK)CNTST	LF	960.000											
	668-6041	PREFAB PAV MRK TY B (Y)(4")(BRK)	LF					80.000		110.000					
	668-6043	PREFAB PAV MRK TY B (Y)(4")(SLD)	LF					320.000		410.000					
	668-6044	PREFAB PAV MRK TY B (Y)(4")(BRK)CNTST	LF					70.000							
	668-6045	PREFAB PAV MRK TY B (Y)(6")(BRK)	LF	960.000											
	668-6047	PREFAB PAV MRK TY B (Y)(6")(SLD)	LF	3,820.000											
	668-6076	PREFAB PAV MRK TY C (W) (24") (SLD)	LF	184.000				40.000						420.000	
	668-6077	PREFAB PAV MRK TY C (W) (ARROW)	EA			7.000								5.000	
	668-6078	PREFAB PAV MRK TY C (W) (DBL ARROW)	EA												
	668-6084	PREFAB PAV MRK TY C (W) (NUMBER)	EA												
	668-6085	PREFAB PAV MRK TY C (W) (WORD)	EA			7.000								6.000	
	668-6089	PREFAB PAV MRK TY C (W) (RR XING)	EA					2.000							
	668-6092	PREFAB PAV MRK TY C (W) (36")(YLD TRI)	EA	14.000											
	672-6007	REFL PAV MRKR TY I-C	EA	296.000		62.000								28.000	
	672-6009	REFL PAV MRKR TY II-A-A	EA	316.000		830.000		988.000		14.000				2,296.000	
	672-6010	REFL PAV MRKR TY II-C-R	EA												
	677-6001	ELIM EXT PAV MRK & MRKS (4")	LF					1,540.000		1,340.000					
	677-6002	ELIM EXT PAV MRK & MRKS (6")	LF	8,600.000											
	677-6003	ELIM EXT PAV MRK & MRKS (8")	LF					70.000							
	677-6004	ELIM EXT PAV MRK & MRKS (10")	LF	960.000											
	677-6007	ELIM EXT PAV MRK & MRKS (24")	LF												

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta **COUNTY** Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

HIGHWAY FM 130, FM 134, FM 1398, FM 1520, FM 1701, FM 1735, FM 1766, FM 1793, FM 1795, FM 2088, FM 21, FM 251, FM 2625, FM 2683, FM 2685, FM 348, FM 44, FM 450, FM 556, FM 726, FM 74, FM 96, FM 992, SH 11, SH 155, SH 300, SH 43, SH 49, SH 77, SH 98, US 271, US 59, US 67, US 80, US 82

			CONTROL SECTION JOB	**0520-02-064**		**0569-04-023**		**0632-02-031**		**0632-03-050**		**0633-03-015**		**0812-01-038**	
			PROJECT ID	**A00134077**		**A00133960**		**A00066274**		**A00133983**		**A00066542**		**A00134046**	
			COUNTY	**Upshur**		**Harrison**		**Harrison**		**Harrison**		**Camp**		**Cass**	
			HIGHWAY	**SH 155**		**SH 43**		**FM 134**		**FM 134**		**FM 21**		**FM 251**	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	677-6008	ELIM EXT PAV MRK & MRKS (ARROW)	EA												
	677-6012	ELIM EXT PAV MRK & MRKS (WORD)	EA												
	6056-6001	PREFORMED IN-LANE(TRANS) RUMBLE STRIP	LF	2,139.000		5,630.000		16,446.000		10,273.000		7,298.000			
	6056-6002	PREFORMED CENTERLINE RUMBLE STRIP	LF	3,260.000		3,380.000		8,478.000		5,286.000		3,784.000		13,812.000	
	6149-6001	REFL PAV MRK AWT (W) 4" (SLD) (100MIL)	LF			28,150.000		82,230.000		51,365.000		36,490.000		16,735.000	
	6149-6002	REFL PAV MRK AWT (W) 4" (BRK) (100MIL)	LF			380.000								110.000	
	6149-6004	REFL PAV MRK AWT (W) 6" (SLD) (100MIL)	LF	12,135.000											
	6149-6005	REFL PAV MRK AWT (W) 6" (BRK) (100MIL)	LF	4,110.000											
	6149-6007	REFL PAV MRK AWT (Y) 4" (SLD) (100MIL)	LF			28,100.000		51,990.000		31,650.000		28,770.000		128,742.000	
	6149-6008	REFL PAV MRK AWT (Y) 4" (BRK) (100MIL)	LF			1,150.000		6,520.000		4,170.000		1,890.000		8,750.000	
	6149-6010	REFL PAV MRK AWT (Y) 6" (SLD) (100MIL)	LF	19,180.000											
	6149-6011	REFL PAV MRK AWT (Y) 6" (BRK) (100MIL)	LF	4,080.000											
	6185-6005	TMA (MOBILE OPERATION)	DAY												
	18	SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS												

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta

COUNTY Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

HIGHWAY FM 130, FM 134, FM 1398, FM 1520, FM 1701, FM 1735, FM 1766, FM 1793, FM 1795, FM 2088, FM 21, FM 251, FM 2625, FM 2683, FM 2685, FM 348, FM 44, FM 450, FM 556, FM 726, FM 74, FM 96, FM 992, SH 11, SH 155, SH 300, SH 43, SH 49, SH 77, SH 98, US 271, US 59, US 67, US 80, US 82

		CONTROL SECTION JOB		**0843-02-028**		**0843-08-012**		**0964-02-034**		**1018-01-032**		**1019-01-033**		**1214-01-019**	
		PROJECT ID		**A00133980**		**A00066416**		**A00133966**		**A00066334**		**A00133977**		**A00134041**	
		COUNTY		**Harrison**		**Harrison**		**Upshur**		**Upshur**		**Camp**		**Bowie**	
		HIGHWAY		**FM 450**		**FM 2625**		**FM 2088**		**FM 1795**		**FM 556**		**FM 992**	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	500-6001	MOBILIZATION	LS												
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO												
	666-6030	REFL PAV MRK TY I (W)8"(DOT)(100MIL)	LF												
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF												
	666-6224	PAVEMENT SEALER 4"	LF									760.000			
	666-6225	PAVEMENT SEALER 6"	LF												
	666-6226	PAVEMENT SEALER 8"	LF									100.000			
	666-6227	PAVEMENT SEALER 10"	LF												
	666-6230	PAVEMENT SEALER 24"	LF												
	666-6231	PAVEMENT SEALER (ARROW)	EA												
	666-6232	PAVEMENT SEALER (WORD)	EA												
	666-6283	REF PROF PAV MRK TY I(W)4"(SLD)(090MIL)	LF					51,895.000		64,745.000		60,000.000		114,015.000	
	666-6285	REF PROF PAV MRK TY I(W)6"(SLD)(090MIL)	LF												
	666-6289	REF PROF PAV MRK TY I(Y)6"(SLD)(090MIL)	LF												
	668-6002	PREFAB PAV MRK TY B (W)(4")(SLD)	LF									760.000			
	668-6007	PREFAB PAV MRK TY B (W)(6")(SLD)	LF												
	668-6010	PREFAB PAV MRK TY B (W)(6")(BRK)CNTST	LF												
	668-6041	PREFAB PAV MRK TY B (Y)(4")(BRK)	LF												
	668-6043	PREFAB PAV MRK TY B (Y)(4")(SLD)	LF												
	668-6044	PREFAB PAV MRK TY B (Y)(4")(BRK)CNTST	LF									100.000			
	668-6045	PREFAB PAV MRK TY B (Y)(6")(BRK)	LF												
	668-6047	PREFAB PAV MRK TY B (Y)(6")(SLD)	LF												
	668-6076	PREFAB PAV MRK TY C (W) (24") (SLD)	LF	73.000		70.000				24.000					
	668-6077	PREFAB PAV MRK TY C (W) (ARROW)	EA												
	668-6078	PREFAB PAV MRK TY C (W) (DBL ARROW)	EA												
	668-6084	PREFAB PAV MRK TY C (W) (NUMBER)	EA												
	668-6085	PREFAB PAV MRK TY C (W) (WORD)	EA	2.000											
	668-6089	PREFAB PAV MRK TY C (W) (RR XING)	EA												
	668-6092	PREFAB PAV MRK TY C (W) (36")(YLD TRI)	EA												
	672-6007	REFL PAV MRKR TY I-C	EA												
	672-6009	REFL PAV MRKR TY II-A-A	EA			804.000		662.000		826.000		5.000		1,406.000	
	672-6010	REFL PAV MRKR TY II-C-R	EA												
	677-6001	ELIM EXT PAV MRK & MRKS (4")	LF									860.000			
	677-6002	ELIM EXT PAV MRK & MRKS (6")	LF												
	677-6003	ELIM EXT PAV MRK & MRKS (8")	LF												
	677-6004	ELIM EXT PAV MRK & MRKS (10")	LF												
	677-6007	ELIM EXT PAV MRK & MRKS (24")	LF												

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta **COUNTY** Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

HIGHWAY FM 130, FM 134, FM 1398, FM 1520, FM 1701, FM 1735, FM 1766, FM 1793, FM 1795, FM 2088, FM 21, FM 251, FM 2625, FM 2683, FM 2685, FM 348, FM 44, FM 450, FM 556, FM 726, FM 74, FM 96, FM 992, SH 11, SH 155, SH 300, SH 43, SH 49, SH 77, SH 98, US 271, US 59, US 67, US 80, US 82

			CONTROL SECTION JOB	**0843-02-028**		**0843-08-012**		**0964-02-034**		**1018-01-032**		**1019-01-033**		**1214-01-019**	
			PROJECT ID	**A00133980**		**A00066416**		**A00133966**		**A00066334**		**A00133977**		**A00134041**	
			COUNTY	**Harrison**		**Harrison**		**Upshur**		**Upshur**		**Camp**		**Bowie**	
			HIGHWAY	**FM 450**		**FM 2625**		**FM 2088**		**FM 1795**		**FM 556**		**FM 992**	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	677-6008	ELIM EXT PAV MRK & MRKS (ARROW)	EA												
	677-6012	ELIM EXT PAV MRK & MRKS (WORD)	EA												
	6056-6001	PREFORMED IN-LANE(TRANS) RUMBLE STRIP	LF	14,254.000		13,752.000									
	6056-6002	PREFORMED CENTERLINE RUMBLE STRIP	LF	7,282.000		6,926.000		5,299.000		6,606.000		6,156.000		11,734.000	
	6149-6001	REFL PAV MRK AWT (W) 4" (SLD) (100MIL)	LF	80,400.000		68,760.000								6,245.000	
	6149-6002	REFL PAV MRK AWT (W) 4" (BRK) (100MIL)	LF												
	6149-6004	REFL PAV MRK AWT (W) 6" (SLD) (100MIL)	LF												
	6149-6005	REFL PAV MRK AWT (W) 6" (BRK) (100MIL)	LF												
	6149-6007	REFL PAV MRK AWT (Y) 4" (SLD) (100MIL)	LF	80,860.000		39,160.000		43,500.000		66,060.000		40,220.000		73,590.000	
	6149-6008	REFL PAV MRK AWT (Y) 4" (BRK) (100MIL)	LF	360.000		6,280.000		2,370.000				5,140.000		9,730.000	
	6149-6010	REFL PAV MRK AWT (Y) 6" (SLD) (100MIL)	LF												
	6149-6011	REFL PAV MRK AWT (Y) 6" (BRK) (100MIL)	LF												
	6185-6005	TMA (MOBILE OPERATION)	DAY												
	18	SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS												

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta

COUNTY Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

HIGHWAY FM 130, FM 134, FM 1398, FM 1520, FM 1701, FM 1735, FM 1766, FM 1793, FM 1795, FM 2088, FM 21, FM 251, FM 2625, FM 2683, FM 2685, FM 348, FM 44, FM 450, FM 556, FM 726, FM 74, FM 96, FM 992, SH 11, SH 155, SH 300, SH 43, SH 49, SH 77, SH 98, US 271, US 59, US 67, US 80, US 82

			CONTROL SECTION JOB	**1215-01-023**		**1226-02-026**		**1232-03-027**		**1381-01-013**		**1385-01-040**		**1569-01-013**	
			PROJECT ID	**A00066260**		**A00133969**		**A00133968**		**A00133963**		**A00133957**		**A00133962**	
			COUNTY	**Bowie**		**Titus**		**Camp**		**Bowie**		**Upshur**		**Bowie**	
			HIGHWAY	**FM 992**		**FM 1735**		**FM 1520**		**FM 1398**		**SH 300**		**FM 1398**	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	500-6001	MOBILIZATION	LS												
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO												
	666-6030	REFL PAV MRK TY I (W)8"(DOT)(100MIL)	LF												
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF			1,540.000		515.000				1,080.000			
	666-6224	PAVEMENT SEALER 4"	LF					2,570.000						1,140.000	
	666-6225	PAVEMENT SEALER 6"	LF												
	666-6226	PAVEMENT SEALER 8"	LF									120.000			
	666-6227	PAVEMENT SEALER 10"	LF												
	666-6230	PAVEMENT SEALER 24"	LF									50.000			
	666-6231	PAVEMENT SEALER (ARROW)	EA									2.000			
	666-6232	PAVEMENT SEALER (WORD)	EA									1.000			
	666-6283	REF PROF PAV MRK TY I(W)4"(SLD)(090MIL)	LF	99,910.000						35,815.000				64,490.000	
	666-6285	REF PROF PAV MRK TY I(W)6"(SLD)(090MIL)	LF												
	666-6289	REF PROF PAV MRK TY I(Y)6"(SLD)(090MIL)	LF												
	668-6002	PREFAB PAV MRK TY B (W)(4")(SLD)	LF					1,580.000						570.000	
	668-6007	PREFAB PAV MRK TY B (W)(6")(SLD)	LF												
	668-6010	PREFAB PAV MRK TY B (W)(6")(BRK)CNTST	LF												
	668-6041	PREFAB PAV MRK TY B (Y)(4")(BRK)	LF					200.000							
	668-6043	PREFAB PAV MRK TY B (Y)(4")(SLD)	LF					790.000						570.000	
	668-6044	PREFAB PAV MRK TY B (Y)(4")(BRK)CNTST	LF												
	668-6045	PREFAB PAV MRK TY B (Y)(6")(BRK)	LF												
	668-6047	PREFAB PAV MRK TY B (Y)(6")(SLD)	LF												
	668-6076	PREFAB PAV MRK TY C (W) (24") (SLD)	LF	18.000		130.000						50.000			
	668-6077	PREFAB PAV MRK TY C (W) (ARROW)	EA			6.000						11.000			
	668-6078	PREFAB PAV MRK TY C (W) (DBL ARROW)	EA												
	668-6084	PREFAB PAV MRK TY C (W) (NUMBER)	EA									2.000			
	668-6085	PREFAB PAV MRK TY C (W) (WORD)	EA			6.000						14.000			
	668-6089	PREFAB PAV MRK TY C (W) (RR XING)	EA												
	668-6092	PREFAB PAV MRK TY C (W) (36")(YLD TRI)	EA												
	672-6007	REFL PAV MRKR TY I-C	EA									804.000			
	672-6009	REFL PAV MRKR TY II-A-A	EA	1,360.000				20.000				4,480.000		8.000	
	672-6010	REFL PAV MRKR TY II-C-R	EA												
	677-6001	ELIM EXT PAV MRK & MRKS (4")	LF					2,570.000						1,140.000	
	677-6002	ELIM EXT PAV MRK & MRKS (6")	LF												
	677-6003	ELIM EXT PAV MRK & MRKS (8")	LF									120.000			
	677-6004	ELIM EXT PAV MRK & MRKS (10")	LF												
	677-6007	ELIM EXT PAV MRK & MRKS (24")	LF									50.000			

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta **COUNTY** Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

HIGHWAY FM 130, FM 134, FM 1398, FM 1520, FM 1701, FM 1735, FM 1766, FM 1793, FM 1795, FM 2088, FM 21, FM 251, FM 2625, FM 2683, FM 2685, FM 348, FM 44, FM 450, FM 556, FM 726, FM 74, FM 96, FM 992, SH 11, SH 155, SH 300, SH 43, SH 49, SH 77, SH 98, US 271, US 59, US 67, US 80, US 82

			CONTROL SECTION JOB	**1215-01-023**		**1226-02-026**		**1232-03-027**		**1381-01-013**		**1385-01-040**		**1569-01-013**	
			PROJECT ID	**A00066260**		**A00133969**		**A00133968**		**A00133963**		**A00133957**		**A00133962**	
			COUNTY	**Bowie**		**Titus**		**Camp**		**Bowie**		**Upshur**		**Bowie**	
			HIGHWAY	**FM 992**		**FM 1735**		**FM 1520**		**FM 1398**		**SH 300**		**FM 1398**	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	677-6008	ELIM EXT PAV MRK & MRKS (ARROW)	EA									2.000			
	677-6012	ELIM EXT PAV MRK & MRKS (WORD)	EA									1.000			
	6056-6001	PREFORMED IN-LANE(TRANS) RUMBLE STRIP	LF			12,493.000		12,493.000				11,929.000			
	6056-6002	PREFORMED CENTERLINE RUMBLE STRIP	LF	10,300.000		7,067.000		6,236.000		3,660.000		11,944.000		6,610.000	
	6149-6001	REFL PAV MRK AWT (W) 4" (SLD) (100MIL)	LF	5,575.000		62,465.000		69,970.000		7,005.000		59,645.000			
	6149-6002	REFL PAV MRK AWT (W) 4" (BRK) (100MIL)	LF									15,030.000			
	6149-6004	REFL PAV MRK AWT (W) 6" (SLD) (100MIL)	LF												
	6149-6005	REFL PAV MRK AWT (W) 6" (BRK) (100MIL)	LF												
	6149-6007	REFL PAV MRK AWT (Y) 4" (SLD) (100MIL)	LF	83,060.000		35,660.000		55,120.000		19,230.000		97,600.000		44,650.000	
	6149-6008	REFL PAV MRK AWT (Y) 4" (BRK) (100MIL)	LF	6,440.000		6,340.000		4,810.000		3,950.000		5,800.000		4,640.000	
	6149-6010	REFL PAV MRK AWT (Y) 6" (SLD) (100MIL)	LF												
	6149-6011	REFL PAV MRK AWT (Y) 6" (BRK) (100MIL)	LF												
	6185-6005	TMA (MOBILE OPERATION)	DAY												
	18	SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS												

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta

COUNTY Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

HIGHWAY FM 130, FM 134, FM 1398, FM 1520, FM 1701, FM 1735, FM 1766, FM 1793, FM 1795, FM 2088, FM 21, FM 251, FM 2625, FM 2683, FM 2685, FM 348, FM 44, FM 450, FM 556, FM 726, FM 74, FM 96, FM 992, SH 11, SH 155, SH 300, SH 43, SH 49, SH 77, SH 98, US 271, US 59, US 67, US 80, US 82

			CONTROL SECTION JOB		**1571-01-017**		**1572-01-024**		**1573-01-019**		**1620-03-012**		**1759-01-013**		**1762-01-004**	
			PROJECT ID		**A00066193**		**A00133965**		**A00134044**		**A00133992**		**A00066331**		**A00066333**	
			COUNTY		**Cass**		**Cass**		**Cass**		**Bowie**		**Harrison**		**Upshur**	
			HIGHWAY		**FM 74**		**FM 96**		**FM 130**		**FM 1701**		**FM 1793**		**FM 1795**	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	500-6001	MOBILIZATION	LS												
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO												
	666-6030	REFL PAV MRK TY I (W)8"(DOT)(100MIL)	LF												
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF	200.000		80.000									
	666-6224	PAVEMENT SEALER 4"	LF					1,120.000							
	666-6225	PAVEMENT SEALER 6"	LF												
	666-6226	PAVEMENT SEALER 8"	LF			80.000									
	666-6227	PAVEMENT SEALER 10"	LF												
	666-6230	PAVEMENT SEALER 24"	LF			53.000									
	666-6231	PAVEMENT SEALER (ARROW)	EA												
	666-6232	PAVEMENT SEALER (WORD)	EA												
	666-6283	REF PROF PAV MRK TY I(W)4"(SLD)(090MIL)	LF	11,625.000		84,545.000		135,510.000		68,380.000				14,320.000	
	666-6285	REF PROF PAV MRK TY I(W)6"(SLD)(090MIL)	LF												
	666-6289	REF PROF PAV MRK TY I(Y)6"(SLD)(090MIL)	LF												
	668-6002	PREFAB PAV MRK TY B (W)(4")(SLD)	LF					560.000							
	668-6007	PREFAB PAV MRK TY B (W)(6")(SLD)	LF												
	668-6010	PREFAB PAV MRK TY B (W)(6")(BRK)CNTST	LF												
	668-6041	PREFAB PAV MRK TY B (Y)(4")(BRK)	LF												
	668-6043	PREFAB PAV MRK TY B (Y)(4")(SLD)	LF					560.000							
	668-6044	PREFAB PAV MRK TY B (Y)(4")(BRK)CNTST	LF												
	668-6045	PREFAB PAV MRK TY B (Y)(6")(BRK)	LF												
	668-6047	PREFAB PAV MRK TY B (Y)(6")(SLD)	LF												
	668-6076	PREFAB PAV MRK TY C (W) (24") (SLD)	LF			53.000		60.000		26.000		60.000		18.000	
	668-6077	PREFAB PAV MRK TY C (W) (ARROW)	EA												
	668-6078	PREFAB PAV MRK TY C (W) (DBL ARROW)	EA												
	668-6084	PREFAB PAV MRK TY C (W) (NUMBER)	EA												
	668-6085	PREFAB PAV MRK TY C (W) (WORD)	EA												
	668-6089	PREFAB PAV MRK TY C (W) (RR XING)	EA												
	668-6092	PREFAB PAV MRK TY C (W) (36")(YLD TRI)	EA												
	672-6007	REFL PAV MRKR TY I-C	EA												
	672-6009	REFL PAV MRKR TY II-A-A	EA			2.000		1,690.000		788.000		1,334.000		194.000	
	672-6010	REFL PAV MRKR TY II-C-R	EA												
	677-6001	ELIM EXT PAV MRK & MRKS (4")	LF					1,120.000							
	677-6002	ELIM EXT PAV MRK & MRKS (6")	LF												
	677-6003	ELIM EXT PAV MRK & MRKS (8")	LF			80.000									
	677-6004	ELIM EXT PAV MRK & MRKS (10")	LF												
	677-6007	ELIM EXT PAV MRK & MRKS (24")	LF			53.000									

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta **COUNTY** Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

HIGHWAY FM 130, FM 134, FM 1398, FM 1520, FM 1701, FM 1735, FM 1766, FM 1793, FM 1795, FM 2088, FM 21, FM 251, FM 2625, FM 2683, FM 2685, FM 348, FM 44, FM 450, FM 556, FM 726, FM 74, FM 96, FM 992, SH 11, SH 155, SH 300, SH 43, SH 49, SH 77, SH 98, US 271, US 59, US 67, US 80, US 82

			CONTROL SECTION JOB	**1571-01-017**		**1572-01-024**		**1573-01-019**		**1620-03-012**		**1759-01-013**		**1762-01-004**	
			PROJECT ID	**A00066193**		**A00133965**		**A00134044**		**A00133992**		**A00066331**		**A00066333**	
			COUNTY	**Cass**		**Cass**		**Cass**		**Bowie**		**Harrison**		**Upshur**	
			HIGHWAY	**FM 74**		**FM 96**		**FM 130**		**FM 1701**		**FM 1793**		**FM 1795**	
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL
	677-6008	ELIM EXT PAV MRK & MRKS (ARROW)	EA												
	677-6012	ELIM EXT PAV MRK & MRKS (WORD)	EA												
	6056-6001	PREFORMED IN-LANE(TRANS) RUMBLE STRIP	LF									20,992.000			
	6056-6002	PREFORMED CENTERLINE RUMBLE STRIP	LF	1,200.000		8,592.000		13,728.000		6,978.000		10,674.000		1,546.000	
	6149-6001	REFL PAV MRK AWT (W) 4" (SLD) (100MIL)	LF	13,560.000		6,775.000						104,960.000			
	6149-6002	REFL PAV MRK AWT (W) 4" (BRK) (100MIL)	LF												
	6149-6004	REFL PAV MRK AWT (W) 6" (SLD) (100MIL)	LF												
	6149-6005	REFL PAV MRK AWT (W) 6" (BRK) (100MIL)	LF												
	6149-6007	REFL PAV MRK AWT (Y) 4" (SLD) (100MIL)	LF	26,680.000		87,220.000		90,840.000		32,090.000		82,190.000		14,090.000	
	6149-6008	REFL PAV MRK AWT (Y) 4" (BRK) (100MIL)	LF	1,170.000		1,470.000		10,890.000		7,740.000		6,140.000		340.000	
	6149-6010	REFL PAV MRK AWT (Y) 6" (SLD) (100MIL)	LF												
	6149-6011	REFL PAV MRK AWT (Y) 6" (BRK) (100MIL)	LF												
	6185-6005	TMA (MOBILE OPERATION)	DAY												
	18	SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS												

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta

COUNTY Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

HIGHWAY FM 130, FM 134, FM 1398, FM 1520, FM 1701, FM 1735, FM 1766, FM 1793, FM 1795, FM 2088, FM 21, FM 251, FM 2625, FM 2683, FM 2685, FM 348, FM 44, FM 450, FM 556, FM 726, FM 74, FM 96, FM 992, SH 11, SH 155, SH 300, SH 43, SH 49, SH 77, SH 98, US 271, US 59, US 67, US 80, US 82

															TOTAL EST.	TOTAL FINAL
		CONTROL SECTION JOB		**1896-03-019**		**1957-01-010**		**2157-01-021**		**2526-01-010**		**2685-01-011**				
		PROJECT ID		**A00133996**		**A00134043**		**A00066418**		**A00133939**		**A00133967**				
		COUNTY		**Upshur**		**Cass**		**Upshur**		**Bowie**		**Marion**				
		HIGHWAY		**FM 726**		**FM 1766**		**FM 2685**		**SH 98**		**FM 2683**				
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL			
	500-6001	MOBILIZATION	LS												100.00%	
	502-6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO												10.000	
	666-6030	REFL PAV MRK TY I (W)8"(DOT)(100MIL)	LF												340.000	
	666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF					190.000		390.000					21,505.000	
	666-6224	PAVEMENT SEALER 4"	LF												10,050.000	
	666-6225	PAVEMENT SEALER 6"	LF												9,640.000	
	666-6226	PAVEMENT SEALER 8"	LF							130.000					585.000	
	666-6227	PAVEMENT SEALER 10"	LF												1,090.000	
	666-6230	PAVEMENT SEALER 24"	LF							43.000					236.000	
	666-6231	PAVEMENT SEALER (ARROW)	EA							2.000					4.000	
	666-6232	PAVEMENT SEALER (WORD)	EA							2.000					3.000	
	666-6283	REF PROF PAV MRK TY I(W)4"(SLD)(090MIL)	LF			68,520.000		68,680.000		25,425.000		62,040.000			1,246,695.000	
	666-6285	REF PROF PAV MRK TY I(W)6"(SLD)(090MIL)	LF												72,380.000	
	666-6289	REF PROF PAV MRK TY I(Y)6"(SLD)(090MIL)	LF												73,080.000	
	668-6002	PREFAB PAV MRK TY B (W)(4")(SLD)	LF												6,220.000	
	668-6007	PREFAB PAV MRK TY B (W)(6")(SLD)	LF												4,340.000	
	668-6010	PREFAB PAV MRK TY B (W)(6")(BRK)CNTST	LF												1,090.000	
	668-6041	PREFAB PAV MRK TY B (Y)(4")(BRK)	LF												390.000	
	668-6043	PREFAB PAV MRK TY B (Y)(4")(SLD)	LF												3,440.000	
	668-6044	PREFAB PAV MRK TY B (Y)(4")(BRK)CNTST	LF												170.000	
	668-6045	PREFAB PAV MRK TY B (Y)(6")(BRK)	LF												960.000	
	668-6047	PREFAB PAV MRK TY B (Y)(6")(SLD)	LF												4,340.000	
	668-6076	PREFAB PAV MRK TY C (W) (24") (SLD)	LF	38.000		20.000		25.000		43.000					2,741.000	
	668-6077	PREFAB PAV MRK TY C (W) (ARROW)	EA							2.000					83.000	
	668-6078	PREFAB PAV MRK TY C (W) (DBL ARROW)	EA												3.000	
	668-6084	PREFAB PAV MRK TY C (W) (NUMBER)	EA							1.000					7.000	
	668-6085	PREFAB PAV MRK TY C (W) (WORD)	EA					2.000		3.000					101.000	
	668-6089	PREFAB PAV MRK TY C (W) (RR XING)	EA												6.000	
	668-6092	PREFAB PAV MRK TY C (W) (36")(YLD TRI)	EA												698.000	
	672-6007	REFL PAV MRKR TY I-C	EA					10.000		20.000					3,891.000	
	672-6009	REFL PAV MRKR TY II-A-A	EA	546.000		878.000		860.000		192.000					29,673.000	
	672-6010	REFL PAV MRKR TY II-C-R	EA												1,160.000	
	677-6001	ELIM EXT PAV MRK & MRKS (4")	LF												10,150.000	
	677-6002	ELIM EXT PAV MRK & MRKS (6")	LF												9,640.000	
	677-6003	ELIM EXT PAV MRK & MRKS (8")	LF							130.000					485.000	
	677-6004	ELIM EXT PAV MRK & MRKS (10")	LF												1,090.000	
	677-6007	ELIM EXT PAV MRK & MRKS (24")	LF							43.000					236.000	

QUANTITY SHEET

CONTROLLING PROJECT ID 0010-12-074

DISTRICT Atlanta

COUNTY Bowie, Camp, Cass, Harrison, Marion, Morris, Panola, Titus, Upshur

HIGHWAY FM 130, FM 134, FM 1398, FM 1520, FM 1701, FM 1735, FM 1766, FM 1793, FM 1795, FM 2088, FM 21, FM 251, FM 2625, FM 2683, FM 2685, FM 348, FM 44, FM 450, FM 556, FM 726, FM 74, FM 96, FM 992, SH 11, SH 155, SH 300, SH 43, SH 49, SH 77, SH 98, US 271, US 59, US 67, US 80, US 82

														TOTAL EST.	TOTAL FINAL
		CONTROL SECTION JOB		**1896-03-019**		**1957-01-010**		**2157-01-021**		**2526-01-010**		**2685-01-011**			
		PROJECT ID		**A00133996**		**A00134043**		**A00066418**		**A00133939**		**A00133967**			
		COUNTY		**Upshur**		**Cass**		**Upshur**		**Bowie**		**Marion**			
		HIGHWAY		**FM 726**		**FM 1766**		**FM 2685**		**SH 98**		**FM 2683**			
ALT	**BID CODE**	**DESCRIPTION**	**UNIT**	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL	EST.	FINAL		
	677-6008	ELIM EXT PAV MRK & MRKS (ARROW)	EA							2.000				4.000	
	677-6012	ELIM EXT PAV MRK & MRKS (WORD)	EA							2.000				3.000	
	6056-6001	PREFORMED IN-LANE(TRANS) RUMBLE STRIP	LF	8,516.000										276,285.000	
	6056-6002	PREFORMED CENTERLINE RUMBLE STRIP	LF	4,364.000		7,018.000		6,884.000		2,630.000		6,446.000		286,160.000	
	6149-6001	REFL PAV MRK AWT (W) 4" (SLD) (100MIL)	LF	42,580.000						360.000				1,325,640.000	
	6149-6002	REFL PAV MRK AWT (W) 4" (BRK) (100MIL)	LF											25,790.000	
	6149-6004	REFL PAV MRK AWT (W) 6" (SLD) (100MIL)	LF											167,575.000	
	6149-6005	REFL PAV MRK AWT (W) 6" (BRK) (100MIL)	LF											47,640.000	
	6149-6007	REFL PAV MRK AWT (Y) 4" (SLD) (100MIL)	LF	34,460.000		57,680.000		47,650.000		2,780.000		35,990.000		1,918,172.000	
	6149-6008	REFL PAV MRK AWT (Y) 4" (BRK) (100MIL)	LF	2,300.000		3,130.000		5,300.000		3,160.000		7,120.000		183,510.000	
	6149-6010	REFL PAV MRK AWT (Y) 6" (SLD) (100MIL)	LF											183,630.000	
	6149-6011	REFL PAV MRK AWT (Y) 6" (BRK) (100MIL)	LF											12,970.000	
	6185-6005	TMA (MOBILE OPERATION)	DAY											145.000	
	18	SAFETY CONTINGENCY: CONTRACTOR FORCE ACCOUNT WORK (PARTICIPATING)	LS											1.000	

CSJ	REF #	LENGTH	0666 6030 REFL PAV MRK TY I (W) (8")(DOT) (100 MIL)	0666 6036 REFL PAV MRK TY I (W) (8")(SLD) (100 MIL)	0666 6224 PAVEMENT SEALER 4"	0666 6225 PAVEMENT SEALER 6"	0666 6226 PAVEMENT SEALER 8"	0666 6227 PAVEMENT SEALER 10"	0666 6230 PAVEMENT SEALER 24"	0666 6231 PAVEMENT SEALER (ARROW)	0666 6232 PAVEMENT SEALER (WORD)	0666 6283 REF PROF PAV MRK TY I(W) 4"(SLD) (090MIL)	0666 6285 REF PROF PAV MRK TY I(W) 6"(SLD) (090MIL)	0666 6289 REF PROF PAV MRK TY I(Y) 6"(SLD) (090MIL)	0668 6002 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6007 PREFAB PAV MRK TY B (W) (6") (SLD)	0668 6010 PREFAB PAV MRK TY B (W) (6") (BRK) CNTST	0668 6041 PREFAB PAV MRK TY B (Y) (4") (BRK)	0668 6043 PREFAB PAV MRK TY B (Y) (4") (SLD)	0668 6044 PREFAB PAV MRK TY B (Y) (4") (BRK) CNTRST	0668 6045 PREFAB PAV MRK TY B (Y) (6") (BRK)	0668 6047 PREFAB PAV MRK TY B (Y) (6") (SLD)	0668 6076 PREFAB PAV MRK TY C (W) (24") (SLD)	0668 6077 PREFAB PAV MRK TY C (W) (ARROW)	0668 6078 PREFAB PAV MRK TY C (W) (DBL ARROW)	0668 6084 PREFAB PAV MRK TY C (W) (NUMBER)
			LF	LF	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA
0010-12-074 US 67	1	13,795																								
	2	1,220		160																				1		
	3	5,170		115																			270	6		
	4	4,810																								
SUBTOTAL			**0**	**275**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**270**	**7**	**0**	**0**
0010-13-096 US 67	5	20,845																								
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0046-05-051 US82	6	6,700		100																			75	1		
	7	5,600																					25			
	8	7,280		200																			120	2		
	9	3,840		110																				1		
SUBTOTAL			**0**	**410**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**220**	**4**	**0**	**0**
0083-07-047 SH 11	10	18,338		760																				5		
SUBTOTAL			**0**	**760**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**
0083-09-036 SH 11	11	23,126		660																			30	2		
SUBTOTAL			**0**	**660**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**30**	**2**	**0**	**0**

CSJ	REF #	LENGTH	0668 6085 PREFAB PAV MRK TY C (W) (WORD)	0668 6089 PREFAB PAV MRK TY C (W) (RR XING)	0668 6092 PREFAB PAV MRK TY C (W) (36") (YLD TRI)	0672 6007 REFL PAV MRKR TY I-C	0672 6009 REFL PAV MRKR TY II-A-A	0672 6010 REFL PAV MRKR TY II-C-R	0677 6001 ELIM EXT PAV MRK & MRKS (4")	0677 6002 ELIM EXT PAV MRK & MRKS (6")	0677 6003 ELIM EXT PAV MRK & MRKS (8")	0677 6004 ELIM EXT PAV MRK & MRKS (10")	0677 6007 ELIM EXT PAV MRK & MRKS (24")	0677 6008 ELIM EXT PAV MRK & MRKS (ARROW)	0677 6012 ELIM EXT PAV MRK & MRKS (WORD)	6056 6001 PREFORMED IN-LANE (TRANS) RUMBLE STRIP	6056 6002 PREFORMED CENTERLINE RUMBLE STRIP	6149 6001 REFL PAV MRK AWT (W) (4") (SLD) (100 MIL)	6149 6002 REFL PAV MRK AWT (W) (4") (BRK) (100 MIL)	6149 6004 REFL PAV MRK AWT (W) (6") (SLD) (100 MIL)	6149 6005 REFL PAV MRK AWT (W) (6") (BRK) (100 MIL)	6149 6007 REFL PAV MRK AWT (Y) (4") (SLD) (100 MIL)	6149 6008 REFL PAV MRK AWT (Y) (4") (BRK) (100 MIL)	6149 6010 REFL PAV MRK AWT (Y) (6") (SLD) (100 MIL)	6149 6011 REFL PAV MRK AWT (Y) (6") (BRK) (100 MIL)
			EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
0010-12-074 US 67	1	13,795					250									5,278	2,759	26,390				6,790	3,300		
	2	1,220	1			8	144									428	724	2,140				4,880	590		
	3	5,170	2	2			218											9,840				10,030	2,010		
	4	4,810					70									1,874	962	9,370				710	1,200		
SUBTOTAL			**3**	**2**	**0**	**8**	**682**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7,580**	**4,445**	**47,740**	**0**	**0**	**0**	**22,410**	**7,100**	**0**	**0**
0010-13-096 US 67	5	20,845					530									7,486	3,952	37,430				16,080	4,250		
SUBTOTAL			**0**	**0**	**0**	**0**	**530**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7,486**	**3,952**	**37,430**	**0**	**0**	**0**	**16,080**	**4,250**	**0**	**0**
0046-05-051 US82	6	6,700	1			22	170									2,660	1,360	13,300	350			10,320	820		
	7	5,600					142									2,080	2,268	10,400				11,340	2,840		
	8	7,280	2			16	236											13,810	140			15,100	3,410		
	9	3,840	1			10	266									1,456	1,536	7,280	100			9,500	1,470		
SUBTOTAL			**4**	**0**	**0**	**48**	**814**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6,196**	**5,164**	**44,790**	**590**	**0**	**0**	**46,260**	**8,540**	**0**	**0**
0083-07-047 SH 11	10	18,338	5			38	878									8,910	4,704	44,550				32,260	3,280		
SUBTOTAL			**5**	**0**	**0**	**38**	**878**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8,910**	**4,704**	**44,550**	**0**	**0**	**0**	**32,260**	**3,280**	**0**	**0**
0083-09-036 SH 11	11	23,126	2	2		34	690									8,442	4,470	42,210				29,920	2,380		
SUBTOTAL			**2**	**2**	**0**	**34**	**690**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8,442**	**4,470**	**42,210**	**0**	**0**	**0**	**29,920**	**2,380**	**0**	**0**

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QUANTITY SUMMARY

Texas Department of Transportation

SHEET 1 OF 11

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			16
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

CSJ	REF #	LENGTH	0666 6030 REFL PAV MRK TY I (W) (8")(DOT) (100 MIL)	0666 6036 REFL PAV MRK TY I (W) (8")(SLD) (100 MIL)	0666 6224 PAVEMENT SEALER 4"	0666 6225 PAVEMENT SEALER 6"	0666 6226 PAVEMENT SEALER 8"	0666 6227 PAVEMENT SEALER 10"	0666 6230 PAVEMENT SEALER 24"	0666 6231 PAVEMENT SEALER (ARROW)	0666 6232 PAVEMENT SEALER (WORD)	0666 6283 REF PROF PAV MRK TY I(W) 4"(SLD) (090MIL)	0666 6285 REF PROF PAV MRK TY I(W) 6"(SLD) (090MIL)	0666 6289 REF PROF PAV MRK TY I(Y) 6"(SLD) (090MIL)	0668 6002 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6007 PREFAB PAV MRK TY B (W) (6") (SLD)	0668 6010 PREFAB PAV MRK TY B (W) (6") (BRK) CNTST	0668 6041 PREFAB PAV MRK TY B (Y) (4") (BRK)	0668 6043 PREFAB PAV MRK TY B (Y) (4") (SLD)	0668 6044 PREFAB PAV MRK TY B (Y) (4") (BRK) CNTRST	0668 6045 PREFAB PAV MRK TY B (Y) (6") (BRK)	0668 6047 PREFAB PAV MRK TY B (Y) (6") (SLD)	0668 6076 PREFAB PAV MRK TY C (W) (24") (SLD)	0668 6077 PREFAB PAV MRK TY C (W) (ARROW)	0668 6078 PREFAB PAV MRK TY C (W) (DBL ARROW)	0668 6084 PREFAB PAV MRK TY C (W) (NUMBER)
			LF	LF	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA
0096-07-051 US 80	12	3,920		475																				200	2	1	
	13	35,090	230	5,170									70,180	73,080										470	15		4
	14	1,100											2,200														
SUBTOTAL			**230**	**5,645**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**72,380**	**73,080**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**670**	**17**	**1**	**4**
0208-02-048 SH 43	15	10,750																									
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0217-01-035 US 59	16	20,660		2,325																				30			
	17	17,900		1,265																				30			
SUBTOTAL			**0**	**3,590**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**60**	**0**	**0**	**0**
0218-05-034 SH 11	18	13,530																									
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0218-06-028 SH 11	19	37,010		100																				25	1	2	
SUBTOTAL			**0**	**100**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	**1**	**2**	**0**

CSJ	REF #	LENGTH	0668 6085 PREFAB PAV MRK TY C (W) (WORD)	0668 6089 PREFAB PAV MRK TY C (W) (RR XING)	0668 6092 PREFAB PAV MRK TY C (W) (36") (YLD TRI)	0672 6007 REFL PAV MRKR TY I-C	0672 6009 REFL PAV MRKR TY II-A-A	0672 6010 REFL PAV MRKR TY II-C-R	0677 6001 ELIM EXT PAV MRK & MRKS (4")	0677 6002 ELIM EXT PAV MRK & MRKS (6")	0677 6003 ELIM EXT PAV MRK & MRKS (8")	0677 6004 ELIM EXT PAV MRK & MRKS (10")	0677 6007 ELIM EXT PAV MRK & MRKS (24")	0677 6008 ELIM EXT PAV MRK & MRKS (ARROW)	0677 6012 ELIM EXT PAV MRK & MRKS (WORD)	6056 6001 PREFORMED IN-LANE (TRANS) RUMBLE STRIP	6056 6002 PREFORMED CENTERLINE RUMBLE STRIP	6149 6001 REFL PAV MRK AWT (W) (4") (SLD) (100 MIL)	6149 6002 REFL PAV MRK AWT (W) (4") (BRK) (100 MIL)	6149 6004 REFL PAV MRK AWT (W) (6") (SLD) (100 MIL)	6149 6005 REFL PAV MRK AWT (W) (6") (BRK) (100 MIL)	6149 6007 REFL PAV MRK AWT (Y) (4") (SLD) (100 MIL)	6149 6008 REFL PAV MRK AWT (Y) (4") (BRK) (100 MIL)	6149 6010 REFL PAV MRK AWT (Y) (6") (SLD) (100 MIL)	6149 6011 REFL PAV MRK AWT (Y) (6") (BRK) (100 MIL)
			EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
0096-07-051 US 80	12	3,920	3			24	194													7,240	1,960			8,800	
	13	35,090	31		377	936	914	677													13,530				
	14	1,100				28	78										270				550			2,700	
SUBTOTAL			**34**	**0**	**377**	**988**	**1,186**	**677**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**270**	**0**	**0**	**7,240**	**16,040**	**0**	**0**	**11,500**	**0**
0208-02-048 SH 43	15	10,750					256									4,080	2,150	20,400				17,670	710		
SUBTOTAL			**0**	**0**	**0**	**0**	**256**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4,080**	**2,150**	**20,400**	**0**	**0**	**0**	**17,670**	**710**	**0**	**0**
0217-01-035 US 59	16	20,660			150	117		259								4,072	2,066			20,360	5,170			20,660	
	17	17,900			152	64		224								3,450	1,790			17,250	4,480			17,900	
SUBTOTAL			**0**	**0**	**302**	**181**	**0**	**483**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7,522**	**3,856**	**0**	**0**	**37,610**	**9,650**	**0**	**0**	**38,560**	**0**
0218-05-034 SH 11	18	13,530					308									5,142	2,706	25,710				17,310	1,820		
SUBTOTAL			**0**	**0**	**0**	**0**	**308**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5,142**	**2,706**	**25,710**	**0**	**0**	**0**	**17,310**	**1,820**	**0**	**0**
0218-06-028 SH 11	19	37,010	2			6	838									14,644	7,412	73,220				50,600	4,110		
SUBTOTAL			**2**	**0**	**0**	**6**	**838**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14,644**	**7,412**	**73,220**	**0**	**0**	**0**	**50,600**	**4,110**	**0**	**0**

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QUANTITY SUMMARY

 Texas Department of Transportation

SHEET 2 OF 11

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			17
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

CSJ	REF #	LENGTH	0666 6030 REFL PAV MRK TY I (W) (8")(DOT) (100 MIL)	0666 6036 REFL PAV MRK TY I (W) (8")(SLD) (100 MIL)	0666 6224 PAVEMENT SEALER 4"	0666 6225 PAVEMENT SEALER 6"	0666 6226 PAVEMENT SEALER 8"	0666 6227 PAVEMENT SEALER 10"	0666 6230 PAVEMENT SEALER 24"	0666 6231 PAVEMENT SEALER (ARROW)	0666 6232 PAVEMENT SEALER (WORD)	0666 6283 REF PROF PAV MRK TY I(W) 4"(SLD) (090MIL)	0666 6285 REF PROF PAV MRK TY I(W) 6"(SLD) (090MIL)	0666 6289 REF PROF PAV MRK TY I(Y) 6"(SLD) (090MIL)	0668 6002 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6007 PREFAB PAV MRK TY B (W) (6") (SLD)	0668 6010 PREFAB PAV MRK TY B (W) (6") (BRK) CNTST	0668 6041 PREFAB PAV MRK TY B (Y) (4") (BRK)	0668 6043 PREFAB PAV MRK TY B (Y) (4") (SLD)	0668 6044 PREFAB PAV MRK TY B (Y) (4") (BRK) CNTRST	0668 6045 PREFAB PAV MRK TY B (Y) (6") (BRK)	0668 6047 PREFAB PAV MRK TY B (Y) (6") (SLD)	0668 6076 PREFAB PAV MRK TY C (W) (24") (SLD)	0668 6077 PREFAB PAV MRK TY C (W) (ARROW)	0668 6078 PREFAB PAV MRK TY C (W) (DBL ARROW)	0668 6084 PREFAB PAV MRK TY C (W) (NUMBER)
			LF	LF	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA
0222-03-061	20	2,240		110																					
SH 11	21	5,850																							
SUBTOTAL			**0**	**110**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	22	3,140																							
	23	7,360																							
0223-01-035	24	275			1,100										550				550						
SH 49	25	1,180																							
	26	120			480										240				240						
	27	50,500																							
SUBTOTAL			**0**	**0**	**1,580**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**790**	**0**	**0**	**0**	**790**	**0**	**0**	**0**	**0**	**0**	**0**
0223-02-031	28	3,290																							
SH 49																									
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0248-04-078	29	23,200		105																			1		
US 271																									
SUBTOTAL			**0**	**105**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**

CSJ	REF #	LENGTH	0668 6085 PREFAB PAV MRK TY C (W) (WORD)	0668 6089 PREFAB PAV MRK TY C (W) (RR XING)	0668 6092 PREFAB PAV MRK TY C (W) (36") (YLD TRI)	0672 6007 REFL PAV MRKR TY I-C	0672 6009 REFL PAV MRKR TY II-A-A	0672 6010 REFL PAV MRKR TY II-C-R	0677 6001 ELIM EXT PAV MRK & MRKS (4")	0677 6002 ELIM EXT PAV MRK & MRKS (6")	0677 6003 ELIM EXT PAV MRK & MRKS (8")	0677 6004 ELIM EXT PAV MRK & MRKS (10")	0677 6007 ELIM EXT PAV MRK & MRKS (24")	0677 6008 ELIM EXT PAV MRK & MRKS (ARROW)	0677 6012 ELIM EXT PAV MRK & MRKS (WORD)	6056 6001 PREFORMED IN-LANE (TRANS) RUMBLE STRIP	6056 6002 PREFORMED CENTERLINE RUMBLE STRIP	6149 6001 REFL PAV MRK AWT (W) (4") (SLD) (100 MIL)	6149 6002 REFL PAV MRK AWT (W) (4") (BRK) (100 MIL)	6149 6004 REFL PAV MRK AWT (W) (6") (SLD) (100 MIL)	6149 6005 REFL PAV MRK AWT (W) (6") (BRK) (100 MIL)	6149 6007 REFL PAV MRK AWT (Y) (4") (SLD) (100 MIL)	6149 6008 REFL PAV MRK AWT (Y) (4") (BRK) (100 MIL)	6149 6010 REFL PAV MRK AWT (Y) (6") (SLD) (100 MIL)	6149 6011 REFL PAV MRK AWT (Y) (6") (BRK) (100 MIL)
			EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
0222-03-061	20	2,240														826	448	4,130	1,120			4,480			
SH 11	21	5,850														2,145	2,340	10,725	2,930			1,170	2,930		
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,971**	**2,788**	**14,855**	**4,050**	**0**	**0**	**5,650**	**2,930**	**0**	**0**
	22	3,140																5,930				5,600	170		
	23	7,360														2,749	1,472	13,745				8,520	1,550		
0223-01-035	24	275					6		1,100																
SH 49	25	1,180														412	236	2,060				1,180	300		
	26	120					4		480																
	27	50,500														20,000	10,100	100,000				72,020	7,250		
SUBTOTAL			**0**	**0**	**0**	**0**	**10**	**0**	**1,580**	**0**	**0**	**0**	**0**	**0**	**0**	**23,161**	**11,808**	**121,735**	**0**	**0**	**0**	**87,320**	**9,270**	**0**	**0**
0223-02-031	28	3,290														1,246	658	6,230	70			4,070	630		
SH 49																									
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,246**	**658**	**6,230**	**70**	**0**	**0**	**4,070**	**630**	**0**	**0**
0248-04-078	29	23,200	1			586	944									9,285	5,664			44,825	11,600			50,040	1,650
US 271																									
SUBTOTAL			**1**	**0**	**0**	**586**	**944**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9,285**	**5,664**	**0**	**0**	**44,825**	**11,600**	**0**	**0**	**50,040**	**1,650**

QUANTITY SUMMARY

Texas Department of Transportation

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			18
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

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CSJ	REF #	LENGTH	0666 6030 REFL PAV MRK TY I (W) (8")(DOT) (100 MIL)	0666 6036 REFL PAV MRK TY I (W) (8")(SLD) (100 MIL)	0666 6224 PAVEMENT SEALER 4"	0666 6225 PAVEMENT SEALER 6"	0666 6226 PAVEMENT SEALER 8"	0666 6227 PAVEMENT SEALER 10"	0666 6230 PAVEMENT SEALER 24"	0666 6231 PAVEMENT SEALER (ARROW)	0666 6232 PAVEMENT SEALER (WORD)	0666 6283 REF PROF PAV MRK TY I(W) 4"(SLD) (090MIL)	0666 6285 REF PROF PAV MRK TY I(W) 6"(SLD) (090MIL)	0666 6289 REF PROF PAV MRK TY I(Y) 6"(SLD) (090MIL)	0668 6002 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6007 PREFAB PAV MRK TY B (W) (6") (SLD)	0668 6010 PREFAB PAV MRK TY B (W) (6") (BRK) CNTST	0668 6041 PREFAB PAV MRK TY B (Y) (4") (BRK)	0668 6043 PREFAB PAV MRK TY B (Y) (4") (SLD)	0668 6044 PREFAB PAV MRK TY B (Y) (4") (BRK) CNTRST	0668 6045 PREFAB PAV MRK TY B (Y) (6") (BRK)	0668 6047 PREFAB PAV MRK TY B (Y) (6") (SLD)	0668 6076 PREFAB PAV MRK TY C (W) (24") (SLD)	0668 6077 PREFAB PAV MRK TY C (W) (ARROW)	0668 6078 PREFAB PAV MRK TY C (W) (DBL ARROW)	0668 6084 PREFAB PAV MRK TY C (W) (NUMBER)
			LF	LF	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA
0277-01-031 SH 77	30	5,152		80																			24			
	31	3,002																								
	32	3,032																								
	33	1,312																								
	34	3,092																								
	35	8,292		2,315																				2		
	36	5,362		670																				1		
	37	2,392																								
SUBTOTAL			**0**	**3,065**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**3**	**0**	**0**
0330-02-020 FM 44	38	40,830										80,660														
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**80,660**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0424-06-007 FM 348	39	22,450																								
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

CSJ	REF #	LENGTH	0668 6085 PREFAB PAV MRK TY C (W) (WORD)	0668 6089 PREFAB PAV MRK TY C (W) (RR XING)	0668 6092 PREFAB PAV MRK TY C (W) (36") (YLD TRI)	0672 6007 REFL PAV MRKR TY I-C	0672 6009 REFL PAV MRKR TY II-A-A	0672 6010 REFL PAV MRKR TY II-C-R	0677 6001 ELIM EXT PAV MRK & MRKS (4")	0677 6002 ELIM EXT PAV MRK & MRKS (6")	0677 6003 ELIM EXT PAV MRK & MRKS (8")	0677 6004 ELIM EXT PAV MRK & MRKS (10")	0677 6007 ELIM EXT PAV MRK & MRKS (24")	0677 6008 ELIM EXT PAV MRK & MRKS (ARROW)	0677 6012 ELIM EXT PAV MRK & MRKS (WORD)	6056 6001 PREFORMED IN-LANE (TRANS) RUMBLE STRIP	6056 6002 PREFORMED CENTERLINE RUMBLE STRIP	6149 6001 REFL PAV MRK AWT (W) (4") (SLD) (100 MIL)	6149 6002 REFL PAV MRK AWT (W) (4") (BRK) (100 MIL)	6149 6004 REFL PAV MRK AWT (W) (6") (SLD) (100 MIL)	6149 6005 REFL PAV MRK AWT (W) (6") (BRK) (100 MIL)	6149 6007 REFL PAV MRK AWT (Y) (4") (SLD) (100 MIL)	6149 6008 REFL PAV MRK AWT (Y) (4") (BRK) (100 MIL)	6149 6010 REFL PAV MRK AWT (Y) (6") (SLD) (100 MIL)	6149 6011 REFL PAV MRK AWT (Y) (6") (BRK) (100 MIL)
			EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
0277-01-031 SH 77	30	5,152	3			4	110									1,971	1,018	9,855				5,790	720		
	31	3,002				42	74									1,101	588	5,505	830			3,760	530		
	32	3,032					44									1,121	594	5,605				530	740		
	33	1,312				20	32									470	250	2,350	390			1,250	310		
	34	3,092					60									1,122	606	5,610				1,770	760		
	35	8,292	2			274	206									3,157	1,646	15,785	3,170			15,160	330		
	36	5,362	1		5	34	130									2,025	1,060	10,125				7,660	670		
	37	2,392				58	58									932	466	4,660	1,170			4,660			
SUBTOTAL			**6**	**0**	**5**	**432**	**714**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11,899**	**6,228**	**59,495**	**5,560**	**0**	**0**	**40,580**	**4,060**	**0**	**0**
0330-02-020 FM 44	38	40,830															8,106					52,730	5,350		
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8,106**	**0**	**0**	**0**	**0**	**52,730**	**5,350**	**0**	**0**
0424-06-007 FM 348	39	22,450														8,801	4,490	44,005				35,680	1,980		
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8,801**	**4,490**	**44,005**	**0**	**0**	**0**	**35,680**	**1,980**	**0**	**0**

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QUANTITY SUMMARY

 Texas Department of Transportation

SHEET 4 OF 11

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			19
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

CSJ	REF #	LENGTH	0666 6030 REFL PAV MRK TY I (W) (8")(DOT) (100 MIL)	0666 6036 REFL PAV MRK TY I (W) (8")(SLD) (100 MIL)	0666 6224 PAVEMENT SEALER 4"	0666 6225 PAVEMENT SEALER 6"	0666 6226 PAVEMENT SEALER 8"	0666 6227 PAVEMENT SEALER 10"	0666 6230 PAVEMENT SEALER 24"	0666 6231 PAVEMENT SEALER (ARROW)	0666 6232 PAVEMENT SEALER (WORD)	0666 6283 REF PROF PAV MRK TY I(W) 4"(SLD) (090MIL)	0666 6285 REF PROF PAV MRK TY I(W) 6"(SLD) (090MIL)	0666 6289 REF PROF PAV MRK TY I(Y) 6"(SLD) (090MIL)	0668 6002 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6007 PREFAB PAV MRK TY B (W) (6") (SLD)	0668 6010 PREFAB PAV MRK TY B (W) (6") (BRK) CNTST	0668 6041 PREFAB PAV MRK TY B (Y) (4") (BRK)	0668 6043 PREFAB PAV MRK TY B (Y) (4") (SLD)	0668 6044 PREFAB PAV MRK TY B (Y) (4") (BRK) CNTRST	0668 6045 PREFAB PAV MRK TY B (Y) (6") (BRK)	0668 6047 PREFAB PAV MRK TY B (Y) (6") (SLD)	0668 6076 PREFAB PAV MRK TY C (W) (24") (SLD)	0668 6077 PREFAB PAV MRK TY C (W) (ARROW)	0668 6078 PREFAB PAV MRK TY C (W) (DBL ARROW)	0668 6084 PREFAB PAV MRK TY C (W) (NUMBER)
			LF	LF	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA
0520-02-063 SH 155	40	720	110	260																				2		
	41	17,200																								
	42	2,210																								
	43	260				1,040		130								520	130						520			
	44	1,160																								
	45	6,100																								
	46	9,500		260																				10		
	47	3,570																								
	48	1,120																								
	49	120		85			85		90															90		
SUBTOTAL			**110**	**605**	**0**	**1,040**	**85**	**130**	**90**	**0**	**0**	**0**	**0**	**0**	**0**	**520**	**130**	**0**	**0**	**0**	**0**	**520**	**90**	**12**	**0**	**0**
0520-02-064 SH 155	50	280		870																				184		
	51	320				1,440		160								640	160					160	640			
	52	8,150																								
	53	1,590				7,160		800								3,180	800					800	3,180			
SUBTOTAL			**0**	**870**	**0**	**8,600**	**0**	**960**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,820**	**960**	**0**	**0**	**0**	**0**	**960**	**3,820**	**184**	**0**	**0**
0569-04-023 SH 43	54	14,600		875																				7		
SUBTOTAL			**0**	**875**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**

CSJ	REF #	LENGTH	0668 6085 PREFAB PAV MRK TY C (W) (WORD)	0668 6089 PREFAB PAV MRK TY C (W) (RR XING)	0668 6092 PREFAB PAV MRK TY C (W) (36") (YLD TRI)	0672 6007 REFL PAV MRKR TY I-C	0672 6009 REFL PAV MRKR TY II-A-A	0672 6010 REFL PAV MRKR TY II-C-R	0677 6001 ELIM EXT PAV MRK & MRKS (4")	0677 6002 ELIM EXT PAV MRK & MRKS (6")	0677 6003 ELIM EXT PAV MRK & MRKS (8")	0677 6004 ELIM EXT PAV MRK & MRKS (10")	0677 6007 ELIM EXT PAV MRK & MRKS (24")	0677 6008 ELIM EXT PAV MRK & MRKS (ARROW)	0677 6012 ELIM EXT PAV MRK & MRKS (WORD)	6056 6001 PREFORMED IN-LANE (TRANS) RUMBLE STRIP	6056 6002 PREFORMED CENTERLINE RUMBLE STRIP	6149 6001 REFL PAV MRK AWT (W) (4") (SLD) (100 MIL)	6149 6002 REFL PAV MRK AWT (W) (4") (BRK) (100 MIL)	6149 6004 REFL PAV MRK AWT (W) (6") (SLD) (100 MIL)	6149 6005 REFL PAV MRK AWT (W) (6") (BRK) (100 MIL)	6149 6007 REFL PAV MRK AWT (Y) (4") (SLD) (100 MIL)	6149 6008 REFL PAV MRK AWT (Y) (4") (BRK) (100 MIL)	6149 6010 REFL PAV MRK AWT (Y) (6") (SLD) (100 MIL)	6149 6011 REFL PAV MRK AWT (Y) (6") (BRK) (100 MIL)
			EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
0520-02-063 SH 155	40	720	2			14	162									288	288			1,440				2,640	
	41	17,200					392									6,663	3,389			33,315				18,490	3,090
	42	2,210				56	56									839	442			4,195	1,110			4,420	
	43	260				6	6			1,040		130													
	44	1,160				30	30									434	232			2,170	580			2,320	
	45	6,100					152									2,315	1,220			11,575				10,970	310
	46	9,500	2			240	474									1,830	3,670			9,150	4,550			21,360	3,840
	47	3,570					22									336	168			1,680				1,680	
	48	1,120					28													2,240				2,240	
	49	120				4	2				85		90											230	
SUBTOTAL			**4**	**0**	**0**	**350**	**1,324**	**0**	**0**	**1,040**	**85**	**130**	**90**	**0**	**0**	**12,705**	**9,409**	**0**	**0**	**65,765**	**6,240**	**0**	**0**	**64,350**	**7,240**
0520-02-064 SH 155	50	280			14	44	64													1,440	30			2,880	
	51	320				8	8			1,440		160													
	52	8,150				204	204									2,139	3,260			10,695	4,080			16,300	4,080
	53	1,590				40	40			7,160		800													
SUBTOTAL			**0**	**0**	**14**	**296**	**316**	**0**	**0**	**8,600**	**0**	**960**	**0**	**0**	**0**	**2,139**	**3,260**	**0**	**0**	**12,135**	**4,110**	**0**	**0**	**19,180**	**4,080**
0569-04-023 SH 43	54	14,600	7			62	830									5,630	3,380	28,150	380			28,100	1,150		
SUBTOTAL			**7**	**0**	**0**	**62**	**830**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5,630**	**3,380**	**28,150**	**380**	**0**	**0**	**28,100**	**1,150**	**0**	**0**

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QUANTITY SUMMARY

Texas Department of Transportation

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			20
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

CSJ	REF #	LENGTH	0666 6030 REFL PAV MRK TY I (W) (8")(DOT) (100 MIL)	0666 6036 REFL PAV MRK TY I (W) (8")(SLD) (100 MIL)	0666 6224 PAVEMENT SEALER 4"	0666 6225 PAVEMENT SEALER 6"	0666 6226 PAVEMENT SEALER 8"	0666 6227 PAVEMENT SEALER 10"	0666 6230 PAVEMENT SEALER 24"	0666 6231 PAVEMENT SEALER (ARROW)	0666 6232 PAVEMENT SEALER (WORD)	0666 6283 REF PROF PAV MRK TY I(W) 4"(SLD) (090MIL)	0666 6285 REF PROF PAV MRK TY I(W) 6"(SLD) (090MIL)	0666 6289 REF PROF PAV MRK TY I(Y) 6"(SLD) (090MIL)	0668 6002 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6007 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6010 PREFAB PAV MRK TY B (W) (6") (BRK) CNTST	0668 6041 PREFAB PAV MRK TY B (Y) (4") (BRK)	0668 6043 PREFAB PAV MRK TY B (Y) (4") (SLD)	0668 6044 PREFAB PAV MRK TY B (Y) (4") (BRK) CNTRST	0668 6045 PREFAB PAV MRK TY B (Y) (6") (BRK)	0668 6047 PREFAB PAV MRK TY B (Y) (6") (SLD)	0668 6076 PREFAB PAV MRK TY C (W) (24") (SLD)	0668 6077 PREFAB PAV MRK TY C (W) (ARROW)	0668 6078 PREFAB PAV MRK TY C (W) (DBL ARROW)	0668 6084 PREFAB PAV MRK TY C (W) (NUMBER)
			LF	LF	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA
0632-02-031 FM 134	55	330																								
	56	250			500		70								500					70						
	57	29,260																					25			
	58	320			1,040										640			80	320							
	59	12,750																					15			
SUBTOTAL			**0**	**0**	**1,540**	**0**	**70**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,140**	**0**	**0**	**80**	**320**	**70**	**0**	**0**	**40**	**0**	**0**	**0**
0632-03-050 FM 134	60	19,880																								
	61	210			690										420			60	210							
	62	740																								
	63	200			650										400			50	200							
	64	5,600																								
SUBTOTAL			**0**	**0**	**1,340**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**820**	**0**	**0**	**110**	**410**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0633-03-015 FM 21	65	18,920																								
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
0812-01-038	66	8,780		440																			380	5		
FM 251	67	69,060										136,120											40			
SUBTOTAL			**0**	**440**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**136,120**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**420**	**5**	**0**	**0**

CSJ	REF #	LENGTH	0668 6085 PREFAB PAV MRK TY C (W) (WORD)	0668 6089 PREFAB PAV MRK TY C (W) (RR XING)	0668 6092 PREFAB PAV MRK TY C (W) (36") (YLD TRI)	0672 6007 REFL PAV MRKR TY I-C	0672 6009 REFL PAV MRKR TY II-A-A	0672 6010 REFL PAV MRKR TY II-C-R	0677 6001 ELIM EXT PAV MRK & MRKS (4")	0677 6002 ELIM EXT PAV MRK & MRKS (6")	0677 6003 ELIM EXT PAV MRK & MRKS (8")	0677 6004 ELIM EXT PAV MRK & MRKS (10")	0677 6007 ELIM EXT PAV MRK & MRKS (24")	0677 6008 ELIM EXT PAV MRK & MRKS (ARROW)	0677 6012 ELIM EXT PAV MRK & MRKS (WORD)	6056 6001 PREFORMED IN-LANE (TRANS) RUMBLE STRIP	6056 6002 PREFORMED CENTERLINE RUMBLE STRIP	6149 6001 REFL PAV MRK AWT (W) (4") (SLD) (100 MIL)	6149 6002 REFL PAV MRK AWT (W) (4") (BRK) (100 MIL)	6149 6004 REFL PAV MRK AWT (W) (6") (SLD) (100 MIL)	6149 6005 REFL PAV MRK AWT (W) (6") (BRK) (100 MIL)	6149 6007 REFL PAV MRK AWT (Y) (4") (SLD) (100 MIL)	6149 6008 REFL PAV MRK AWT (Y) (4") (BRK) (100 MIL)	6149 6010 REFL PAV MRK AWT (Y) (6") (SLD) (100 MIL)	6149 6011 REFL PAV MRK AWT (Y) (6") (BRK) (100 MIL)
			EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
0632-02-031 FM 134	55	330					4									132	66	660					80		
	56	250					4		500		70														
	57	29,260		2			680									11,374	5,852	56,870				34,810	4,900		
	58	320					8		1,040																
	59	12,750					292									4,940	2,560	24,700				17,180	1,540		
SUBTOTAL			**0**	**2**	**0**	**0**	**988**	**0**	**1,540**	**0**	**70**	**0**	**0**	**0**	**0**	**16,446**	**8,478**	**82,230**	**0**	**0**	**0**	**51,990**	**6,520**	**0**	**0**
0632-03-050 FM 134	60	19,880														7,807	4,006	39,035				22,630	3,220		
	61	210					8		690																
	62	740														296	148	1,480				740	190		
	63	200					6		650																
	64	5,600														2,170	1,132	10,850				8,280	760		
SUBTOTAL			**0**	**0**	**0**	**0**	**14**	**0**	**1,340**	**0**	**0**	**0**	**0**	**0**	**0**	**10,273**	**5,286**	**51,365**	**0**	**0**	**0**	**31,650**	**4,170**	**0**	**0**
0633-03-015 FM 21	65	18,920														7,298	3,784	36,490				28,770	1,890		
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7,298**	**3,784**	**36,490**	**0**	**0**	**0**	**28,770**	**1,890**	**0**	**0**
0812-01-038	66	8,780	6			28	586											16,735	110			23,022	970		
FM 251	67	69,060					1,710										13,812					105,720	7,780		
SUBTOTAL			**6**	**0**	**0**	**28**	**2,296**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13,812**	**16,735**	**110**	**0**	**0**	**128,742**	**8,750**	**0**	**0**

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5/5/2021 11:40:40 AM

QUANTITY SUMMARY

 Texas Department of Transportation

SHEET 6 OF 11

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			21
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

CSJ	REF #	LENGTH	0666 6030 REFL PAV MRK TY I (W) (8")(DOT) (100 MIL)	0666 6036 REFL PAV MRK TY I (W) (8")(SLD) (100 MIL)	0666 6224 PAVEMENT SEALER 4"	0666 6225 PAVEMENT SEALER 6"	0666 6226 PAVEMENT SEALER 8"	0666 6227 PAVEMENT SEALER 10"	0666 6230 PAVEMENT SEALER 24"	0666 6231 PAVEMENT SEALER (ARROW)	0666 6232 PAVEMENT SEALER (WORD)	0666 6283 REF PROF PAV MRK TY I(W) 4"(SLD) (090MIL)	0666 6285 REF PROF PAV MRK TY I(W) 6"(SLD) (090MIL)	0666 6289 REF PROF PAV MRK TY I(Y) 6"(SLD) (090MIL)	0668 6002 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6007 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6010 PREFAB PAV MRK TY B (W) (6") (BRK) CNTST	0668 6041 PREFAB PAV MRK TY B (Y) (4") (BRK)	0668 6043 PREFAB PAV MRK TY B (Y) (4") (SLD)	0668 6044 PREFAB PAV MRK TY B (Y) (4") (BRK) CNTRST	0668 6045 PREFAB PAV MRK TY B (Y) (6") (BRK)	0668 6047 PREFAB PAV MRK TY B (Y) (6") (SLD)	0668 6076 PREFAB PAV MRK TY C (W) (24") (SLD)	0668 6077 PREFAB PAV MRK TY C (W) (ARROW)	0668 6078 PREFAB PAV MRK TY C (W) (DBL ARROW)	0668 6084 PREFAB PAV MRK TY C (W) (NUMBER)
			LF	LF	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA
0843-02-028 FM 450	68	36,335																					25			
	69	4,740																					48			
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**73**	**0**	**0**	**0**
0843-08-012 FM 2625	70	34,636																					70			
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**70**	**0**	**0**	**0**
0964-02-034 FM 2208	71	26,495										51,895														
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**51,895**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1018-01-032 FM 1795	72	32,970										64,745											24			
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**64,745**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	**0**	**0**	**0**
1019-01-033 FM 556	73	18,760										36,645														
	74	380			760		100								760						100					
	75	12,060										23,355														
SUBTOTAL			**0**	**0**	**760**	**0**	**100**	**0**	**0**	**0**	**0**	**60,000**	**0**	**0**	**760**	**0**	**0**	**0**	**0**	**0**	**100**	**0**	**0**	**0**	**0**	**0**

CSJ	REF #	LENGTH	0668 6085 PREFAB PAV MRK TY C (W) (WORD)	0668 6089 PREFAB PAV MRK TY C (W) (RR XING)	0668 6092 PREFAB PAV MRK TY C (W) (36") (YLD TRI)	0672 6007 REFL PAV MRKR TY I-C	0672 6009 REFL PAV MRKR TY II-A-A	0672 6010 REFL PAV MRKR TY II-C-R	0677 6001 ELIM EXT PAV MRK & MRKS (4")	0677 6002 ELIM EXT PAV MRK & MRKS (6")	0677 6003 ELIM EXT PAV MRK & MRKS (8")	0677 6004 ELIM EXT PAV MRK & MRKS (10")	0677 6007 ELIM EXT PAV MRK & MRKS (24")	0677 6008 ELIM EXT PAV MRK & MRKS (ARROW)	0677 6012 ELIM EXT PAV MRK & MRKS (WORD)	6056 6001 PREFORMED IN-LANE (TRANS) RUMBLE STRIP	6056 6002 PREFORMED CENTERLINE RUMBLE STRIP	6149 6001 REFL PAV MRK AWT (W) (4") (SLD) (100 MIL)	6149 6002 REFL PAV MRK AWT (W) (4") (BRK) (100 MIL)	6149 6004 REFL PAV MRK AWT (W) (6") (SLD) (100 MIL)	6149 6005 REFL PAV MRK AWT (W) (6") (BRK) (100 MIL)	6149 6007 REFL PAV MRK AWT (Y) (4") (SLD) (100 MIL)	6149 6008 REFL PAV MRK AWT (Y) (4") (BRK) (100 MIL)	6149 6010 REFL PAV MRK AWT (Y) (6") (SLD) (100 MIL)	6149 6011 REFL PAV MRK AWT (Y) (6") (BRK) (100 MIL)
			EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
0843-02-028 FM 450	68	36,335	2													14,254	7,282	71,270				71,380	360		
	69	4,740																9,130				9,480			
SUBTOTAL			**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14,254**	**7,282**	**80,400**	**0**	**0**	**0**	**80,860**	**360**	**0**	**0**
0843-08-012 FM 2625	70	34,636					804									13,752	6,926	68,760				39,160	6,280		
SUBTOTAL			**0**	**0**	**0**	**0**	**804**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13,752**	**6,926**	**68,760**	**0**	**0**	**0**	**39,160**	**6,280**	**0**	**0**
0964-02-034 FM 2208	71	26,495					662										5,299					43,500	2,370		
SUBTOTAL			**0**	**0**	**0**	**0**	**662**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5,299**	**0**	**0**	**0**	**0**	**43,500**	**2,370**	**0**	**0**
1018-01-032 FM 1795	72	32,970					826										6,606					66,060			
SUBTOTAL			**0**	**0**	**0**	**0**	**826**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6,606**	**0**	**0**	**0**	**0**	**66,060**	**0**	**0**	**0**
1019-01-033 FM 556	73	18,760															3,744					24,930	3,130		
	74	380					5		860																
	75	12,060															2,412					15,290	2,010		
SUBTOTAL			**0**	**0**	**0**	**0**	**5**	**0**	**860**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6,156**	**0**	**0**	**0**	**0**	**40,220**	**5,140**	**0**	**0**

QUANTITY SUMMARY

Texas Department of Transportation

SHEET 7 OF 11

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			22
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

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CSJ	REF #	LENGTH	0666 6030 REFL PAV MRK TY I (W) (8")(DOT) (100 MIL)	0666 6036 REFL PAV MRK TY I (W) (8")(SLD) (100 MIL)	0666 6224 PAVEMENT SEALER 4"	0666 6225 PAVEMENT SEALER 6"	0666 6226 PAVEMENT SEALER 8"	0666 6227 PAVEMENT SEALER 10"	0666 6230 PAVEMENT SEALER 24"	0666 6231 PAVEMENT SEALER (ARROW)	0666 6232 PAVEMENT SEALER (WORD)	0666 6283 REF PROF PAV MRK TY I(W) 4"(SLD) (090MIL)	0666 6285 REF PROF PAV MRK TY I(W) 6"(SLD) (090MIL)	0666 6289 REF PROF PAV MRK TY I(Y) 6"(SLD) (090MIL)	0668 6002 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6007 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6010 PREFAB PAV MRK TY B (W) (6") (BRK) CNTST	0668 6041 PREFAB PAV MRK TY B (Y) (4") (BRK)	0668 6043 PREFAB PAV MRK TY B (Y) (4") (SLD)	0668 6044 PREFAB PAV MRK TY B (Y) (4") (BRK) CNTRST	0668 6045 PREFAB PAV MRK TY B (Y) (6") (BRK)	0668 6047 PREFAB PAV MRK TY B (Y) (6") (SLD)	0668 6076 PREFAB PAV MRK TY C (W) (24") (SLD)	0668 6077 PREFAB PAV MRK TY C (W) (ARROW)	0668 6078 PREFAB PAV MRK TY C (W) (DBL ARROW)	0668 6084 PREFAB PAV MRK TY C (W) (NUMBER)
			LF	LF	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA
1214-01-019 FM 992	76	58,670										114,015														
	77	3,210																								
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**114,015**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1215-01-023 FM 992	78	2,900																					18			
	79	51,180										99,910														
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**99,910**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**18**	**0**	**0**	**0**
1226-02-026 FM 1735	80	1,860		730																			130	6		
	81	2,000		220																						
	82	2,200		590																						
	83	25,885																								
SUBTOTAL			**0**	**1,540**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**130**	**6**	**0**	**0**
1232-03-027 FM 1520	84	10,030																								
	85	790			2,570										1,580			200	790							
	86	22,010																								
	87	3,840		515																						
SUBTOTAL			**0**	**515**	**2,570**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,580**	**0**	**0**	**200**	**790**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

CSJ	REF #	LENGTH	0668 6085 PREFAB PAV MRK TY C (W) (WORD)	0668 6089 PREFAB PAV MRK TY C (W) (RR XING)	0668 6092 PREFAB PAV MRK TY C (W) (36") (YLD TRI)	0672 6007 REFL PAV MRKR TY I-C	0672 6009 REFL PAV MRKR TY II-A-A	0672 6010 REFL PAV MRKR TY II-C-R	0677 6001 ELIM EXT PAV MRK & MRKS (4")	0677 6002 ELIM EXT PAV MRK & MRKS (6")	0677 6003 ELIM EXT PAV MRK & MRKS (8")	0677 6004 ELIM EXT PAV MRK & MRKS (10")	0677 6007 ELIM EXT PAV MRK & MRKS (24")	0677 6008 ELIM EXT PAV MRK & MRKS (ARROW)	0677 6012 ELIM EXT PAV MRK & MRKS (WORD)	6056 6001 PREFORMED IN-LANE (TRANS) RUMBLE STRIP	6056 6002 PREFORMED CENTERLINE RUMBLE STRIP	6149 6001 REFL PAV MRK AWT (W) (4") (SLD) (100 MIL)	6149 6002 REFL PAV MRK AWT (W) (4") (BRK) (100 MIL)	6149 6004 REFL PAV MRK AWT (W) (6") (SLD) (100 MIL)	6149 6005 REFL PAV MRK AWT (W) (6") (BRK) (100 MIL)	6149 6007 REFL PAV MRK AWT (Y) (4") (SLD) (100 MIL)	6149 6008 REFL PAV MRK AWT (Y) (4") (BRK) (100 MIL)	6149 6010 REFL PAV MRK AWT (Y) (6") (SLD) (100 MIL)	6149 6011 REFL PAV MRK AWT (Y) (6") (BRK) (100 MIL)
			EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
1214-01-019 FM 992	76	58,670					1,326										11,734					67,170	9,730		
	77	3,210					80											6,245				6,420			
SUBTOTAL			**0**	**0**	**0**	**0**	**1,406**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11,734**	**6,245**	**0**	**0**	**0**	**73,590**	**9,730**	**0**	**0**
1215-01-023 FM 992	78	2,900					72											5,575				5,800			
	79	51,180					1,288										10,300					77,260	6,440		
SUBTOTAL			**0**	**0**	**0**	**0**	**1,360**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10,300**	**5,575**	**0**	**0**	**0**	**83,060**	**6,440**	**0**	**0**
1226-02-026 FM 1735	80	1,860	6													699	698	3,495				5,560	360		
	81	2,000														775	400	3,875				4,000			
	82	2,200														810	792	4,050				7,020	230		
	83	25,885														10,209	5,177	51,045				19,080	5,750		
SUBTOTAL			**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12,493**	**7,067**	**62,465**	**0**	**0**	**0**	**35,660**	**6,340**	**0**	**0**
1232-03-027 FM 1520	84	10,030														3,855	2,006	19,275				11,670	1,700		
	85	790					20		2,570																
	86	22,010														8,638	4,230	43,190				32,350	2,370		
	87	3,840																7,505				11,100	740		
SUBTOTAL			**0**	**0**	**0**	**0**	**20**	**0**	**2,570**	**0**	**0**	**0**	**0**	**0**	**0**	**12,493**	**6,236**	**69,970**	**0**	**0**	**0**	**55,120**	**4,810**	**0**	**0**

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QUANTITY SUMMARY

Texas Department of Transportation

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			23
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

CSJ	REF #	LENGTH	0666 6030 REFL PAV MRK TY I (W) (8")(DOT) (100 MIL)	0666 6036 REFL PAV MRK TY I (W) (8")(SLD) (100 MIL)	0666 6224 PAVEMENT SEALER 4"	0666 6225 PAVEMENT SEALER 6"	0666 6226 PAVEMENT SEALER 8"	0666 6227 PAVEMENT SEALER 10"	0666 6230 PAVEMENT SEALER 24"	0666 6231 PAVEMENT SEALER (ARROW)	0666 6232 PAVEMENT SEALER (WORD)	0666 6283 REF PROF PAV MRK TY I(W) 4"(SLD) (090MIL)	0666 6285 REF PROF PAV MRK TY I(W) 6"(SLD) (090MIL)	0666 6289 REF PROF PAV MRK TY I(Y) 6"(SLD) (090MIL)	0668 6002 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6007 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6010 PREFAB PAV MRK TY B (W) (6") (BRK) CNTST	0668 6041 PREFAB PAV MRK TY B (Y) (4") (BRK)	0668 6043 PREFAB PAV MRK TY B (Y) (4") (SLD)	0668 6044 PREFAB PAV MRK TY B (Y) (4") (BRK) CNTRST	0668 6045 PREFAB PAV MRK TY B (Y) (6") (BRK)	0668 6047 PREFAB PAV MRK TY B (Y) (6") (SLD)	0668 6076 PREFAB PAV MRK TY C (W) (24") (SLD)	0668 6077 PREFAB PAV MRK TY C (W) (ARROW)	0668 6078 PREFAB PAV MRK TY C (W) (DBL ARROW)	0668 6084 PREFAB PAV MRK TY C (W) (NUMBER)
			LF	LF	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA
1381-01-013 FM 1398	88	18,300										35,815														
	89	3,670																								
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**35,815**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1385-01-040 SH 300	90	30,790		960																				9		2
	91	460		120			120		50	2	1												50	2		
SUBTOTAL			**0**	**1,080**	**0**	**0**	**120**	**0**	**50**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**50**	**11**	**0**	**2**
1569-01-013 FM 1398	92	30,950										60,600														
	93	285			1,140										570				570							
	94	2,070										3,890														
SUBTOTAL			**0**	**0**	**1,140**	**0**	**0**	**0**	**0**	**0**	**0**	**64,490**	**0**	**0**	**570**	**0**	**0**	**0**	**570**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1571-01-017 FM 74	95	7,030		200																						
	96	5,990										11,625														
SUBTOTAL			**0**	**200**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11,625**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1572-01-024 FM 96	97	42,935										84,545														
	98	3,500																								
	99	95		80			80		53														53			
SUBTOTAL			**0**	**80**	**0**	**0**	**80**	**0**	**53**	**0**	**0**	**84,545**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**53**	**0**	**0**	**0**

CSJ	REF #	LENGTH	0668 6085 PREFAB PAV MRK TY C (W) (WORD)	0668 6089 PREFAB PAV MRK TY C (W) (RR XING)	0668 6092 PREFAB PAV MRK TY C (W) (36") (YLD TRI)	0672 6007 REFL PAV MRKR TY I-C	0672 6009 REFL PAV MRKR TY II-A-A	0672 6010 REFL PAV MRKR TY II-C-R	0677 6001 ELIM EXT PAV MRK & MRKS (4")	0677 6002 ELIM EXT PAV MRK & MRKS (6")	0677 6003 ELIM EXT PAV MRK & MRKS (8")	0677 6004 ELIM EXT PAV MRK & MRKS (10")	0677 6007 ELIM EXT PAV MRK & MRKS (24")	0677 6008 ELIM EXT PAV MRK & MRKS (ARROW)	0677 6012 ELIM EXT PAV MRK & MRKS (WORD)	6056 6001 PREFORMED IN-LANE (TRANS) RUMBLE STRIP	6056 6002 PREFORMED CENTERLINE RUMBLE STRIP	6149 6001 REFL PAV MRK AWT (W) (4") (SLD) (100 MIL)	6149 6002 REFL PAV MRK AWT (W) (4") (BRK) (100 MIL)	6149 6004 REFL PAV MRK AWT (W) (6") (SLD) (100 MIL)	6149 6005 REFL PAV MRK AWT (W) (6") (BRK) (100 MIL)	6149 6007 REFL PAV MRK AWT (Y) (4") (SLD) (100 MIL)	6149 6008 REFL PAV MRK AWT (Y) (4") (BRK) (100 MIL)	6149 6010 REFL PAV MRK AWT (Y) (6") (SLD) (100 MIL)	6149 6011 REFL PAV MRK AWT (Y) (6") (BRK) (100 MIL)
			EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
1381-01-013 FM 1398	88	18,300															3,660					14,260	3,610		
	89	3,670																7,005				4,970	340		
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3,660**	**7,005**	**0**	**0**	**0**	**19,230**	**3,950**	**0**	**0**
1385-01-040 SH 300	90	30,790	13			788	4,468									11,929	11,944	59,645	14,810			96,940	5,630		
	91	460	1			16	12				120		50	2	1				220			660	170		
SUBTOTAL			**14**	**0**	**0**	**804**	**4,480**	**0**	**0**	**0**	**120**	**0**	**50**	**2**	**1**	**11,929**	**11,944**	**59,645**	**15,030**	**0**	**0**	**97,600**	**5,800**	**0**	**0**
1569-01-013 FM 1398	92	30,950															6,190					42,050	4,240		
	93	285					8		1,140																
	94	2,070															420					2,600	400		
SUBTOTAL			**0**	**0**	**0**	**0**	**8**	**0**	**1,140**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6,610**	**0**	**0**	**0**	**0**	**44,650**	**4,640**	**0**	**0**
1571-01-017 FM 74	95	7,030																13,560				16,180	790		
	96	5,990															1,200					10,500	380		
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,200**	**13,560**	**0**	**0**	**0**	**26,680**	**1,170**	**0**	**0**
1572-01-024 FM 96	97	42,935															8,592					80,030	1,470		
	98	3,500																6,775				7,000			
	99	95					2				80		53									190			
SUBTOTAL			**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**80**	**0**	**53**	**0**	**0**	**0**	**8,592**	**6,775**	**0**	**0**	**0**	**87,220**	**1,470**	**0**	**0**

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QUANTITY SUMMARY

Texas Department of Transportation

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			24
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

CSJ	REF #	LENGTH	0666 6030 REFL PAV MRK TY I (W) (8")(DOT) (100 MIL)	0666 6036 REFL PAV MRK TY I (W) (8")(SLD) (100 MIL)	0666 6224 PAVEMENT SEALER 4"	0666 6225 PAVEMENT SEALER 6"	0666 6226 PAVEMENT SEALER 8"	0666 6227 PAVEMENT SEALER 10"	0666 6230 PAVEMENT SEALER 24"	0666 6231 PAVEMENT SEALER (ARROW)	0666 6232 PAVEMENT SEALER (WORD)	0666 6283 REF PROF PAV MRK TY I(W) 4"(SLD) (090MIL)	0666 6285 REF PROF PAV MRK TY I(W) 6"(SLD) (090MIL)	0666 6289 REF PROF PAV MRK TY I(Y) 6"(SLD) (090MIL)	0668 6002 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6007 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6010 PREFAB PAV MRK TY B (W) (6") (BRK) CNTST	0668 6041 PREFAB PAV MRK TY B (Y) (4") (BRK)	0668 6043 PREFAB PAV MRK TY B (Y) (4") (SLD)	0668 6044 PREFAB PAV MRK TY B (Y) (4") (BRK) CNTRST	0668 6045 PREFAB PAV MRK TY B (Y) (6") (BRK)	0668 6047 PREFAB PAV MRK TY B (Y) (6") (SLD)	0668 6076 PREFAB PAV MRK TY C (W) (24") (SLD)	0668 6077 PREFAB PAV MRK TY C (W) (ARROW)	0668 6078 PREFAB PAV MRK TY C (W) (DBL ARROW)	0668 6084 PREFAB PAV MRK TY C (W) (NUMBER)
			LF	LF	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA
1573-01-019 FM 130	100	41,160										81,650														
	101	280			1,120										560				560							
	102	28,500										53,860												60		
SUBTOTAL			**0**	**0**	**1,120**	**0**	**0**	**0**	**0**	**0**	**0**	**135,510**	**0**	**0**	**560**	**0**	**0**	**0**	**560**	**0**	**0**	**0**	**60**	**0**	**0**	**0**
1620-03-012 FM 1701	103	34,840										68,380												26		
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**68,380**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**26**	**0**	**0**	**0**
1759-01-013 FM 1793	104	53,330																						60		
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**60**	**0**	**0**	**0**
1762-01-004 FM 1795	105	7,560										14,320												18		
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14,320**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**18**	**0**	**0**	**0**
1896-03-019 FM 726	106	21,790																						38		
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**38**	**0**	**0**	**0**

CSJ	REF #	LENGTH	0668 6085 PREFAB PAV MRK TY C (W) (WORD)	0668 6089 PREFAB PAV MRK TY C (W) (RR XING)	0668 6092 PREFAB PAV MRK TY C (W) (36") (YLD TRI)	0672 6007 REFL PAV MRKR TY I-C	0672 6009 REFL PAV MRKR TY II-A-A	0672 6010 REFL PAV MRKR TY II-C-R	0677 6001 ELIM EXT PAV MRK & MRKS (4")	0677 6002 ELIM EXT PAV MRK & MRKS (6")	0677 6003 ELIM EXT PAV MRK & MRKS (8")	0677 6004 ELIM EXT PAV MRK & MRKS (10")	0677 6007 ELIM EXT PAV MRK & MRKS (24")	0677 6008 ELIM EXT PAV MRK & MRKS (ARROW)	0677 6012 ELIM EXT PAV MRK & MRKS (WORD)	6056 6001 PREFORMED IN-LANE (TRANS) RUMBLE STRIP	6056 6002 PREFORMED CENTERLINE RUMBLE STRIP	6149 6001 REFL PAV MRK AWT (W) (4") (SLD) (100 MIL)	6149 6002 REFL PAV MRK AWT (W) (4") (BRK) (100 MIL)	6149 6004 REFL PAV MRK AWT (W) (6") (SLD) (100 MIL)	6149 6005 REFL PAV MRK AWT (W) (6") (BRK) (100 MIL)	6149 6007 REFL PAV MRK AWT (Y) (4") (SLD) (100 MIL)	6149 6008 REFL PAV MRK AWT (Y) (4") (BRK) (100 MIL)	6149 6010 REFL PAV MRK AWT (Y) (6") (SLD) (100 MIL)	6149 6011 REFL PAV MRK AWT (Y) (6") (BRK) (100 MIL)
			EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
1573-01-019 FM 130	100	41,160					984										8,232					56,750	5,480		
	101	280					8		1,120																
	102	28,500					698										5,496					34,090	5,410		
SUBTOTAL			**0**	**0**	**0**	**0**	**1,690**	**0**	**1,120**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**13,728**	**0**	**0**	**0**	**0**	**90,840**	**10,890**	**0**	**0**
1620-03-012 FM 1701	103	34,840					788										6,978					32,090	7,740		
SUBTOTAL			**0**	**0**	**0**	**0**	**788**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6,978**	**0**	**0**	**0**	**0**	**32,090**	**7,740**	**0**	**0**
1759-01-013 FM 1793	104	53,330					1,334									20,992	10,674	104,960				82,190	6,140		
SUBTOTAL			**0**	**0**	**0**	**0**	**1,334**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20,992**	**10,674**	**104,960**	**0**	**0**	**0**	**82,190**	**6,140**	**0**	**0**
1762-01-004 FM 1795	105	7,560					194										1,546					14,090	340		
SUBTOTAL			**0**	**0**	**0**	**0**	**194**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,546**	**0**	**0**	**0**	**0**	**14,090**	**340**	**0**	**0**
1896-03-019 FM 726	106	21,790					546									8,516	4,364	42,580				34,460	2,300		
SUBTOTAL			**0**	**0**	**0**	**0**	**546**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8,516**	**4,364**	**42,580**	**0**	**0**	**0**	**34,460**	**2,300**	**0**	**0**

QUANTITY SUMMARY

Texas Department of Transportation

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			25
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

CSJ	REF #	LENGTH	0666 6030 REFL PAV MRK TY I (W) (8")(DOT) (100 MIL)	0666 6036 REFL PAV MRK TY I (W) (8")(SLD) (100 MIL)	0666 6224 PAVEMENT SEALER 4"	0666 6225 PAVEMENT SEALER 6"	0666 6226 PAVEMENT SEALER 8"	0666 6227 PAVEMENT SEALER 10"	0666 6230 PAVEMENT SEALER 24"	0666 6231 PAVEMENT SEALER (ARROW)	0666 6232 PAVEMENT SEALER (WORD)	0666 6283 REF PROF PAV MRK TY I(W) 4"(SLD) (090MIL)	0666 6285 REF PROF PAV MRK TY I(W) 6"(SLD) (090MIL)	0666 6289 REF PROF PAV MRK TY I(Y) 6"(SLD) (090MIL)	0668 6002 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6007 PREFAB PAV MRK TY B (W) (4") (SLD)	0668 6010 PREFAB PAV MRK TY B (W) (6") (BRK) CNTST	0668 6041 PREFAB PAV MRK TY B (Y) (4") (BRK)	0668 6043 PREFAB PAV MRK TY B (Y) (4") (SLD)	0668 6044 PREFAB PAV MRK TY B (Y) (4") (BRK) CNTRST	0668 6045 PREFAB PAV MRK TY B (Y) (6") (BRK)	0668 6047 PREFAB PAV MRK TY B (Y) (6") (SLD)	0668 6076 PREFAB PAV MRK TY C (W) (24") (SLD)	0668 6077 PREFAB PAV MRK TY C (W) (ARROW)	0668 6078 PREFAB PAV MRK TY C (W) (DBL ARROW)	0668 6084 PREFAB PAV MRK TY C (W) (NUMBER)
			LF	LF	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA
1957-01-010 FM 1766	107	35,010										68,520												20			
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**68,520**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	**0**	**0**	**0**
2157-01-021 FM 2685	108	34,790		190								68,680												25			
SUBTOTAL			**0**	**190**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**68,680**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	**0**	**0**	**0**
2526-01-010 SH 98	109	180		130			130		43	2	2													43	2		
	110	13,250		260								25,425															1
SUBTOTAL			**0**	**390**	**0**	**0**	**130**	**0**	**43**	**2**	**2**	**25,425**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**43**	**2**	**0**	**1**
2685-01-011 FM 2683	111	31,220										62,040															
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**62,040**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
PROJECT TOTAL			**340**	**21,505**	**10,050**	**9,640**	**585**	**1,090**	**236**	**4**	**3**	**1,246,695**	**72,380**	**73,080**	**6,220**	**4,340**	**1,090**	**390**	**3,440**	**170**	**960**	**4,340**	**2,741**	**83**	**3**	**7**

CSJ	REF #	LENGTH	0668 6085 PREFAB PAV MRK TY C (W) (WORD)	0668 6089 PREFAB PAV MRK TY C (W) (RR XING)	0668 6092 PREFAB PAV MRK TY C (W) (36") (YLD TRI)	0672 6007 REFL PAV MRKR TY I-C	0672 6009 REFL PAV MRKR TY II-A-A	0672 6010 REFL PAV MRKR TY II-C-R	0677 6001 ELIM EXT PAV MRK & MRKS (4")	0677 6002 ELIM EXT PAV MRK & MRKS (6")	0677 6003 ELIM EXT PAV MRK & MRKS (8")	0677 6004 ELIM EXT PAV MRK & MRKS (10")	0677 6007 ELIM EXT PAV MRK & MRKS (24")	0677 6008 ELIM EXT PAV MRK & MRKS (ARROW)	0677 6012 ELIM EXT PAV MRK & MRKS (WORD)	6056 6001 PREFORMED IN-LANE (TRANS) RUMBLE STRIP	6056 6002 PREFORMED CENTERLINE RUMBLE STRIP	6149 6001 REFL PAV MRK AWT (W) (4") (SLD) (100 MIL)	6149 6002 REFL PAV MRK AWT (W) (4") (BRK) (100 MIL)	6149 6004 REFL PAV MRK AWT (W) (6") (SLD) (100 MIL)	6149 6005 REFL PAV MRK AWT (W) (6") (BRK) (100 MIL)	6149 6007 REFL PAV MRK AWT (Y) (4") (SLD) (100 MIL)	6149 6008 REFL PAV MRK AWT (Y) (4") (BRK) (100 MIL)	6149 6010 REFL PAV MRK AWT (Y) (6") (SLD) (100 MIL)	6149 6011 REFL PAV MRK AWT (Y) (6") (BRK) (100 MIL)
			EA	EA	EA	EA	EA	EA	LF	LF	LF	LF	LF	EA	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
1957-01-010 FM 1766	107	35,010					878										7,018					57,680	3,130		
SUBTOTAL			**0**	**0**	**0**	**0**	**878**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7,018**	**0**	**0**	**0**	**0**	**57,680**	**3,130**	**0**	**0**
2157-01-021 FM 2685	108	34,790	2			10	860										6,884					47,650	5,300		
SUBTOTAL			**2**	**0**	**0**	**10**	**860**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6,884**	**0**	**0**	**0**	**0**	**47,650**	**5,300**	**0**	**0**
2526-01-010 SH 98	109	180	2			6	4				130		43	2	2			360				360			
	110	13,250	1			14	188										2,630					2,420	3,160		
SUBTOTAL			**3**	**0**	**0**	**20**	**192**	**0**	**0**	**0**	**130**	**0**	**43**	**2**	**2**	**0**	**2,630**	**360**	**0**	**0**	**0**	**2,780**	**3,160**	**0**	**0**
2685-01-011 FM 2683	111	31,220															6,446					35,990	7,120		
SUBTOTAL			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6,446**	**0**	**0**	**0**	**0**	**35,990**	**7,120**	**0**	**0**
PROJECT TOTAL			**101**	**6**	**698**	**3,891**	**29,673**	**1,160**	**10,150**	**9,640**	**485**	**1,090**	**236**	**4**	**3**	**276,285**	**286,160**	**1,325,640**	**25,790**	**167,575**	**47,640**	**1,918,172**	**183,510**	**183,630**	**12,970**

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QUANTITY SUMMARY

Texas Department of Transportation
SHEET 11 OF 11

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.	SHEET NO.
		26

STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0010-12-074 US 67 ADT: 7199	1	13,795	FM 2149	START OF TURN LANE W OF FM 3098		2 LANE UNDIVIDED W/ 8 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS
	2	1,220	START OF TURN LANE W OF FM 3098	50 MPH SIGN	TURN LANE 1 ARROW 1 ONLY	2 LANE UNDIVIDED W/ 8 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PERFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING, REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC (W)(WORD), PREFAB PAV MRK TYC (W)(ARROW)
	3	5,170	50 MPH SIGN	1,300' E OF 60 MPH SIGN	NO RUMBLE BARS TURN LANE 6 ARROW 2 ONLY 2 RXR	2 LANE UNDIVIDED W/ 3 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYC (W)(WORD), PREFAB PAV MRK TYC (W)(RXR), PREFAB PAV MRK TYC (W)(ARROW), PREFAB PAV MRK TYC(W)(24")(SLD), REFL PAV MRK TYI (W)(8")(SLD)
	4	4,810	60 MPH SIGN	1.367 MI. E. OF FM 991		2 LANE UNDIVIDED W/ 8 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0010-13-096 US 67 ADT: 7004	5	20,845	1.367 MI. E. OF FM 991	FM 2148		2 LANE UNDIVIDED W/ 10 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0046-05-051 US 82 ADT: 5190	6	6,700	SS 86	START OF TURN LANE	1 ARROW 1 ONLY	2 LANE UNDIVIDED W/ 3 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), REFL PAV MRK TYC(W)(24")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, AWT(W)(4")(BRK), PREFAB PAV MRK TYC(W)(ARROW), PREFAB PAV MRK TYC(W)(WORD), REFL PAV MRK TYI (W)(8")(SLD),
	7	5,600	START OF TURN LANE	45 MPH SIGN	TURN LANE	2 LANE UNDIVIDED W/ 3 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (W)(4")(SLD), PERFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING, REFL PAV MRK TYC(24")(W)(SLD), AWT(Y)(4")(BRK), RAISED REFLECTIVE PAVEMENT MARKERS
	8	7,280	45 MPH SIGN	50 MPH SIGN	NO RUMBLE BARS TURN LANE 2 ARROW 2 ONLY	2 LANE UNDIVIDED W/ 3 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (W)(4")(SLD), REFL PAV MRK TYI (W)(8")(SLD), REFL PAV MRK TYC(24")(W)(SLD), REFL PAV MRK TYC(W)(ARROW), AWT(Y)(4")(BRK), RAISED REFLECTIVE PAVEMENT MARKERS, AWT(W)(4")(BRK), PREFAB PAV MRK TYC(W)(WORD)
	9	3,840	50 MPH SIGN	FM 1398	TURN LANE 1 ARROW 1 ONLY	2 LANE UNDIVIDED W/ 3 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (W)(4")(SLD), PERFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING, REFL PAV MRK TYI (W)(8")(SLD), REFL PAVMRK TYC(W)(ARROW), AWT(Y)(4")(BRK), RAISED REFLECTIVE PAVEMENT MARKERS, AWT(W)(4")(BRK), REFL PAVMRK TYC(W)(WORD),

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0083-07-047 SH 11 ADT: 5018	10	18,338	FM 21	SL 179	5 ARROW 5 ONLY	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PERFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING, REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC (W)(WORD), PREFAB PAV MRK TYC (W)(ARROW)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0083-09-036 SH 11 ADT: 3580	11	23,126	CAMP C/L	MORRIS C/L	2 ARROW 2 ONLY 2 RXR	2 LANE UNDIVIDED W/ 4 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PERFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING, REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC (W)(WORD), PREFAB PAV MRK TYC (W)(ARROW), PREFAB PAV MRK TYC (W)(RXR), PREFAB PAV MRK TYC (W)(24')(SLD),

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0096-07-051 US 80 ADT: 15,088	12	3,920	FM 450	DIVIDED	1 RIGHT ARROW 1 STRAIGHT ARROW 1 LEFT STRAIGHT DBL ARROW 3 ONLY NO RUMBLE BARS	4 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	AWT (Y)(6")(SLD), AWT (W)(6")(BRK), AWT (W)(6")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC (W)(WORD), PREFAB PAV MRK TYC (W)(ARROW), PREFAB PAV MRK TYC (W)(24')(SLD),
	13	35,090	DIVIDED	UNDIVIDED	15 ARROW, 15 ONLY 6 SIGNAL AHEAD, 4 MPH, 4 50	4 LANE DIVIDED W/ <1 FT SHOULDERS - SEAL COAT	AWT (W)(6")(BRK), RAISED REFLECTIVE PAVEMENT MARKERS, REFL PAV MRK TYI (W)(8")(DOT)REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC (W)(WORD), PREFAB PAV MRK TYC (W)(ARROW), PREFAB PAV MRK TYC (W)(24')(SLD), PREFAB PAV MRK TYC (W)(NUMBER), PREFAB PAV MRK TYC (W)(YLD TRI), REF PROF PAV MRK TYI(W)(6")(SLD), REF PROF PAV MRK TYI(Y)(6")(SLD)
	14	1,100	UNDIVIDED	GREGG C/L	AUDIBLE EDGELINE ONLY	4 LANE UNDIVIDED W/<1 FT SHOULDERS - SEAL COAT	AWT (Y)(6")(SLD), AWT (W)(6")(BRK), RAISED REFLECTIVE PAVEMENT MARKERS, REF PROF PAV MRK TYI(W)(6")(SLD), PERFORMED CENTERLINE RUMBLE AT 5' SPACING

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0208-02-048 SH 43 ADT: 1612	15	10,750	SP 449	FM 2682		2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS

PAVEMENT MARKING DESCRIPTIONS

Texas Department of Transportation

SHEET 1 OF 7

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			27
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0217-01-035 US 59 ADT: 13,838	16	20,660	ARK S/L	1.524 MI N OF IH 30	SOUTHBOUND SIDE	4 LANE DIVIDED W/ 5 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(6")(SLD), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(6")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC (W)(24")(SLD), AWT (W)(BRK)(6"), PREFAB PAV MRK TYC(W)(YLD TRI)
	17	17,900	ARK S/L	1.524 MI N OF IH 30	NORTHBOUND SIDE	4 LANE DIVIDED W/ 5 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(6")(SLD), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(6")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC (W)(24")(SLD), AWT (W)(BRK)(6"), PREFAB PAV MRK TYC(W)(YLD TRI)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0218-05-034 SH 11 ADT: 1656	18	13,530	FM 130	2.568 MI N OF FM 130		2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0218-06-028 SH 11 ADT: 2388	19	37,010	SH 49	2.568 MI N OF FM 130	1 RIGHT ARROW 2 LEFT STRAIGHT DBL ARROW 2 ONLY	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC (W)(WORD), PREFAB PAV MRK TYC (W)(ARROW), PREFAB PAV MRK TYC (W)(24')(SLD), PREFAB PAV MRK TYC (W)(DBL ARROW)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0222-03-061 SH 11 ADT: 6205	20	2,240	1.545 MI W OF CASS C/L	TURN LANE	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 1 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (W)(4")(SLD), REFL PAV MRK TYI (W)(8")(SLD), AWT(W)(4")(BRK), PERFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING,
	21	5,850	TURN LANE	CASS C/L	FOLLOWING SEAL COAT TURN LANE	2 LANE UNDIVIDED W/ 1 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")BRK), PERFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING, AWT(W)(4")(SLD), AWT(W)(4")(BRK)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0223-01-035 SH 49 ADT: 1310	22	3,140	FM 134	50 MPH SIGN	NO RUMBLE BARS FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 1 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD),
	23	7,360	50 MPH SIGN	CONCRETE BRIDGE	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 3 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING
	24	275	CONCRETE BRIDGE	END OF CONCRETE	CONCRETE NO RUMBLE BARS	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - CONCRETE BRIDGE	ELIM EXT PAV MARK 4", PAVEMENT SEALER 4", RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYB(W)(4")(SLD), PREFAB PAV MRK TYB(Y)(4")(SLD),
	25	1,180	END OF CONCRETE	CONCRETE BRIDGE	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING
	26	120	CONCRETE BRIDGE	END OF CONCRETE	CONCRETE NO RUMBLE BARS	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - CONCRETE BRIDGE	ELIM EXT PAV MARK 4", PAVEMENT SEALER 4", RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYB(W)(4")(SLD), PREFAB PAV MRK TYB(Y)(4")(SLD),
	27	50,500	END OF CONCRETE	0.629 MI W OF SH 43	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 7 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING,

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0223-02-031 SH 49 ADT: 770	28	3,290	0.629 MI W OF SH 43	SH 43	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 1-2 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(BRK),

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0248-04-078 US 271 ADT: 10,185	29	23,200	5.9 MI N OF SH 155	1.5 MI N OF SH 155	1 ARROW TURN LANE 1 ONLY 8 SETS OF IN-LANE RUMBLE BARS*	4 LANE UNDIVIDED W/ 5 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(6")(SLD), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(6")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC (W)(WORD), AWT (W)(BRK)(6"), PREFAB PAV MRK TYC(W)(ARROW), AWT (Y)(6")(BRK),

* 1 SET OF IN-LANE RUMBLE BARS = 40LF

PAVEMENT MARKING DESCRIPTIONS

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			28
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

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CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0277-01-031 SH 77 ADT: 958	30	5,152	US 259	START OF 4 LANE	2 STOP 1 AHEAD	2 LANE UNDIVIDED W/ 10 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING, PREFAB PAV MRK TYC (W)(WORD), PREFAB PAV MRK TYC (W)(24")(SLD), PAV MRK TYI (W)(8")(SLD), RAISED REFLECTIVE PAV MRKS
	31	3,002	START OF 4 LANE	END OF 4 LANE		4 LANE UNDIVIDED W/ 10 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD), PREFORMED CENTERLINE RUMBLE AT 5'SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING, RAISED REFLECTIVE PAVEMENT MARKERS, AWT (W)(4")(BRK)
	32	3,032	END OF 4 LANE	START OF 4 LANE		2 LANE UNDIVIDED W/ 10 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD), PREFORMED CENTERLINE RUMBLE AT 5'SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING, RAISED REFLECTIVE PAVEMENT MARKERS
	33	1,312	START OF 4 LANE	END OF 4 LANE		4 LANE UNDIVIDED W/ 10 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD), PREFORMED CENTERLINE RUMBLE AT 5'SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING, RAISED REFLECTIVE PAVEMENT MARKERS, AWT (W)(4")(BRK)
	34	3,092	END OF 4 LANE	START OF 4 LANE		2 LANE UNDIVIDED W/ 10 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD), PREFORMED CENTERLINE RUMBLE AT 5'SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING, RAISED REFLECTIVE PAVEMENT MARKERS
	35	8,292	START OF 4 LANE	END OF 4 LANE	2 ARROW 2 ONLY	4 LANE UNDIVIDED W/ 10 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC (W)(WORD), PREFAB PAV MRK TYC (W)(ARROW), AWT (W)(BRK)(4")
	36	5,362	END OF 4 LANE	START OF 4 LANE	1 ARROW 1 ONLY	2 LANE UNDIVIDED W/ 10 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC (W)(WORD), PREFAB PAV MRK TYC (W)(ARROW), PREFAB PAV MRK TYC(W)(YLD TRI)
	37	2,392	START OF 4 LANE	CASS COUNTY LINE		4 LANE UNDIVIDED W/ 1 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (W)(4")(SLD), PREFORMED CENTERLINE RUMBLE AT 5'SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING, RAISED REFLECTIVE PAVEMENT MARKERS, AWT (W)(4")(BRK)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0330-02-020 FM 44 ADT: 204	38	40,830	RED RIVER COUNTY LINE	FM 992	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), REF PROF PAV MRK TYI (W)(4")(SLD),

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0424-06-007 FM 348 ADT: 207	39	22,450	SH 315	RUSK COUNTY LINE	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD),

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0520-02-063 SH 155 ADT: 6701	40	720	FM 1404	START OF 2 LANE	TURN LANE 2 ARROW 2 ONLY	2 LANE UNDIVIDED W/ 3 FT SHOULDERS - SEAL COAT	AWT (Y)(6")(SLD), AWT (W)(6")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYC (W)(ARROW), PREFAB PAV MRK TYC (W)(WORD), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING, PAV MRK TYI (W)(8")(SLD), PAV MRK TYI (W)(8")(DOT)
	41	17,200	START OF 2 LANE	START OF 4 LANE		2 LANE UNDIVIDED W/ 8 FT SHOULDERS - SEAL COAT	AWT (Y)(6")(SLD), AWT (W)(6")(SLD), AWT (Y)(6")(BRK) RAISED REFLECTIVE PAVEMENT MARKERS, PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING.
	42	2,210	START OF 4 LANE	CONCRETE BRIDGE		4 LANE UNDIVIDED W/ 8 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(6")(SLD), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(6")(SLD), AWT (W)(6")(BRK), RAISED REFLECTIVE PAVEMENT MARKERS
	43	260	CONCRETE BRIDGE	END OF CONCRETE BRIDGE	NO RUMBLE BARS CONCRETE BRIDGE	4 LANE UNDIVIDED W/ 8 FT SHOULDERS - CONCRETE BRIDGE	ELIM EXT PAV MARK 6", PREFAB PAV MRK TYB(Y)(6")(SLD), PREFAB PAV MRK TYB(W)(6")(BRK)CNTST, PREFAB PAV MRKTYB(W)(6")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PAVEMENT SEALER 6", PAVEMENT SEALER 10", ELIM EXT PAV MARK 10"
	44	1,160	END OF CONCRETE BRIDGE	START OF 2 LANE		4 LANE UNDIVIDED W/ 8 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(6")(SLD), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(6")(SLD), AWT (W)(6")(BRK), RAISED REFLECTIVE PAVEMENT MARKERS
	45	6,100	START OF 2 LANE	START OF 4 LANE		2 LANE UNDIVIDED W/ 3 FT SHOULDERS - SEAL COAT	AWT (Y)(6")(SLD), AWT (W)(6")(SLD), AWT (Y)(6")(BRK) RAISED REFLECTIVE PAVEMENT MARKERS, PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING.
	46	9,500	START OF 4 LANE	START OF 2 LANE	10 ARROW 2 ONLY	4 LANE UNDIVIDED W/ 5 FT SHOULDERS - SEAL COAT	AWT (Y)(6")(SLD), AWT (W)(6")(SLD), AWT (W)(6")(BRK), RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYC (W)(ARROW), PREFAB PAV MRK TYC (W)(WORD), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING, AWT(Y)(6")(BRK), PAV MRK TYI (W)(8")(SLD),
	47	3,570	START OF 2 LANE	45 MPH SIGN		2 LANE UNDIVIDED W/ 5 FT SHOULDERS - SEAL COAT	AWT (Y)(6")(SLD), AWT (W)(6")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5' SPACING.
	48	1,120	45 MPH SIGN	START OF CONCRETE	NO RUMBLE BARS	2 LANE UNDIVIDED W/ 1 FT SHOULDERS - SEAL COAT	AWT (Y)(6)(SLD), AWT (W)(6)(SLD), RAISED REFLECTIVE PAVEMENT MARKERS,
	49	120	START OF CONCRETE	US 80	CONCRETE CURB NO RUMBLE BARS CONCRETE	2 LANE UNDIVIDED W/ 1 FT SHOULDERS - CONCRETE	RAISED REFLECTIVE PAVEMENT MARKERS, AWT (Y)(6")(SLD), ELIM EXT PAV MARK 8", ELIM EXT PAV MARK 24", PAVEMENT SEALER 24", PAV MRK TYI(W)(8")(SLD), PREFAB PAV MRK TYC(W)(24")(SLD), PAVEMENT SEALER 8"

PAVEMENT MARKING DESCRIPTIONS

 Texas Department of Transportation

SHEET 3 OF 7

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			29
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0520-02-064 SH 155 ADT: 7299	50	280	US 80	START OF CONCRETE	NO RUMBLE BARS	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	AWT (Y)(6")(SLD), AWT (W)(6")(SLD), RAISED REFLECTIVE PAVEMENT MARKINGS, PREFAB PAV MRK TYC(W)(24")(SLD), REFL PAV MRK TYI(W)(8")(SLD), PREFAB PAV MRK TYC(W)(YLD TRI), AWT(W)(6")(BRK)
	51	320	START OF CONCRETE	START OF SEAL COAT	CONCRETE BRIDGE NO RUMBLE BARS	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - CONCRETE BRIDGE	ELIM EXT PAV MARK 6", PAVEMENT SEALER 6", PAVEMENT SEALER 10", RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYB(W)(6")(SLD), PREFAB PAV MRK TYB(Y)(6")(BRK), PREFAB PAV MRK TYB(Y)(6")(SLD), PREFAB PAV MRK TYB(W)(6")(BRK)CNTST, ELIM EXT PAV MARK 10"
	52	8,150	START OF SEAL COAT	START OF CONCRETE	TURN LANE	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(6")(SLD), AWT (Y)(6")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(6")(SLD), AWT (W)(6")(BRK), RAISED REFLECTIVE PAVEMENT MARKERS
	53	1,590	START OF CONCRETE	SMITH COUNTY LINE	CONCRETE BRIDGE NO RUMBLE BARS	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - CONCRETE BRIDGE	ELIM EXT PAV MARK 6", PAVEMENT SEALER 6", RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYB(W)(6")(SLD), PREFAB PAV MRK TYB(Y)(6")(BRK), PREFAB PAV MRK TYB(Y)(6")(SLD), PREFAB PAV MRK TYB(W)(6")(BRK) CNTST, PAVEMENT SEALER 10", ELIM EXT PAV MARK 10"

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0569-04-023 SH 43	54	14,600	MARION COUNTY LINE	SP 449	7 ARROW 7 ONLY	4 LANE UNDIVIDED W/ 5 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC (W)(WORD), AWT (W)(BRK)(4"), PREFAB PAV MRK TYC(W)(ARROW), AWT (Y)(4")(BRK)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0632-02-031 FM 134 ADT: 870	55	330	MARION C/L	START OF CONCRETE		2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS
	56	250	START OF CONCRETE	END OF CONCRETE	CONCRETE BRIDGE NO RUMBLE BARS	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - CONCRETE BRIDGE	ELIM EXT PAV MARK 4", PAVEMENT SEALER 4", PREFAB PAV MRK TYB(W)(4")(SLD), PREFAB PAV MRK TYB(Y)(4")(BRK)CNTST, RAISED REFLECTIVE PAVEMENT MARKERS, PAVEMENT SEALER 8"
	57	29,260	END OF CONCRETE	START OF CONCRETE	2 RXR	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), PREFAB PAV MRK TYC(W)(RR XING), PREFAB PAV MRK TYC(W)(24")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS
	58	320	START OF CONCRETE	END OF CONCRETE	CONCRETE BRIDGE NO RUMBLE BARS	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - CONCRETE BRIDGE	ELIM EXT PAV MARK 4", PAVEMENT SEALER 4", PREFAB PAV MRK TYB(W)(4")(SLD), PREFAB PAV MRK TYB(Y)(4")(SLD), PREFAB PAV MRK TYB(Y)(4")(BRK), RAISED REFLECTIVE PAVEMENT MARKERS
	59	12,750	END OF CONCRETE	SH 43		2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), PREFAB PAV MRK TYC(W)(24")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0632-03-050 FM 134 ADT: 1185	60	19,840	SP 449	START OF CONCRETE	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD),
	61	210	START OF CONCRETE	END OF CONCRETE	NO RUMBLE BARS CONCRETE BRIDGE	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - CONCRETE BRIDGE	ELIM EXT PAV MARK 4", PAVEMENT SEALER 4", PREFAB PAV MRK TYB(W)(4")(SLD), PREFAB PAV MRK TYB(Y)(4")(SLD), PREFAB PAV MRK TYB(Y)(4")(BRK), RAISED REFLECTIVE PAVEMENT MARKERS
	62	740	END OF CONCRETE	START OF CONCRETE	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD),
	63	200	START OF CONCRETE	END OF CONCRETE	CONCRETE BRIDGE NO RUMBLE BARS	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - CONCRETE BRIDGE	ELIM EXT PAV MARK 4", PAVEMENT SEALER 4", PREFAB PAV MRK TYB(W)(4")(SLD), PREFAB PAV MRK TYB(Y)(4")(SLD), PREFAB PAV MRK TYB(Y)(4")(BRK), RAISED REFLECTIVE PAVEMENT MARKERS
	64	5,600	END OF CONCRETE	FM 1999	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD),

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0633-03-015 FM 21 ADT: 1655	65	18,920	TITUS C/L	SH 11	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")BRK), AWT(W)(4")(SLD), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE RUMBLE AT 5' SPACING

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0812-01-038 FM 251 ADT: 1345	66	8,780	FM 785	800' S OF SH 77	5 ARROW 5 ONLY 1 STOP NO RUMBLE BARS	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC (W)(24")(SLD), AWT (W)(BRK)(4"), PREFAB PAV MRK TYC(W)(ARROW), PREFAB PAV MRK TYC(W)(WORD), AWT(Y)(4")(BRK)
	67	69,060	800' S OF SH 77	FM 125		2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), REF PROF PAV MRK TYI (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYC (W)(24")(SLD), AWT(Y)(4")(BRK)

* 1 SET OF IN-LANE RUMBLE BARS = 40LF

PAVEMENT MARKING DESCRIPTIONS

Texas Department of Transportation

SHEET 4 OF 7

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			30

STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

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DATE: 5/5/2021 11:41:00 AM

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0843-02-028 FM 450 ADT: 2695	68	36,335	FM 449	45 MPH SIGN	1 STOP AHEAD FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	AWT(Y)(4")(BRK), AWT (W)(4")(SLD), PREFAB PAV MRK TYC(W)(24")(SLD), PREFAB PAV MRK TYC(W)(WORD), PREFORMED CENTERLINE RUMBLE AT 5′ SPACING, PREFORMED IN-LANE(TRANS) RUMBLE AT 5′ SPACING, AWT(Y)(4")(SLD)
	69	4,740	45 MPH SIGN	US 80	NO RUMBLE BARS FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT(W)(4")(SLD), PREFAB PAV MRK TYC(W)(24")(SLD)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0843-08-012 FM 2625 ADT: 1418	70	34,636	US 59	FM 31		2 LANE UNDIVIDED W/ 1 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5′ SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5′ SPACING, AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYC(W)(24")(SLD)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
0964-02-034 FM 2088 ADT:504	71	26,495	FM 556	WOOD COUNTY LINE		2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5′ SPACING, AWT (Y)(4")(SLD), REF PROF PAV MRK TYI (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, AWT (Y)(4")(BRK)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1018-01-032 FM 1795 ADT:666	72	32,970	FM 49	FM 1002		2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5′ SPACING, AWT (Y)(4")(SLD), REF PROF PAV MRK TYI (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYC(W)(24")(SLD)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1019-01-033 FM 556 ADT:978	73	18,760	FM 1519	CONCRETE BRIDGE	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	REF PROF PAV MRK TYI (W)(4")(SLD), AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED CENTERLINE RUMBLE AT 5′ SPACING
	74	380	CONCRETE BRIDGE	END OF CONCRETE BRIDGE	CONCRETE BRIDGE NO RUMBLE BARS	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - CONCRETE BRIDGE	ELIM EXT PAV MARK 4", PAVEMENT SEALER 8", RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYB(W)(4")(SLD), PAVEMENT SEALER 4", PREFAB PAV MRK TYB(Y)(4")(BRK)(CNTST)
	75	12,060	END OF CONCRETE BRIDGE	UPSHUR COUNTY LINE	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	REF PROF PAV MRK TYI (W)(4")(SLD), AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED CENTERLINE RUMBLE AT 5′ SPACING

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1214-01-019 FM 992 ADT:327	76	58,670	11.7 MI N OF US 82	45 MPH SIGN		2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5′ SPACING, AWT (Y)(4")(SLD), REF PROF PAV MRK TYI (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, AWT(Y)(4")(BRK)
	77	3,210	45 MPH SIGN	US 82	NO RUMBLE BARS	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS,

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1215-01-023 FM 992 ADT:376	78	2,900	US 82	50 MPH SIGN	NO RUMBLE BARS	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	AWT(Y)(4")(BRK), AWT (W)(4")(SLD), PREFAB PAV MRK TYC(W)(24")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS
	79	51,180	50 MPH SIGN	THREE SIDES RD		2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT(Y)(4")(BRK), PREFORMED CENTERLINE RUMBLE AT 5′ SPACING, REF PAV PROF PAV MRK TYI (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1226-02-026 FM 1735 ADT:1317	80	1,860	2.1 MI S OF SH 49	END OF TURN LANE	6 ARROW TURN LANE 6 ONLY FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 8 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5′ SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5′ SPACING, AWT (W)(4")(SLD), REFL PAV MRK TYI(W)(8")(SLD), PREFAB PAV MRK TYC(W)(WORD), PREFAB PAV MRK TYC(W)(ARROW), PREFAB PAV MRK TYC(W)(24")(SLD)
	81	2,000	END OF TURN LANE	START OF TURN LANE	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 8 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (W)(4")(SLD), PERFORMED CENTERLINE RUMBLE AT 5′ SPACING, PREFORMED IN-LANE(TRANS)RUMBLE AT 5′ SPACING, REFL PAV MRK TYI (W)(8")(SLD)
	82	2,200	START OF TURN LANE	END OF TURN LANE	TURN LANE FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 3 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5′ SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5′ SPACING, AWT (W)(4")(SLD), REFL PAV MRK TYI(W)(8")(SLD)
	83	25,885	END OF TURN LANE	SH 11	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 8 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5′ SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5′ SPACING, AWT (W)(4")(SLD),

* 1 SET OF IN-LANE RUMBLE BARS = 40LF

PAVEMENT MARKING DESCRIPTIONS

SHEET 5 OF 7

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			31
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1232-03-027 FM 1520 ADT: 1205	84	10,030	FM 1521	START OF CONCRETE	TURN LANE FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD),
	85	790	START OF CONCRETE	END OF CONCRETE	CONCRETE BRIDGE NO RUMBLE BARS	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - CONCRETE BRIDGE	ELIM EXT PAV MARK 4", PAVEMENT SEALER 4", RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYB(W)(4")(SLD), PREFAB PAV MRK TYB(Y)(4")(BRK), PREFAB PAV MRK TYB(Y)(4")(SLD),
	86	22,010	END OF CONCRETE	LP 179	TURN LANE FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD),
	87	3,840	LP 179	SH 11	NO RUMBLE BARS FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), AWT (W)(4")(SLD), REFL PAV MRK TYI(W)(8")(SLD)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1381-01-013 FM 1398 ADT: 754	88	18,300	4.2 MI N OF US 82	45 MPH SIGN	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT(Y)(4")(BRK), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, REF PAV PROF PAV MRK TYI (W)(4")(SLD)
	89	3,670	45 MPH SIGN	US 82	NO RUMBLE BARS FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT(Y)(4")(BRK), AWT (W)(4")(SLD)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1385-01-040 SH 300 ADT: 10,489	90	30,790	FM 3358	START OF CONCRETE	9 ARROW 7 ONLY 2 SIGNAL AHEAD 2 55 2 MPH	4 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC (W)(NUMBER), AWT (W)(BRK)(4"), PREFAB PAV MRK TYC(W)(ARROW), PREFAB PAV MRK TYC(W)(WORD), AWT (Y)(4")(BRK) PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFORMED IN-LANE (TRANS) RUMBLE AT 5' SPACING
	91	460	START OF CONCRETE	GREGG COUNTY LINE	CONCRETE CONCRETE CURB NO EDGELINE NO RUMBLE BARS 2 ARROW 1 ONLY	4 LANE UNDIVIDED W/ 2 FT SHOULDERS - CONCRETE	AWT (Y)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PAVEMENT SEALER 8", AWT (Y)(4")(BRK), REFL PAV MRK TYI (W)(8")(SLD), PAVEMENT SEALER 24", PAVEMENT SEALER(ARROW), PAVEMENT SEALER(WORD), ELIM EXT PAV MARK 24", ELIM EXT PAV MARK(ARROW), ELIM EXT PAV MARK(WORD), PREFAB PAV MRK TYC(W)(24")(SLD), PREFAB PAV MRK TYC(WORD), PREFAB PAV MRK TYC(ARROW), ELIM EXT PAV MARK 8", AWT(W)(4")(BRK)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1569-01-013 FM 1398 ADT: 745	92	30,950	US 82	CONCRETE BRIDGE	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	REF PROF PAV MRK TYI (W)(4")(SLD), AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED CENTERLINE RUMBLE AT 5' SPACING
	93	285	CONCRETE BRIDGE	END OF CONCRETE BRIDGE	NO RUMBLE BARS CONCRETE BRIDGE	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - CONCRETE BRIDGE	ELIM EXT PAV MARK 4", PAVEMENT SEALER 4", RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYB(W)(4")(SLD), PREFAB PAV MRK TYB(Y)(4")(SLD)
	94	2,070	END OF CONCRETE BRIDGE	6.3 MI N OF US 82	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	REF PROF PAV MRK TYI (W)(4")(SLD), AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED CENTERLINE RUMBLE AT 5' SPACING

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1571-01-017 FM 74 ADT: 1809	95	7,030	SL 236	QC CITY LIMITS	NO RUMBLE BARS FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	AWT(Y)(4")(BRK), AWT (W)(4")(SLD), PREFAB PAV MRK TYI(W)(8")(SLD), AWT(Y)(4")(SLD)
	96	5,990	QC CITY LIMITS	FM 251	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT(Y)(4")(BRK), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, REF PAV PROF PAV MRK TYI (W)(4")(SLD)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1572-01-024 FM 96 ADT: 1109	97	42,935	FM 2791	45 MPH SIGN	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	REF PROF PAV MRK TYI (W)(4")(SLD), AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED CENTERLINE RUMBLE AT 5' SPACING
	98	3,500	45 MPH SIGN	START OF CONCRETE	FOLLOWING SEAL COAT NO BARS	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	AWT (W)(4")(SLD), AWT (Y)(4")(SLD),
	99	95	START OF CONCRETE	US 59	CONCRETE CURB NO EDGELINE CONCRETE NO RUMBLE BARS	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - CONCRETE	ELIM EXT PAV MARK 24", PAVEMENT SEALER 24", RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYC(W)(24")(SLD), AWT (Y)(4")(SLD), PREFAB PAV MRK TYI(W)(8")(SLD), ELIM EXT PAV MARK 8", PAVEMENT SEALER 8"

* 1 SET OF IN-LANE RUMBLE BARS = 40LF

PAVEMENT MARKING DESCRIPTIONS

 Texas Department of Transportation

SHEET 6 OF 7

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			32
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

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DATE: 5/5/2021 11:41:04 AM

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1573-01-19 FM 130 ADT: 292	100	41,160	FM 250	CONCRETE BRIDGE		2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	REF PROF PAV MRK TYI (W)(4")(SLD), AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, RAISED REFLECTIVE PAVEMENT MARKERS,
	101	280	CONCRETE BRIDGE	END OF CONCRETE BRIDGE	CONCRETE BRIDGE NO RUMBLE BARS	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - CONCRETE BRIDGE	ELIM EXT PAV MARK 4", PAVEMENT SEALER 4", RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYB(W)(4")(SLD), PREFAB PAV MRK TYB(Y)(4")(SLD)
	102	28,500	END OF CONCRETE BRIDGE	SH 11		2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	REF PROF PAV MRK TYI (W)(4")(SLD), AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYC(W)(24")(SLD)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1620-03-012 FM 1701 ADT: 671	103	34,840	RED RIVER COUNTY LINE	US 259		2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), REF PROF PAV MRK TYI(W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYC(W)(24")(SLD)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1759-01-013 FM 1793 ADT: 1549	104	53,330	FM 134	US 59		2 LANE UNDIVIDED W/ 1 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYC(W)(24")(SLD)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1762-01-004 FM 1795 ADT: 496	105	7,560	FM 1002	WOOD C/L		2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), REF PROF PAV MRK TYI(W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYC(W)(24")(SLD),

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1896-03-019 FM 726 ADT: 2297	106	21,790	US 271	SH 300		2 LANE UNDIVIDED W/ 1 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED IN-LANE(TRANS) RUMBLE AT 5' SPACING, AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYC(W)(24")(SLD)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
1957-01-010 FM 1766 ADT: 157	107	35,010	SH 77	FM 994		2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	REF PROF PAV MRK TYI (W)(4")(SLD), AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYC(W)(24")(SLD)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
2157-01-021 FM 2685 ADT: 1124	108	34,790	SH 155	FM 1404	1 STOP AHEAD	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), AWT(Y)(4")(BRK), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFAB PAV MRK TYC(W)(24")(SLD), REF PROF PAV MRK TYI(W)(4")(SLD), REFL PAV MRK TYI(W)(8")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, PREFAB PAV MRK TYC(W)(WORD)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
2526-01-010 SH 98 ADT: 3037	109	180	US 82	END OF CONCRETE	CONCRETE 2 ARROW 2 ONLY NO RUMBLE BARS	2 LANE UNDIVIDED W/ 1 FT SHOULDERS - CONCRETE	AWT (Y)(4")(SLD), AWT (W)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, REFL PAV MRK TYI (W)(8")(SLD), PREFAB PAV MRK TYC(W)(ARROW), PREFAB PAV MRK TYC(W)(WORD), PAVEMENT SEALER 8", ELIM EXT PAV MARK 8", ELIM EXT PAV MARK (ARROW), ELIM EXT PAV MARK(WORD), PAVEMENT SEALER(WORD), PAVEMENT SEALER 24", PAVEMENT SEALER(ARROW), PREFAB PAV MRK TYC(W)(24")(SLD), ELIM EXT PAV MARK (24")
	110	13,250	END OF CONCRETE	FM 1840	1 50 1 MPH	2 LANE UNDIVIDED W/ 2 FT SHOULDERS - SEAL COAT	AWT (Y)(4")(SLD), RAISED REFLECTIVE PAVEMENT MARKERS, AWT (Y)(4")BRK), REFL PAV MRK TYI(W)(8")(SLD), REF PROF PAV MRK TYI(W)(4")(SLD), PREFORMED CENTERLINE RUMBLE AT 5' SPACING, PREFAB PAV MRK TYC(W)(WORD), PREFAB PAV MRK TYC(W)(NUMBER)

CSJ	REF	LENGTH	FROM	TO	ADDITIONAL NOTES	ROADWAY SECTION AND TYPE	WORK TYPE
2685-01-011 FM 2683 ADT: 149	111	31,220	SH 43	FM 248	FOLLOWING SEAL COAT	2 LANE UNDIVIDED W/ <1 FT SHOULDERS - SEAL COAT	PREFORMED CENTERLINE RUMBLE AT 5' SPACING, AWT (Y)(4")(SLD), AWT (Y)(4")(BRK), REF PROF PAV MRK TYI (W)(4")(SLD)

* 1 SET OF IN-LANE RUMBLE BARS = 40LF

PAVEMENT MARKING DESCRIPTIONS

 Texas Department of Transportation

SHEET 7 OF 7

FHWA TEXAS DIVISION	FEDERAL AID PROJECT NO.		SHEET NO.
			33
STATE	DISTRICT	COUNTY	
TEXAS	ATL	BOWIE	
CONTROL	SECTION	JOB	HIGHWAY NO.
0010	12	074	US 67

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BARRICADE AND CONSTRUCTION (BC) STANDARD SHEETS GENERAL NOTES:

1. The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction pavement markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).

2. The development and design of the Traffic Control Plan (TCP)is the responsibility of the Engineer.

3. The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.

4. The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.

5. Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets," the TxDOT "Roadway Design Manual" or engineering judgment.

6. When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.

7. The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.

8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.

9. The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.

10. Where highway construction or maintenance work is being undertaken, other than mobile operations as defined by the Texas Manual on Uniform Traffic Control Devices, CSJ limit signs are required. CSJ limit signs are shown on BC(2). The OBEY WARNING SIGNS STATE LAW sign, STAY ALERT TALK OR TEXT LATER and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque shall be erected in advance of the CSJ limits. The BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits. For mobile operations, CSJ limit signs are not required.

11. Traffic control devices should be in place only while work is actually in progress or a definite need exists.

12. The Engineer has the final decision on the location of all traffic control devices.

13. Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.

WORKER SAFETY NOTES:

1. Workers on foot who are exposed to traffic or to construction equipment within the right-of-way shall wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel," or equivalent revisions, and labeled as ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Class 3 garments should be considered for high traffic volume work areas or night time work.

2. Except in emergency situations, flagger stations shall be illuminated when flagging is used at night.

COMPLIANT WORKZONE TRAFFIC CONTROL DEVICES

1. Only pre-qualified products shall be used. The "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources.

2. Work zone traffic control devices shall be compliant with the Manual for Assessing safety Hardware (MASH).

THE DOCUMENTS BELOW CAN BE FOUND ON-LINE AT http://www.txdot.gov
COMPLIANT WORK ZONE TRAFFIC CONTROL DEVICES LIST (CWZTCD)
DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS)
MATERIAL PRODUCER LIST (MPL)
ROADWAY DESIGN MANUAL - SEE "MANUALS (ONLINE MANUALS)"
STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD)
TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD)
TRAFFIC ENGINEERING STANDARD SHEETS

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS

BC(1)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	034	US 67
4-03 7-13	DIST	COUNTY		SHEET NO.
9-07 8-14	ATL	BOWIE		34
5-10 5-21				

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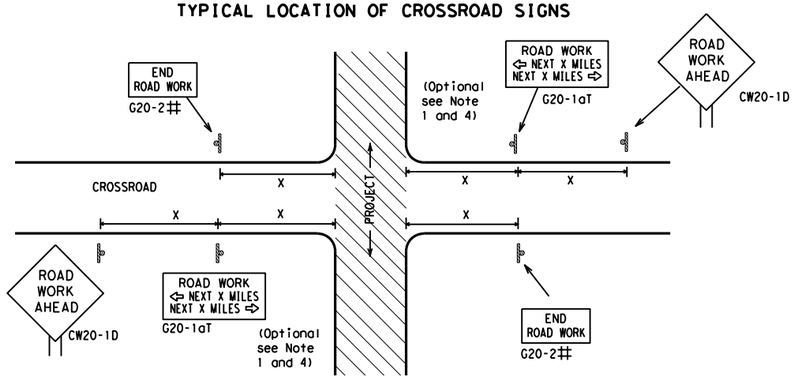
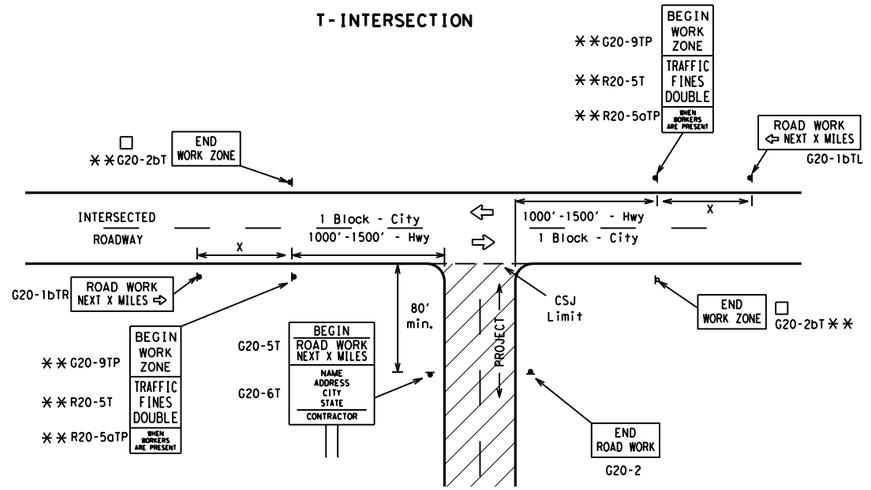
TYPICAL LOCATION OF CROSSROAD SIGNS



May be mounted on back of "ROAD WORK AHEAD"(CW20-1D) sign with approval of Engineer. (See note 2 below)

1. The typical minimum signing on a crossroad approach should be a "ROAD WORK AHEAD" (CW20-1D)sign and a (G20-2) "END ROAD WORK" sign, unless noted otherwise in plans.
2. The Engineer may use the reduced size 36" x 36" ROAD WORK AHEAD (CW20-1D) sign mounted back to back with the reduced size 36" x 18" "END ROAD WORK"(G20-2) sign on low volume crossroads (see Note 4 under "Typical Construction Warning Sign Size and Spacing"). See the "Standard Highway Sign Designs for Texas" manual for sign details. The Engineer may omit the advance warning signs on low volume crossroads. The Engineer will determine whether a road is low volume as per TMUTCD Part 5. This information shall be shown in the plans.
3. Based on existing field conditions, the Engineer/Inspector may require additional signs such as FLAGGER AHEAD, LOOSE GRAVEL, or other appropriate signs. When additional signs are required, these signs will be considered part of the minimum requirements. The Engineer/Inspector will determine the proper location and spacing of any sign not shown on the BC sheets, Traffic Control Plan sheets or the Work Zone Standard Sheets.
4. The "ROAD WORK NEXT X MILES"(G20-1aT)sign shall be required at high volume crossroads to advise motorists of the length of construction in either direction from the intersection. The Engineer will determine whether a roadway is considered high volume.
5. Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
6. When work occurs in the intersection area, appropriate traffic control devices, as shown elsewhere in the plans or as determined by the Engineer/Inspector, shall be in place.

T-INTERSECTION



CSJ LIMITS AT T-INTERSECTION

1. The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
2. If construction closes the road at a T-intersection, the Contractor shall place the "CONTRACTOR NAME"(G20-6T) sign behind the Type 3 Barricades for the road closure (see BC(10) also). The "ROAD WORK NEXT X MILES" left arrow(G20-1bTL) and "ROAD WORK NEXT X MILES" right arrow (G20-1bTR)" signs shall be replaced by the detour signing called for in the plans.

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING[1,5,6]

SIZE

Sign Number or Series	Conventional Road	Expressway/ Freeway
CW20[4] CW21 CW22 CW23 CW25	48" x 48"	48" x 48"
CW1, CW2, CW7, CW8, CW9, CW11, CW14	36" x 36"	48" x 48"
CW3, CW4, CW5, CW6, CW8-3, CW10, CW12	48" x 48"	48" x 48"

SPACING

Posted Speed	Sign △ Spacing "X"
MPH	Feet (Apprx.)
30	120
35	160
40	240
45	320
50	400
55	500[2]
60	600[2]
65	700[2]
70	800[2]
75	900[2]
80	1000[2]
*	*[3]

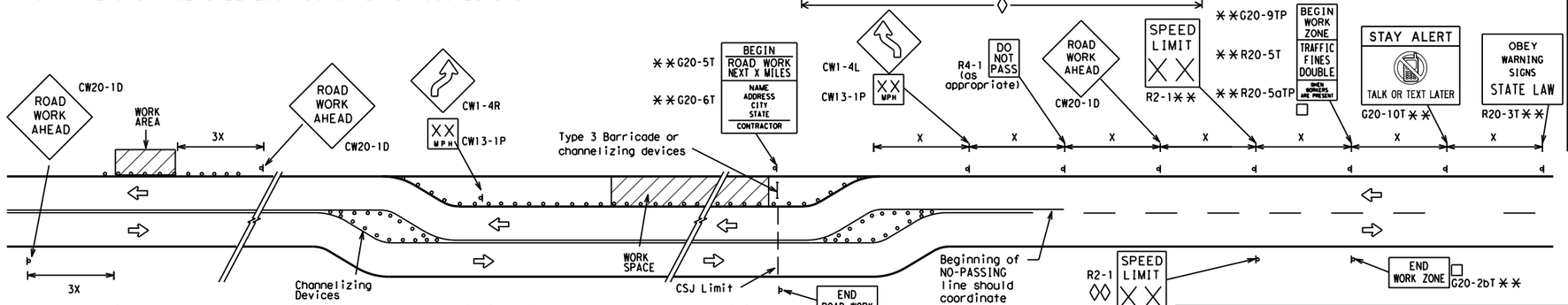
* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

△ Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

GENERAL NOTES

1. Special or larger size signs may be used as necessary.
2. Distance between signs should be increased as required to have 1500 feet advance warning.
3. Distance between signs should be increased as required to have 1/2 mile or more advance warning.
4. 36" x 36" "ROAD WORK AHEAD" (CW20-1D)signs may be used on low volume crossroads at the discretion of the Engineer as per TMUTCD Part 5. See Note 2 under "Typical Location of Crossroad Signs".
5. Only diamond shaped warning sign sizes are indicated.
6. See sign size listing in "TMUTCD", Sign Appendix or the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

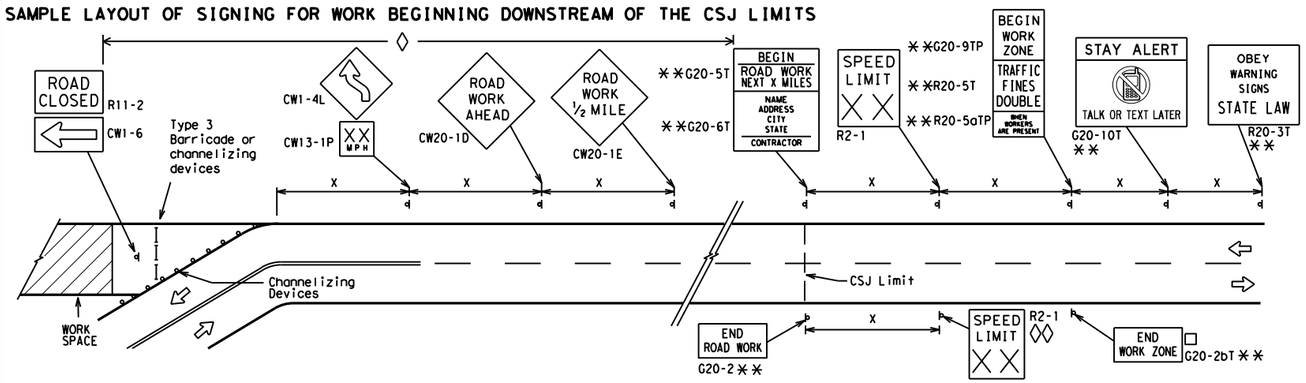
WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



When extended distances occur between minimal work spaces, the Engineer/Inspector should ensure additional "ROAD WORK AHEAD"(CW20-1D)signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing of signs and channelizing devices.

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING AT THE CSJ LIMITS

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING DOWNSTREAM OF THE CSJ LIMITS



NOTES

The Contractor shall determine the appropriate distance to be placed on the G20-1 series signs and "BEGIN ROAD WORK NEXT X MILES"(G20-5T)sign for each specific project. This distance shall replace the "X" and shall be rounded to the nearest whole mile with the approval of the Engineer. No decimals shall be used.

□ The "BEGIN WORK ZONE"(G20-9TP) and "END WORK ZONE" (G20-2bT) shall be used as shown on the sample layout when advance signs are required outside the CSJ Limits. They inform the motorist of entering or leaving a part of the work zone lying outside the CSJ Limits where traffic fines may double if workers are present.

** CSJ limit signing is required for highway construction and maintenance work, with the exception of mobile operations.

◊ Area for placement of "ROAD WORK AHEAD" (CW20-1D)sign and other signs or devices as called for on the Traffic Control Plan.

◊◊ Contractor will install a regulatory speed limit sign at the end of the work zone.

LEGEND	
⊢⊣	Type 3 Barricade
○ ○ ○	Channelizing Devices
▬	Sign
X	See Typical Construction Warning Sign Size and Spacing chart or the TMUTCD for sign spacing requirements.

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
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	074	US 67
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	ATL	BOWIE		35

DATE: $DATE$ $TIME$
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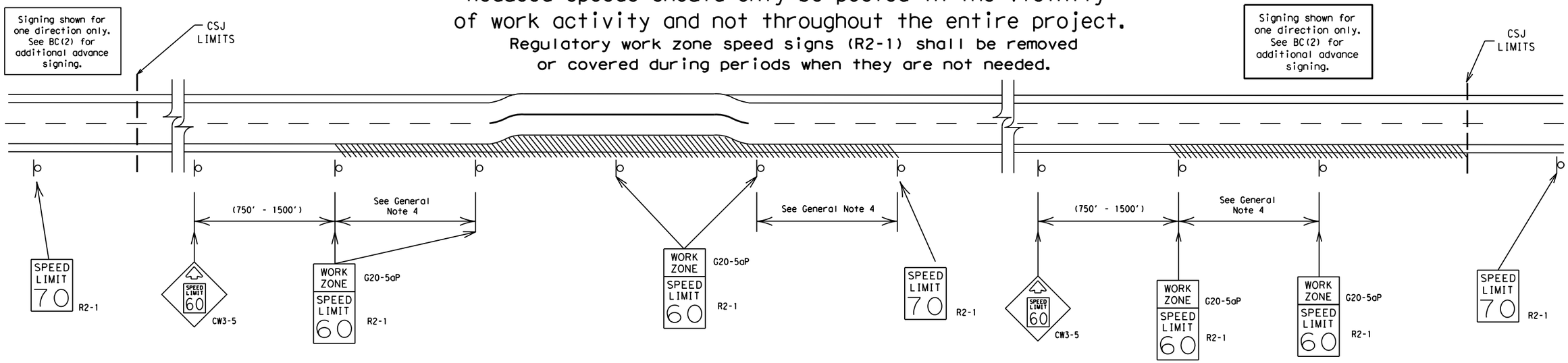
TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

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

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© TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	074	US 67
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	ATL	BOWIE		36

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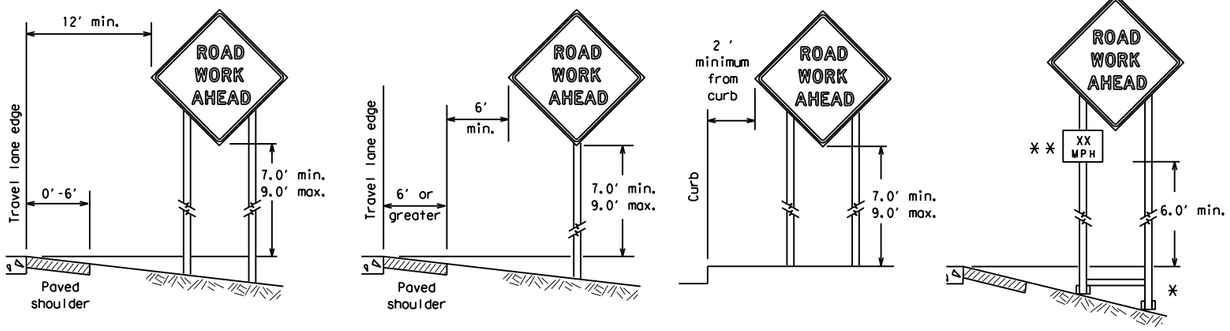
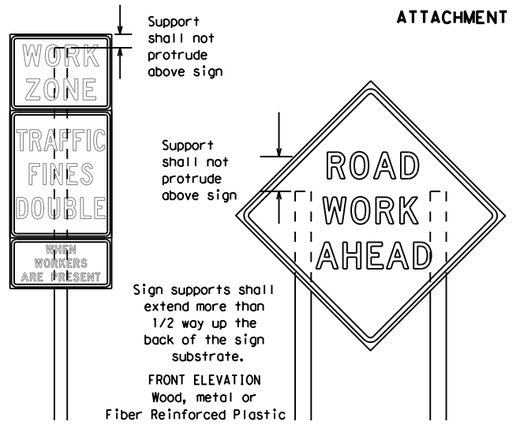
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS

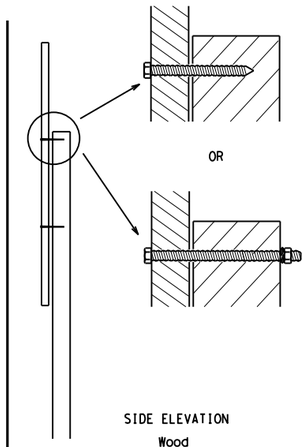


* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

** When plaques are placed on dual-leg supports, they should be attached to the upright nearest the travel lane. Supplemental plaques (advisory or distance) should not cover the surface of the parent sign.

ATTACHMENT FOR SIGN SUPPORTS





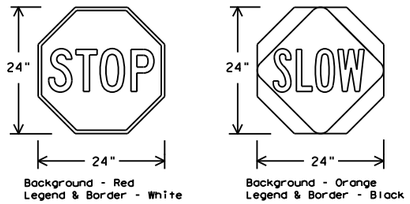
Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

Nails shall NOT be allowed. Each sign shall be attached directly to the sign support. Multiple signs shall not be joined or spliced by any means. Wood supports shall not be extended or repaired by splicing or other means.

Splicing embedded perforated square metal tubing in order to extend post height will only be allowed when the splice is made using four bolts, two above and two below the spice point. Splice must be located entirely behind the sign substrate, not near the base of the support. Splice insert lengths should be at least 5 times nominal post size, centered on the splice and of at least the same gauge material.

STOP/SLOW PADDLES

1. STOP/SLOW paddles are the primary method to control traffic by flaggers. The STOP/SLOW paddle size should be 24" x 24".
2. STOP/SLOW paddles shall be retroreflectorized when used at night.
3. STOP/SLOW paddles may be attached to a staff with a minimum length of 6' to the bottom of the sign.
4. Any lights incorporated into the STOP or SLOW paddle faces shall only be as specifically described in Section 6E.03 Hand Signaling Devices in the TMUTCD.



SHEETING REQUIREMENTS (WHEN USED AT NIGHT)		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	RED	TYPE B OR C SHEETING
BACKGROUND	ORANGE	TYPE B_{FL} OR C_{FL} SHEETING
LEGEND & BORDER	WHITE	TYPE B OR C SHEETING
LEGEND & BORDER	BLACK	ACRYLIC NON-REFLECTIVE FILM

CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

1. Permanent signs are used to give notice of traffic laws or regulations, call attention to conditions that are potentially hazardous to traffic operations, show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, specific service (LOGO), or cultural information. Drivers proceeding through a work zone need the same, if not better route guidance as normally installed on a roadway without construction.
2. When permanent regulatory or warning signs conflict with work zone conditions, remove or cover the permanent signs until the permanent sign message matches the roadway condition. For details for covering large guide signs see the TS-CD standard.
3. When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
4. If existing signs are to be relocated on their original supports, they shall be installed on crashworthy bases as shown on the SMD Standard sheets. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards. This work should be paid for under the appropriate pay item for relocating existing signs.
5. If permanent signs are to be removed and relocated using temporary supports, the Contractor shall use crashworthy supports as shown on the BC standard sheets, TLRS standard sheets or the CWZTCD list. The signs shall meet the required mounting heights shown on the BC, or the SMD standard sheets during construction. This work should be paid for under the appropriate pay item for relocating existing signs.
6. Any sign or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced as soon as possible by the Contractor to ensure proper guidance for the motorists. This will be subsidiary to Item 502.

GENERAL NOTES FOR WORK ZONE SIGNS

1. Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. All signs shall be installed in accordance with the plans or as directed by the Engineer. Signs shall be used to regulate, warn, and guide the traveling public safely through the work zone.
5. The Contractor may furnish either the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD). The Engineer/Inspector may require the Contractor to furnish other work zone signs that are shown in the TMUTCD but may have been omitted from the plans. Any variation in the plans shall be documented by written agreement between the Engineer and the Contractor's Responsible Person. All changes must be documented in writing before being implemented. This can include documenting the changes in the Inspector's TxDOT diary and having both the Inspector and Contractor initial and date the agreed upon changes.
6. The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD) for small roadside signs. Supports for temporary large roadside signs shall meet the requirements detailed on the Temporary Large Roadside Signs (TLRS) standard sheets. The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so the Engineer can verify the correct procedures are being followed.
7. The Contractor is responsible for installing signs on approved supports and replacing signs with damaged or cracked substrates and/or damaged or marred reflective sheeting as directed by the Engineer/Inspector.
8. Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1 inch.
9. The Contractor shall replace damaged wood posts. New or damaged wood sign posts shall not be spliced.

DURATION OF WORK (as defined by the "Texas Manual on Uniform Traffic Control Devices" Part 6)

1. The types of sign supports, sign mounting height, the size of signs, and the type of sign substrates can vary based on the type of work being performed. The Engineer is responsible for selecting the appropriate size sign for the type of work being performed. The Contractor is responsible for ensuring the sign support, sign mounting height and substrate meets manufacturer's recommendations in regard to crashworthiness and duration of work requirements.
   a. Long-term stationary - work that occupies a location more than 3 days.
   b. Intermediate-term stationary - work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than one hour.
   c. Short-term stationary - daytime work that occupies a location for more than 1 hour in a single daylight period.
   d. Short, duration - work that occupies a location up to 1 hour.
   e. Mobile - work that moves continuously or intermittently (stopping for up to approximately 15 minutes.)

SIGN MOUNTING HEIGHT

1. The bottom of Long-term/Intermediate-term signs shall be at least 7 feet, but not more than 9 feet, above the paved surface, except as shown for supplemental plaques mounted below other signs.
2. The bottom of Short-term/Short Duration signs shall be a minimum of 1 foot above the pavement surface but no more than 2 feet above the ground.
3. Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
4. Short-term/Short Duration signs shall be used only during daylight and shall be removed at the end of the workday or raised to appropriate Long-term/Intermediate sign height.
5. Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

SIZE OF SIGNS

1. The Contractor shall furnish the sign sizes shown on BC (2) unless otherwise shown in the plans or as directed by the Engineer.

SIGN SUBSTRATES

1. The Contractor shall ensure the sign substrate is installed in accordance with the manufacturer's recommendations for the type of sign support that is being used. The CWZTCD lists each substrate that can be used on the different types and models of sign supports.
2. "Mesh" type materials are NOT an approved sign substrate, regardless of the tightness of the weave.
3. All wooden individual sign panels fabricated from 2 or more pieces shall have one or more plywood cleat, 1/2" thick by 6" wide, fastened to the back of the sign and extending fully across the sign. The cleat shall be attached to the back of the sign using wood screws that do not penetrate the face of the sign panel. The screws shall be placed on both sides of the splice and spaced at 6" centers. The Engineer may approve other methods of splicing the sign face.

REFLECTIVE SHEETING

1. All signs shall be retroreflective and constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 for rigid signs or DMS-8310 for roll-up signs. The web address for DMS specifications is shown on BC(1).
2. White sheeting, meeting the requirements of DMS-8300 Type A, shall be used for signs with a white background.
3. Orange sheeting, meeting the requirements of DMS-8300 Type B_{FL} or Type C_{FL}, shall be used for rigid signs with orange backgrounds.

SIGN LETTERS

1. All sign letters and numbers shall be clear, and open rounded type uppercase alphabet letters as approved by the Federal Highway Administration (FHWA) and as published in the "Standard Highway Sign Design for Texas" manual. Signs, letters and numbers shall be of first class workmanship in accordance with Department Standards and Specifications.

REMOVING OR COVERING

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
2. Long-term stationary or intermediate stationary signs installed on square metal tubing may be turned away from traffic 90 degrees when the sign message is not applicable. This technique may not be used for signs installed in the median of divided highways or near any intersections where the sign may be seen from approaching traffic.
3. Signs installed on wooden skids shall not be turned at 90 degree angles to the roadway. These signs should be removed or completely covered when not required.
4. When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night, without damaging the sign sheeting.
5. Burlap shall NOT be used to cover signs.
6. Duct tape or other adhesive material shall NOT be affixed to a sign face.
7. Signs and anchor stubs shall be removed and holes backfilled upon completion of work.

SIGN SUPPORT WEIGHTS

1. Where sign supports require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand should be used.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall NOT be used.
6. Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
7. Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
8. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

FLAGS ON SIGNS

1. Flags may be used to draw attention to warning signs. When used, the flag shall be 16 inches square or larger and shall be orange or fluorescent red-orange in color. Flags shall not be allowed to cover any portion of the sign face.

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC(4)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	074	US 67
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	ATL	BOWIE		37

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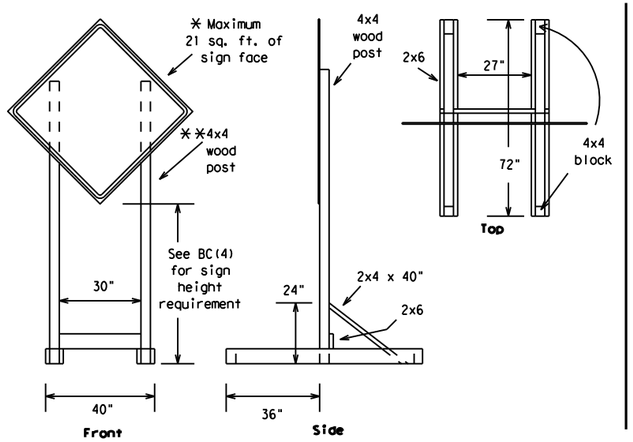
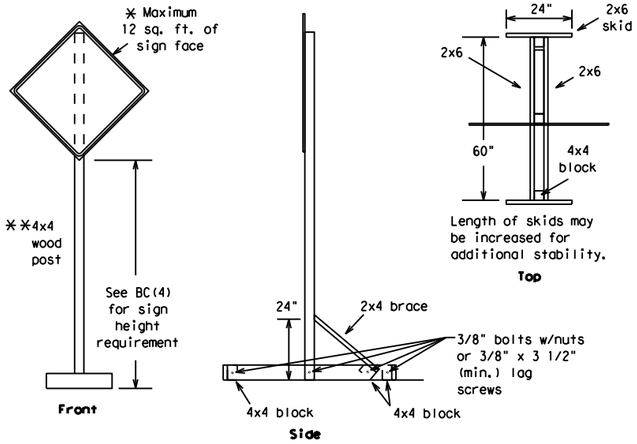
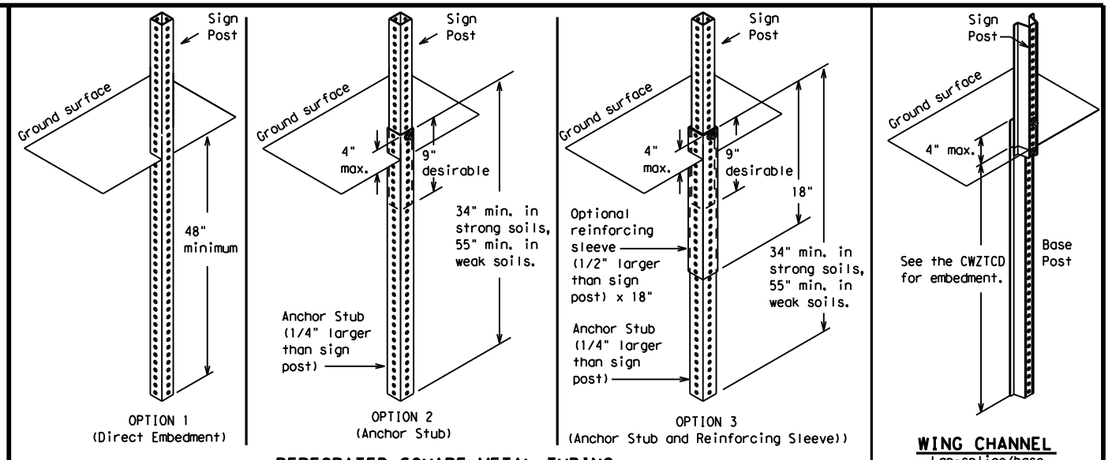




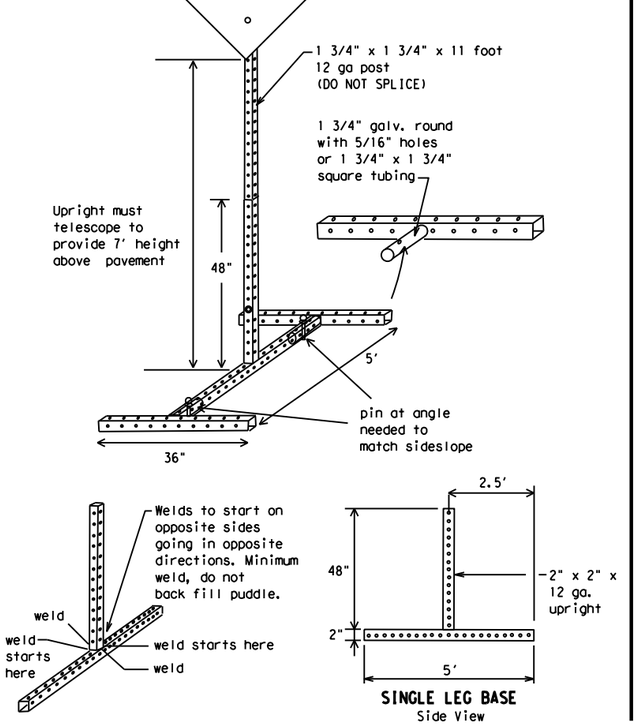
SKID MOUNTED WOOD SIGN SUPPORTS

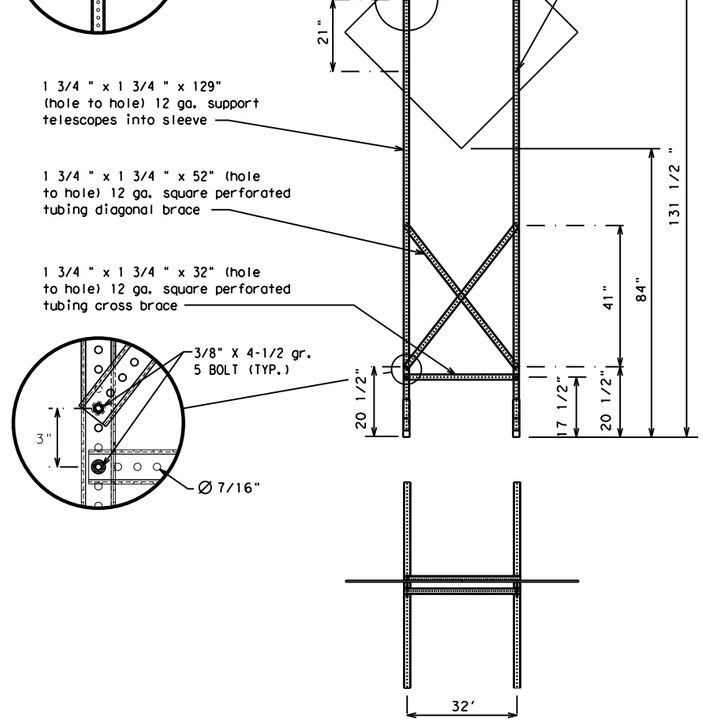
* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS

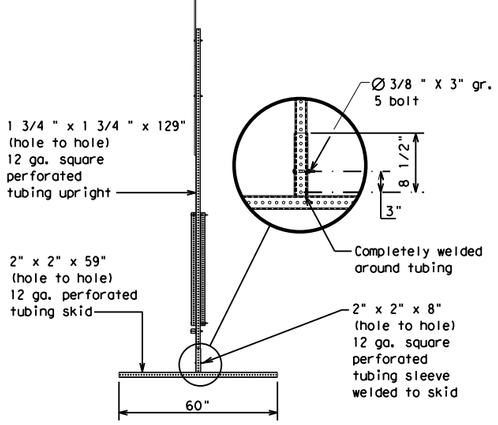


GROUND MOUNTED SIGN SUPPORTS

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
© TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	074	UBW87
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	ATL	BOWIE		38

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WHEN NOT IN USE, REMOVE THE PCMS FROM THE RIGHT-OF-WAY OR PLACE THE PCMS BEHIND BARRIER OR GUARDRAIL WITH SIGN PANEL TURNED PARALLEL TO TRAFFIC

PORTABLE CHANGEABLE MESSAGE SIGNS

1. The Engineer/Inspector shall approve all messages used on portable changeable message signs (PCMS).
2. Messages on PCMS should contain no more than 8 words (about four to eight characters per word), not including simple words such as "TO," "FOR," "AT," etc.
3. Messages should consist of a single phase, or two phases that alternate. Three-phase messages are not allowed. Each phase of the message should convey a single thought, and must be understood by itself.
4. Use the word "EXIT" to refer to an exit ramp on a freeway; i.e., "EXIT CLOSED." Do not use the term "RAMP."
5. Always use the route or interstate designation (IH, US, SH, FM) along with the number when referring to a roadway.
6. When in use, the bottom of a stationary PCMS message panel should be a minimum 7 feet above the roadway, where possible.
7. The message term "WEEKEND" should be used only if the work is to start on Saturday morning and end by Sunday evening at midnight. Actual days and hours of work should be displayed on the PCMS if work is to begin on Friday evening and/or continue into Monday morning.
8. The Engineer/Inspector may select one of two options which are available for displaying a two-phase message on a PCMS. Each phase may be displayed for either four seconds each or for three seconds each.
9. Do not "flash" messages or words included in a message. The message should be steady burn or continuous while displayed.
10. Do not present redundant information on a two-phase message; i.e., keeping two lines of the message the same and changing the third line.
11. Do not use the word "Danger" in message.
12. Do not display the message "LANES SHIFT LEFT" or "LANES SHIFT RIGHT" on a PCMS. Drivers do not understand the message.
13. Do not display messages that scroll horizontally or vertically across the face of the sign.
14. The following table lists abbreviated words and two-word phrases that are acceptable for use on a PCMS. Both words in a phrase must be displayed together. Words or phrases not on this list should not be abbreviated, unless shown in the TMUTCD.
15. PCMS character height should be at least 18 inches for trailer mounted units. They should be visible from at least 1/2 (.5) mile and the text should be legible from at least 600 feet at night and 800 feet in daylight. Truck mounted units must have a character height of 10 inches and must be legible from at least 400 feet.
16. Each line of text should be centered on the message board rather than left or right justified.
17. If disabled, the PCMS should default to an illegible display that will not alarm motorists and will only be used to alert workers that the PCMS has malfunctioned. A pattern such as a series of horizontal solid bars is appropriate.

WORD OR PHRASE	ABBREVIATION
Access Road	ACCS RD
Alternate	ALT
Avenue	AVE
Best Route	BEST RTE
Boulevard	BLVD
Bridge	BRDG
Cannot	CANT
Center	CTR
Construction Ahead	CONST AHD
CROSSING	XING
Detour Route	DETOUR RTE
Do Not	DONT
East	E
Eastbound	(route) E
Emergency	EMER
Emergency Vehicle	EMER VEH
Entrance, Enter	ENT
Express Lane	EXP LN
Expressway	EXPWY
XXXX Feet	XXXX FT
Fog Ahead	FOG AHD
Freeway	FRWY, FWY
Freeway Blocked	FWY BLKD
Friday	FRI
Hazardous Driving	HAZ DRIVING
Hazardous Material	HAZMAT
High-Occupancy	HOV
Vehicle Highway	HWY
Hour(s)	HR, HRS
Information	INFO
It Is	ITS
Junction	JCT
Left	LFT
Left Lane	LFT LN
Lane Closed	LN CLOSED
Lower Level	LWR LEVEL
Maintenance	MAINT

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

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7-13 5-21	ATL	BOWIE		39

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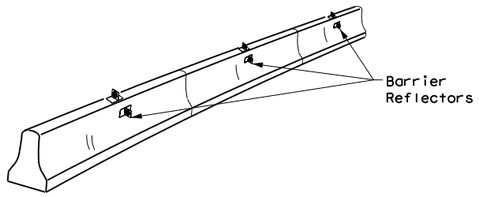
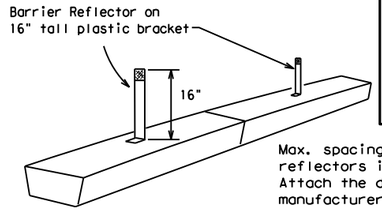
1. Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
2. Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 512.



CONCRETE TRAFFIC BARRIER (CTB)

3. Where traffic is on one side of the CTB, two (2) Barrier Reflectors shall be mounted in approximately the midsection of each section of CTB. An alternate mounting location is uniformly spaced at one end of each CTB. This will allow for attachment of a barrier grapple without damaging the reflector. The Barrier Reflector mounted on the side of the CTB shall be located directly below the reflector mounted on top of the barrier, as shown in the detail above.
4. Where CTB separates two-way traffic, three barrier reflectors shall be mounted on each section of CTB. The reflector unit on top shall have two yellow reflective faces (Bi-Directional)while the reflectors on each side of the barrier shall have one yellow reflective face, as shown in the detail above.
5. When CTB separates traffic traveling in the same direction, no barrier reflectors will be required on top of the CTB.
6. Barrier Reflector units shall be yellow or white in color to match the edgeline being supplemented.
7. Maximum spacing of Barrier Reflectors is forty (40) feet.
8. Pavement markers or temporary flexible-reflective roadway marker tabs shall NOT be used as CTB delineation.
9. Attachment of Barrier Reflectors to CTB shall be per manufacturer's recommendations.
10. Missing or damaged Barrier Reflectors shall be replaced as directed by the Engineer.
11. Single slope barriers shall be delineated as shown on the above detail.

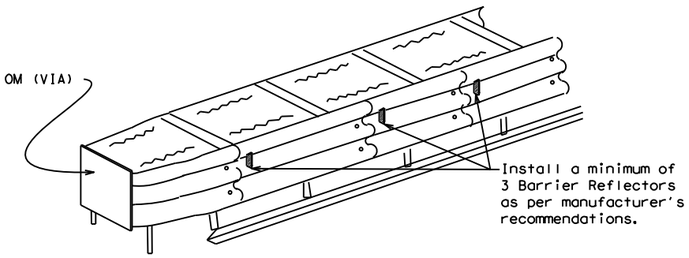


Max. spacing of barrier reflectors is 20 feet. Attach the delineators as per manufacturer's recommendations.

LOW PROFILE CONCRETE BARRIER (LPCB) USED IN WORK ZONES

LPCB is approved for use in work zone locations, where the posted speed is 45mph, or less. See Roadway Standard Sheet LPCB.

LOW PROFILE CONCRETE BARRIER (LPCB)

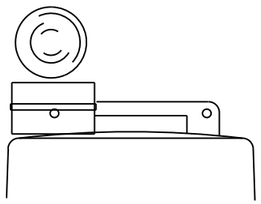


DELINEATION OF END TREATMENTS

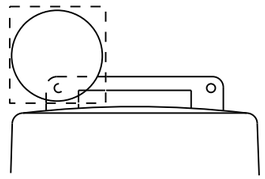
END TREATMENTS FOR CTB'S USED IN WORK ZONES

End treatments used on CTB's in work zones shall meet the apppropriate crashworthy standards as defined in the Manual for Assessing Safety Hardware (MASH). Refer to the CWZTCD List for approved end treatments and manufacturers.

BARRIER REFLECTORS FOR CONCRETE TRAFFIC BARRIER AND ATTENUATORS



Type C Warning Light or approved substitute mounted on a drum adjacent to the travel way.



Warning reflector may be round or square.Must have a yellow reflective surface area of at least 30 square inches

WARNING LIGHTS

1. Warning lights shall meet the requirements of the TMUTCD.
2. Warning lights shall NOT be installed on barricades.
3. Type A-Low Intensity Flashing Warning Lights are commonly used with drums. They are intended to warn of or mark a potentially hazardous area. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "FL". The Type A Warning Lights shall not be used with signs manufactured with Type B_{FL} or C_{FL} Sheeting meeting the requirements of Departmental Material Specification DMS-8300.
4. Type-C and Type D 360 degree Steady Burn Lights are intended to be used in a series for delineation to supplement other traffic control devices. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "SB".
5. The Engineer/Inspector or the plans shall specify the location and type of warning lights to be installed on the traffic control devices.
6. When required by the Engineer, the Contractor shall furnish a copy of the warning lights certification. The warning light manufacturer will certify the warning lights meet the requirements of the latest ITE Purchase Specifications for Flashing and Steady-Burn Warning Lights.
7. When used to delineate curves, Type-C and Type D Steady Burn Lights should only be placed on the outside of the curve, not the inside.
8. The location of warning lights and warning reflectors on drums shall be as shown elsewhere in the plans.

WARNING LIGHTS MOUNTED ON PLASTIC DRUMS

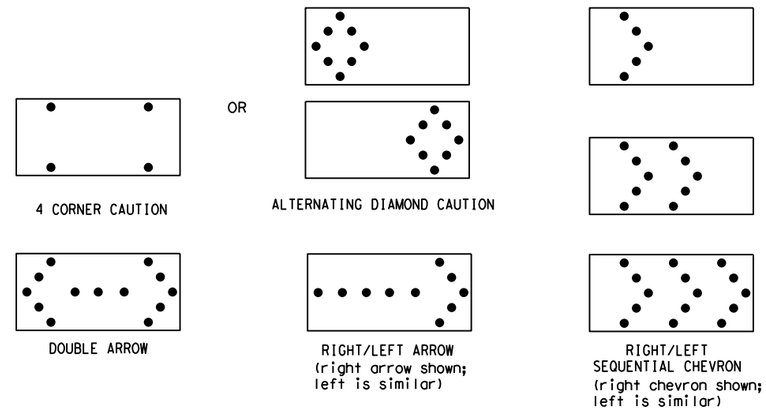
1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing devices to form a merging taper may be used for delineation. If used, the successive flashing of the sequential warning lights should occur from the beginning of the taper to the end of the merging taper in order to identify the desired vehicle path. The rate of flashing for each light shall be 65 flashes per minute, plus or minus 10 flashes.
4. Type C and D steady-burn warning lights are intended to be used in a series to delineate the edge of the travel lane on detours, on lane changes, on lane closures, and on other similar conditions.
5. Type A, Type C and Type D warning lights shall be installed at locations as detailed on other sheets in the plans.
6. Warning lights shall not be installed on a drum that has a sign, chevron or vertical panel.
7. The maximum spacing for warning lights on drums should be identical to the channelizing device spacing.

WARNING REFLECTORS MOUNTED ON PLASTIC DRUMS AS A SUBSTITUTE FOR TYPE C (STEADY BURN) WARNING LIGHTS

1. A warning reflector or approved substitute may be mounted on a plastic drum as a substitute for a Type C, steady burn warning light at the discretion of the Contractor unless otherwise noted in the plans.
2. The warning reflector shall be yellow in color and shall be manufactured using a sign substrate approved for use with plastic drums listed on the CWZTCD.
3. The warning reflector shall have a minimum retroreflective surface area (one-side) of 30 square inches.
4. Round reflectors shall be fully reflectorized, including the area where attached to the drum.
5. Square substrates must have a minimum of 30 square inches of reflectorized sheeting. They do not have to be reflectorized where it attaches to the drum.
6. The side of the warning reflector facing approaching traffic shall have sheeting meeting the color and retroreflectivity requirements for DMS 8300-Type B or Type C.
7. When used near two-way traffic, both sides of the warning reflector shall be reflectorized.
8. The warning reflector should be mounted on the side of the handle nearest approaching traffic.
9. The maximum spacing for warning reflectors should be identical to the channelizing device spacing requirements.

Arrow Boards may be located behind channelizing devices in place for a shoulder taper or merging taper, otherwise they shall be delineated with four (4) channelizing devices placed perpendicular to traffic on the upstream side of traffic.

1. The Flashing Arrow Board should be used for all lane closures on multi-lane roadways, or slow moving maintenance or construction activities on the travel lanes.
2. Flashing Arrow Boards should not be used on two-lane, two-way roadways, detours, diversions or work on shoulders unless the "CAUTION" display (see detail below) is used.
3. The Engineer/Inspector shall choose all appropriate signs, barricades and/or other traffic control devices that should be used in conjunction with the Flashing Arrow Board.
4. The Flashing Arrow Board should be able to display the following symbols:



5. The "CAUTION" display consists of four corner lamps flashing simultaneously, or the Alternating Diamond Caution mode as shown.
6. The straight line caution display is NOT ALLOWED.
7. The Flashing Arrow Board shall be capable of minimum 50 percent dimming from rated lamp voltage. The flashing rate of the lamps shall not be less than 25 nor more than 40 flashes per minute.
8. Minimum lamp "on time" shall be approximately 50 percent for the flashing arrow and equal intervals of 25 percent for each sequential phase of the flashing chevron.
9. The sequential arrow display is NOT ALLOWED.
10. The flashing arrow display is the TxDOT standard; however, the sequential chevron display may be used during daylight operations.
11. The Flashing Arrow Board shall be mounted on a vehicle, trailer or other suitable support.
12. A Flashing Arrow Board SHALL NOT BE USED to laterally shift traffic.
13. A full matrix PCMS may be used to simulate a Flashing Arrow Board provided it meets visibility, flash rate and dimming requirements on this sheet for the same size arrow.
14. Minimum mounting height of trailer mounted Arrow Boards should be 7 feet from roadway to bottom of panel.

REQUIREMENTS			
TYPE	MINIMUM SIZE	MINIMUM NUMBER OF PANEL LAMPS	MINIMUM VISIBILITY DISTANCE
B	30 x 60	13	3/4 mile
C	48 x 96	15	1 mile

ATTENTION

Flashing Arrow Boards shall be equipped with automatic dimming devices.

WHEN NOT IN USE, REMOVE THE ARROW BOARD FROM THE RIGHT-OF-WAY OR PLACE THE ARROW BOARD BEHIND CONCRETE TRAFFIC BARRIER OR GUARDRAIL.

FLASHING ARROW BOARDS

TRUCK-MOUNTED ATTENUATORS

1. Truck-mounted attenuators (TMA) used on TxDOT facilities must meet the requirements outlined in the Manual for Assessing Safety Hardware (MASH).
2. Refer to the CWZTCD for the requirements of Level 2 or Level 3 TMAs.
3. Refer to the CWZTCD for a list of approved TMAs.
4. TMAs are required on freeways unless otherwise noted in the plans.
5. A TMA should be used anytime that it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the work performance.
6. The only reason a TMA should not be required is when a work area is spread down the roadway and the work crew is an extended distance from the TMA.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION ARROW PANEL, REFLECTORS, WARNING LIGHTS & ATTENUATOR

BC(7)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	074	US 67
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	ATL	BOWIE		40

101

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GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections, one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Pre-qualified plastic drums shall meet the following requirements:

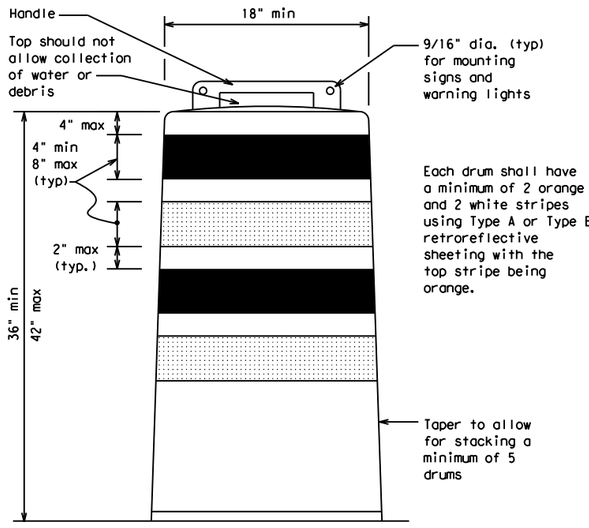
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

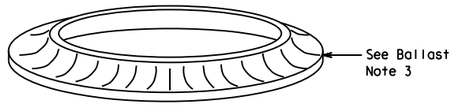
RETROREFLECTIVE SHEETING

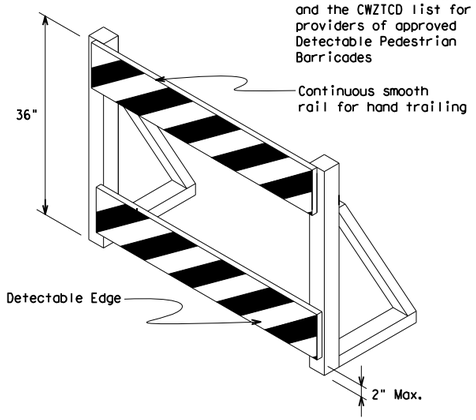
1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A or Type B reflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

BALLAST

1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
4. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
5. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.

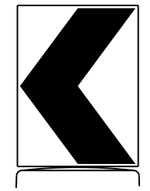




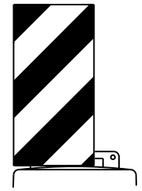


DETECTABLE PEDESTRIAN BARRICADES

1. When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility. Refer to WZ(BTS-2) for Pedestrian Control requirements for Sidewalk Diversions, Sidewalk Detours and Crosswalk Closures.
2. Where pedestrians with visual disabilities normally use the closed sidewalk, a Detectable Pedestrian Barricade shall be placed across the full width of the closed sidewalk instead of a Type 3 Barricade.
3. Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
4. Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines (ADAAG)" and should not be used as a control for pedestrian movements.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. Detectable pedestrian barricades should use 8" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.



18" x 24" Sign
(Maximum Sign Dimension)
Chevron CW1-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer



12" x 24"
Vertical Panel
mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type B_{FL} or Type C_{FL} Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A or Type B. Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations, they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	074	US 67
4-03 8-14	DIST	COUNTY		SHEET NO.
9-07 5-21	ATL	BOWIE		41
7-13				

102

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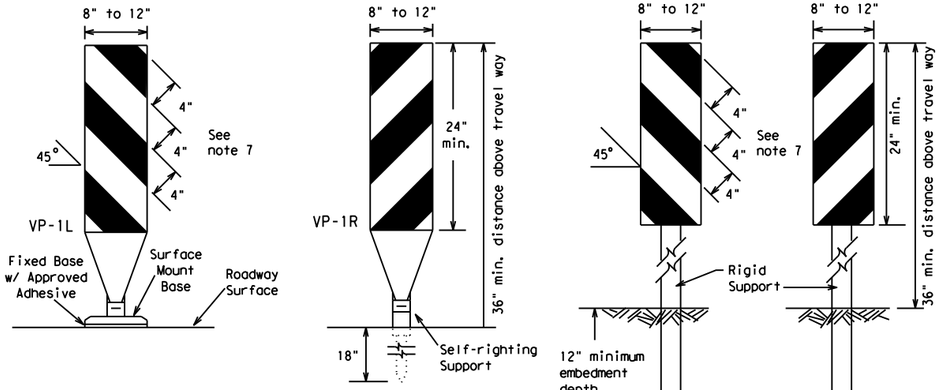
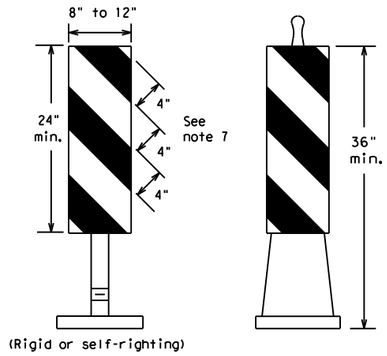


FIXED
(Rigid or self-righting)

DRIVEABLE

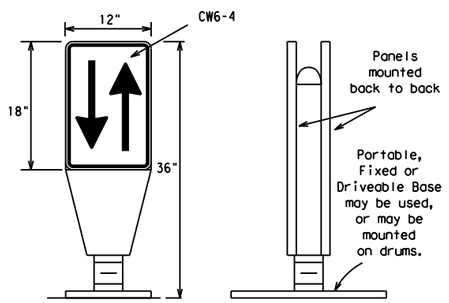


(Rigid or self-righting)

PORTABLE

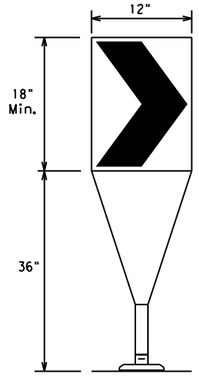
1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is required. The Engineer/Inspector shall refer to the Roadway Design Manual for additional requirements on the use VP's for drop-offs.
3. VP's should be mounted back to back if used at the edge of cuts adjacent to two-way two lane roadways. Stripes are to be reflective orange and reflective white and should always slope downward toward the travel lane.
4. VP's used on expressways and freeways or other high speed roadways, may have more than 270 square inches of retroreflective area facing traffic.
5. Self-righting supports are available with portable base. See "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
6. Sheeting for the VP's shall be retroreflective Type A or Type B conforming to Departmental Material Specification DMS-8300, unless noted otherwise.
7. Where the height of reflective material on the vertical panel is 36 inches or greater, a panel stripe of 6 inches shall be used.

VERTICAL PANELS (VPs)



1. Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The base is secured to the pavement with an adhesive or rubber weight to minimize movement caused by a vehicle impact or wind gust.
2. The OTLD may be used in combination with 42" cones or VPs.
3. Spacing between the OTLD shall not exceed 500 feet. 42" cones or VPs placed between the OTLD's should not exceed 100 foot spacing.
4. The OTLD shall be orange with a black non-reflective legend. Sheeting for the OTLD shall be retroreflective Type B_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.

OPPOSING TRAFFIC LANE DIVIDERS (OTLD)



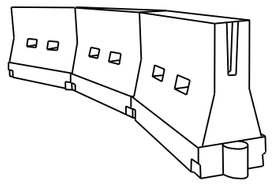
Fixed Base w/ Approved Adhesive (Driveable Base, or Flexible Support can be used)

1. The chevron shall be a vertical rectangle with a minimum size of 12 by 18 inches.
2. Chevrons are intended to give notice of a sharp change of alignment with the direction of travel and provide additional emphasis and guidance for vehicle operators with regard to changes in horizontal alignment of the roadway.
3. Chevrons, when used, shall be erected on the outside of a sharp curve or turn, or on the far side of an intersection. They shall be in line with and at right angles to approaching traffic. Spacing should be such that the motorist always has three in view, until the change in alignment eliminates its need.
4. To be effective, the chevron should be visible for at least 500 feet.
5. Chevrons shall be orange with a black nonreflective legend. Sheeting for the chevron shall be retroreflective Type B_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.
6. For Long Term Stationary use on tapers or transitions on freeways and divided highways, self-righting chevrons may be used to supplement plastic drums but not to replace plastic drums.

CHEVRONS

GENERAL NOTES

1. Work Zone channelizing devices illustrated on this sheet may be installed in close proximity to traffic and are suitable for use on high or low speed roadways. The Engineer/Inspector shall ensure that spacing and placement is uniform and in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2. Channelizing devices shown on this sheet may have a driveable, fixed or portable base. The requirement for self-righting channelizing devices must be specified in the General Notes or other plan sheets.
3. Channelizing devices on self-righting supports should be used in work zone areas where channelizing devices are frequently impacted by errant vehicles or vehicle related wind gusts making alignment of the channelizing devices difficult to maintain. Locations of these devices shall be detailed elsewhere in the plans. These devices shall conform to the TMUTCD and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
4. The Contractor shall maintain devices in a clean condition and replace damaged, nonreflective, faded, or broken devices and bases as required by the Engineer/Inspector. The Contractor shall be required to maintain proper device spacing and alignment.
5. Portable bases shall be fabricated from virgin and/or recycled rubber. The portable bases shall weigh a minimum of 30 lbs.
6. Pavement surfaces shall be prepared in a manner that ensures proper bonding between the adhesives, the fixed mount bases and the pavement surface. Adhesives shall be prepared and applied according to the manufacturer's recommendations.
7. The installation and removal of channelizing devices shall not cause detrimental effects to the final pavement surfaces, including pavement surface discoloration or surface integrity. Driveable bases shall not be permitted on final pavement surfaces. The Engineer/Inspector shall approve all application and removal procedures of fixed bases.



LONGITUDINAL CHANNELIZING DEVICES (LCD)

1. LCDs are crashworthy, lightweight, deformable devices that are highly visible, have good target value and can be connected together. They are not designed to contain or redirect a vehicle on impact.
2. LCDs may be used instead of a line of cones or drums.
3. LCDs shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. LCDs should not be used to provide positive protection for obstacles, pedestrians or workers.
5. LCDs shall be supplemented with retroreflective delineation as required for temporary barriers on BC(7) when placed roughly parallel to the travel lanes.
6. LCDs used as barricades placed perpendicular to traffic should have at least one row of reflective sheeting meeting the requirements for barricade rails as shown on BC(10). Place reflective sheeting near the top of the LCD along the full length of the device.

WATER BALLASTED SYSTEMS USED AS BARRIERS

1. Water ballasted systems used as barriers shall not be used solely to channelize road users, but also to protect the work space per the appropriate Manual for Assessing Safety Hardware (MASH) crashworthiness requirements based on roadway speed and barrier application.
2. Water ballasted systems used to channelize vehicular traffic shall be supplemented with retroreflective delineation or channelizing devices to improve daytime/nighttime visibility. They may also be supplemented with pavement markings.
3. Water ballasted systems used as barriers shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. Water ballasted systems used as barriers should not be used for a merging taper except in low speed (less than 45 MPH) urban areas. When used on a taper in a low speed urban area, the taper shall be delineated and the taper length should be designed to optimize road user operations considering the available geometric conditions.
5. When water ballasted systems used as barriers have blunt ends exposed to traffic, they should be attenuated as per manufacturer recommendations or flared to a point outside the clear zone.

If used to channelize pedestrians, longitudinal channelizing devices or water ballasted systems must have a continuous detectable bottom for users of long canes and the top of the unit shall not be less than 32 inches in height.

HOLLOW OR WATER BALLASTED SYSTEMS USED AS LONGITUDINAL CHANNELIZING DEVICES OR BARRIERS

Posted Speed	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices: On a Taper	On a Tangent
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'
35		205'	225'	245'	35'	70'
40		265'	295'	320'	40'	80'
45	L = WS	450'	495'	540'	45'	90'
50		500'	550'	600'	50'	100'
55		550'	605'	660'	55'	110'
60		600'	660'	720'	60'	120'
65		650'	715'	780'	65'	130'
70		700'	770'	840'	70'	140'
75		750'	825'	900'	75'	150'
80		800'	880'	960'	80'	160'

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

SUGGESTED MAXIMUM SPACING OF CHANNELIZING DEVICES AND MINIMUM DESIRABLE TAPER LENGTHS

SHEET 9 OF 12

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(9)-21

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REVISIONS	0010	12	074	US 67
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	ATL	BOWIE		42

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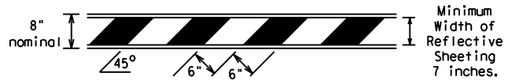
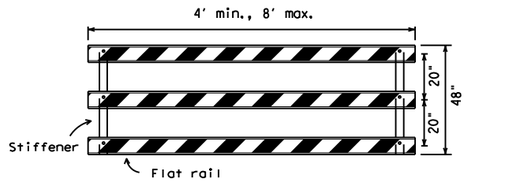
TYPE 3 BARRICADES

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.



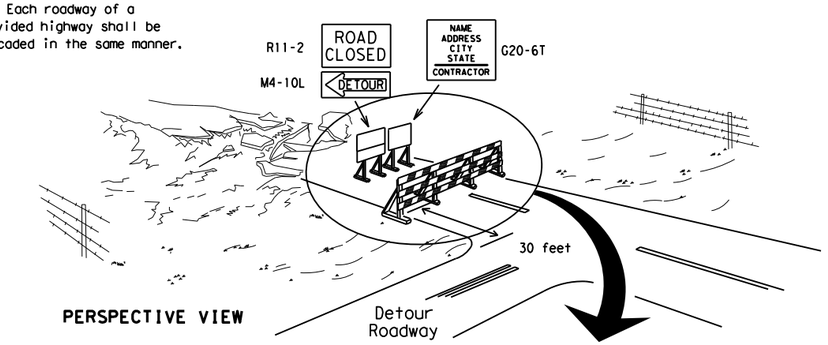
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



Stiffener may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

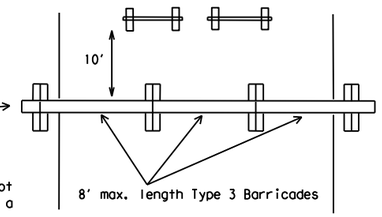
TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES

Each roadway of a divided highway shall be barricaded in the same manner.



PERSPECTIVE VIEW

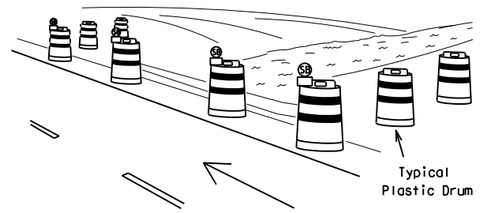
The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

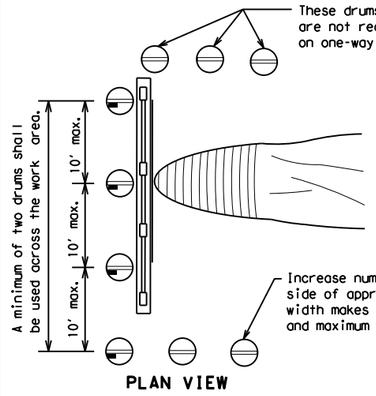
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

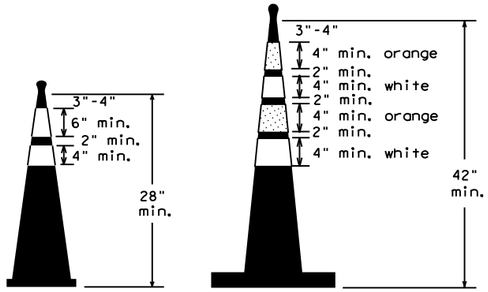
1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder 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

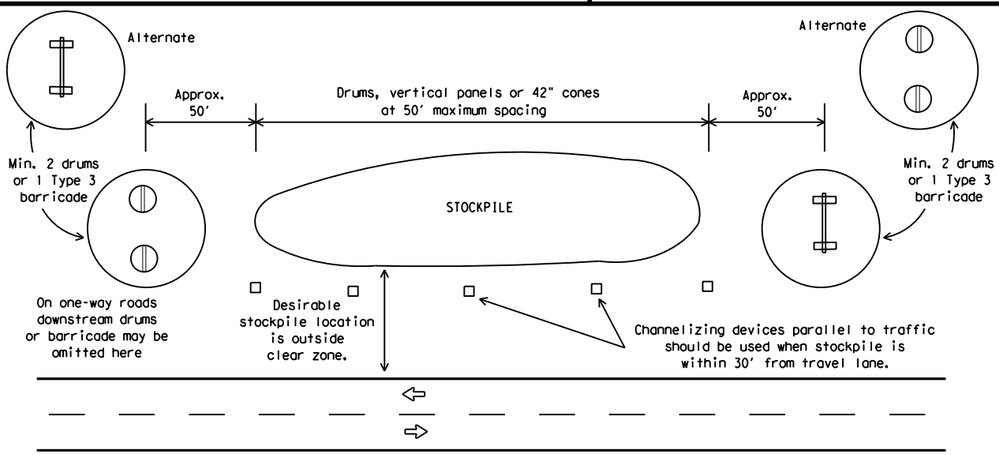
PLAN VIEW

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

SHEET 10 OF 12

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(10)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	074	US 67
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13 5-21	ATL	BOWIE		43

104

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WORK ZONE PAVEMENT MARKINGS

GENERAL

1. The Contractor shall be responsible for maintaining work zone and existing pavement markings, in accordance with the standard specifications and special provisions, on all roadways open to traffic within the CSJ limits unless otherwise stated in the plans.
2. Color, patterns and dimensions shall be in conformance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
3. Additional supplemental pavement marking details may be found in the plans or specifications.
4. Pavement markings shall be installed in accordance with the TMUTCD and as shown on the plans.
5. When short term markings are required on the plans, short term markings shall conform with the TMUTCD, the plans and details as shown on the Standard Plan Sheet WZ(STPM).
6. When standard pavement markings are not in place and the roadway is opened to traffic, DO NOT PASS signs shall be erected to mark the beginning of the sections where passing is prohibited and PASS WITH CARE signs at the beginning of sections where passing is permitted.
7. All work zone pavement markings shall be installed in accordance with Item 662, "Work Zone Pavement Markings."

RAISED PAVEMENT MARKERS

1. Raised pavement markers are to be placed according to the patterns on BC(12).
2. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and Departmental Material Specification DMS-4200 or DMS-4300.

PREFABRICATED PAVEMENT MARKINGS

1. Removable prefabricated pavement markings shall meet the requirements of DMS-8241.
2. Non-removable prefabricated pavement markings (foil back) shall meet the requirements of DMS-8240.

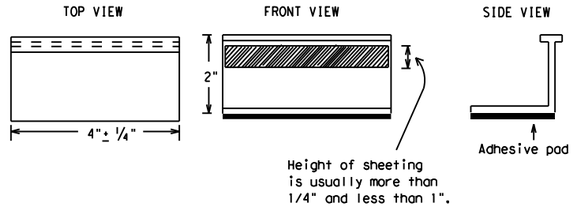
MAINTAINING WORK ZONE PAVEMENT MARKINGS

1. The Contractor will be responsible for maintaining work zone pavement markings within the work limits.
2. Work zone pavement markings shall be inspected in accordance with the frequency and reporting requirements of work zone traffic control device inspections as required by Form 599.
3. The markings should provide a visible reference for a minimum distance of 300 feet during normal daylight hours and 160 feet when illuminated by automobile low-beam headlights at night, unless sight distance is restricted by roadway geometrics.
4. Markings failing to meet this criteria within the first 30 days after placement shall be replaced at the expense of the Contractor as per Specification Item 662.

REMOVAL OF PAVEMENT MARKINGS

1. Pavement markings that are no longer applicable, could create confusion or direct a motorist toward or into the closed portion of the roadway shall be removed or obliterated before the roadway is opened to traffic.
2. The above shall not apply to detours in place for less than three days, where flaggers and/or sufficient channelizing devices are used in lieu of markings to outline the detour route.
3. Pavement markings shall be removed to the fullest extent possible, so as not to leave a discernable marking. This shall be by any method approved by TxDOT Specification Item 677 for "Eliminating Existing Pavement Markings and Markers".
4. The removal of pavement markings may require resurfacing or seal coating portions of the roadway as described in Item 677.
5. Subject to the approval of the Engineer, any method that proves to be successful on a particular type pavement may be used.
6. Blast cleaning may be used but will not be required unless specifically shown in the plans.
7. Over-painting of the markings SHALL NOT BE permitted.
8. Removal of raised pavement markers shall be as directed by the Engineer.
9. Removal of existing pavement markings and markers will be paid for directly in accordance with Item 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS," unless otherwise stated in the plans.
10. Black-out marking tape may be used to cover conflicting existing markings for periods less than two weeks when approved by the Engineer.

Temporary Flexible-Reflective Roadway Marker Tabs



STAPLES OR NAILS SHALL NOT BE USED TO SECURE TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS TO THE PAVEMENT SURFACE

1. Temporary flexible-reflective roadway marker tabs used as guidemarks shall meet the requirements of DMS-8242.
2. Tabs detailed on this sheet are to be inspected and accepted by the Engineer or designated representative. Sampling and testing is not normally required, however at the option of the Engineer, either "A" or "B" below may be imposed to assure quality before placement on the roadway.
   A. Select five (5) or more tabs at random from each lot or shipment and submit to the Construction Division, Materials and Pavement Section to determine specification compliance.
   B. Select five (5) tabs and perform the following test. Affix five (5) tabs at 24 inch intervals on an asphaltic pavement in a straight line. Using a medium size passenger vehicle or pickup, run over the markers with the front and rear tires at a speed of 35 to 40 miles per hour, four (4) times in each direction. No more than one (1) out of the five (5) reflective surfaces shall be lost or displaced as a result of this test.
3. Small design variances may be noted between tab manufacturers.
4. See Standard Sheet WZ(STPM) for tab placement on new pavements. See Standard Sheet TCP(7-1) for tab placement on seal coat work.

RAISED PAVEMENT MARKERS USED AS GUIDEMARKS

1. Raised pavement markers used as guidemarks shall be from the approved product list, and meet the requirements of DMS-4200.
2. All temporary construction raised pavement markers provided on a project shall be of the same manufacturer.
3. Adhesive for guidemarks shall be bituminous material hot applied or butyl rubber pad for all surfaces, or thermoplastic for concrete surfaces.

Guidemarks shall be designated as:
YELLOW - (two amber reflective surfaces with yellow body).
WHITE - (one silver reflective surface with white body).

DEPARTMENTAL MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
TRAFFIC BUTTONS	DMS-4300
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240
TEMPORARY REMOVABLE, PREFABRICATED PAVEMENT MARKINGS	DMS-8241
TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS	DMS-8242

A list of prequalified reflective raised pavement markers, non-reflective traffic buttons, roadway marker tabs and other pavement markings can be found at the Material Producer List web address shown on BC(1).

Texas Department of Transportation | Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS

BC(11)-21

FILE: bc-21.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	074	US 67
2-98 9-07 5-21	DIST	COUNTY		SHEET NO.
1-02 7-13	ATL	BOWIE		44
11-02 8-14				

105

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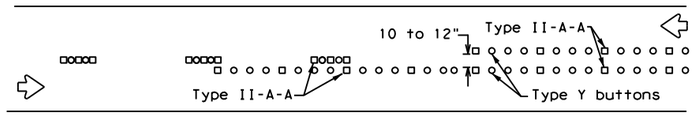
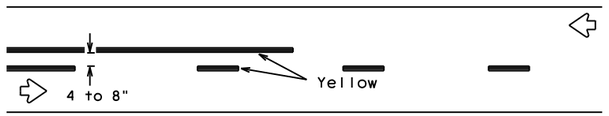
PAVEMENT MARKING PATTERNS

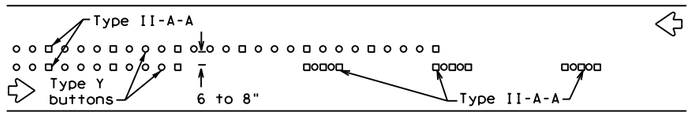
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



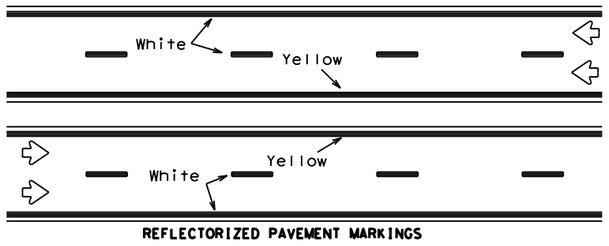
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



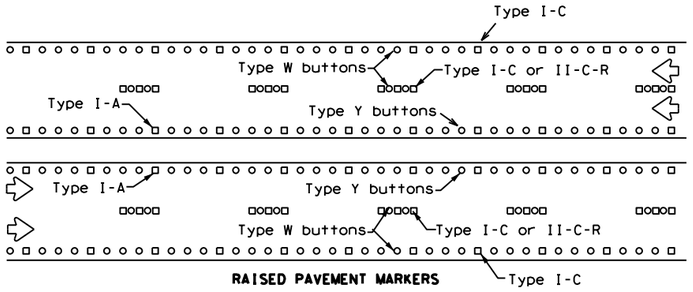
RAISED PAVEMENT MARKERS - PATTERN B

Pattern A is the TXDOT Standard, however Pattern B may be used if approved by the Engineer.
Prefabricated markings may be substituted for reflectorized pavement markings.

CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO-LANE, TWO-WAY HIGHWAYS



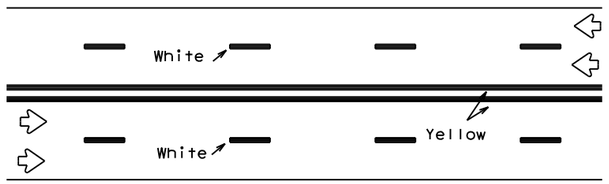
REFLECTORIZED PAVEMENT MARKINGS



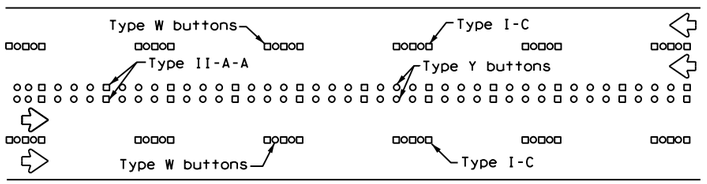
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



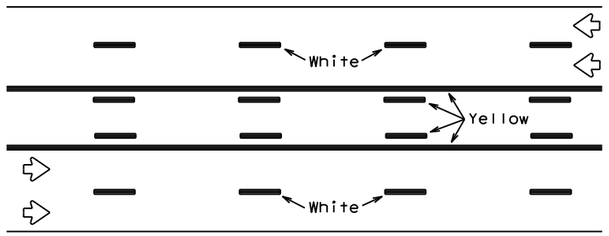
REFLECTORIZED PAVEMENT MARKINGS



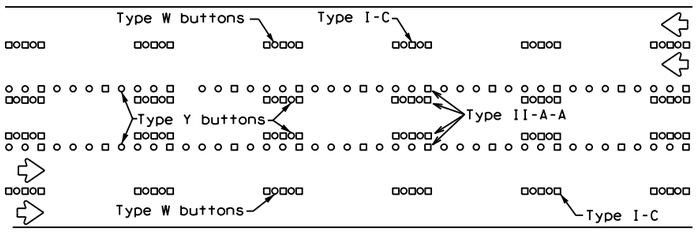
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS



RAISED PAVEMENT MARKERS

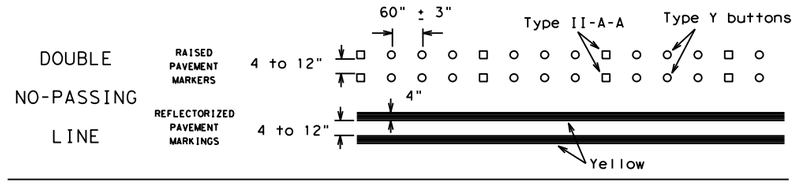
Prefabricated markings may be substituted for reflectorized pavement markings.

TWO-WAY LEFT TURN LANE

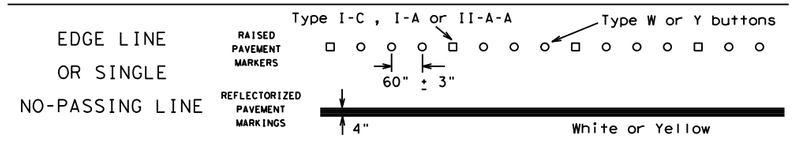
STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS

SOLID LINES

DOUBLE NO-PASSING LINE

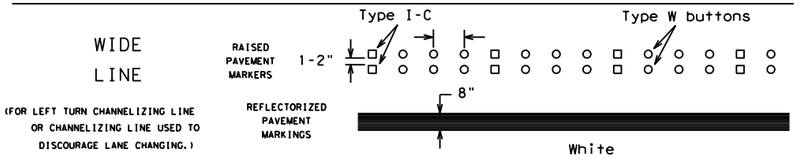


EDGE LINE OR SINGLE NO-PASSING LINE



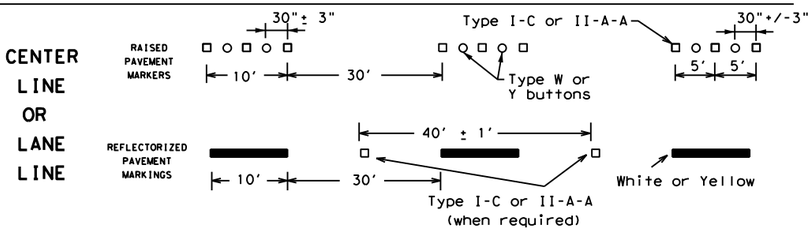
WIDE LINE

(FOR LEFT TURN CHANNELIZING LINE OR CHANNELIZING LINE USED TO DISCOURAGE LANE CHANGING.)

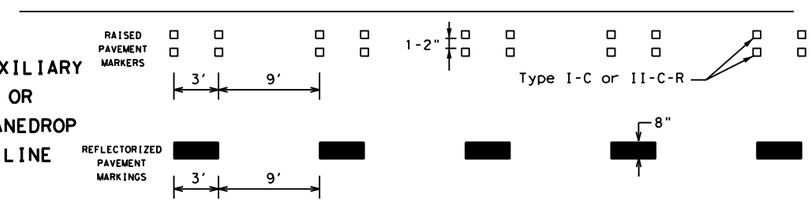


BROKEN LINES

CENTER LINE OR LANE LINE

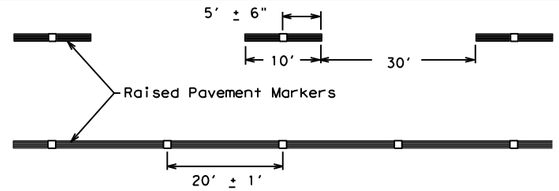


AUXILIARY OR LANEDROP LINE



REMOVABLE MARKINGS WITH RAISED PAVEMENT MARKERS

If raised pavement markers are used to supplement REMOVABLE markings, the markers shall be applied to the top of the tape at the approximate mid length of tape used for broken lines or at 20 foot spacing for solid lines. This allows an easier removal of raised pavement markers and tape.



Centerline only - not to be used on edge lines

Raised pavement markers used as standard pavement markings shall be from the approved products list and meet the requirements of Item 672 "RAISED PAVEMENT MARKERS."

SHEET 12 OF 12

Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS

BC(12)-21

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	ATL	BOWIE		45

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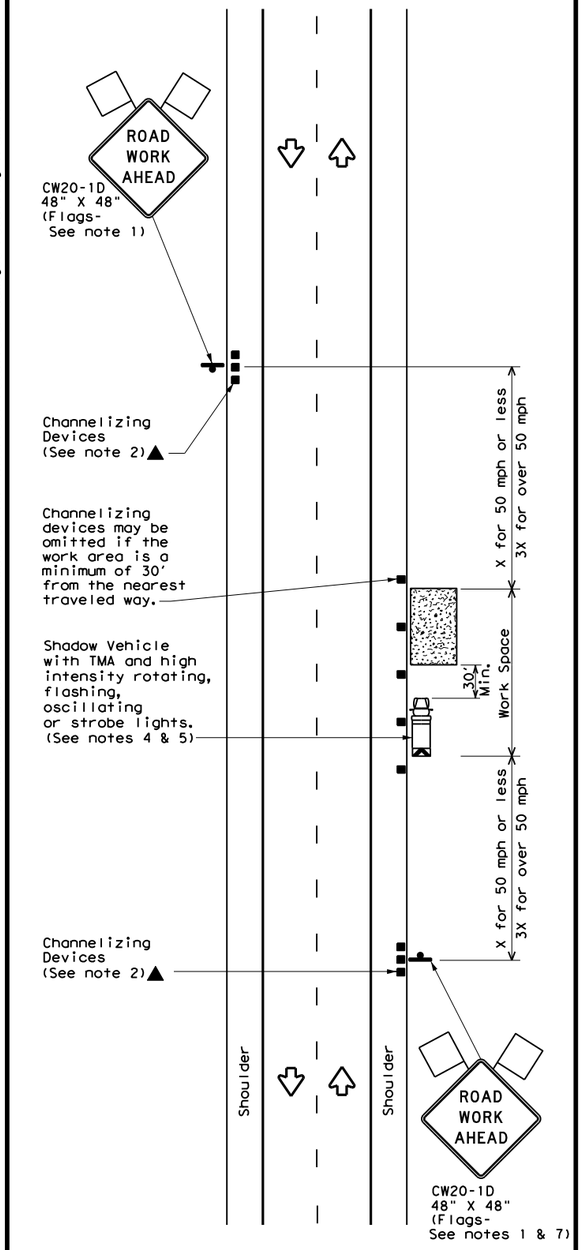
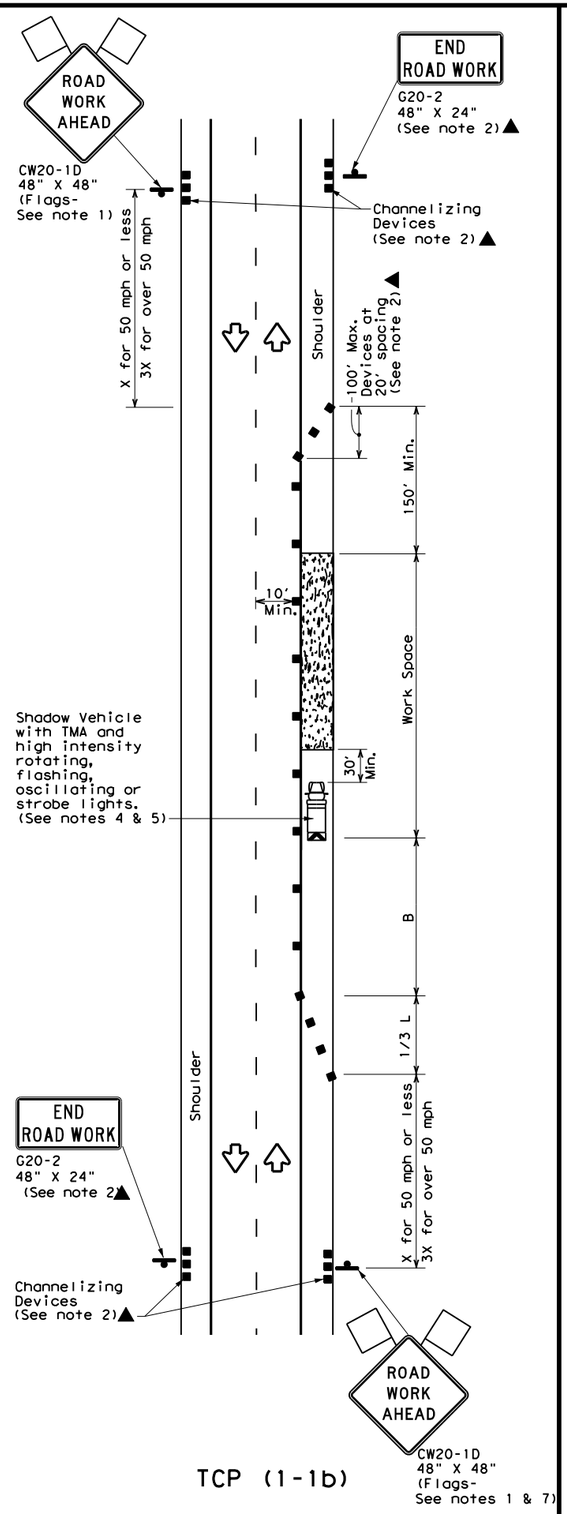


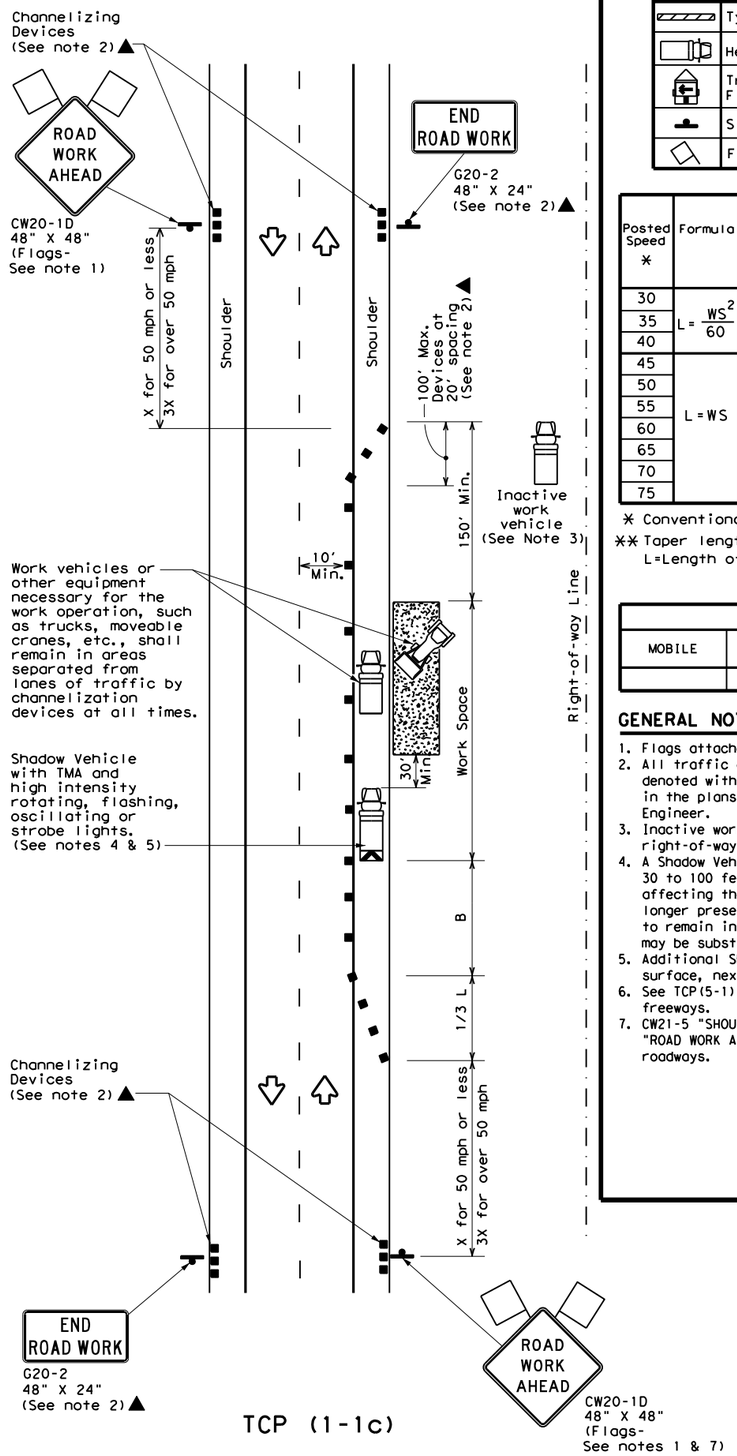
TCP (1-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads



TCP (1-1b)

WORK SPACE ON SHOULDER
Conventional Roads



TCP (1-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

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. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
4. 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.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
6. See TCP(5-1) for shoulder work on divided highways, expressways and freeways.
7. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(1-1)-18

FILE: tcp1-1-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
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	ATL	BOWIE		46

DATE:
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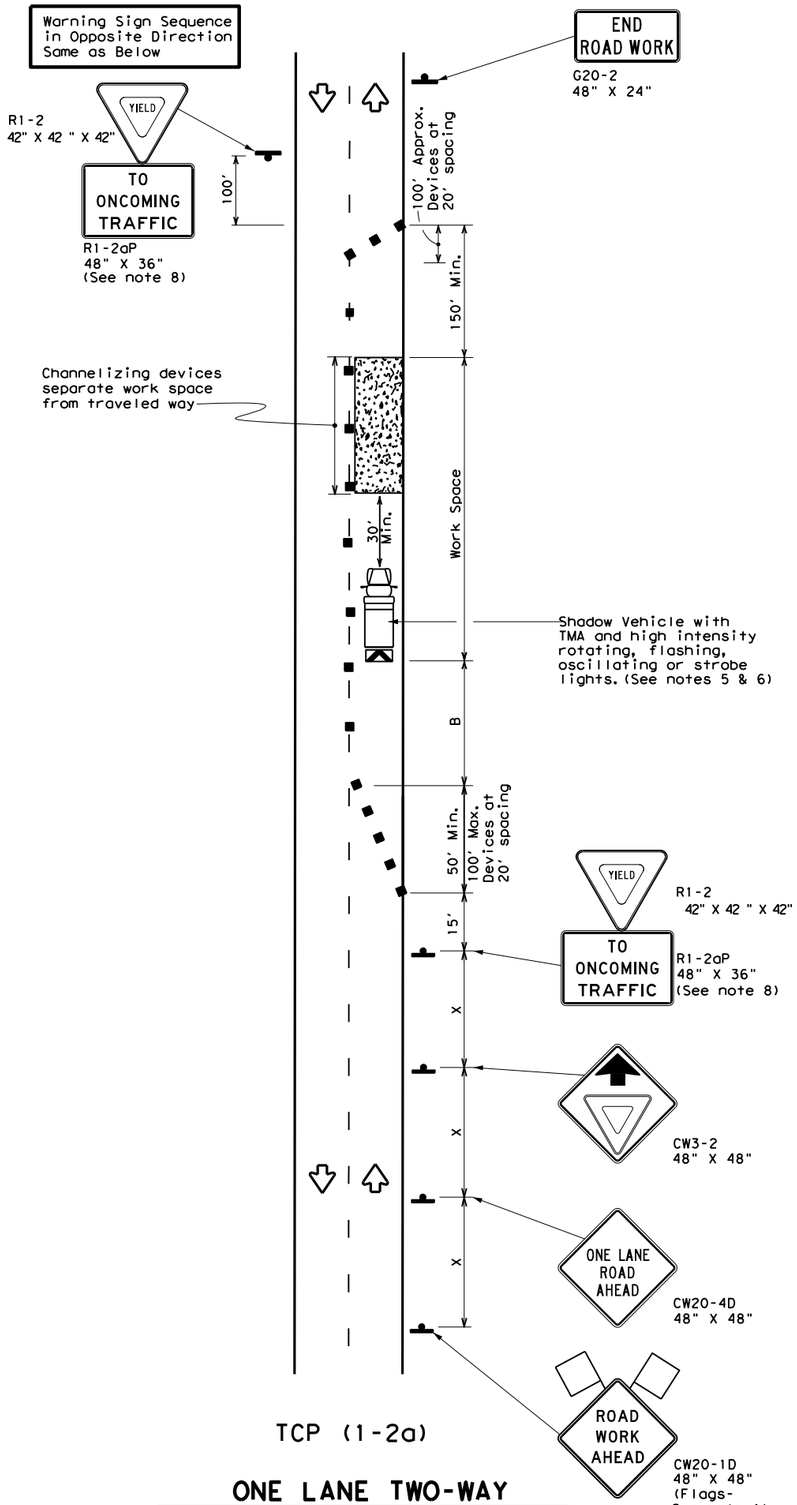
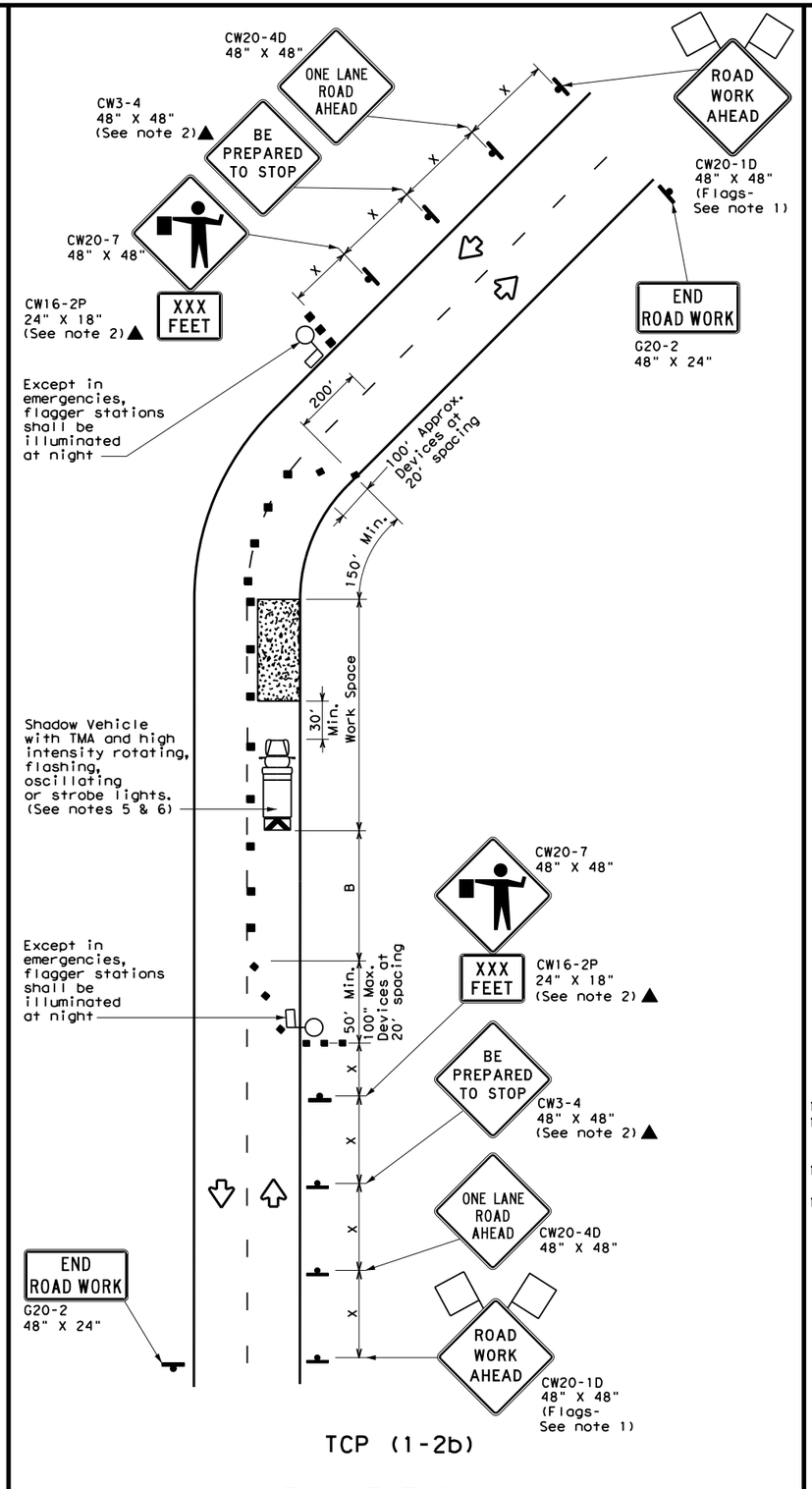


TCP (1-2a)

ONE LANE TWO-WAY
CONTROL WITH YIELD SIGNS
(Less than 2000 ADT - See note 7)



TCP (1-2b)

ONE LANE TWO-WAY
CONTROL WITH FLAGGERS

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 or R1-2 "YIELD" sign is less than 1500 feet.
5. 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.
6. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

TCP (1-2a)

7. R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work spaces should be no longer than one half city block. In rural areas on roadways with less than 2000 ADT, work spaces should be no longer than 400 feet.
8. R1-2 "YIELD" sign with R1-2aP "TO ONCOMING TRAFFIC" plaque shall be placed on a support at a 7 foot minimum mounting height.

TCP (1-2b)

9. Flaggers should use two-way radios or other methods of communication to control traffic.
10. Length of work space should be based on the ability of flaggers to communicate.
11. 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).
12. Channelizing devices on the center-line may be omitted when a pilot car is leading traffic and approved by the Engineer.
13. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

Texas Department of Transportation

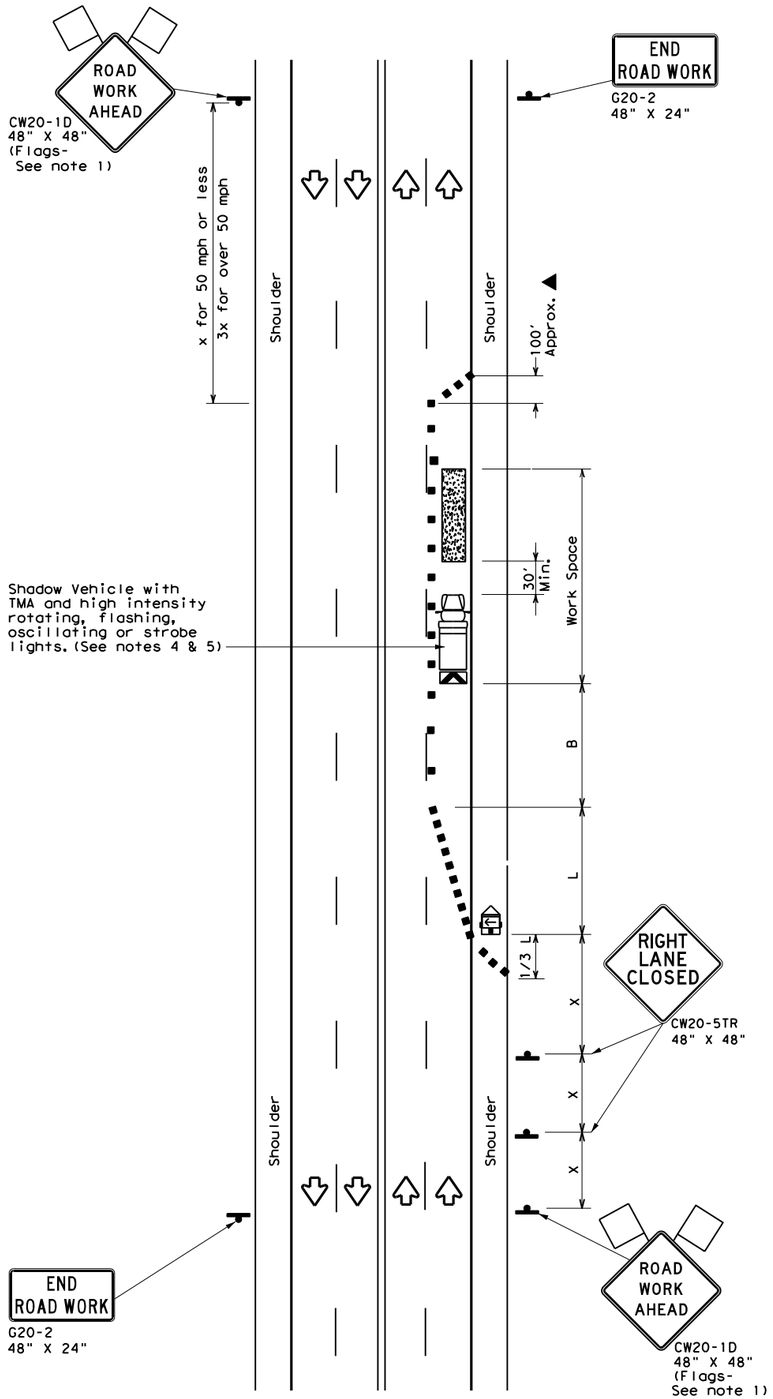
Traffic Operations Division Standard

TRAFFIC CONTROL PLAN
ONE-LANE TWO-WAY
TRAFFIC CONTROL

TCP(1-2)-18

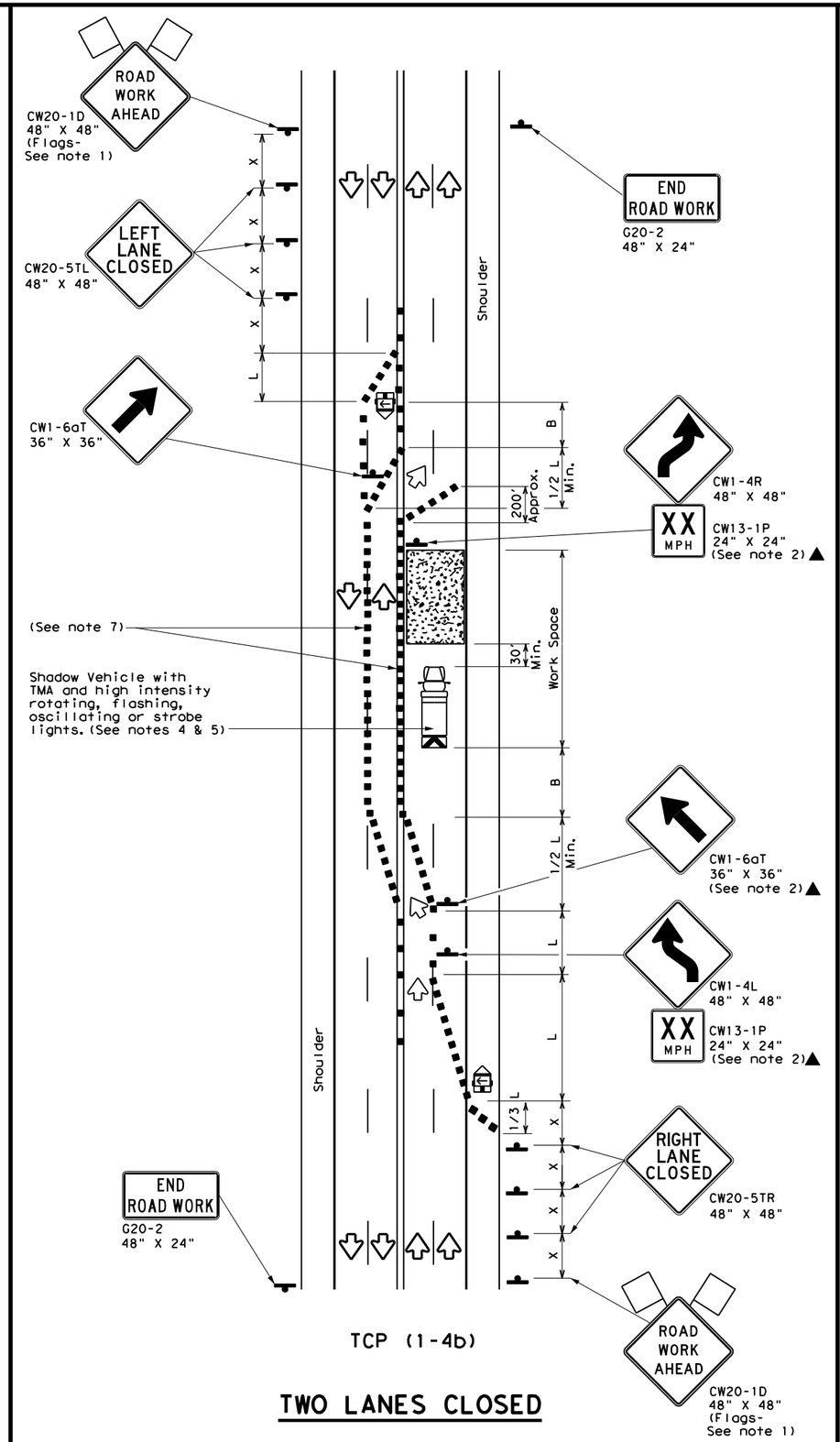
FILE: tcp1-2-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-90 4-98	0010	12	074	US 67
2-94 2-12	DIST	COUNTY		SHEET NO.
1-97 2-18	ATL	BOWIE		47

DATE:
FILE:



TCP (1-4a)

ONE LANE CLOSED



TCP (1-4b)

TWO LANES CLOSED

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	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. 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.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

TCP (1-4a)

6. If this TCP is used for a left lane closure , CW20-5TL "LEFT LANE CLOSED" signs shall be used and channelizing devices shall be placed on the centerline where needed to protect the work space from opposing traffic with the arrow panel placed in the closed lane near the end of the merging taper.

TCP (1-4b)

7. Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speeds are 35 mph or slower, and for tangent sections, at 1/2S where S is the speed in mph. This tighter device spacing is intended for the areas of conflicting markings, not the entire work zone.

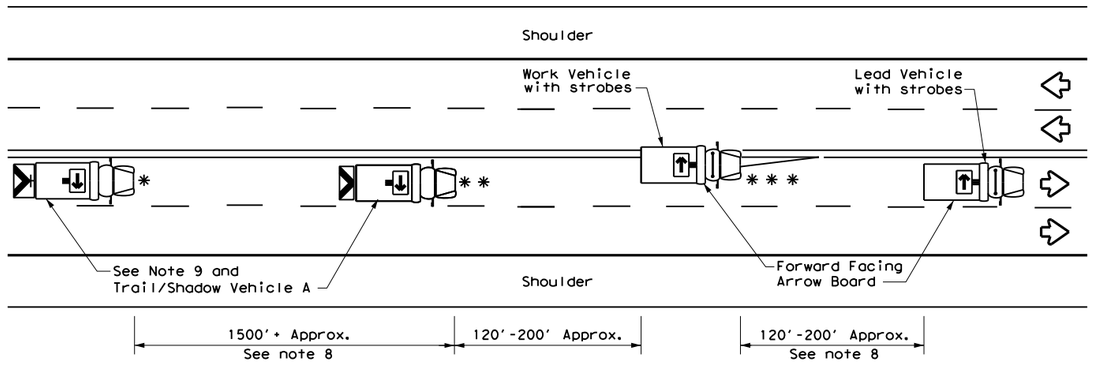
Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS

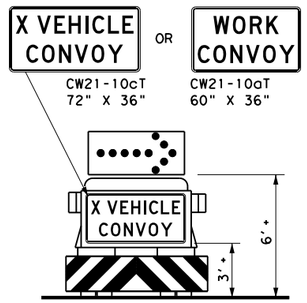
TCP(1-4)-18

FILE: tcp1-4-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	074	US 67
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 2-12	ATL	BOWIE		48
1-97 2-18				



TCP (3-1a)

UNDIVIDED MULTILANE ROADWAY



TRAIL/SHADOW VEHICLE A

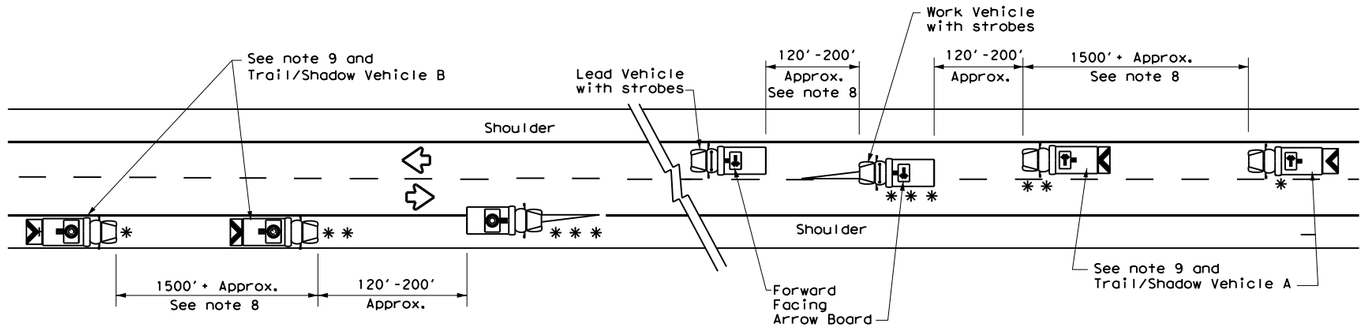
with RIGHT Directional display Flashing Arrow Board

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.

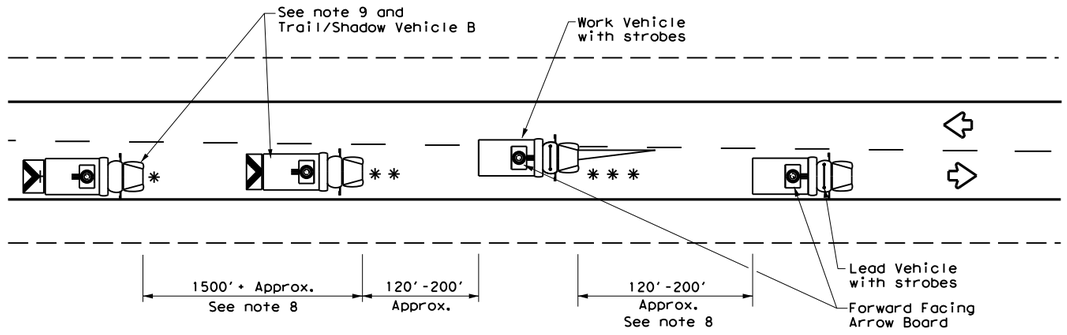


WORK ON SHOULDER

WORK ON TRAVEL LANE

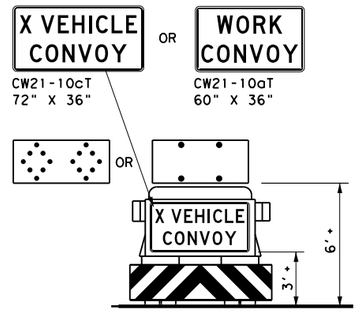
TCP (3-1b)

TWO-WAY ROADWAY WITH PAVED SHOULDERS



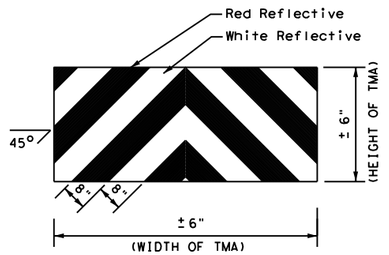
TCP (3-1c)

TWO-WAY ROADWAY WITHOUT PAVED SHOULDERS



TRAIL/SHADOW VEHICLE B

with Flashing Arrow Board in CAUTION display



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	0010	12	074	US 67
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 7-13	ATL	BOWIE		49
1-97				

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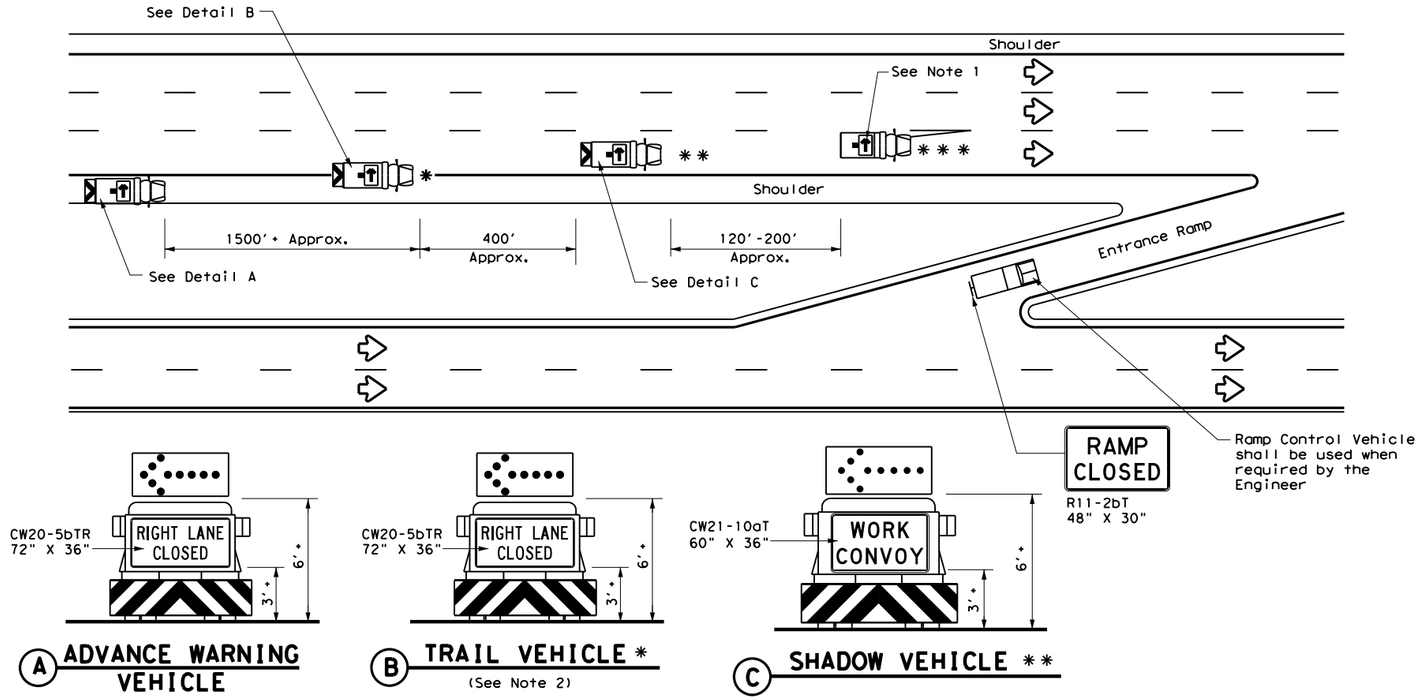
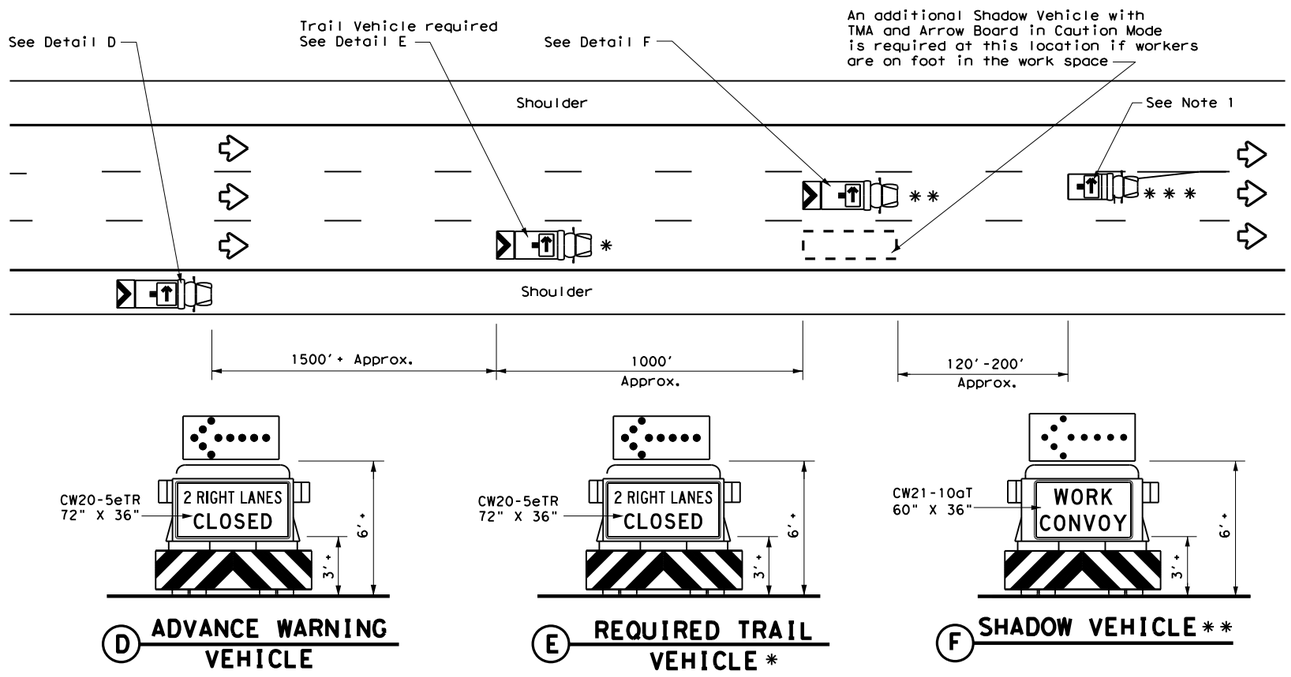


RIGHT LANE CLOSURE ON DIVIDED HIGHWAY - TCP(3-2a)



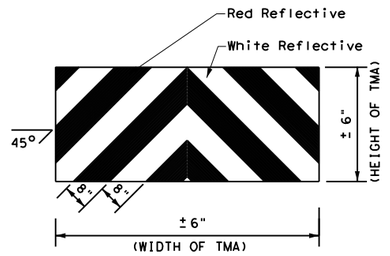
INTERIOR LANE CLOSURE ON MULTI-LANE DIVIDED HIGHWAY - TCP(3-2b)

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
REVISIONS	0010	12	074	US 67
2-94 4-98 8-95 7-13 1-97	DIST	COUNTY		SHEET NO.
	ATL	BOWIE		50

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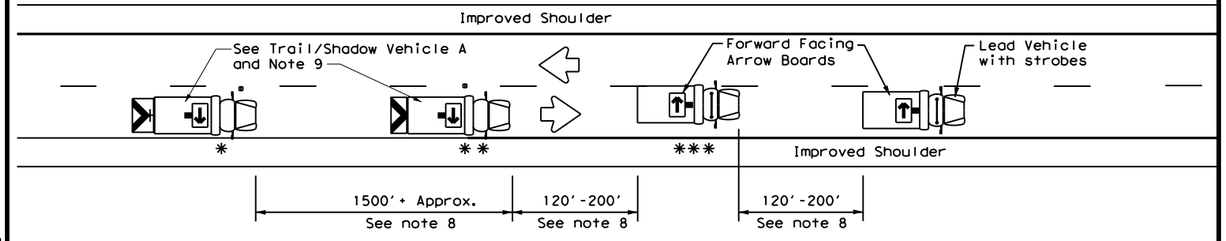
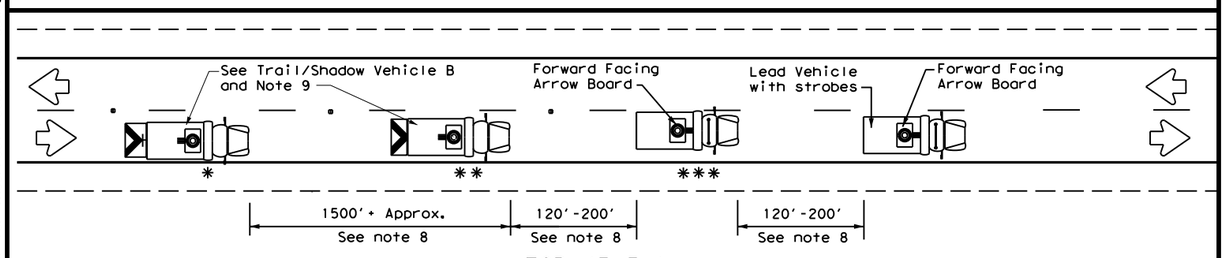


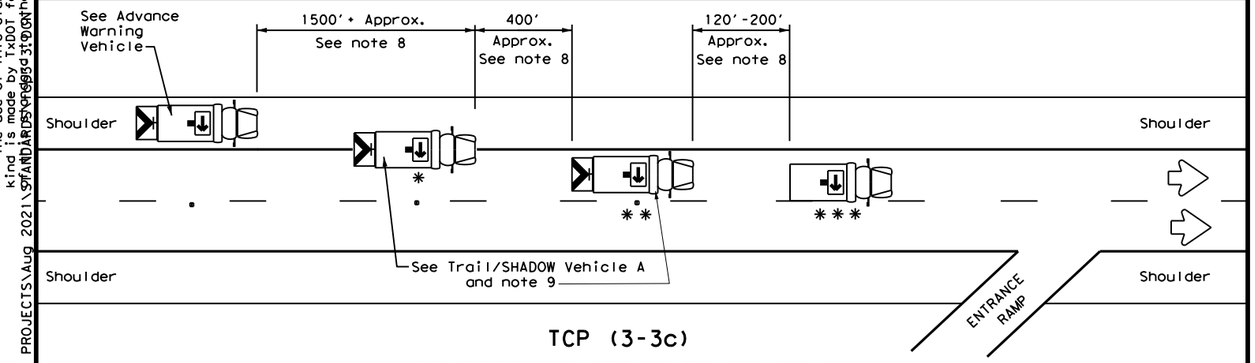
TCP (3-3a)

TWO LANE HIGHWAY WITH PAVED SHOULDERS (WORK ON TRAVEL LANE)



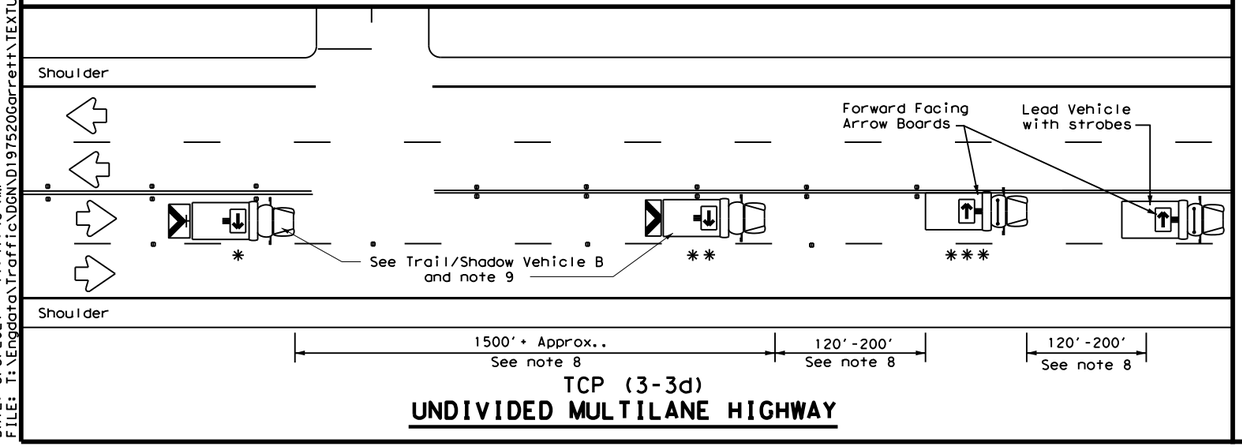
TCP (3-3b)

TWO LANE HIGHWAY WITHOUT PAVED SHOULDERS (WORK ON TRAVEL LANE)



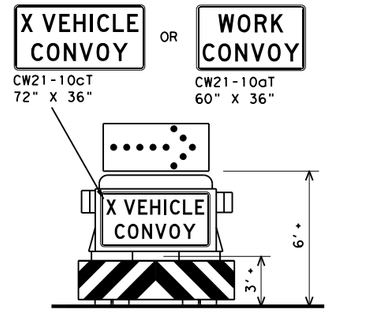
TCP (3-3c)

DIVIDED MULTILANE HIGHWAY



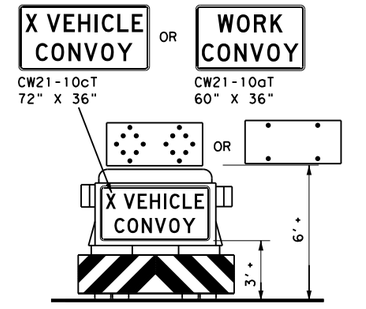
TCP (3-3d)

UNDIVIDED MULTILANE HIGHWAY



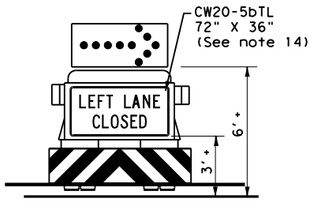
TRAIL/SHADOW VEHICLE A

with RIGHT Directional display
Flashing Arrow Board

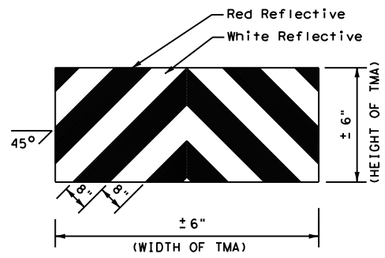


TRAIL/SHADOW VEHICLE B

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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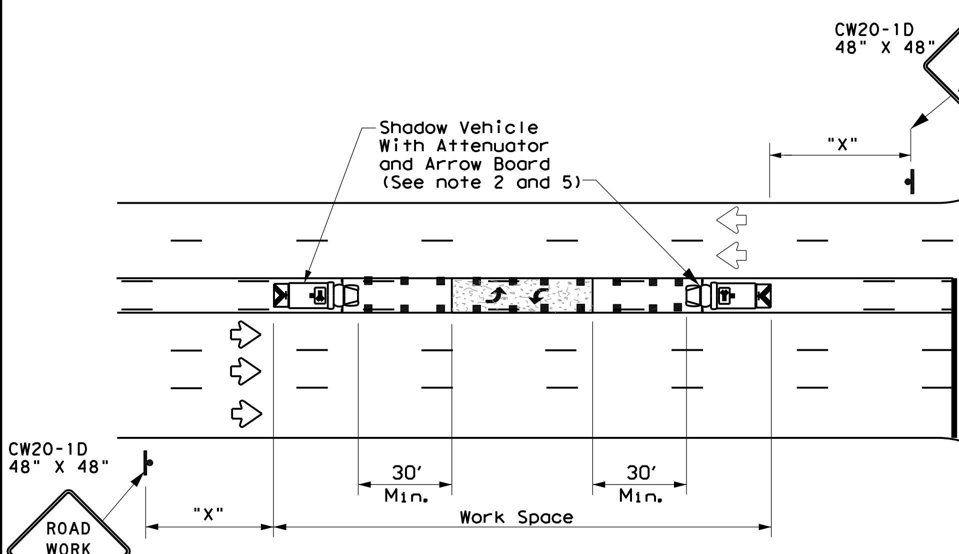
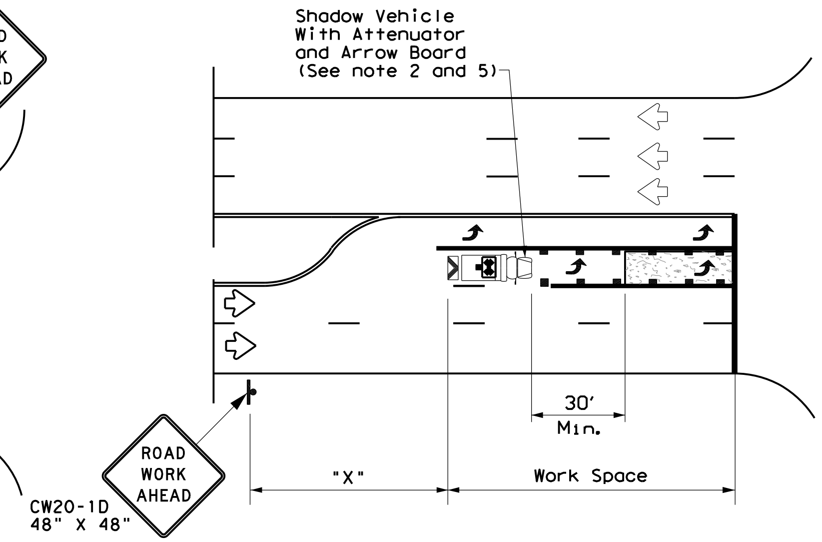
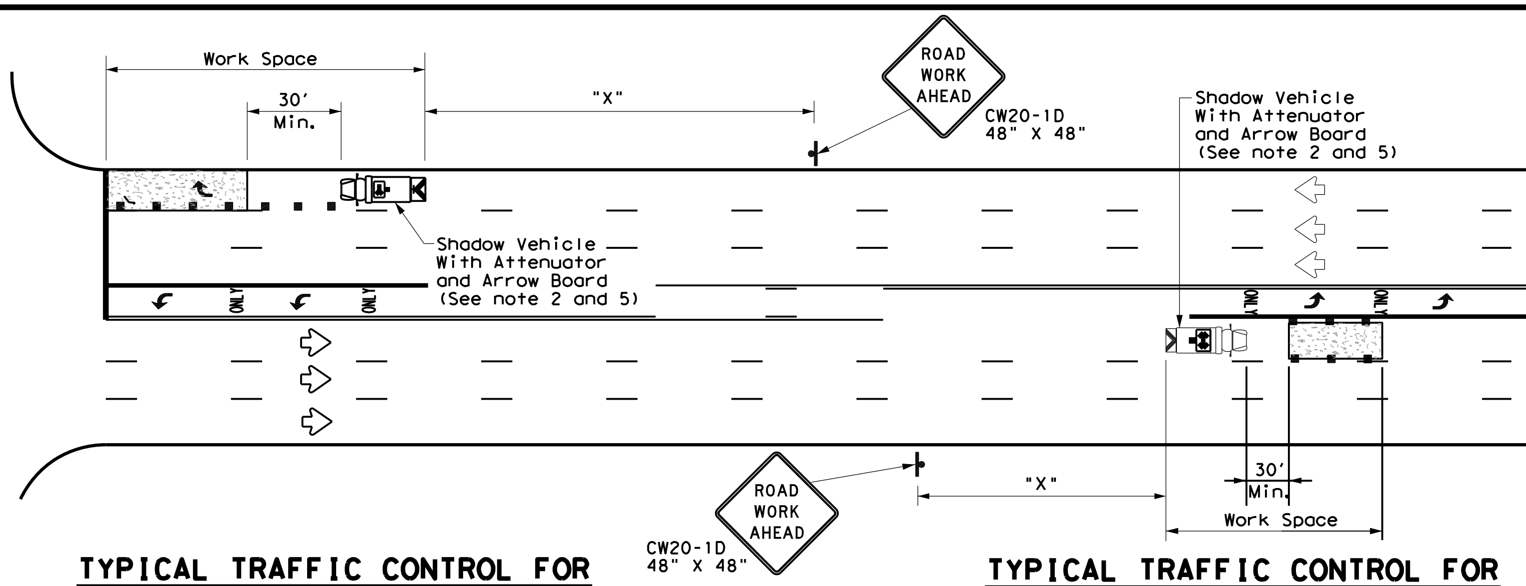
8-95 7-13	ATL	BOWIE		51
1-97 7-14				



TYPICAL TRAFFIC CONTROL FOR CONTINUOUS LEFT TURN LANE SYMBOL MARKINGS

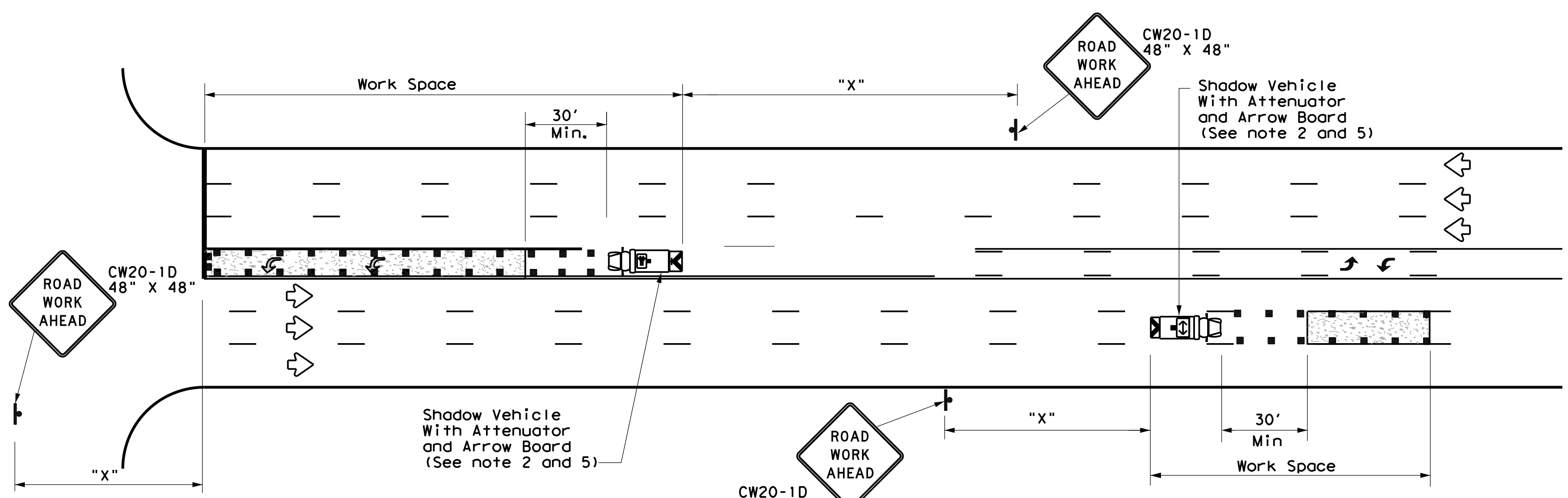


TYPICAL TRAFFIC CONTROL FOR OUTSIDE DUAL LEFT TURN LANE SYMBOL MARKINGS



TYPICAL TRAFFIC CONTROL FOR OUTSIDE LANE MARKINGS

TYPICAL TRAFFIC CONTROL FOR INSIDE LANE MARKINGS



TYPICAL TRAFFIC CONTROL FOR LEFT TURN LANE MARKINGS

TYPICAL TRAFFIC CONTROL FOR CENTER LANE MARKINGS

LEGEND

Symbol	Description	Symbol	ARROW BOARD DISPLAY
*	Trail Vehicle		
**	Shadow Vehicle		
***	Work Vehicle		RIGHT Directional
	Heavy Work Vehicle		LEFT Directional
	Truck Mounted Attenuator (TMA)		Double Arrow
	Traffic Flow	■ ■ ■	Channelizing Devices

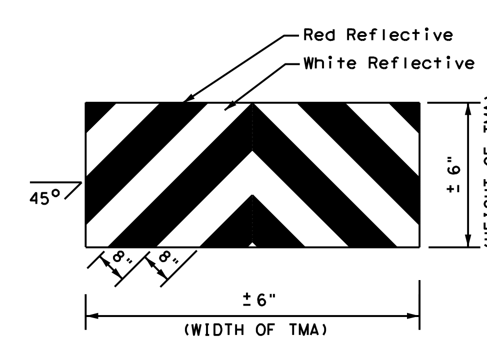
Posted Speed *	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
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. This traffic control plan is for use on conventional roads posted at 45 mph or less and is intended for mobile operations that move continuously or intermittently (stopping up to approximately 15 minutes) such as short-line striping and in-lane rumble strips. When activities are anticipated to take longer amounts of time or traffic conditions warrant, a short duration or short-term stationary traffic control plan should be used.
2. A Truck Mounted Attenuator shall be used on Shadow Vehicle. Striping on the back panel of all truck mounted attenuators shall be 8" red and white reflective sheeting placed in an inverted "V" design. Reflective sheeting shall meet or exceed the reflectivity and color requirements of departmental material specification DMS-8300, Type A.
3. All traffic control devices shall be in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD), latest edition.
4. The use of yellow rotating beacons or strobe lights on vehicles are required. Blue high intensity rotating, flashing, oscillating or strobe lights when mounted on the drivers side of the vehicle may be operated simultaneously with the amber beacons or strobe lights.
5. Flashing arrow board shall be used on Shadow Vehicle. Flashing arrow board shall be Type B or Type C as per BC Standards. The arrow board operation shall be controlled from inside the truck.



STRIPING FOR TMA

Texas Department of Transportation
Traffic Operations Division Standard

TRAFFIC CONTROL PLAN MOBILE OPERATIONS FOR ISOLATED WORK AREAS UNDIVIDED HIGHWAYS

TCP(3-4)-13

FILE: tcp3-4.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT July, 2013	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	074	US 67
	DIST		COUNTY	SHEET NO.
	ATL		BOWIE	52

178

DATE: $DATE$ $TIME$
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DATE: 5/5/2021 11:41:51 AM
FILE: T:\Engdata\Traffic\DGN\D197520Garrett\TEXTURIZING PROJECTS\Aug 2021\STANDARDS\tcp(atl-10)-14.dgn

TABLE 1: Guidance for Choosing Whether a Lead Vehicle Is Needed on Spot Edge Repair, Spot Pothole Patching, Herbicide, Sweeping, Retroreflectivity Measurements, and Tab Placement/Removal.

Volume (ADT)	Speed (mph)	Type of Roadway		
		Two-Lane, Two-Way	Multilane Undivided	Multilane Divided
<2000	≤45	NO	NO	NO
<2000	>45	NO	NO	NO
≥2000	≤45	NO	NO	NO
≥2000	>45	YES	YES	NO

When a LEAD vehicle is not used, the WORK vehicle must be equipped with an arrow board.

TABLE 2: Guidance for Choosing Whether a Shadow/Trail/Advance Warning Vehicle is Needed on Spot Edge Repair, Spot Pothole Patching, Herbicide, Sweeping, Retroreflectivity Measurements, and Tab Placement/Removal.

Volume (ADT)	Speed (mph)	Type of Roadway								
		Two-Lane, Two-Way			Multilane Undivided			Multilane Divided		
		SHADOW	TRAIL	ADVANCE	SHADOW	TRAIL	ADVANCE	SHADOW	TRAIL	ADVANCE
<2000	≤45	YES	NO	NO	YES[1]	NO	NO	YES	NO	YES
<2000	>45	YES	NO	NO	YES[1]	NO	NO	YES	NO	YES
≥2000	≤45	YES	NO	NO	YES[1]	NO	NO	YES	NO	YES
≥2000	>45	YES	YES	NO	YES[1]	YES	NO	YES	YES[2]	YES

[1] The shadow vehicle may be omitted if the work vehicle does not encroach into a travel lane.

[2] For Right Lane Closure, the Engineer will determine if the TRAIL VEHICLE is required based on prevailing roadway conditions, traffic volume, and sight distance restrictions.

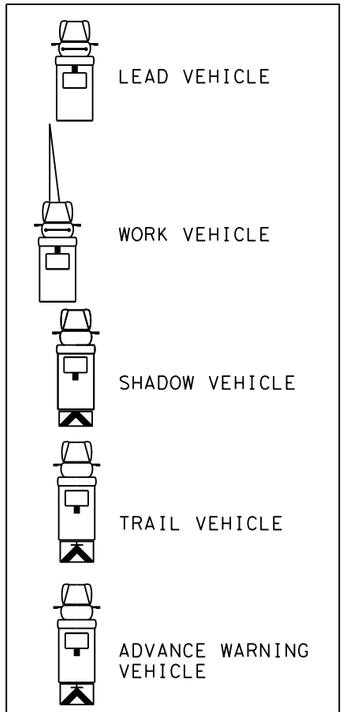
TABLE 3: Guidance for Choosing Whether a Shadow/Trail/Advance Warning Vehicle Is Needed on Striping, RPM Installation/Removal, and Shoulder Texture Operations.

Volume (ADT)	Speed (mph)	Type of Roadway								
		Two-Lane, Two-Way			Multilane Undivided			Multilane Divided		
		SHADOW	TRAIL	ADVANCE	SHADOW	TRAIL	ADVANCE	SHADOW	TRAIL	ADVANCE
<2000	≤45	YES	NO	NO	YES	NO	NO	YES	NO	YES
<2000	>45	YES	NO	NO	YES	NO	NO	YES	NO	YES
≥2000	≤45	YES	NO	NO	YES	NO	NO	YES	NO	YES
≥2000	>45	YES	YES	NO	YES	YES	NO	YES	YES[2]	YES

[2] For Right Lane Closure, the Engineer will determine if the TRAIL VEHICLE is required based on prevailing roadway conditions, traffic volume, and sight distance restrictions.

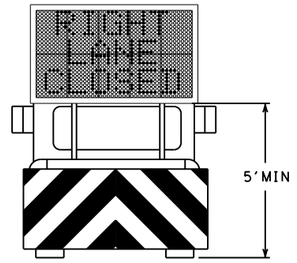
LIST OF VEHICLES

Refer to TCP(3-1) or TCP(3-2) for vehicle details.



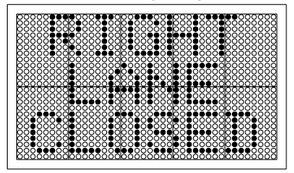
Guidance for Using a Dynamic Message Sign on an Advance Warning Vehicle

When shown in the plans, use a Truck Mounted Changeable Message Sign on Advance Warning Vehicle on multilane roadways with speed limit of 75 MPH.



Advance Warning Vehicle for speed =75 mph

Typical Advance Warning Sign



THREE LINES OF 12" MIN LETTERS

MIN 12" LETTERS
MIN 12" LETTERS
MIN 12" LETTERS

PORTABLE DYNAMIC MESSAGE SIGN

LETTERS = AMBER
BORDER = BLACK
BACKGROUND = BLACK

Texas Department of Transportation
Atlanta District Standard

TRAFFIC CONTROL PLAN TMA USAGE GUIDELINES

TCP (ATL-10)-14

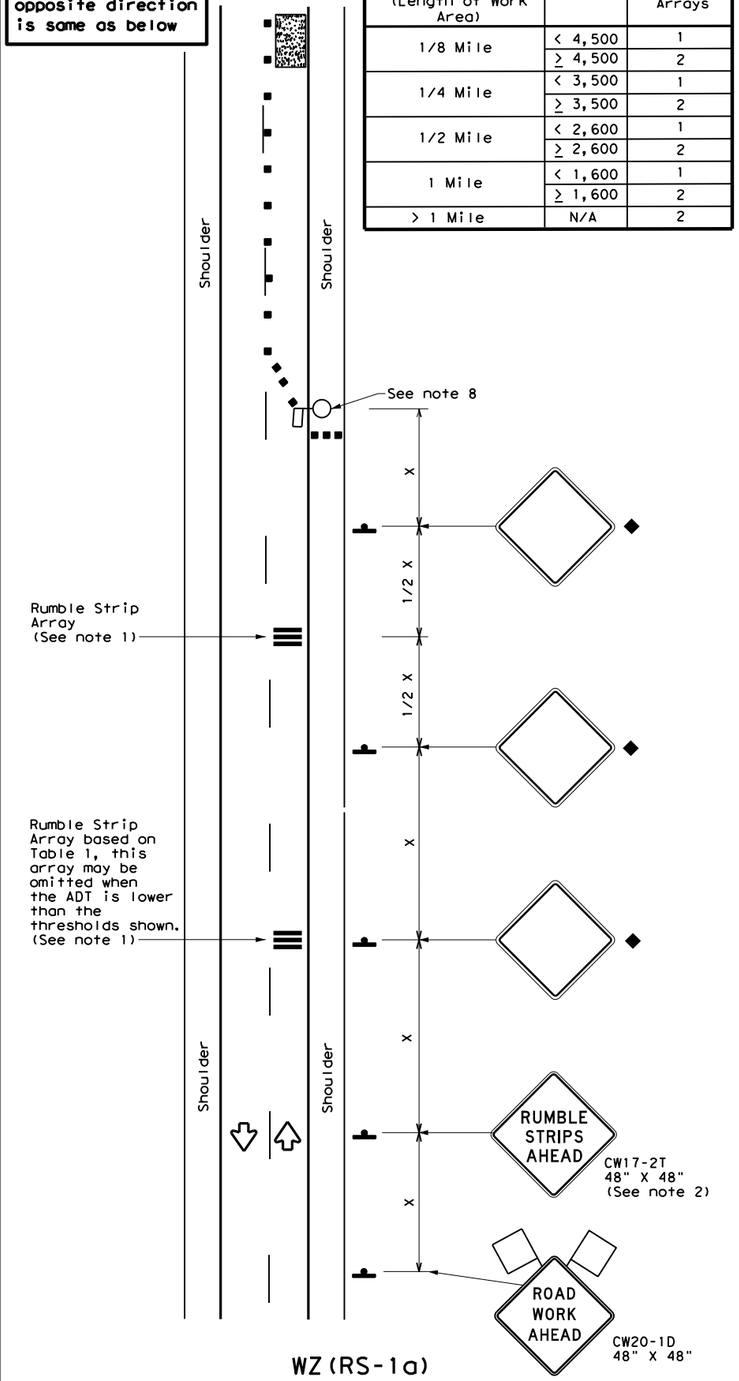
FILE:	atl-10.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT	January 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS		0010	12	074	US 67
		DIST	COUNTY		SHEET NO.
		ATL	BOWIE		53

010

DATE: 5/5/2021 11:41:53 AM
FILE: I:\Engdata\Traffic\DGN\D197520arret1\TEXTURIZING PROJECTS\Aug 2021\STANDARDS\wzrs16.dgn

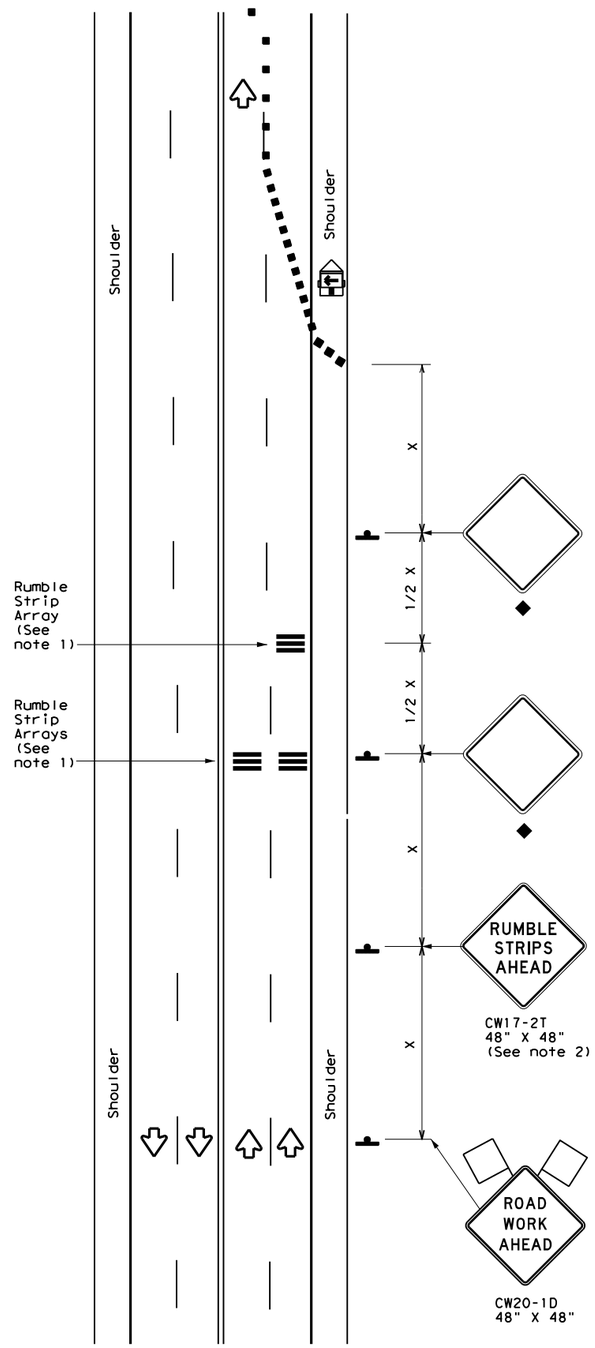
Warning sign and rumble strip sequence in opposite direction is same as below

TABLE 1		
Flagger to Flagger (Length of Work Area)	ADT	# of Rumble Strip Arrays
1/8 Mile	< 4,500	1
	≥ 4,500	2
1/4 Mile	< 3,500	1
	≥ 3,500	2
1/2 Mile	< 2,600	1
	≥ 2,600	2
1 Mile	< 1,600	1
	≥ 1,600	2
> 1 Mile	N/A	2



WZ(RS-1a)
75 mph or Less

RUMBLE STRIPS ON ONE-LANE TWO-WAY APPLICATION



WZ(RS-1b)
75 mph or Less

RUMBLE STRIPS FOR LANE CLOSURE ON CONVENTIONAL ROADWAY

GENERAL NOTES

1. Each Rumble Strip Array should consist of three rumble strips spaced center to center at the spacing shown in Table 2, placed transverse across the lane at locations shown.
2. The CW17-2T "RUMBLE STRIPS AHEAD" sign should be located after the CW20-1D "ROAD WORK AHEAD sign and spaced as shown. If traffic is observed to be queuing, or is expected to queue beyond the Rumble Strips, the CW17-2T sign and the first Rumble Strip Array may be located upstream of the CW20-1D sign as necessary to provide needed warning.
3. Temporary Rumble Strips will be considered subsidiary to Item 502, and shall be a product listed on the Compliant Work Zone Traffic Control Devices.
4. Removal of the Temporary Rumble Strips should be accomplished before removing the advance warning signs.
5. Temporary Rumble Strips should not be used on horizontal curves, loose gravel, soft or bleeding asphalt, heavily rutted pavements or unpaved surfaces.
6. Temporary Rumble Strips shall be installed and maintained as per manufacturer's recommendations.
7. This standard sheet shall be used in conjunction with other appropriate TCP standard, TMUTCD typical application or project specific detail for the project.
8. The one-lane two-way application may utilize a flagger, an AFAD or a portable traffic signal.
9. Temporary Rumble Strips may be used on freeways or expressways based on engineering judgment.

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Panel	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
	✓	✓		

◆ **Signs are for illustrative purposes only. Signs required may vary depending on the TCP, TMUTCD Typical Application, or project specific details for the project.**

TABLE 2	
Speed	Approximate distance between strips in an Array
≤ 40 MPH	10'
> 40 MPH & ≤ 55 MPH	15'
> 55 MPH	20'

Texas Department of Transportation

Traffic Operations Division Standard

TEMPORARY RUMBLE STRIPS

WZ(RS)-16

FILE: wzrs16.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2012	CONT	SECT	JOB	HIGHWAY
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2-14	DIST	COUNTY		SHEET NO.
4-16	ATL	BOWIE		54

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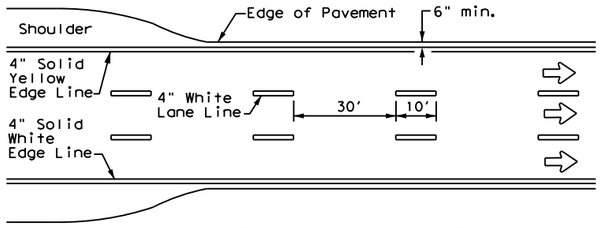
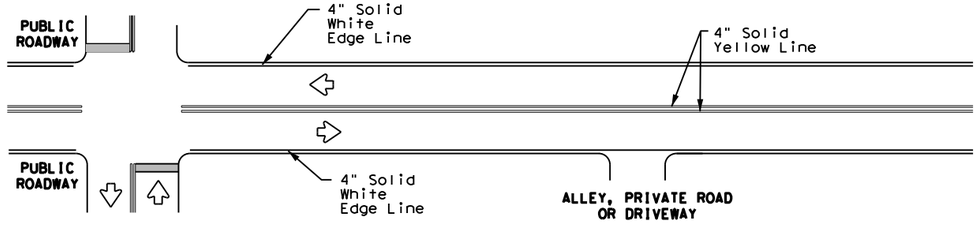
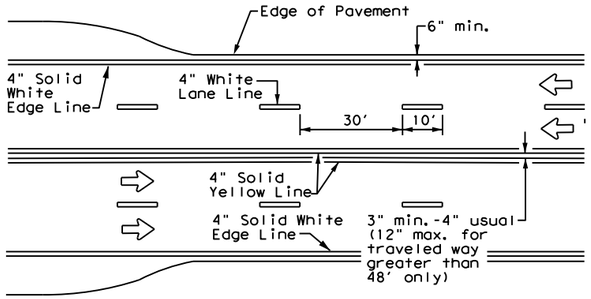


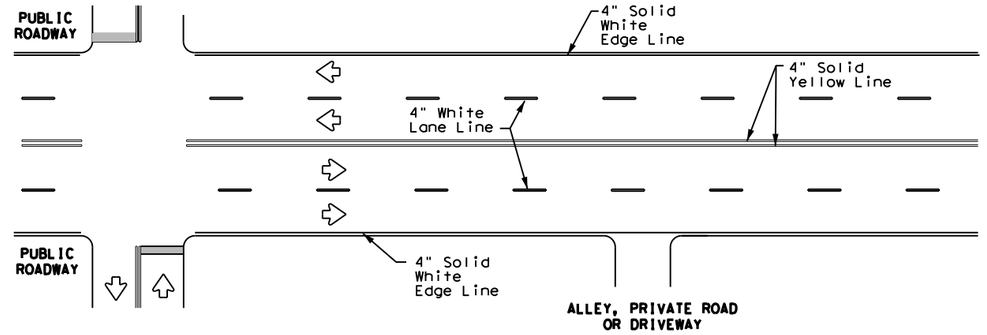
EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS



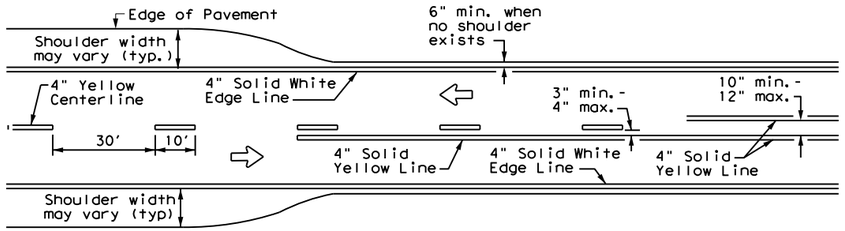
TYPICAL TWO-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS



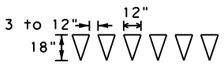
CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS



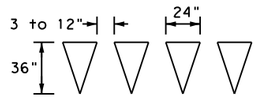
TYPICAL MULTI-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS



TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

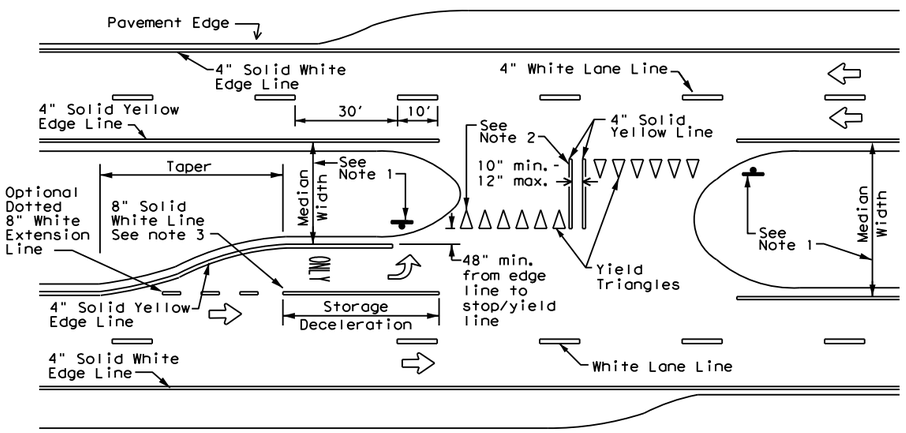


For posted speed on road being marked equal to or less than 40 MPH.



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.

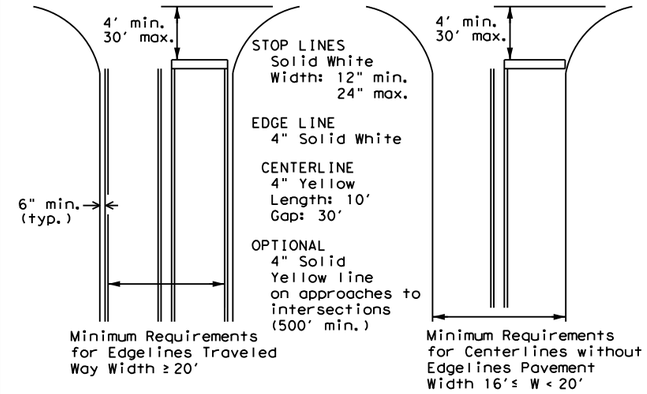
GENERAL NOTES

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

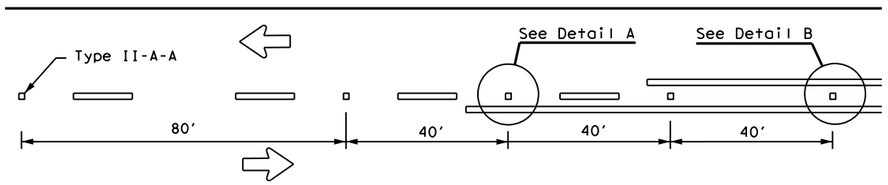
TYPICAL STANDARD PAVEMENT MARKINGS

PM(1)-20

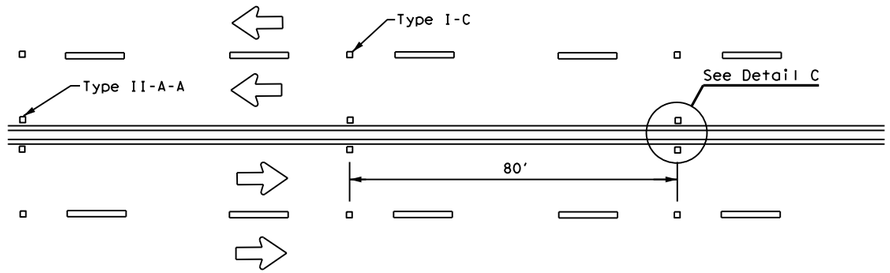
FILE: pm1-20.dgn	DN:	CK:	DW:	CK:
© TxDOT November 1978	CONT	SECT	JOB	HIGHWAY
REVISIONS 8-95 3-03	0010	12	074	US 67
5-00 2-12	DIST	COUNTY		SHEET NO.
8-00 6-20	ATL	BOWIE		55

22A

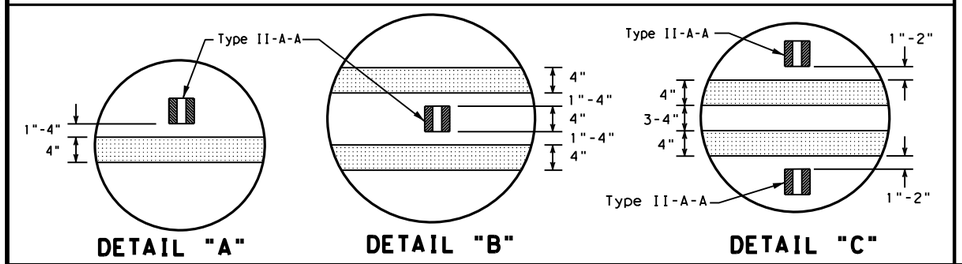
REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE



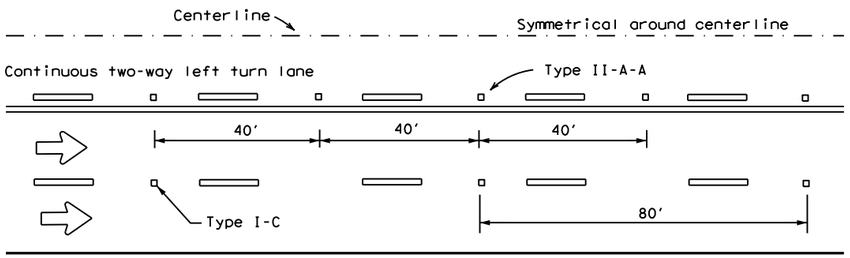
CENTERLINE FOR ALL TWO LANE ROADWAYS



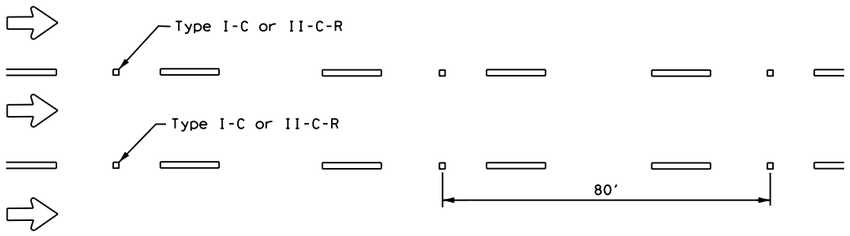
CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY HIGHWAYS



DETAIL "A" **DETAIL "B"** **DETAIL "C"**

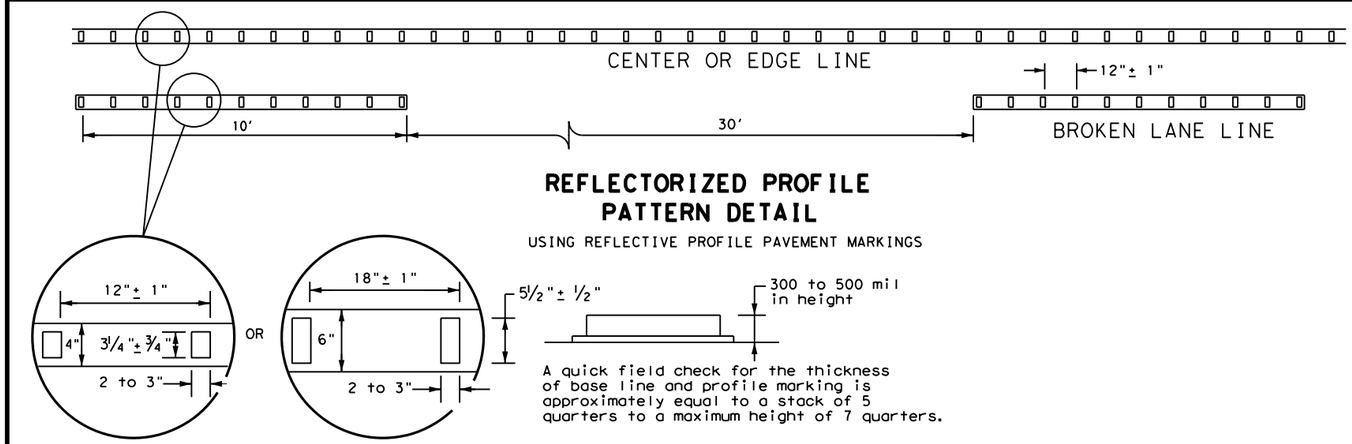


CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE



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.



4" EDGE LINE, CENTER LINE OR LANE LINE

OPTIONAL 6" EDGE LINE, CENTER LINE OR LANE LINE

REFLECTORIZED PROFILE PATTERN DETAIL

USING REFLECTIVE PROFILE PAVEMENT MARKINGS

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

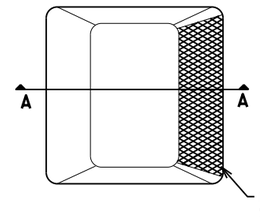
Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.

GENERAL NOTES

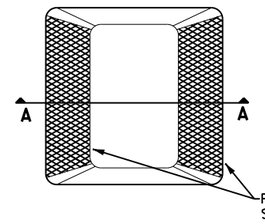
1. All raised pavement markers placed in broken lines shall be placed in line with and midway between the stripes.
2. On concrete pavements the raised pavement markers should be placed to one side of the longitudinal joints.

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

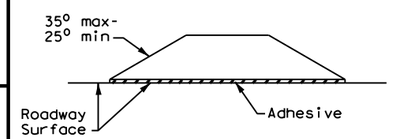
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



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	0010	12	074	US 67
5-00 2-12	DIST	COUNTY		SHEET NO.
8-00 6-20	ATL	BOWIE		56

22B

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DATE:
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DATE: 5/5/2021 11:42:00 AM
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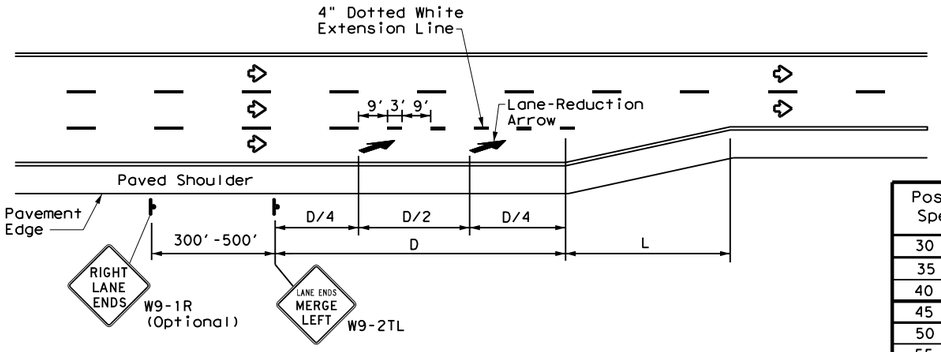
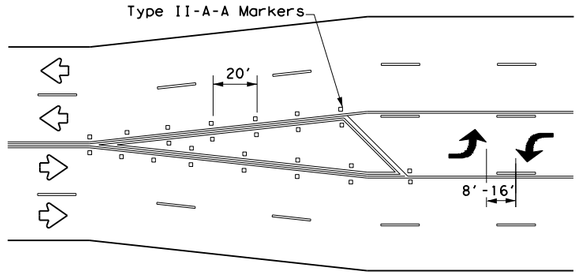


LANE REDUCTION

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.

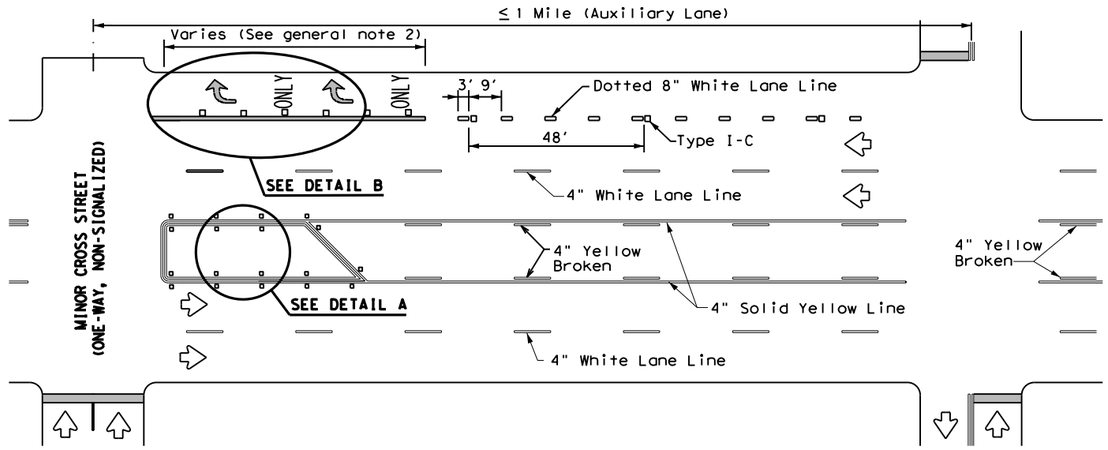
TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY

GENERAL NOTES

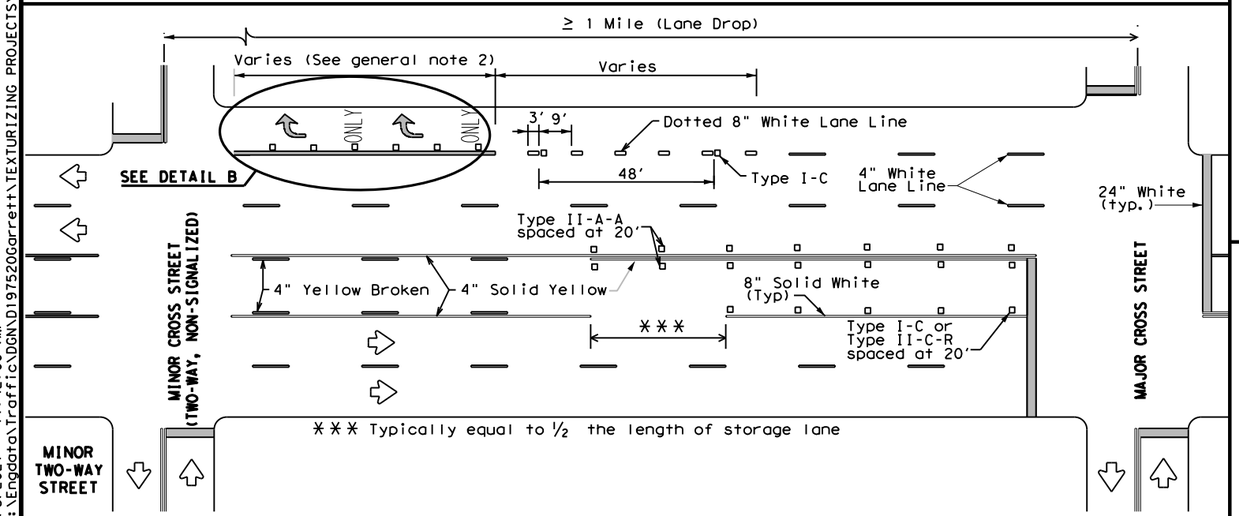
1. Lane use word and arrow markings shall be used where through lanes approaching an intersection become mandatory turn lanes. Lane use word and arrow markings should be used in auxiliary lanes of substantial length. Lane use arrow markings or word and arrow markings may be used in other lanes and turn 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

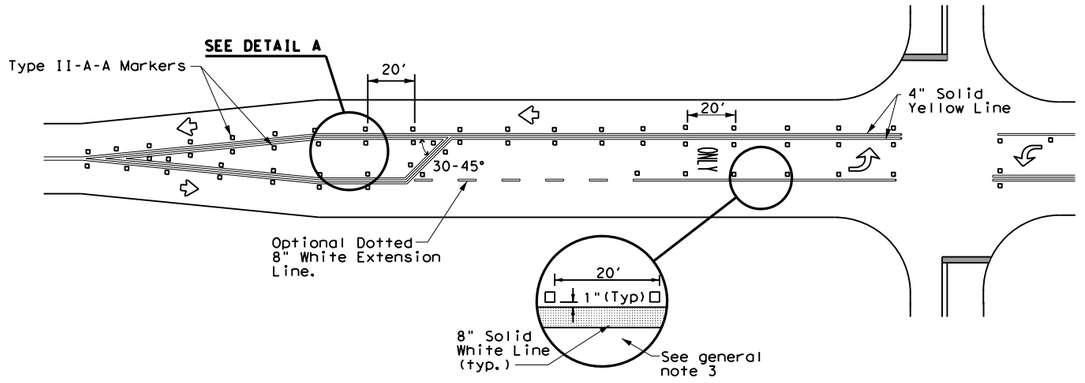
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



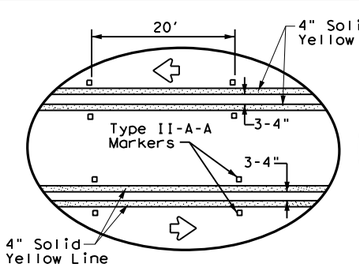
TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE



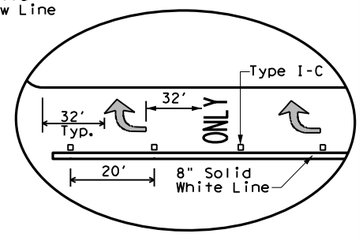
TYPICAL TWLTL AT TWO-WAY CROSS STREET AND RIGHT TURN LANE DROP



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

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© TxDOT April 1998	CONT	SECT	JOB	HIGHWAY
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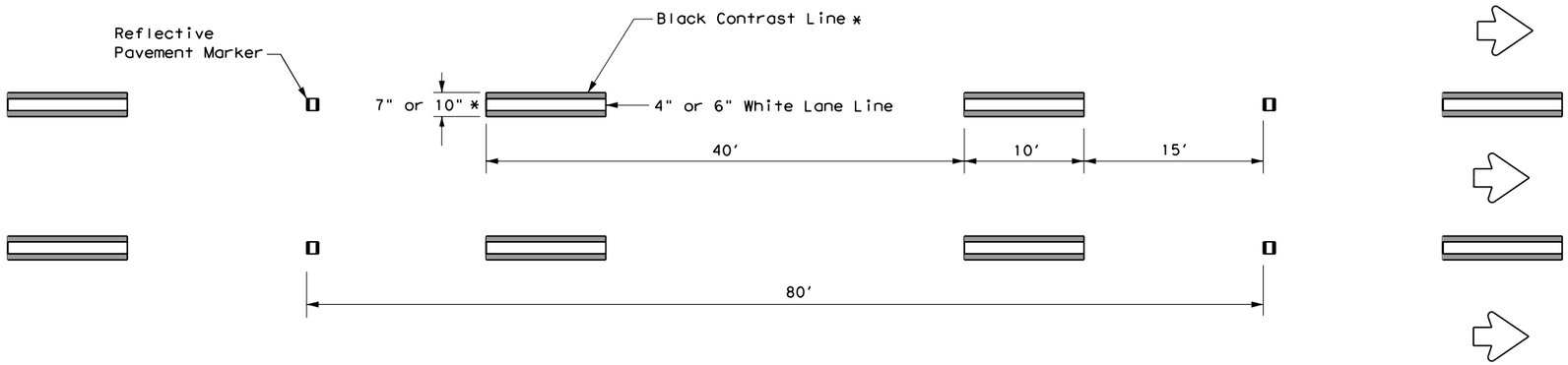
220



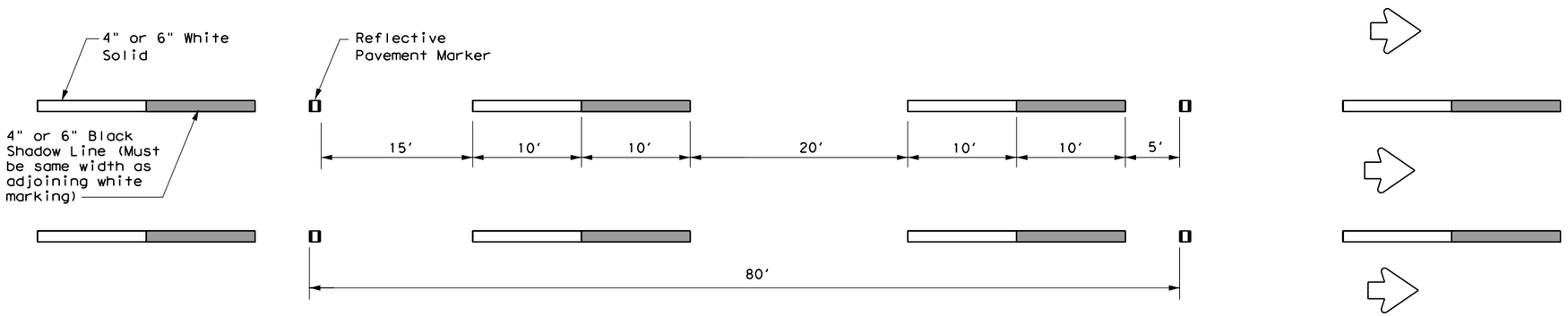
* See contrast line dimensions table for width of black line.

CONTRAST LANE LINE DESIGN

CONTRAST LINE DIMENSIONS		
White	Black (per side)	Total Width
4"	1.5"	7"
6"	2"	10"

GENERAL NOTES

1. Contrast and Shadow markings may only be used on concrete pavements.
2. Contrast and Shadow markings shall not be used on edge lines.
3. Contrast lane lines shall be permanent prefabricated pavement markings meeting DMS 8240.
4. Shadow lane line designs shall be a liquid markings system approved by TxDOT.
5. All raised reflective pavement markers placed in broken lines shall be placed in line with and midway between the white stripes.
6. See PM(2) for raised reflective pavement markings installation details.



SHADOW LANE LINE DESIGN

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.

Texas Department of Transportation

Traffic Operations Division Standard

CONTRAST AND SHADOW PAVEMENT MARKINGS

CPM(1)-14

FILE: CPM(1)14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT May 2014	CONT	SECT	JOB	HIGHWAY
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	ATL	BOWIE		58

22N

DATE:
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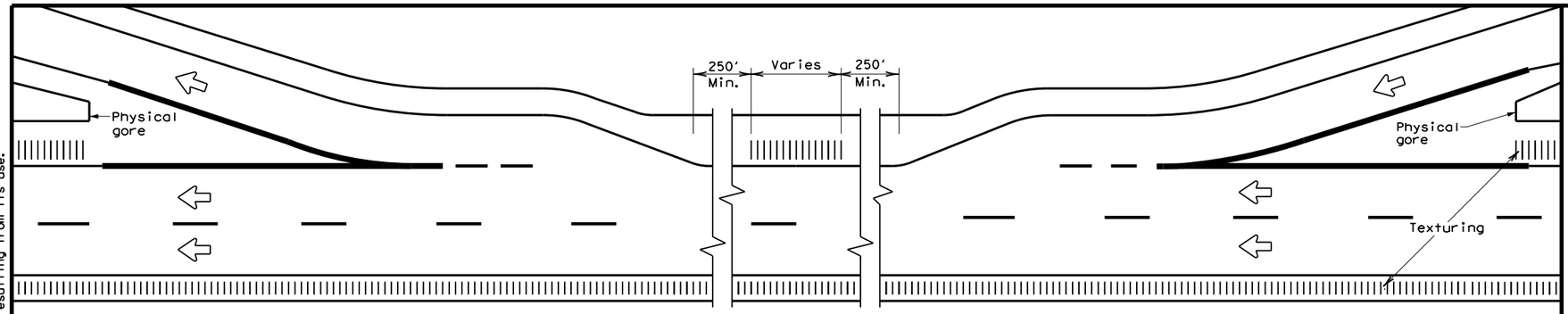
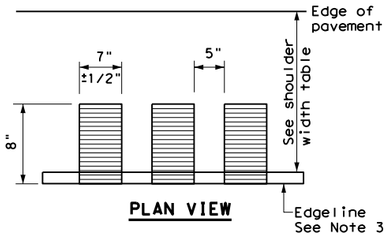
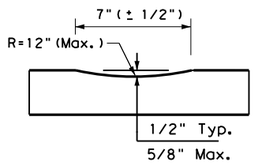


TYPICAL RUMBLE STRIP PLACEMENT AT EXIT AND ENTRANCE RAMPS

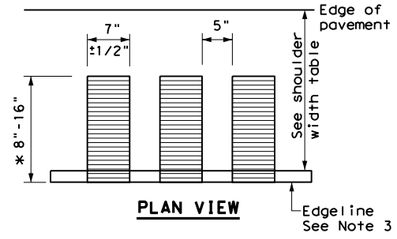


PLAN VIEW



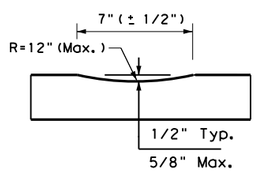
PROFILE VIEW
OPTION 1

CONTINUOUS MILLED DEPRESSIONS
(Rumble Stripes)



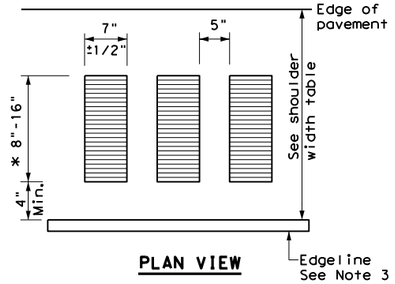
PLAN VIEW

* This distance may vary based on width of shoulder



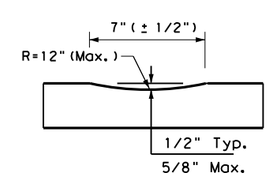
PROFILE VIEW
OPTION 2

CONTINUOUS MILLED DEPRESSIONS
(Rumble Stripes)



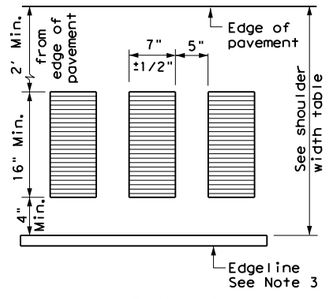
PLAN VIEW

* This distance may vary based on width of shoulder

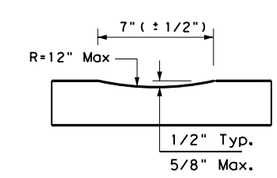


PROFILE VIEW
OPTION 3

CONTINUOUS MILLED DEPRESSIONS
(Rumble Strips)



PLAN VIEW



PROFILE VIEW
OPTION 4

CONTINUOUS MILLED DEPRESSIONS
(Rumble Strips)

GENERAL NOTES

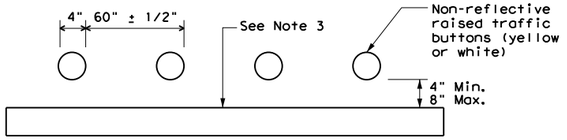
1. Rumble strips and profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.
2. Milled rumble strips are preferred when adequate pavement depth is available. If pavement thickness is less than 2 inches, milled rumble strips shall not be used. Rumble strips shall 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.

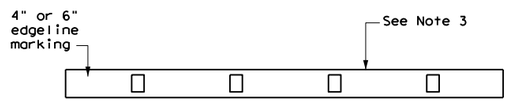
WHEN INSTALLING RAISED OR PROFILE EDGELINE RUMBLE STRIPS:

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
REVISIONS 2-10 10-13	0010	12	074	US 67
	DIST	COUNTY		SHEET NO.
	ATL	BOWIE		59

DATE:
FILE:

DATE: $DATE$ $TIME$
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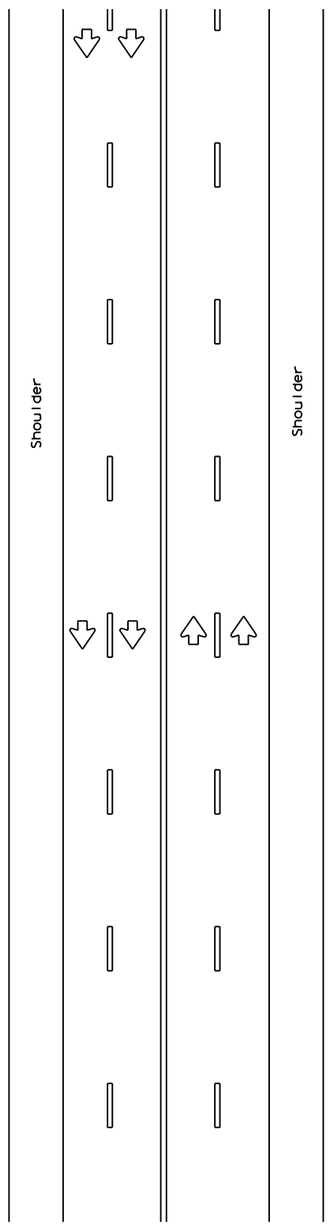
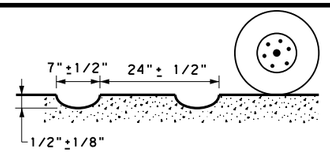
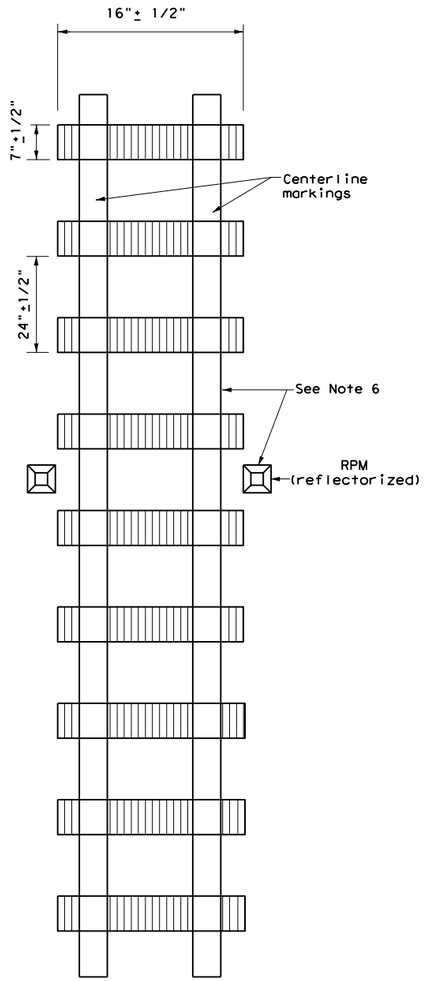
CENTERLINE RUMBLE STRIPS



MULTILANE UNDIVIDED HIGHWAY WITH SHOULDER

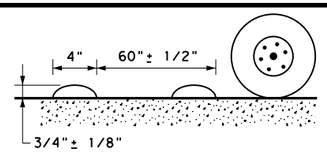


PROFILE VIEW

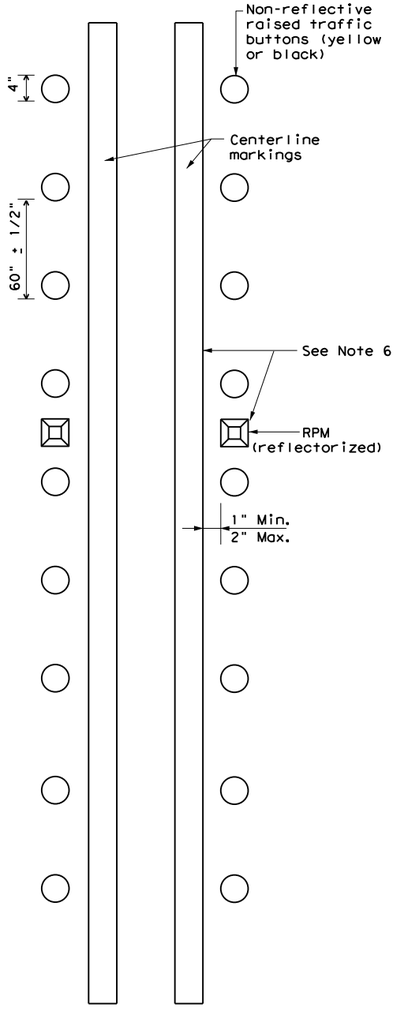


PLAN VIEW
OPTION 1

MILLED CENTERLINE RUMBLE STRIPS

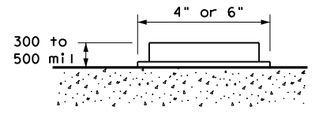


PROFILE VIEW

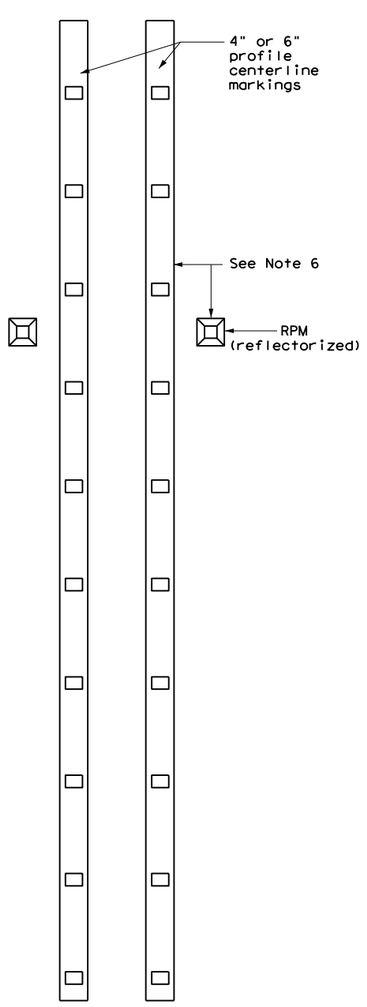


PLAN VIEW
OPTION 2

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

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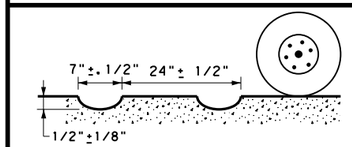
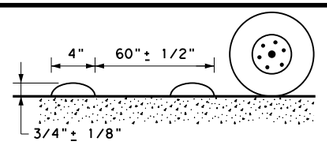
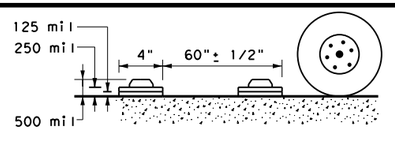
CENTERLINE RUMBLE STRIPS



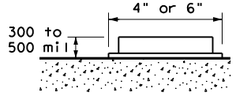
MILLED RUMBLE STRIPS



RAISED TRAFFIC BUTTONS

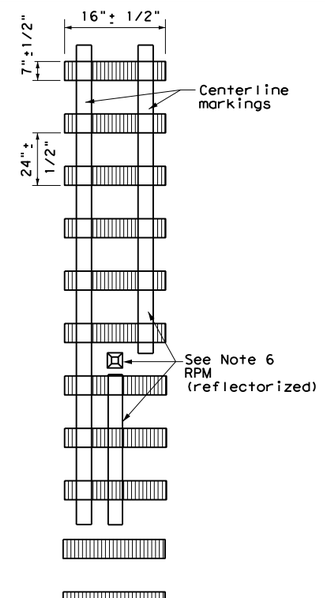


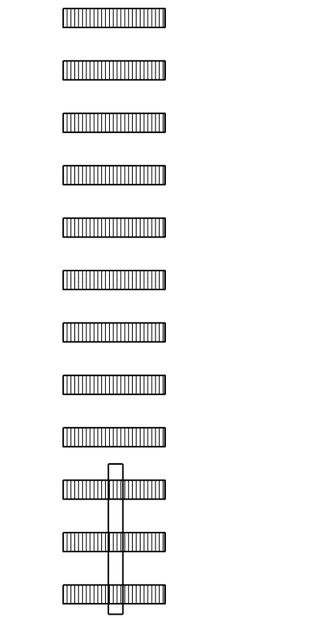
PREFORMED THERMOPLASTIC STRIPS



PROFILE MARKINGS

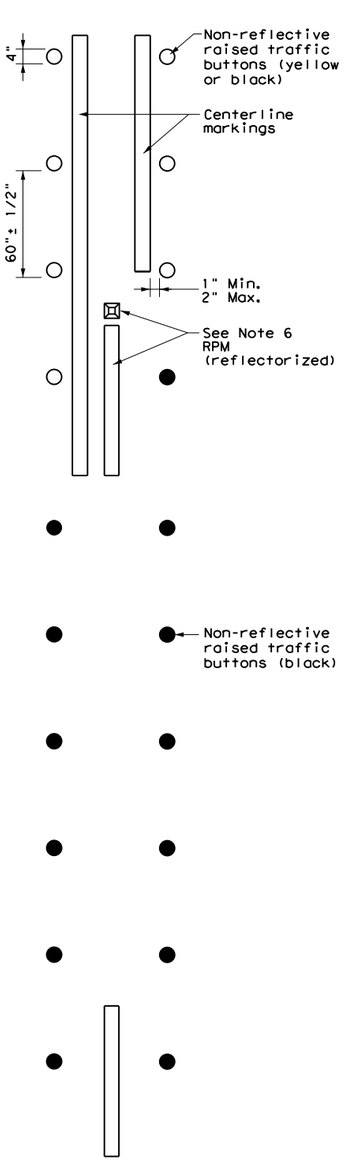
PROFILE VIEW





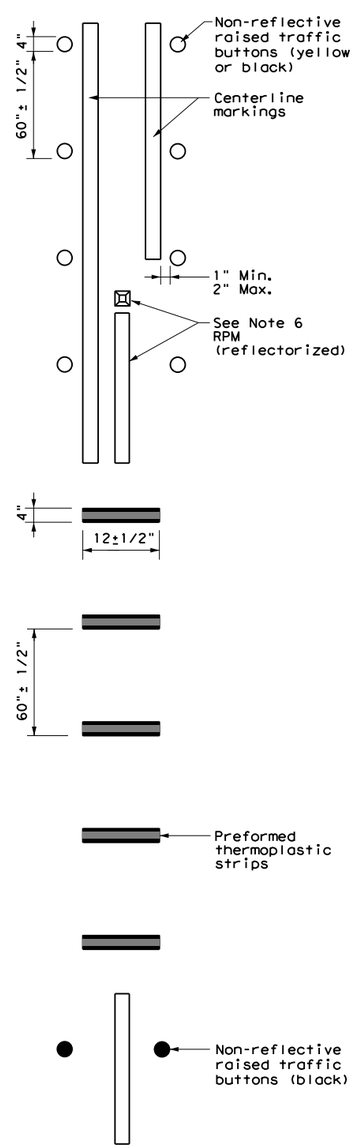
PLAN VIEW
OPTION 1

MILLED CENTERLINE RUMBLE STRIPS



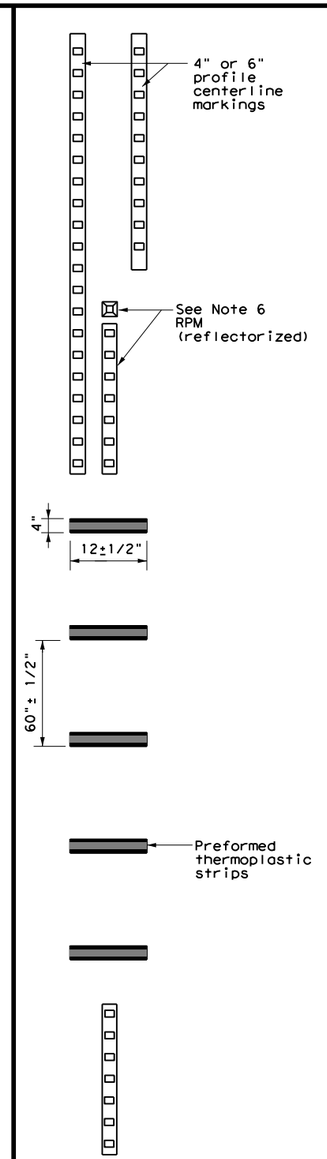
PLAN VIEW
OPTION 2

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

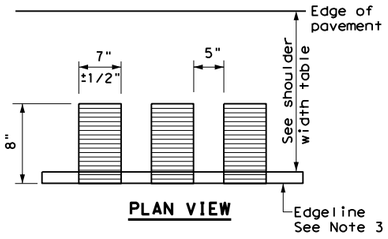
CENTERLINE RUMBLE STRIPS ON TWO LANE TWO-WAY HIGHWAYS

RS(3)-13

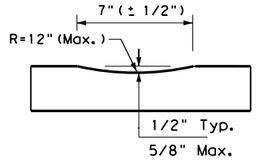
FILE: rs(3)-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2013	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	074	US 67
	DIST	COUNTY		SHEET NO.
	ATL	BOWIE		61

TWO LANE TWO-WAY ROADWAYS

DATE: $DATE$ $TIME$
FILE: T:\Engdata\Traffic\DGN\D197520arrett\TEXTURIZING PROJECTS\Aug 2021\STANDARDS\rs(4)-13.dgn

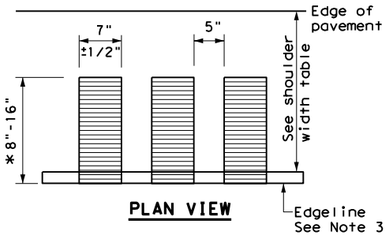


PLAN VIEW

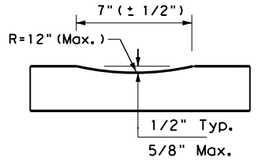


PROFILE VIEW
OPTION 1

CONTINUOUS MILLED DEPRESSIONS
(Rumble Stripes)



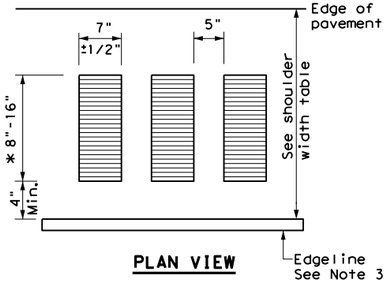
PLAN VIEW



* This distance may vary based on width of shoulder

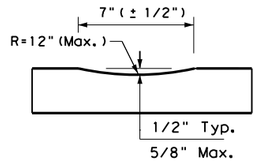
PROFILE VIEW
OPTION 2

CONTINUOUS MILLED DEPRESSIONS
(Rumble Stripes)



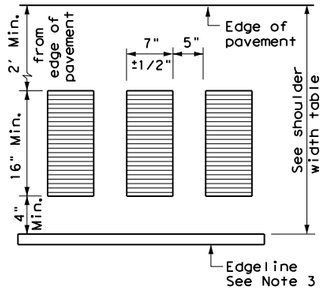
PLAN VIEW

* This distance may vary based on width of shoulder

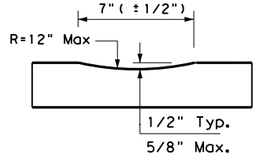


PROFILE VIEW
OPTION 3

CONTINUOUS MILLED DEPRESSIONS
(Rumble Strips)

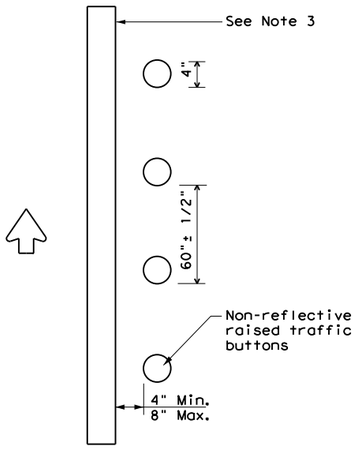


PLAN VIEW



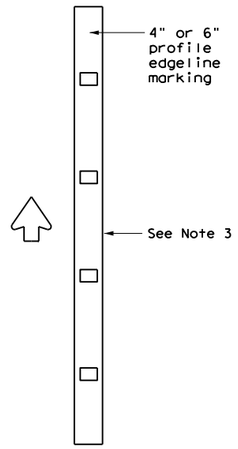
PROFILE VIEW
OPTION 4

CONTINUOUS MILLED DEPRESSIONS
(Rumble Strips)



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

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 stips 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.

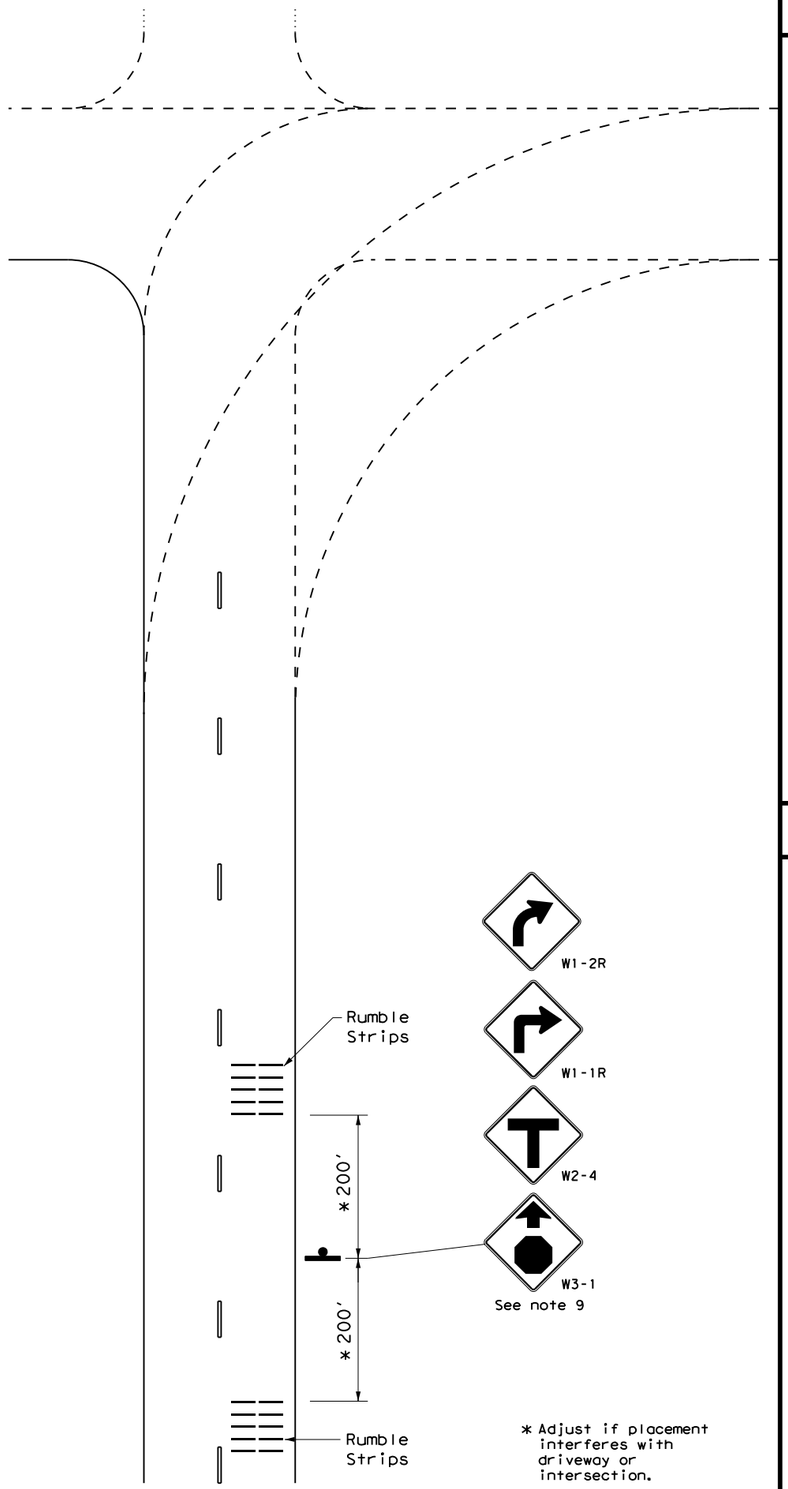
Texas Department of Transportation

Traffic Operations Division Standard

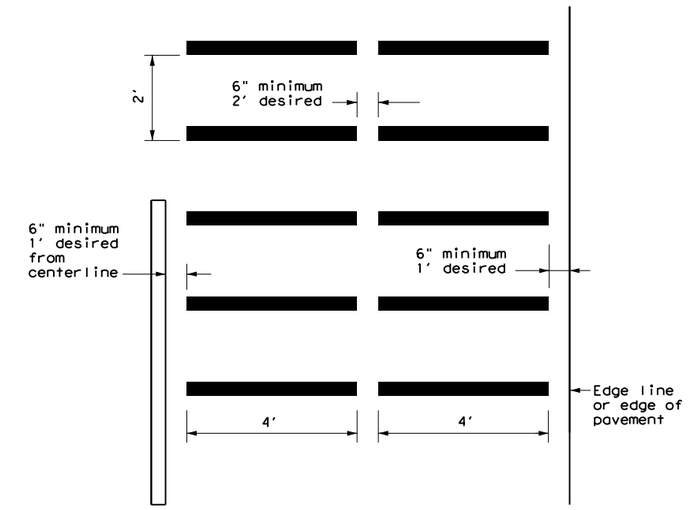
EDGELINE RUMBLE STRIPS ON UNDIVIDED OR TWO LANE HIGHWAYS RS(4)-13

FILE: rs(4)-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2013	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	074	US 67
	DIST	COUNTY		SHEET NO.
	ATL	BOWIE		62

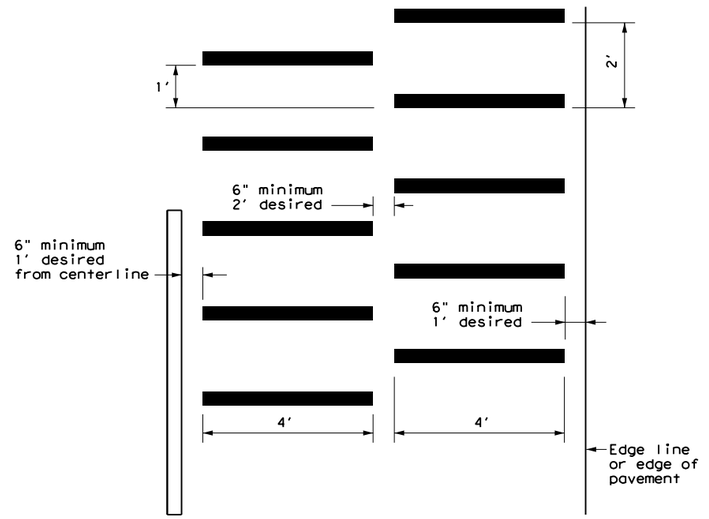
DATE:
FILE:



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

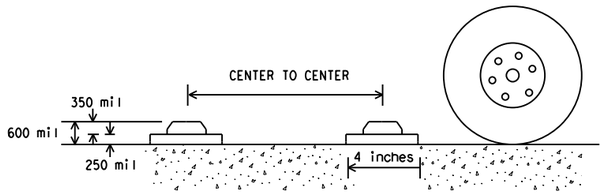
TRANSVERSE OR IN-LANE RUMBLE STRIPS

RS(5)-13

FILE: rs(5)-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT April 2006	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	074	US 67
2-10	DIST	COUNTY		SHEET NO.
10-13	ATL	BOWIE		63

IN-LANE OR TRANSVERSE RUMBLE STRIPS

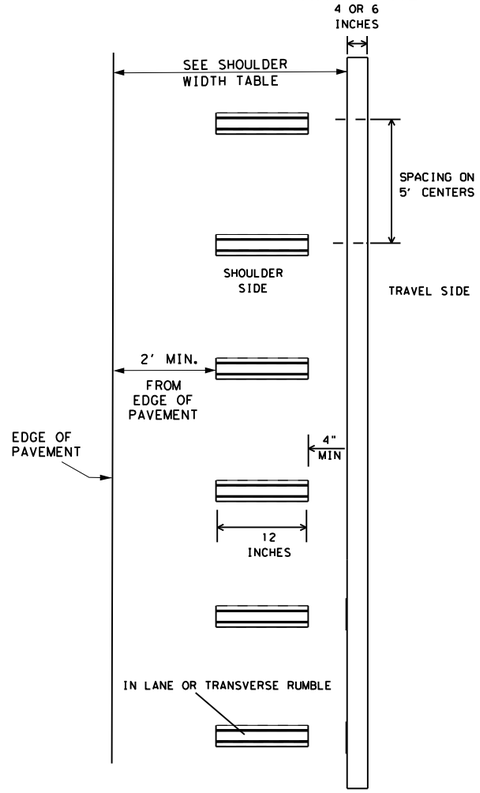
PROFILE VIEW



GENERAL NOTES:

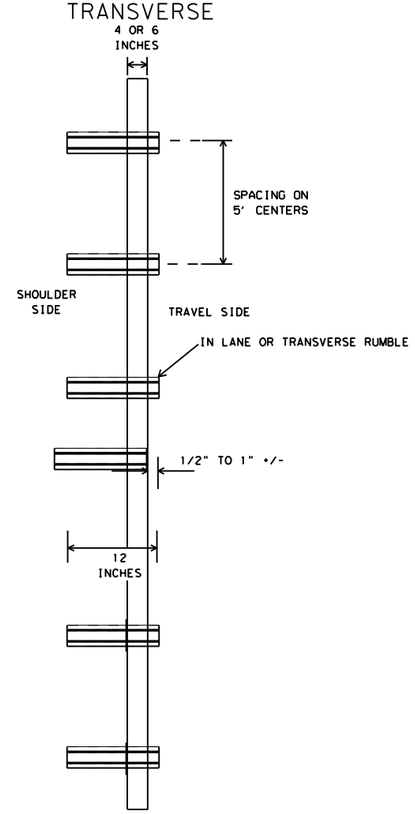
1. Place rumble strips on 5 ft. centers, as indicated in the Work Type column of the Pavement Marking Descriptions sheet.
2. Rumble strips and profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.
3. Use Standard Sheet PM (2) and CPM (1) for positioning, dimensioning, and spacing of all reflective raised pavement markers, pavement markings, and profile markings.
4. 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.
5. Rumble strips shall not be placed across exit or entrance ramps, acceleration and deceleration lanes, crossovers, gore areas or intersections with other roadways.
6. Consideration should be given to noise levels when edgeline rumble strips are installed near residential areas, schools, churches, etc.
7. 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.

EDGELINE TRANSVERSE



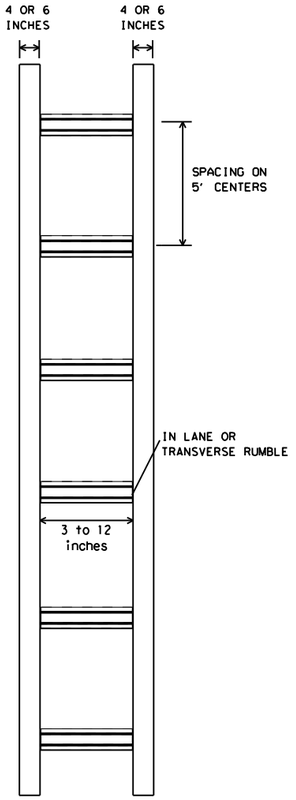
OPTION 1

EDGELINE TRANSVERSE

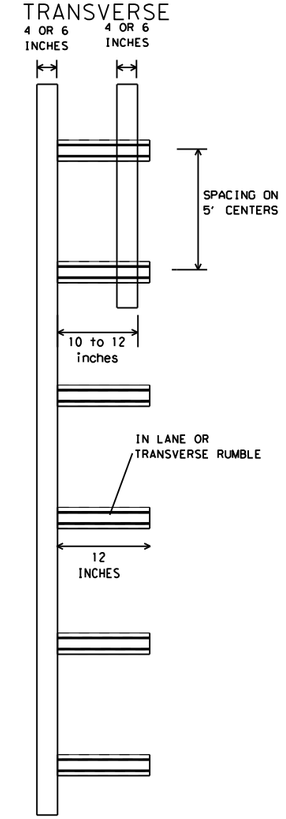


OPTION 2

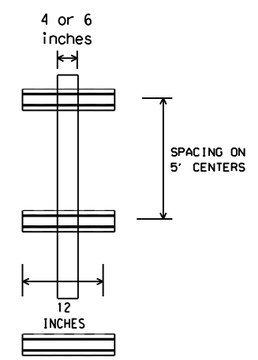
CENTERLINE NO PASSING TRANSVERSE

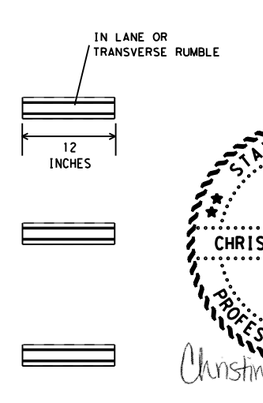


CENTERLINE PASSING ONE-WAY TRANSVERSE



CENTERLINE PASSING BOTH DIRECTIONS TRANSVERSE





SHOULDER WIDTH TABLE	
GREATER THAN 2 FEET	EQUAL TO OR LESS THAN 2 FEET
Option 1	OPTION 2

Christina N. Trowler, P.E.

5/17/2021

IN-LANE OR TRANSVERSE RUMBLE STRIP DETAIL

FED. ROAD DIV. NO.	PROJECT NO.					SHEET NO.
6						64
STATE	STATE DISTRICT	COUNTY	CONT.	SECT.	JOB	HIGHWAY NO.
TEXAS	ATL	BOWIE	0010	12	074	US 67

RETROREFLECTIVITY READINGS
REPORT FORMAT 8½" X 11"

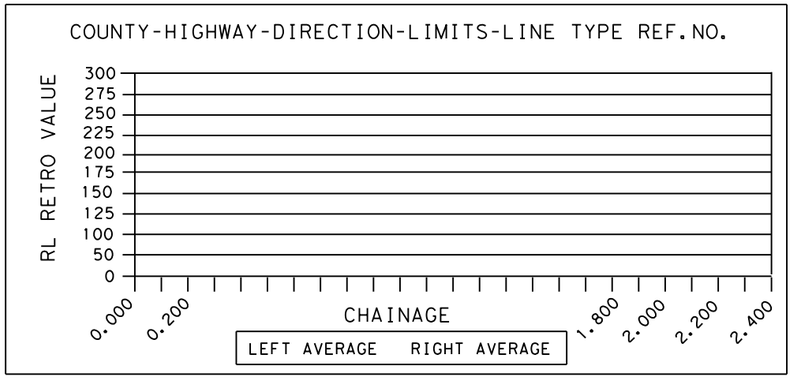
DESCRIPTION: COUNTY- HIGHWAY-DIRECTION-LIMITS-LINE TYPE-REF. NO.

ROAD SUMMARY

DATE:
DISTRICT#
COUNTY:
ROUTE#
REFERENCE NO:
DIRECTION:
LINE TYPE:
LINE COLOR:
MATERIAL:
APPEARANCE:
VIDEO LOCATION:

LEFT STRIPE	RIGHT STRIPE
NUMBER OF READINGS:	NUMBER OF READINGS:
INTERVALS PASSING:	INTERVALS PASSING:
INTERVALS FAILING:	INTERVALS FAILING:
PASSING PERCENTAGE:	PASSING PERCENTAGE:
FAILING PERCENTAGE:	FAILING PERCENTAGE:
LEFT AVERAGE:	RIGHT AVERAGE:

TOTAL AVERAGE OF LINE:



ALL DATA SHOWN WILL BE ON ONE SINGLE PAGE.
READINGS WILL BE SHOWN ON SEPERATE SHEET.

RETROREFLECTIVITY READINGS
REPORT FORMAT 8½" X 11"

DESCRIPTION: COUNTY- HIGHWAY-DIRECTION-LIMITS-LINE TYPE-REF. NO.

WHITE STRIPE CALIBRATION:
WHITE STRIPE CALIBRATION - DATE/TIME:
YELLOW STRIPE CALIBRATION:
YELLOW STRIPE CALIBRATION - DATE/TIME:
MEASUREMENT DATE:
START TIME:
END TIME:
START CHAINAGE:
END CHAINAGE:

1-LEFT NO PASS	2-RIGHT NO PASS	3-BROKEN LINE	4-DOUBLE YELLOW	5-NO LINE	6-INTER-SECTION	7-TURN LANE	8-SEAL COAT	9-SINGLE LINE	10-ASPHALT

CHAINAGE	LEFT POINTS	LEFT AVERAGE	RIGHT POINTS	RIGHT AVERAGE	LONGITUDE	LATITUDE	CONDITIONS	SKIP LINE

MOBILE RETROREFLECTIVITY TABLE

FED. ROAD DIV. NO.	PROJECT NO.					SHEET NO.
6						65
STATE	STATE DISTRICT	COUNTY	CONT.	SECT.	JOB	HWY. NO.
TEXAS	ATL	BOWIE	0010 etc.	12 etc.	074 etc.	US 67

DATE: 5/5/2021 11:42:26 AM
FILE: I:\Engdata\Traffic\DGN\D197520Garrett\TEXTURIZING PROJECTS\Aug 2021\STANDARDS\swp3lesslacre.dgn

SITE DESCRIPTION

PROJECT LIMITS: VARIOUS LOCATIONS IN THE ATLANTA DISTRICT.

PROJECT DESCRIPTION: PROFILE EDGELINE & CENTERLINE MARKINGS

MAJOR SOIL DISTURBING ACTIVITIES: THIS PROJECT IS CONSIDERED A MAINTENANCE ACTIVITY.

TOTAL PROJECT AREA: N/A

TOTAL AREA TO BE DISTURBED: N/A

EXISTING CONDITION OF SOIL & VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER: N/A

NAME OF RECEIVING WATERS: N/A

ANTICIPATED EFFECT OF STORM WATER ON THREATENED AND ENDANGERED SPECIES AND WILDLIFE HABITAT: *REFER TO EPIC SHEET*

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

STORM WATER MANAGEMENT: N/A

DETAILED SITE MAP OR LAYOUT INDICATING THE FOLLOWING:

LOCATION(S) OF ALL MAJOR STRUCTURAL CONTROLS EITHER PLANNED OR IN PLACE
LOCATIONS WHERE TEMPORARY OR PERMANENT STABILIZATION PRACTICES ARE EXPECTED TO BE USED
LOCATIONS OF CONCRETE VEHICLE WASHOUT AREAS
LOCATIONS OF PORTABLE SANITARY WASTE UNITS
LOCATIONS OF TRASH DUMPSTERS

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

- ___ PERMANENT PLANTING, SODDING, OR SEEDING
- ___ TEMPORARY SEEDING
- ___ MULCHING
- ___ SOIL RETENTION BLANKET
- ___ BUFFER ZONES
- ___ PRESERVATION OF NATURAL RESOURCES
- ___ SLOPE TEXTURING

OTHER: EROSION CONTROL AND STABILIZATION MEASURES MUST BE INITIATED IMMEDIATELY IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION MEASURES THAT PROVIDE A PROTECTIVE COVER MUST BE INITIATED IMMEDIATELY IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED.

STRUCTURAL PRACTICES:

- ___ SILT FENCES
- ___ HAY BALES
- ___ ROCK BERMS
- ___ PAVED FLUMES
- ___ CHANNEL LINERS
- ___ SEDIMENT TRAPS
- ___ FILTER DAMS
- ___ CURBS AND GUTTERS
- ___ STORM SEWERS
- ___ ROCK BEDDING AT CONSTRUCTION EXIT
- ___ TIMBER MATTING AT CONSTRUCTION EXIT
- ___ DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
- ___ DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
- ___ DIVERSION DIKE AND SWALE COMBINATIONS
- ___ STORM INLET SEDIMENT TRAP
- ___ VELOCITY CONTROL DEVICES
- ___ EROSION CONTROL LOGS

OTHER:

MAINTENANCE: *N/A*

INSPECTION: ITEM 506 *N/A*

OFFSITE VEHICLE TRACKING: *N/A*

CONCRETE TRUCK WASHOUT AREAS: *N/A*

WASTE MATERIALS

HAZARDOUS WASTE (INCLUDING SPILL REPORTING): *AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES ARE CONSIDERED TO BE HAZARDOUS: PAINTS, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS, ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SOIL STABILIZATION, CONCRETE CURING COMPOUNDS AND ADDITIVES OR MOTOR OIL. MATERIALS SHALL BE STORED IN ACCORDANCE WITH APPLICABLE REGULATIONS. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, IMMEDIATELY REPORT SPILL IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.*

WASTE MATERIALS: *THE BURYING OF CONSTRUCTION WASTE MATERIAL ON SITE WILL NOT BE PERMITTED. DISPOSAL OF WASTE MATERIALS SHALL MEET ALL STATE AND LOCAL SOLID WASTE MANAGMENT REGULATIONS. WASTE MATERIALS STORED ON SITE SHALL BE COLLECTED IN A METAL DUMPSTER WITH A LOCKING, SECURE COVER AND A DRAIN PLUG IN PLACE.*

SANITARY WASTE: *ALL SANITARY WASTE WILL BE DISPOSED OF IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. SPECIFIC LOCATIONS OF PORTABLE UNITS MUST BE SHOWN ON THE SWP3 SITE MAP OR LAYOUT.*

REMARKS: *DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS. ALL WATERWAYS SHALL BE CLEARED AS SOON AS PRACTICAL OF TEMPORARY EMBANKMENT, TEMPORARY BRIDGES, MATTING FALSEWORK, PILING, DEBRIS OR OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT A PART OF THE FINISHED WORK.*

NOTES: *THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUBCONTRACTORS ARE AWARE OF AND COMPLY WITH ALL COMPONENTS OF THE SWP3.*

STATE OF TEXAS
CHRISTINA N. TROWLER
114588
LICENSED PROFESSIONAL ENGINEER

Christina N. Trowler, P.E.

5/17/2021

Texas Department of Transportation

TxDOT STORM WATER POLLUTION PREVENTION PLAN

SWP3

FILE: swp3lesslacre.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
Revisions	CONT	SECT	JOB	HIGHWAY
May 2017	0010	12	074	US 67
	DIST	COUNTY		SHEET NO.
	ATL	BOWIE		66

DATE: 5/5/2021 11:42:28 AM
FILE: T:\Engdata\Traffic\DGN\D197520Garrett\TEXTURIZING PROJECTS\Aug 2021\SPANDARDS\epic.dgn

I. STORMWATER POLLUTION PREVENTION-CLEAN WATER ACT SECTION 402

TPDES TXR 150000: Stormwater Discharge Permit or Construction General Permit required for projects with 1 or more acres disturbed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 506.

List MS4 Operator(s) that may receive discharges from this project. They may need to be notified prior to construction activities.

1. There are no MS4 Operators in the project area.

2.

☐ No Action Required ☒ Required Action

Action No.

1. This project is considered a maintenance activity and is exempt from the requirements of TPDES TXR 150000.

Commitment No.

1. Refer to the SWP3 Plan Sheet, BMPs, and Detail. It will address sweeping, chemical storage, sanitary waste, and all other management practices.

II. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS CLEAN WATER ACT SECTIONS 401 AND 404

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

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

☒ No Permit Required

☐ Nationwide Permit 14 - PCN not Required (less than 1/10th acre waters or wetlands affected)

☐ Nationwide Permit 14 - PCN Required (1/10 to <1/2 acre, 1/3 in tidal waters)

☐ Individual 404 Permit Required

☐ Other Nationwide Permit Required: NWP# _____

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

1.

2.

3.

4.

The elevation of the ordinary high water marks of any areas requiring work to be performed in the waters of the US requiring the use of a nationwide permit can be found on the Bridge Layouts.

Best Management Practices:

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

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 immediate area and contact the Engineer immediately.

☒ No Action Required ☐ Required Action

Action No.

1.

2.

3.

4.

IV. VEGETATION RESOURCES

Preserve native vegetation to the extent practical.
Contractor must adhere to Construction Specification Requirements Specs 162, 164, 192, 193, 506, 730, 751, 752 in order to comply with requirements for invasive species, beneficial landscaping, and tree/brush removal commitments.

☒ No Action Required ☐ Required Action

Action No.

1.

2.

3.

4.

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS.

☒ No Action Required ☐ Required Action

Action No.

1.

2.

3.

4.

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

LIST OF ABBREVIATIONS

BMP:	Best Management Practice	SPCC:	Spill Prevention Control and Countermeasure
CGP:	Construction General Permit	SW3P:	Storm Water Pollution Prevention Plan
DSHS:	Texas Department of State Health Services	PCN:	Pre-Construction Notification
FHWA:	Federal Highway Administration	PSL:	Project Specific Location
MOA:	Memorandum of Agreement	TCEQ:	Texas Commission on Environmental Quality
MOU:	Memorandum of Understanding	TPDES:	Texas Pollutant Discharge Elimination System
MS4:	Municipal Separate Stormwater Sewer System	TPWD:	Texas Parks and Wildlife Department
MBTA:	Migratory Bird Treaty Act	TxDOT:	Texas Department of Transportation
NOT:	Notice of Termination	T&E:	Threatened and Endangered Species
NWP:	Nationwide Permit	USACE:	U.S. Army Corps of Engineers
NOI:	Notice of Intent	USFWS:	U.S. Fish and Wildlife Service

VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

General (applies to all projects):

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

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

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

Contact the Engineer if any of the following are detected:
* Dead or distressed vegetation (not identified as normal)
* Trash piles, drums, canister, barrels, etc.
* Undesirable smells or odors
* Evidence of leaching or seepage of substances

Does the project involve any bridge class structure rehabilitation or replacements (bridge class structures not including box culverts)?

☐ Yes ☒ No

If "No", then no further action is required.
If "Yes", then TxDOT is responsible for completing asbestos assessment/inspection.

Are the results of the asbestos inspection positive (is asbestos present)?

☐ Yes ☐ No

If "Yes", then TxDOT must retain a DSHS licensed asbestos consultant to assist with the notification, develop abatement/mitigation procedures, and perform management activities as necessary. The notification form to DSHS must be postmarked at least 15 working days prior to scheduled demolition.

If "No", then TxDOT is still required to notify DSHS 15 working days prior to any scheduled demolition.

In either case, the Contractor is responsible for providing the date(s) for abatement activities and/or demolition with careful coordination between the Engineer and asbestos consultant in order to minimize construction delays and subsequent claims.

Any other evidence indicating possible hazardous materials or contamination discovered on site. Hazardous Materials or Contamination Issues Specific to this Project:

☒ No Action Required ☐ Required Action

Action No.

1.

2.

3.

VII. OTHER ENVIRONMENTAL ISSUES

(includes regional issues such as Edwards Aquifer District, etc.)

☒ No Action Required ☐ Required Action

Action No.

1.

2.

3.

Texas Department of Transportation — Design Division Standard

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS (EPIC)

FILE: epic.dgn	DN: TxDOT	CK: RG	DW: VP	CK: AR
©TxDOT: February 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS	0010	12	074	US 67
12-12-2011 (DS)	DIST	COUNTY		SHEET NO.
05-07-14 ADDED NOTE SECTION IV.	ATL	BOWIE		67
01-23-2015 SECTION I (CHANGED ITEM 1122 TO ITEM 506, ADDED GRASSY SWALES.				