

SEE SHEET 2 FOR INDEX OF SHEETS

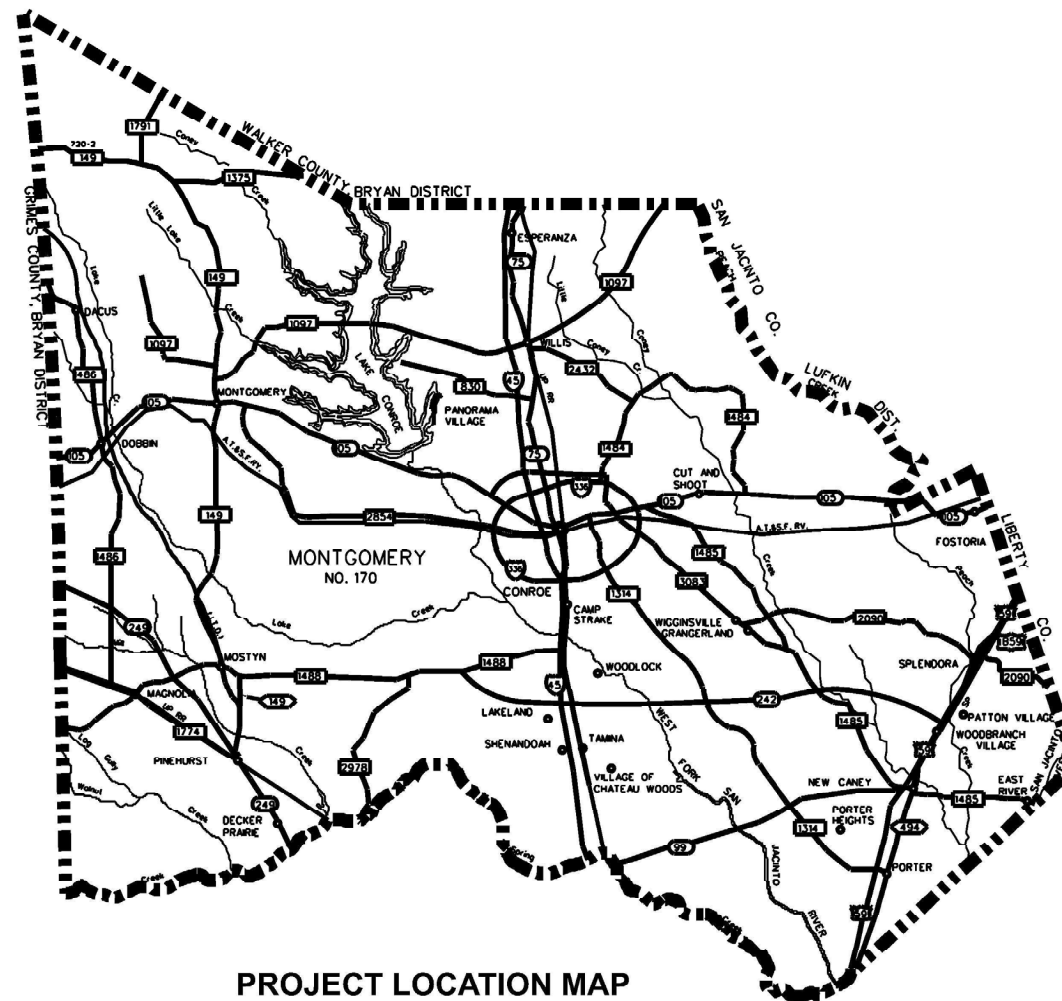
# STATE OF TEXAS DEPARTMENT OF TRANSPORTATION

FED. RD. DIV. NO.	PROJECT NUMBER	HIGHWAY NUMBER	
6	RMC 6463-30-001	145, etc.	
STATE	DISTRICT	COUNTY	
TEXAS	HOU	MONTGOMERY	
CONTROL	SECTION	JOB	SHEET NO.
6463	30	001	1

## PLANS OF PROPOSED STATE HIGHWAY IMPROVEMENT

MONTGOMERY COUNTY  
RMC 6463-30-001

LIMITS: VARIOUS HIGHWAYS IN MONTGOMERY COUNTY  
TYPE OF WORK: FULL-WIDTH MOWING



PROJECT LOCATION MAP  
(NTS)

NO EXCEPTIONS  
NO EQUATIONS  
NO RAILROADS



COUNTY MONTGOMERY PROJ. NO. \_\_\_\_\_  
 HWY. NO. \_\_\_\_\_ LETTING DATE \_\_\_\_\_  
 CONTRACTOR NAME \_\_\_\_\_  
 CONTRACT BEGIN DATE \_\_\_\_\_  
 WORK COMPLETED DATE \_\_\_\_\_  
 DATE OF ACCEPTANCE \_\_\_\_\_

**NOTE:**  
 SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF  
 TRANSPORTATION, NOVEMBER 1, 2014, AND THE SPECIFICATION  
 ITEMS LISTED AND DATED AS FOLLOWS SHALL GOVERN ON  
 THIS PROJECT.

SUBMITTED FOR LETTING: **9/3/2024**

DocuSigned by:  
  
 412B713C2C024FF... AREA ENGINEER  
 for

APPROVED FOR LETTING: **10/25/2024**

DocuSigned by:  
  
 A667183790A349... DIRECTOR OF MAINTENANCE

# INDEX OF SHEETS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
<u>GENERAL</u>	
1	TITLE SHEET
2	INDEX
3,3A-3C	GENERAL NOTES
4	ESTIMATE & QUANTITY SHEET
5	ROADWAY MOWING AREAS AND LIMITS
<u>TRAFFIC CONTROL PLAN STANDARDS</u>	
6	# RS-TCP-05
7	# TCP(3-2)-13




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

DocuSigned by:  
  
 449274302202455  
 \_\_\_\_\_  
 MATTHEW M. CONNELLY, P.E.

9/3/2024  
 \_\_\_\_\_  
 DATE

PRINT DATE: REVISION DATE

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**Texas Department of Transportation**  
 Houston District - Montgomery Area Office

## INDEX OF SHEETS

FED. RES. DIV. NO.	DISTRICT	COUNTY	HIGHWAY NUMBER
6	HOU	MONTGOMERY	145, etc.
CSJ		SHEET NO.	
6463-30-001		2	

FILENAME: CSJ

**Project Number:** RMC 6463-30-001**County:** Montgomery County**Highway:** I 45, etc.**Sheet 3****Control:** 646330001**GENERAL NOTES:**

This project will be managed by and request for payment addressed to:

Lynn Champagne, Maintenance Supervisor  
901 N. FM 3083 E.  
Conroe, Texas 77303  
(936) 538-3350

**General:**

This is a Routine Maintenance, Non-Site Specific Callout Contract.

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

*Brandi Evans, [Brandi.Evans@txdot.gov](mailto:Brandi.Evans@txdot.gov)  
Lynn Champagne, [Lynn.Champagne@txdot.gov](mailto:Lynn.Champagne@txdot.gov)*

Questions may be submitted via the Letting Pre-Bid Q&A web page. This webpage can be accessed from the Notice to Contractors dashboard located at the following Address:  
<https://tableau.txdot.gov/views/ProjectInformationDashboard/NoticetoContractors>

All Contractor questions will be reviewed by the Area Engineer. All questions and any corresponding responses that are generated will be posted through the same Letting Pre-Bid Q&A web page.

The Letting Pre-Bid Q&A web page for each project can be accessed by using the dashboard to navigate to the project you are interested in by scrolling or filtering the dashboard using the controls on the left. Hover over the blue hyperlink for the project you want to view the Q&A for and click on the link in the window that pops up.

The Area Engineer will determine the location of the day's work. Work will be performed as scheduled by the department or as needed.

Work will not be permitted when impending bad or inclement weather may impair the quality of work. Notify TxDOT's representative for this project by 7:00 a.m. when scheduled work is cancelled for any reason. The Area Engineer shall have the discretion to make decisions regarding whether work shall be performed or cancelled.

This contract will be for 239 working days. There will be an option under SP 004-004 to extend this contract for an additional year, as agreed upon by the Contractor and Area Engineer.

**Project Number:** RMC 6463-30-001**County:** Montgomery County**Highway:** I 45, etc.**Sheet 3****Control:** 646330001

Refer to the plans for estimated quantities. The estimated quantities listed in the plans is an estimate. The Area Engineer will determine what work will be scheduled and where that work is to be scheduled on an as needed basis.

During the Preconstruction Meeting a begin work date will be determined. Any changes to the begin date will be at the discretion and approval of the Area Engineer. Failure to begin work or failure to complete work on time or within the specified time on the work order will result in Liquidated Damages.

Work request shall be on a callout basis and work order(s) will accompany the callout. Commence work upon issuance of a work order. Callout work orders, only, will be issued for no less than \$1,000.00 per work order.

A Mobilization Letter for either Callout work will be accompanied by a work order detailing the specifics of the work requested. The Contractor will begin, and complete work listed within the Callout Mobilization Letter within the required time for each work order. Work orders are expected to be completed per the contract plans within the number of days allowed for each work order. All Callout work orders will have a begin date and number of working days. The Contractor will begin work within 48 hours of notification for Mobilization Callout Letters, unless otherwise approved by the Area Engineer. The Contractor will begin work within 2 hours of notification for Emergency Callout Letters and complete within 7 hours, unless otherwise approved by the Area Engineer. Failure to begin work within the required time and proceed to completion within the required time will result in the assessment of Liquidated Damages.

An email address shall be provided to receive and respond to all Mobilization Letters. The Contractor shall notify the Department once receiving the Mobilization Letter and 24 Hours prior to beginning work.

It is the Contractor's Responsibility to ensure familiarity with the existing site conditions and all aspects of the contract prior to bidding.

The limits of each cycle will be defined on the "Mowing Areas and Limits" sheet in the plans.

Provide hard hats, safety vests, rubber boots, gloves, and all other safety materials or devices to complete the work in a safe manner.

The cost for materials, labor, and incidentals to provide for traffic across the roadway and for ingress and egress to private property in accordance with Section 7.2.4 of the standard specifications is subsidiary to the various bid items. Restore access roadways to their original condition upon completing construction.

Procure permits and licenses, which are to be issued by the City, County, or Municipal Utility District.

**Project Number:** RMC 6463-30-001**County:** Montgomery County**Highway:** I 45, etc.**Sheet 3****Control:** 646330001

Unless otherwise shown on the plans or otherwise directed, commence work after sunrise and ensure construction equipment is off the road by sunset.

Tolls incurred by the Contractor are incidental to the various bid items.

**General: Site Management**

Assume ownership of debris and dispose of at an approved location. Do not dispose of debris on private property unless approved in writing by the District Engineer.

Personal vehicles of employees are not permitted to park within the right of way, including sections closed to public traffic. Employees may park on the right of way at the Contractor's office, equipment, and materials storage yard sites.

The Contractor will be responsible for the protection of his/her materials and equipment from theft, vandalism, animals, fire, etc., while materials and equipment are on the project site, whether stored or installed in place during this contract.

Locate equipment or materials, temporarily stored on State right of way during non-working hours at least 30 feet from the edge of the pavement.

Maintain continuous access to public and private drives and side roads.

All equipment will be pressure washed prior to beginning work and leaving the job site.

**General: Traffic Control and Construction**

When design details are not shown on the plans, provide signs and arrows conforming to the latest "Standard Highway Sign Designs for Texas" manual.

**General: Utilities**

Consider the locations of underground utilities depicted in the plans as approximate and employ responsible care to avoid damaging utility facilities. Depending upon scope and magnitude of planned construction activities, advanced field confirmation by the utility owner or operator may be prudent. Where possible, protect and preserve permanent signs, markers, and designations of underground facilities.

If the Contractor damages or causes damage (breaks, leaks, nicks, dents, gouges, etc.) to the utility, contact the utility facility owner or operator immediately.

If working near power lines, comply with the appropriate sections of Texas State Law and Federal Regulations relating to the type of work involved.

**Project Number:** RMC 6463-30-001**County:** Montgomery County**Highway:** I 45, etc.**Sheet 3****Control:** 646330001**Item 7: Legal Relations and Responsibilities**

This project does not require a U.S. Army Corps of Engineers (USACE) Section 404 Permit before letting, but if a permit is needed during construction, assume responsibility for preparing the permit application. Submit the permit application to the Department's District Environmental Section for approval. Once the permit application is approved, the Department will submit it to the USACE. Assume responsibility for the requested revisions, in coordination with the Department's District Environmental Section.

No significant traffic generator events identified.

**Item 8: Prosecution and Progress**

Working days will be computed and charged based on a *standard workweek* in accordance with Section 8.3.1.4.

**Item 500: Mobilization**

This contract consists of Callout Mobilization Items for most regularly scheduled work and Emergency Callout Mobilization Items for any unexpected or emergency work.

**Item 505: Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)**

A shadow vehicle with Truck Mounted Attenuators (TMAs) is required as shown on the appropriate Traffic Control Plan (TCP) sheets. TMAs must meet the requirements of the Compliant Work Zone Traffic Control Device List.

Level 3 Compliant TMAs are required for this project.

Do not use trailer mounted attenuators for this project.

A total of three (3) shadow vehicles with a TMA are required for Pavement Marking Operations. The Contractor is responsible for determining if one or more of these operations will be ongoing at the same time to determine the total number of TMAs needed on the project.

In addition to the shadow vehicles with TMAs that are specified as being required on the TCP layout sheets for this project, provide additional shadow vehicles with TMAs as shown on the TCP Standard sheets. The Contractor is responsible for determining if one or more of these operations will be ongoing at the same time to determine the total number of TMAs needed on the project.

This item will be paid for by the day. The Contractor is responsible to furnish, operate, maintain and remove upon completion of work.

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**County:** Montgomery County

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**Sheet 3**

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**Item 730: Roadside Mowing**

There are several highways with sidewalks and center medians that must be mowed and edged. These highways include but are not limited to: SH 242, SH 105, FM 1488, FM 1774. The estimated cycles per year is 4 (four). This is a 2 (two) year contract. The acres per cycle and cycles per year is an estimate. The Area Engineer reserves the right to alter the cycles per year and scheduled roads to be mowed as needed. Each mowing cycle shall be completed as set in the work order. The Area Engineer has discretion to alter this schedule as necessary to meet the needs of Montgomery County.

Any outfall ditches will be mowed and paid for under Full-Width Mowing. Any outfall ditch or retention pond location not specifically included in the plans will be paid for under Spot Mowing.

Provide adequate equipment meeting all requirements to average 110 acres per day, for Full-Width Mowing. The State will inspect the equipment to ensure that all mowers are adjusted properly for the correct mowing heights and meet all safety requirements prior to beginning mowing operations and at any time during the contract period.

The Department will issue a written notice to begin a mowing cycle. In this notice, the contractor will be given the number of acres required to be mowed, the number of working days allowed to complete the mowing cycle, and the date when time charges for the mowing cycle will begin. The number of working days will be determined by dividing the total number of acres required for the mowing cycle by the average rate as shown above. Liquidated damages will be assessed for any working day charged beyond the rates as shown above. Liquidated damages will be assessed for any working day charged beyond the authorized time. Time will be suspended between mowing cycles.

***Mowing on this contract will be completed in increments known as a cycle. A cycle is defined as a group of mowing tracts or areas that must be completed on time within the time specified herein or in a work order. The average mowing cycle shall take approximately 29 working days, and time charges shall adhere to Section 8.3.1.4 of the 2024 Standard Specifications Book for Maintenance and Construction. Refer to Sheet 5 for locations and approximate acreage per cycle.***

Provide a slope mower in areas too steep to mow with conventional equipment. Provide equipment capable of mowing the slope while traveling on the pavement. Do not damage existing slope surface or injure existing growth. Extensive hand trimming will be required on areas unable to be mowed by a slope mower. In areas where there are shrubs and or dense trees, hand trimming will be required. Extensive hand trimming will be required on an around all structures, including but not limited to signs, guardrail, CSB walls, sidewalks, poles, or other structures from the pavement surface and within TxDOT ROW (Right of Way). Mowing and

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**County:** Montgomery County

**Highway:** I 45, etc.

**Sheet 3**

**Control:** 646330001

extensive hand trimming will also be required on all State Highways with grass (vegetation) in the center median areas. Do not damage curbed areas. Any damage to curbed areas, signs, mailboxes, or other structures will be fixed by the Contractor within 5 days from incident and will be at the Contractor's expense.

Use caution during mowing and trimming operations to eliminate flying debris from becoming a possible hazard to the public.

In addition to debris removal, mud that is tracked or dragged onto the roadway by mowers will be removed immediately at the Contractor's expense.

Avoid mowing over large items of litter, bags of trash or items that may be strewn or scattered in pieces along the ROW. It is the contractor's responsibility to pick up any litter that is mowed over and scattered. The mowing contractor shall inspect roadways prior to beginning the mowing cycle to inspect for large items of litter. On roads where the mowing cycle coincides with the litter pickup cycle, cooperate with others to avoid mowing of litter as directed by the Area Engineer.

All attempts will be made by the Department to have litter removed from the road prior to the start of the roadway mowing cycle. Delays may occur to allow the litter pickup to advance ahead of the mowers; time will be suspended for mowing of a cycle during the time work has been delayed for litter removal operations by others.

The road will be open to traffic at all times. Access to all drives and a side road, both public and private, is to be maintained at all times.

In the event it becomes necessary not to mow construction areas, the subject quantities for the contract will be decreased in accordance with the terms and conditions of the contract.

Adjust mowers for a cutting height of approximately 5-7 inches. Trim around all poles, signs, trees and other appurtenances located within the right of way. Hand trimming is required; cut and/or trim the grass to the height of 5-7 inches. Adjustment of lower or higher mowing heights will be at the discretion of the Area Engineer.

The Area Engineer may at his/her discretion, reduce or alter the limits of each cycle. For this contract, the required minimum mowing acres per normal working days will be 110 acres for Full Width Mowing. This production rate was used to determine the completion time for each cycle. If the contractor fails to complete the mowing necessary to complete the subject cycle in the working days specified, a time char will be made for each working day thereafter. Working days established for the completion of a cycle are essential element of the contract. For reach working day that any work remains incomplete after the expiration of time specified for a given mowing cycle, the amount per day in the Special Provision "Scheduled or Liquidated Damages"

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(000-018) will be deducted from the payment due to the contractor, not as a penalty, but as liquidated damages.

The Contractor will be responsible for protection of his/her materials and equipment from theft, vandalism, animals, fire, etc. while said materials and equipment are on the project site.

Payment for those tracts of a cycle that has been completed (all mowing and trimming) will be made at the end of the day for work completed within the estimate period.

Conduct mowing operations in a manner that will not damage State right-of-way. The Area Engineer reserves the right to suspend mowing work when areas are too wet to mow without damage to State Right-of-Way occurring.

The Department has the authority to charge the contractor for any damage not repaired.

Spot Mowing shall cover any area and limits contained in this contract. It will be at the discretion of the Area Engineer to determine the work location based on the needs of Montgomery County.



# Estimate & Quantity Sheet

**CONTROLLING PROJECT ID** 6463-30-001

**DISTRICT** Houston

**COUNTY** Montgomery

**HIGHWAY** IH0045

<b>CONTROL SECTION JOB</b>				<b>6463-30-001</b>		TOTAL EST.	TOTAL FINAL
<b>PROJECT ID</b>				<b>A00207113</b>			
<b>COUNTY</b>				<b>Montgomery</b>			
<b>HIGHWAY</b>				<b>IH0045</b>			
<b>ALT</b>	<b>BID CODE</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	EST.	FINAL		
	500-7002	MOBILIZATION (CALLOUT)	EA	8.000		8.000	
	500-7033	MOBILIZATION (EMERGENCY)	EA	2.000		2.000	
	505-7003	TMA (MOBILE OPERATION)	DAY	60.000		60.000	
	730-7021	SPOT MOWING	AC	100.000		100.000	
	730-7022	FULL - WIDTH MOWING	AC	26,163.120		26,163.120	

**FULL-WIDTH MOWING  
AREAS AND LIMITS RMC 6463-30-001**

SECTION:		TxDOT Montgomery Maintenance - 1205			FULL-WIDTH MOWING		
TRACT NO.	HIGHWAY	LIMITS	REF. MARKERS FROM & TO	LENGTH MILES	NO. OF CYCLE	ACRES PER CYCLE	TOTALS
1	BU 59L	FROM: IH 69 SOUTHEND TO: IH 69 NORTH END	434 TO 436	2	8	23.99	191.92
2	SH 75	FROM: FM 3083 TO: WALKER C/L	446 TO 458	12	8	130.35	1,042.80
3	SH 105 W	FROM: W. LP 336 TO: GRIMES	668 TO 688	20	8	210.67	1,685.36
4	SH 105 E	FROM: E. LP 336 TO: LIBERTY COUNTY LINE	694 TO 712	18	8	261.80	2,094.40
5	SH 242	FROM: I 45 TO: I 69	674 TO 691	15	8	342.56	2,740.48
6	SH 249	FROM: FM 1774 TO: SPRING CREEK OR HARRIS C/L	444 TO 448	4	8	71.44	571.52
7	SP 149	FROM: FM 1488 TO: FM 149	472 TO 474	2	8	7.41	59.28
8	LP 494	FROM: HARRIS C/L TO: I 69 NORTH END	442 TO 452	9	8	80.31	642.48
9	LP 336 (ENTIRE LOOP)	FROM I 45 NE LOOP 336 TO: I 45 NW LOOP 336 (COMPLETING LP 336)	674 TO 692	18	8	215.00	1,720.00
10	FM 1097	FROM: BETHEL RD SOUTH TO: WALKER C/L	654 TO 684	29	8	188.66	1,509.28
11	FM 1314	FROM: LP 494 TO: SH 105	430 TO 451	20	8	137.98	1,103.84
12	FM 1375	FROM: FM 149 TO: WALKER C/L	654 TO 662	8	8	51.08	408.64
13	FM 1484	FROM: FM 3083 TO: SH 105 EAST	676 TO 690	14	8	95.17	761.36
14	FM 1485	FROM: SH 105 TO: HARRIS C/L	676 TO 700	24	8	175.44	1,403.52
15	FM 1486	FROM: GRIMES C/L TO: FM 1774	426 TO 444	18	8	151.72	1,213.76
16	FM 1488	FROM: WEST OF I 45 TO: WALLER C/L	658 TO 680	22	8	195.46	1,563.68
17	FM 1774	FROM: SH 249 / FM 149 TO: GRIMES C/L	448 TO 456	1	8	51.27	410.16
18	FM 1791	FROM: FM 149 TO: WALKER C/L	418 TO 421	3	8	25.00	200.00
19	FM 2090	FROM: FM 3083 TO: LIBERTY C/L	682 TO 697	15	8	111.09	888.72
20	FM 2432	FROM: SH 75 TO: FM 1484	672 TO 680	6	8	40.99	327.92
21	FM 2854	FROM: I 45 TO: SH 105 WEST	660 TO 676	16	8	165.07	1,320.56
22	FM 2978	FROM: FM 1488 TO: SPRING CREEK / HARRIS C/L	438 TO 444	6	8	67.88	543.04
23	FM 3083	FROM: SH 1485 TO: SH 105 WEST	664 TO 680	15	8	180.25	1,442.00
24	FM 149	FROM: GRIMES C/L TO: FM 1774	440 TO 470	32	8	228.25	1,826.00
25	FM 830	FROM: EAST OF LAKE CONROE TO: SH 75	666 TO 672	6	8	61.55	492.40
						<b>TOTAL =</b>	<b>3,270.39</b>
							<b>26,163.12</b>

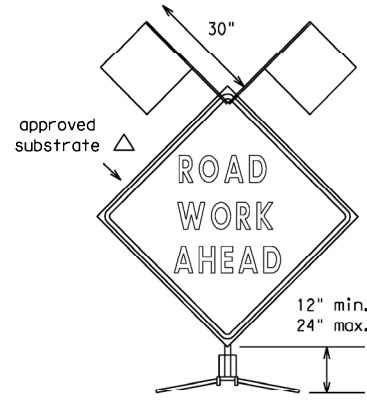


DISCLAIMER  
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
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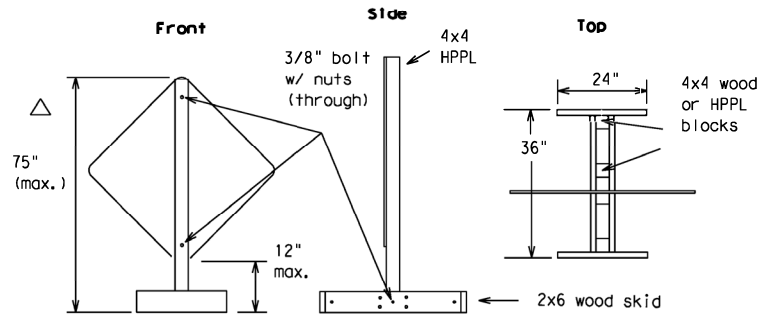
## EXAMPLES OF SIGN SUPPORTS

See the CWZTCD for the type of sign substrate that can be used for each approved sign support.



Flags as required by Engineer or as shown on plans

### SHORT TERM DURATION, DAYTIME USE ONLY PORTABLE SIGN SUPPORTS

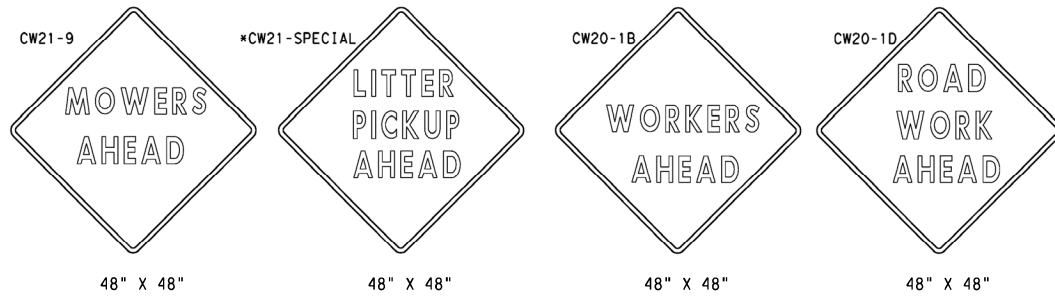


The upright SHALL be made of hollow-profile plastic lumber (HPPL). Wood or metal shall NOT be used.

1 Foot Mounting Height

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 will NOT be allowed.**



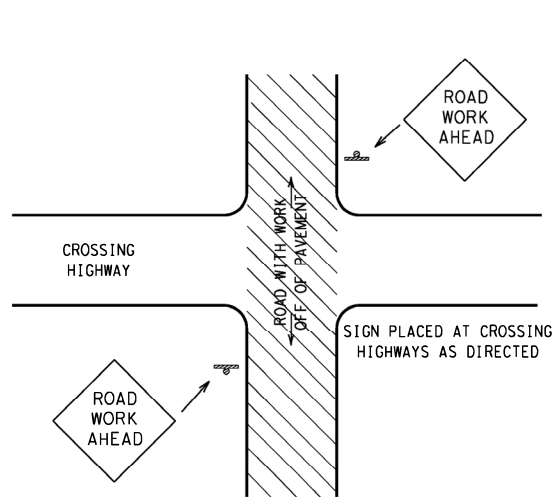
**SIGN IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS**

**MOWERS AHEAD SIGNS ARE USED FOR MOWING OPERATIONS.**

**LITTER PICKUP AHEAD, ROAD WORK AHEAD AND WORKER AHEAD SIGNS ARE USED AS DIRECTED FOR OTHER MAINTENANCE OPERATIONS WHEN ALL WORK OCCURS OFF OF THE PAVED HIGHWAY SURFACE.**

### ROLL-UP SIGNS CONFORMING TO DMS-8310 AND THE CWZTCD ALLOWED

\*Letter dimensions and spacing for "CW21-SPECIAL" is the same as C20-1D



TYPICAL LOCATION OF SIGNS AT HIGHWAY CROSSING

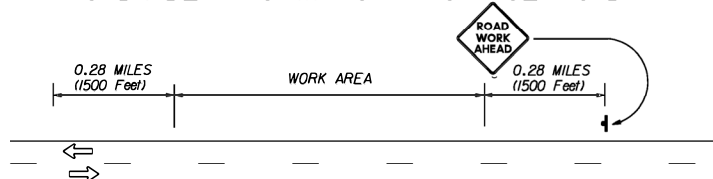
WORK AREA IS A MAXIMUM OF 2.0 MILES UNLESS OTHERWISE DIRECTED. SIGNS MAY REMAIN IN PLACE ONLY DURING DAYLIGHT HOURS.

SIGNS ARE TO BE PLACED 6' TO 12' OFF OF THE PAVED SURFACE UNLESS OTHERWISE DIRECTED.

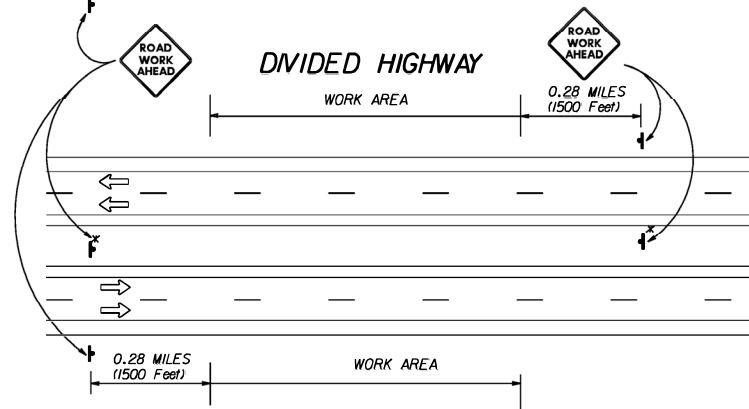
ROAD WORK AHEAD SIGNS SHOWN AS EXAMPLES, ONE OF THE FOUR TYPE SIGNS WILL BE USED AS DIRECTED.

\* SIGNS IN THE MEDIAN ARE REQUIRED WHEN WORK OCCURS IN MEDIAN

### UNDIVIDED HIGHWAY OR FRONTAGE ROAD



### DIVIDED HIGHWAY



### TRAFFIC CONTROL PLAN FOR WORK OFF OF THE PAVED SURFACE.

### GENERAL NOTES FOR WORK ZONE SIGNS

- Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
- Wooden sign posts shall be painted white.
- Barricades shall NOT be used as sign supports.
- Nails shall NOT be used to attach signs to any support.
- 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.
- 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. The additional signs requested by the Engineer/Inspector shall not be subsidiary.
- The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD). 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 that the Engineer can verify the correct procedures are being followed.
- The Contractor is responsible for sign installations and replacing signs with damaged or cracked substrates and/or damaged or marred reflective sheeting as directed by the Engineer/Inspector.
- 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".
- 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 VI)

- The Contractor is responsible for ensuring the sign support and substrate meets crashworthiness. For mowing operation all signs and supports are Short-term Duration for daytime work.
- The Contractor shall furnish the sign sizes shown on this sheet or as directed by the Engineer.

### SIGN SUBSTRATES

- The Contractor shall ensure that the sign substrate is allowed 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.
- "Mesh" type materials are NOT an approved sign substrate.
- 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 faces.

### REFLECTIVE SHEETING

- Reflectorized signs shall be constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 or DMS-8310. The DMS specifications can be accessed from the following web address:  
[http://manuals.dot.state.tx.us:80/dynaweb/colmates/@Generic\\_\\_CollectionView;cs=default;ts=default](http://manuals.dot.state.tx.us:80/dynaweb/colmates/@Generic__CollectionView;cs=default;ts=default)
- White sheeting, meeting the requirements of DMS-8300 Type C (High Specific Intensity), shall be used for signs with white background and channelizing devices.
- Orange sheeting, meeting the requirements of DMS-8300 Type E (Fluorescent Prismatic), shall be used for signs with orange backgrounds.

### SIGN LETTERS

- 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

- Signs should be removed or completely covered when not mowing.
- Duct tape or other adhesive material shall NOT be affixed to a sign face.
- Signs and supports shall be removed by the end of the day.

### SIGN SUPPORT WEIGHTS

- Where sign supports 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.
- Rock, concrete, iron, steel or other solid objects will not be permitted for use as sign support weights.
- 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.
- Rubber ballasts (such as those used with cones or edgeline channelizers) shall NOT be used as sign support weights.
- 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 supports.
- Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

### CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

Any sign, sign support or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced or repaired as soon as possible by the Contractor at the Contractor's expense.

Only pre-qualified products shall be used. A copy of the "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources and may be obtained by contacting:

Standards Engineer  
Traffic Operations Division - TE  
Texas Department of Transportation  
125 East 11th Street  
Austin, Texas 78701-2483  
Phone (512) 416-3120  
Fax (512) 416-3299

Instructions to locate the "CWZTCD" on TxDOT website are:

Start at website - [www.dot.state.tx.us](http://www.dot.state.tx.us)  
Click on "About TxDOT",  
Click on "Organizational Chart",  
Click on Traffic Operations Box,  
Click on "Compliant Work Zone Traffic Control Devices",  
Click on "View PDF".  
This site is printable.

Texas Department of Transportation  
Maintenance Division  
Standard Plans

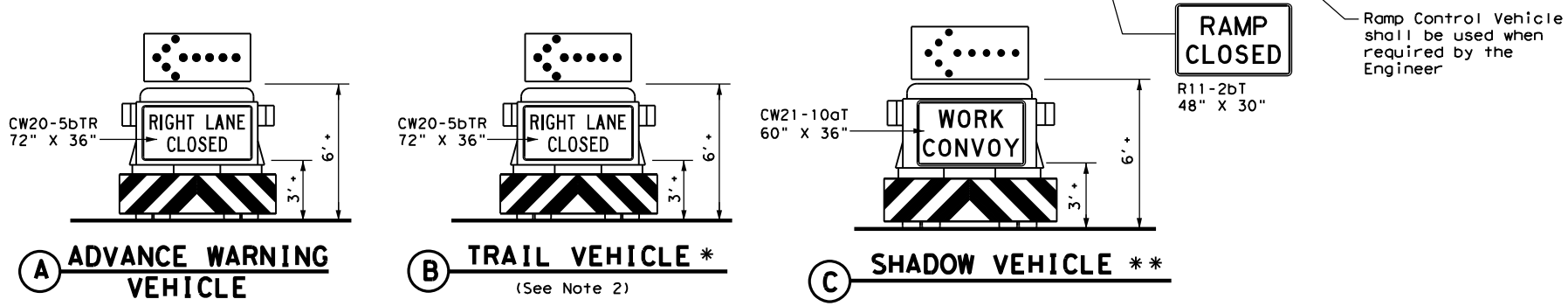
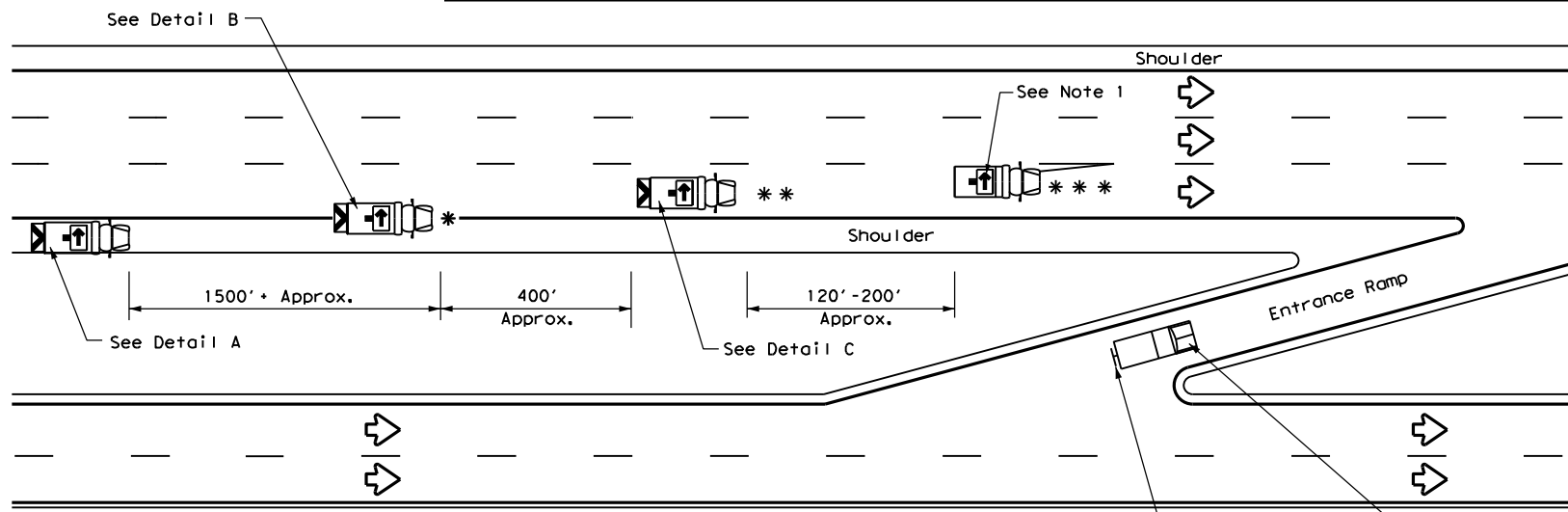
## ROADSIDE TRAFFIC CONTROL PLAN

SHEET 1 OF 1 RS-TCP-05 NOT TO SCALE

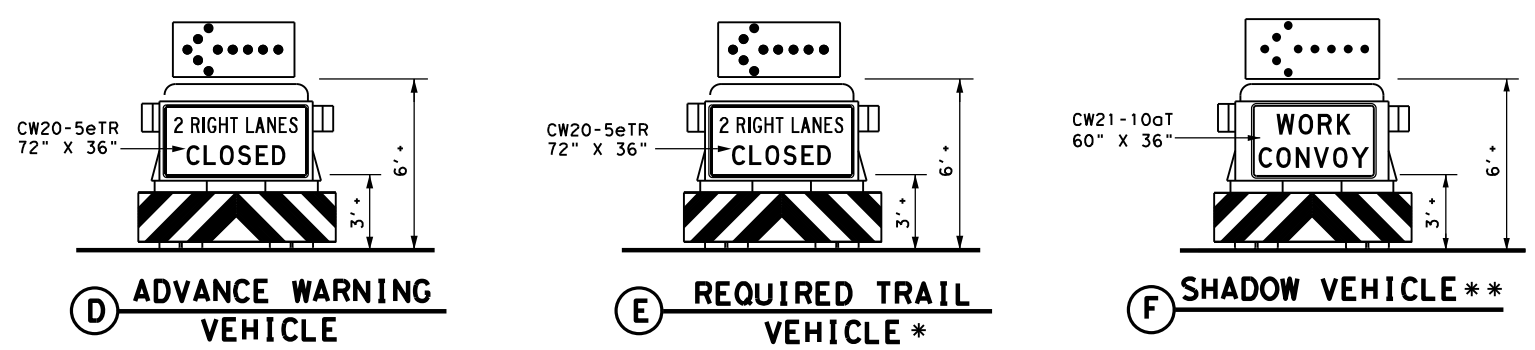
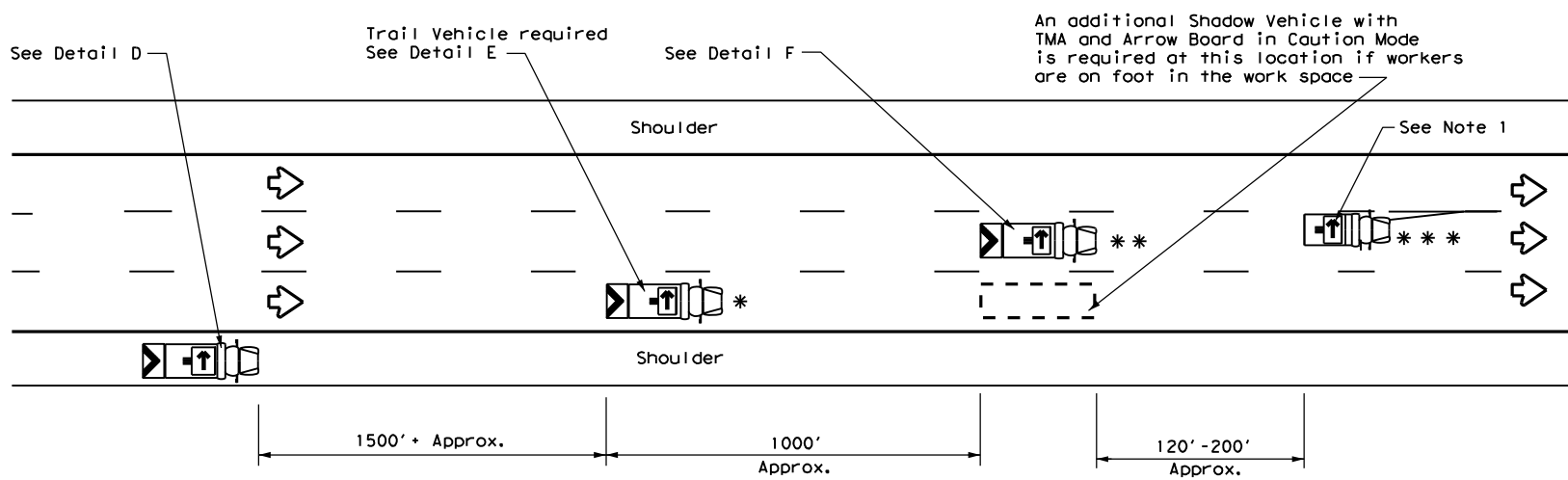
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© TxDOT FEBRUARY 2005		STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
REVISED: September 17, 2004	12	6	6463-30-001	6	
REVISED: FEBRUARY 2, 2005 Sign placement in TCP	COUNTY		CONTROL SECTION	JOB	HIGHWAY
REVISED:	MONTGOMERY		6463	30	001

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DATE:  
FILE:



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



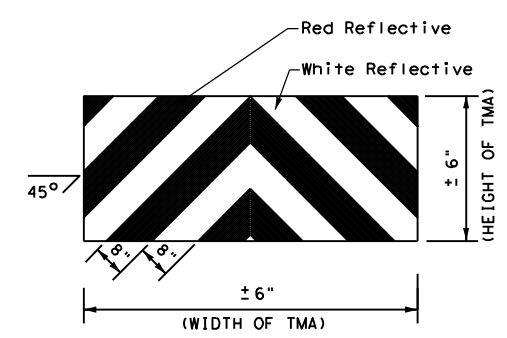
**INTERIOR LANE CLOSURE ON MULTI-LANE DIVIDED HIGHWAY - TCP(3-2b)**

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
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**GENERAL NOTES**

- 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.
- 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.
- 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.
- The use of truck mounted attenuators (TMA) on the ADVANCE WARNING, SHADOW, and TRAIL vehicles are required.
- Reflective sheeting on the rear of the TMA shall meet or exceed the reflectivity and color requirements of DMS 8300, Type A.
- Each vehicle shall have two-way radio communication capability.
- When work convoys must change lanes, the TRAIL VEHICLE should change lanes first to shadow the other convoy vehicles.
- 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.
- Standard 48" X 48" diamond shaped warning signs with the same message as those shown may be used where adequate mounting space exists.
- 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.
- Standard diamond shape versions of the CW20-5 series signs may be used as an option if the rectangular signs shown are not available.
- 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.
- Signs and flashing arrow board modes shall be appropriately altered when implementing left lane closures or interior closures which close the left lanes.
- The Advance Warning Vehicle may straddle the edgeline when shoulder width makes it necessary.



**STRIPING FOR TMA**

		<b>Traffic Operations Division Standard</b>	
<b>TRAFFIC CONTROL PLAN MOBILE OPERATIONS DIVIDED HIGHWAYS</b>			
<b>TCP(3-2)-13</b>			
FILE: tcp3-2.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT
© TxDOT December 1985	CONT: 6463	SECT: 30	JOB: 001
REVISIONS		HIGHWAY: 145, ETC.	
2-94 4-98	DIST: COUNTY		SHEET NO.:
8-95 7-13	HOU: MONTGOMERY		7
1-97			