

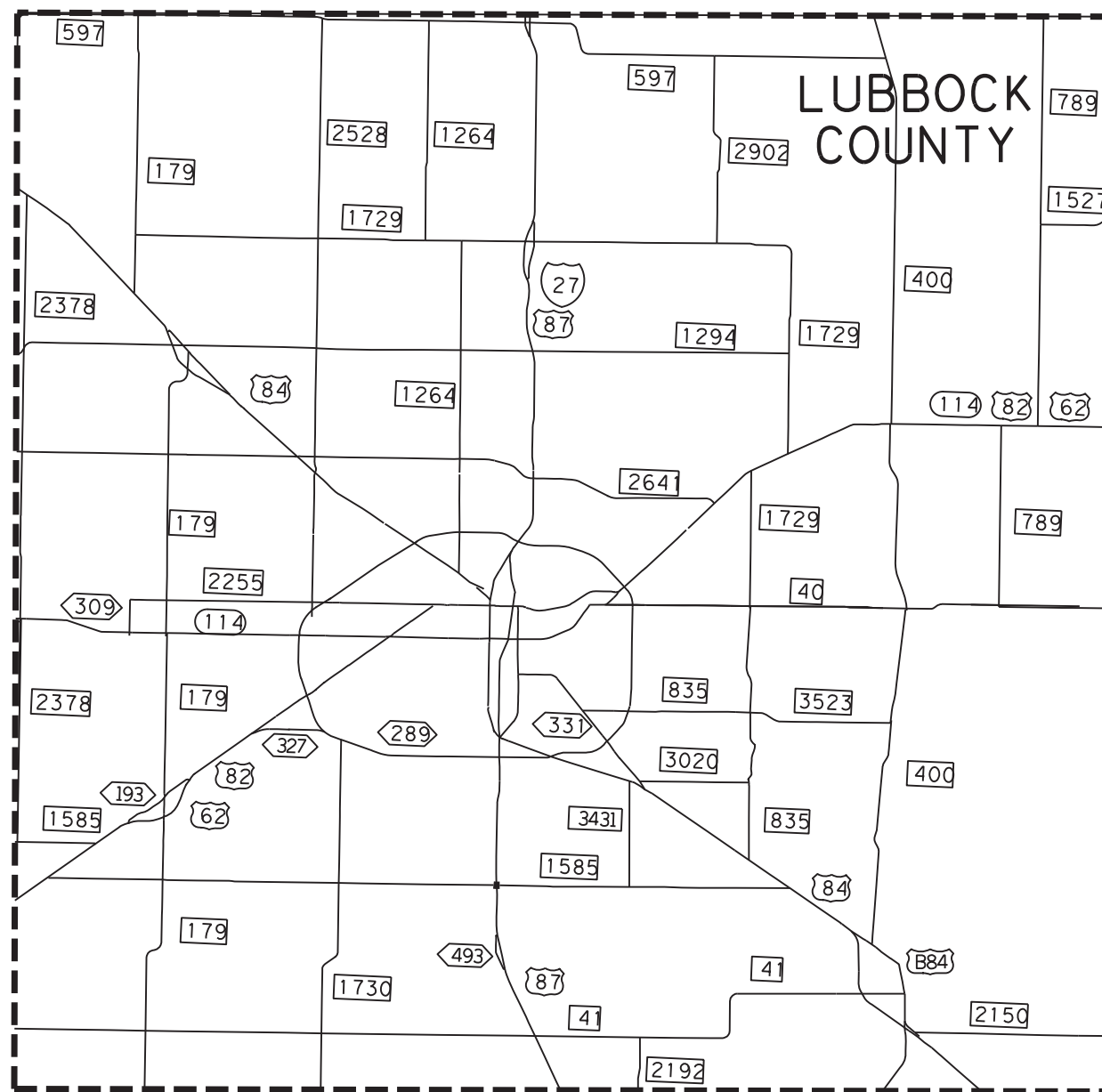
© 2021 Texas Department of Transportation	
FED. RD. DIV. NO. 6	PROJECT NO. RMC 638947001
STATE TEXAS	SHEET NO. 1
DIST. LBB	COUNTY LUBBOCK
CONTROL 6389	HIGHWAY NO. VARIOUS
JOB 47	DATE 9/13/2021
FILENAME	

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
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3	ESTIMATE AND QUANTITY SUMMARY
4	MOWING AREAS SUMMARY SHEET
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6	TCP (3-5)-18

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION
PLANS OF PROPOSED
ROUTINE MAINTENANCE CONTRACT

TYPE OF WORK:
ROADSIDE MOWING
PROJECT NO.: RMC 638947001
CSJ: 6389-47-001
HIGHWAY: VARIOUS
LIMITS OF WORK: LUBBOCK COUNTY



RMC 638947001

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



DocuSigned by:
Michael P. Stroope
BC3D76BE5B2B4F2... P.E.
9/14/2021
Date



SUBMITTED 9/14/2021
FOR LETTING: _____ .20

DocuSigned by:
Michael P. Stroope
BC3D76BE5B2B4F2... ER

APPROVED 9/14/2021
FOR LETTING: _____ .20

DocuSigned by:
Michael P. Stroope
BC3D76BE5B2B4F2... TENANCE

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

NO SCALE
NO EQUATIONS
NO EXCEPTIONS
NO RAILROAD CROSSINGS

Project Number: RMC 638947001**Sheet 2****County:** Lubbock**Control:** 6389-47-001**Highway:** Various**GENERAL NOTES:**

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

Mike Stroope, P.E., Director of Maintenance
mike.stroope@txdot.gov

Contractor questions will only be accepted through email to the above individual(s).

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.

General Requirements and Covenants - Items 1 thru 9

Project Description – This project shall consist Right of Way mowing in the Lubbock NE Maintenance Section area.

Lubbock Area Engineer

Michael Wittie, P.E.
135 Slaton Road
Lubbock, TX 79404
PH (806) 748-4466

Lubbock NE Maintenance Supervisor

Manuel DeLaCruz
2710 E Municipal Drive
Lubbock, TX 79403
PH (806) 763-8137

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 at the same time.

Project Number: RMC 638947001**Sheet 2****County:** Lubbock**Control:** 6389-47-001**Highway:** Various**Item 2 - Instructions to Bidders**

View the plans on-line or download from the web at:

<http://www.dot.state.tx.us/business/plansonline/plansonline.htm>

Order plans from any of the plan reproduction companies shown on the web at:

http://www.dot.state.tx.us/business/contractors_consultants/repro_companies.htm

By signing this proposal, a bidder acknowledges that he/she has a copy of the "Standard Specifications for Construction of Highways, Streets and Bridges", adopted by the Texas Department of Transportation, November 1, 2014. This specification book may be purchased from the Department.

Item 3 - Award and Execution of Contract

This Contract includes work required under multiple Work Orders. Perform work as shown in the plans and continue until work is completed.

Item 4 - Scope of Work

If agreed upon in writing by both parties to the contract, the contract may be extended for an additional period of time not to exceed the original contract time period. The extended contract shall be for the original bid quantities, terms and conditions plus any approved change orders.

When the contract is extended by agreement of both parties, a Performance Bond, if required, and Payment Bond shall be executed in the amount of the extension before the additional work begins.

Item 5 - Control of Work

Notify TxDOT representative by 9:00 am each day for work completed the previous day, including hand trimming and cleanup. The Engineer will then inspect the section(s) of roadway for acceptance, not more than two (2) working days after notification.

Item 8 - Prosecution and Progress

Contract time charges shall begin upon issuance of "Authorization to Begin Work" letter. Seven Hundred and Thirty (730) days have been designated for this contract. Days shall be computed and charged in accordance with Article 8.3.1.5 "Calendar Day."

Project Number: RMC 638947001**Sheet 2****County:** Lubbock**Control:** 6389-47-001**Highway:** Various

Pre-Work Meeting - Prior to beginning work, a conference between the Contractor's representative and the Department will be arranged by the Department.

Submit the outline referenced in Item 8.5.5 in writing. Include all roadways in the sequential order of mowing and the number of day(s) allotted to each roadway. In the event that the schedule is not submitted to the Engineer, work will not be allowed to begin, but time charges will be charged.

Do not begin work each day until 30 minutes after sunrise and stop work 30 minutes before sundown unless authorized by the Engineer. During non-working hours, remove all equipment at least 30 feet from the roadway. No equipment repair will be allowed on the rights of way during non-working hours.

Work Prosecution

Cycles shall begin upon issuance of a Work Order. Individual Work Order charge days shall run concurrently with Contract time charges.

Estimated working days per cycle are calculated as follows:

Mowing--total acreage per cycle divided by 100 acres per day.

Each cycle stands alone as to the number of working days allowed for that cycle. The contractor shall be charge liquidated damages per each cycle not completed in the specified time.

Remaining days on each cycle shall not be carried on to future cycles.

The designated number of working days per cycle is 28.

Item 500 - Mobilization

Mobilization for call out work will be paid for each callout work request.

Item 502 - Barricades, Signs and Traffic Handling

For this project, Barricades, Signs, and Traffic Handling will be subsidiary to the various bid items.

The Engineer will inspect and approve all traffic control devices prior to work starting on each cycle.

A traffic control plan is required as shown in the plans. For this Contract, this operation will be considered Short Term Stationary. The Contractor is responsible for furnishing, erecting, and

Project Number: RMC 638947001**Sheet 2****County:** Lubbock**Control:** 6389-47-001**Highway:** Various

maintaining all signs necessary to comply with the Texas Manual on Uniform Traffic Control Devices. Flags are required on all signs. The Contractor is responsible for compliance with all City, State, and Federal laws.

Use only signs that are 48" x 48". Use signs and sign supports that are listed in the "Compliant Work Zone Traffic Control Devices." This list is available from TxDOT and may be obtained by calling 512-416-3335, or visiting the Departments Web Site at www.dot.state.tx.us.

Item 730 – Roadside Mowing

Full Width (3.2.2) mowing unless otherwise indicated in the plans or as directed.

Curb and Gutter

Mow and hand trim behind curb and gutter in all developed areas if included in the limits of that roadway.

Omitted Areas

Areas not able to be mowed, or that do not need to be mowed, which have been included in the estimated measurements, may be omitted, at the discretion of the Engineer.

Areas omitted will be deducted from the pay measurement. These areas will usually be a minimum of two (2) acres. Areas will be noted in work order.

Easements

Mow State-owned easements and easement slopes as directed by the Engineer. These areas are included in the estimated measurements, except as indicated otherwise in the plans.

Equipment

The Engineer will inspect and approve all equipment prior to work starting on each cycle.

Keep mowers in good operating condition. Repair or replace any equipment the Engineer determines is defective to the point that it may affect the quality of the work.

Equip all decks, including bat-wings, with either safety chains or the manufacturer's safety device long enough to be in constant contact with the ground during operation.

Provide highly visible amber strobe warning lights on all tractors and work trucks.

Project Number: RMC 638947001**Sheet 2****County:** Lubbock**Control:** 6389-47-001**Highway:** Various**Cutting Height**

Cutting height shall be seven (7) inches when measured on level ground.

Areas left in a ragged condition will be re-mowed with no additional compensation. The Contractor will not be required to make more than two (2) additional passes.

Hand Trimming

Hand trimming is required for all tracts listed in the plans and is considered subsidiary to Item 730.

Hand trimming shall be completed within 24 hours after mowing is completed on any section of Right of Way.

Hand trim around appurtenances/objects, whether temporary or permanent.

Perform hand trimming operations inside an established safety work zone area.

Hand trim around metal beam guard fence included within the mowing limits. Extend hand trimming from the edge of the roadway, under the guard fence, to a minimum of five (5) feet, for the length of the metal beam guard fence and guardrail extruder terminal or terminal section.

Hand trim all vegetation growing in and around the guardrail in rip-rap and non-mow areas.

Hand trim all vegetation growing around appurtenances/objects behind curb and gutter.

Hand trim around all safety lighting and/or traffic signal lighting. Hand trim a seven (7) foot radius around the base.

Hand trim all vegetation growing in and around all rip-rap areas, including but not limited to all medians, islands, turnarounds, channels, slopes, etc.

DAMAGES

Charges for damages, including paved surfaces, rights of way, vegetation, and appurtenances, will be deducted from payments due to the contractor.

Item 6185 - Truck Mounted Attenuator and Trailer Attenuator

Provide shadow vehicle equipped with Truck Mounted Attenuator (TMA) as shown on Traffic Control Plan (TCP) standard TCP (3-5)-18.

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TMA's used for this project shall comply with requirements found in the Complaint Work Zone Traffic Control Devices list, which can be found at the following website.

<http://www.txdot.gov/business/resources/materials/producer-list.html>

Certified weights of host vehicles may be required by the Engineer to verify compliance with TMA/TA requirements of SS6185.

A minimum of One (1) TMA for Mowing Operations shall be available daily as noted on the summary sheet.

Tract No.	Highway	Limits	Ref. Marker	# Full Width Cycles	Acres Per Cycle	Total Acres Full Width
1	SL 369	IH 27 N. in Hale Co. to IH 27 S.	194-197	4	5	20
2	SL 388	US 84 W. to US 84 E.	204-207	4	15	60
3	SL461	IH 27 N. to IH 27 S.	202-204	4	12	48
4	FM 40	East Lubbock City Limits to FM 789	297-306	4	65	260
4.1	FM 40	Easement - South Side	297-300	4	6	24
5	FM 179	FM 597 to FM 2255	200-217	4	197	788
6	FM 400	Hale C/L to BU 84	200-226	4	232	928
7	FM 400	Easement	216-226	4	1	4
8	FM 597	Hockley C/L to FM 400	286-311	4	182	728
9	FM 1264	FM 597 to Lubbock City Limits	196-209	4	85	340
10	FM 1294	Hockley C/L to FM 1729	284-306	4	181	724
11	FM 1729	FM 179 to FM 835	286-318	4	232	928
11.1	FM 1729	Easement	313-313	4	1	4
12	FM 2378	US 84 to FM 1585	200-218	4	124	496
13	FM 2528	FM 597 to US 84	192-209	4	126	504
13.1	FM 2528	Easement - East Side	208-208	4	2	8
13.2	FM 2528	Easement	208-210	4	4	16
13.3	FM 2528	Easement	197-197	4	1	4
14	FM 2641	Hockley C/L to US 62	280-300	4	136	544
14.1	FM 2641	Easement of Cones Place	294-294	4	2	8
15	FM 2902	FM 1729 to FM 597	196-201	4	35	140
16*	US 62/82	East Loop 289 to FM 789	334-344	4	200	800
17*	IH 27	N Lubbock City Limit to Hale C/L	009-021	4	382	1528
18*	US 84 NW	W. LBB C-L to Hockley C/L	300-313	4	204	816
18.1	US 84 NW	Easement	311-312	4	1	4
19	IH 27	Abernathy Lake SE 1	22-22	4	16	64
20	IH 27	Abernathy Lake NE 2	22-22	4	13	52
21	IH 27	Abernathy Lake NW 3	22-22	4	14	56
22	IH 27	Abernathy Lake SW 4	22-22	4	4	16
23	IH 27	Triangle N of Monroe Overpass on E side	12-13	4	19	76
24	SL 461	Easement	203-204	4	1	4
25	FM 2150	US 84 to end of Road	306-313	4	90	360
26	FM 3020	SP 331 to FM 835	298-300	4	25	100
27	FM 835	E LP 289 to US 84	299-307	4	50	200
28	FM 1585	Hockley C/L to US 62/82	284-286	4	15	60
29	FM 3523	FM 835 to FM 400	300-304	4	42	168
Lubbock NE		Estimated Acreage Totals			2720	10880

COMBINED TOTALS	
MOWING ACRES PER FULL WIDTH CYCLE	2720
TOTAL FULL WIDTH ACRAGE	10880
WORKING DAYS PER CYCLE	28
TOTALWORKING DAYS	112

Notes:
 Tracts 16, 17, 18: TMA required where median cable barrier present if mower deck extends into roadway. Estimated 8 days per cycle.

MOWING AREAS SUMMARY SHEET

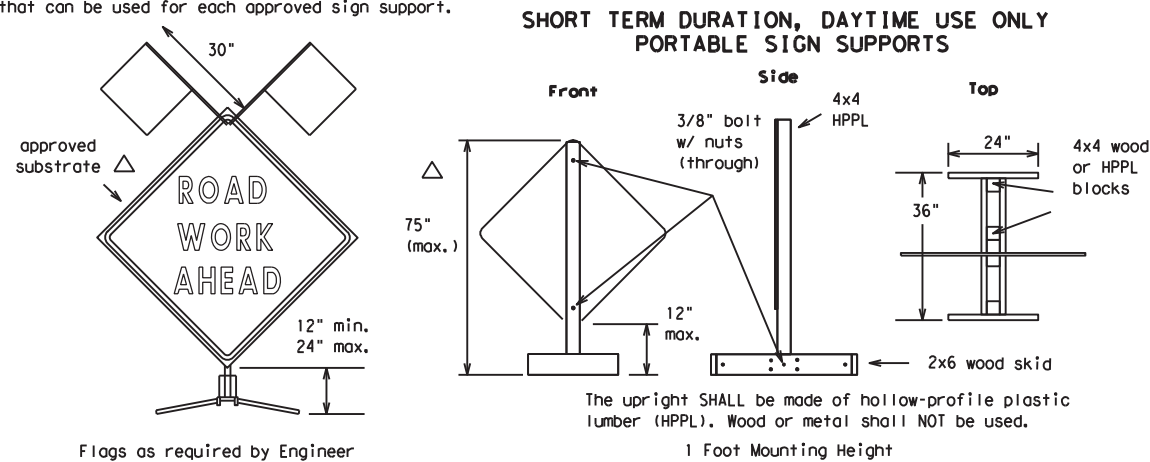
FED. RD. DIST. NO.	MAINTENANCE PROJECT NO.	SHEET NO.
06	RMC 63897001	4
STATE	DIST. NO.	COUNTY
TX	05	LUBBOCK
CONT.	SECT.	JOB
6389	47	001
		VARIOUS

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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
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	

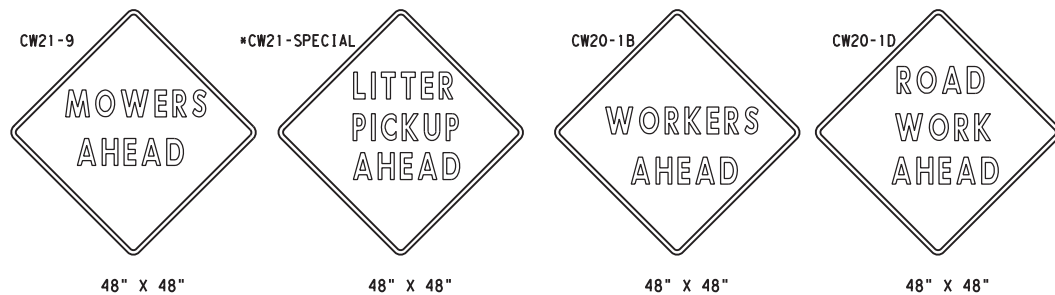
EXAMPLES OF SIGN SUPPORTS

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



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.



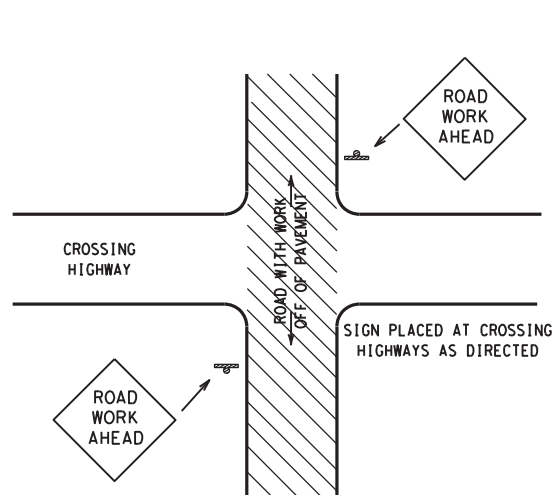
SIGN IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS

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

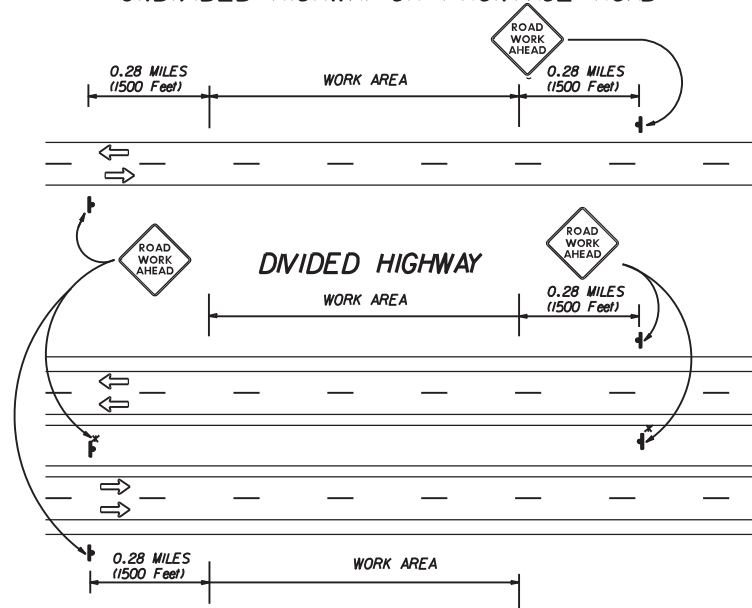


TYPICAL LOCATION OF SIGNS AT HIGHWAY CROSSING

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



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
- 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
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.

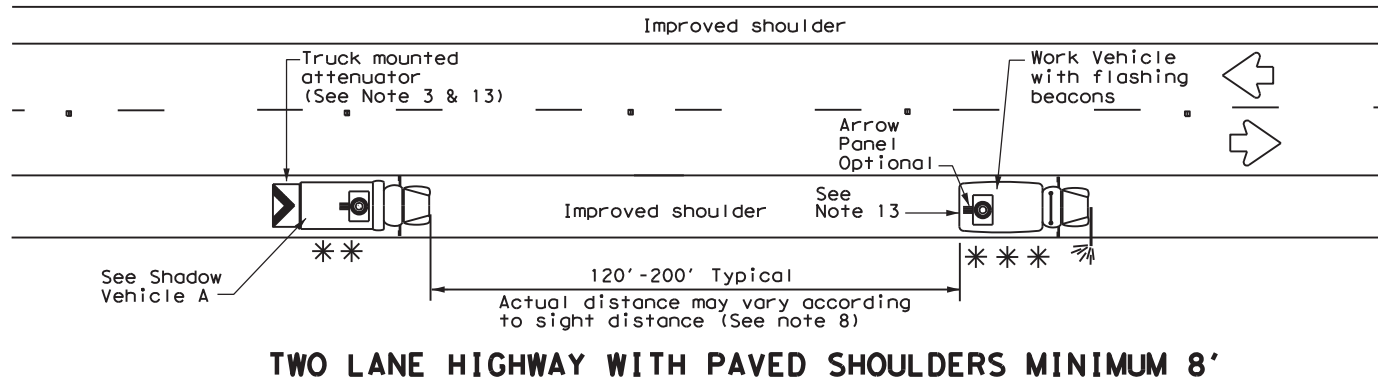
Texas Department of Transportation
Maintenance Division
Standard Plans

ROADSIDE TRAFFIC CONTROL PLAN

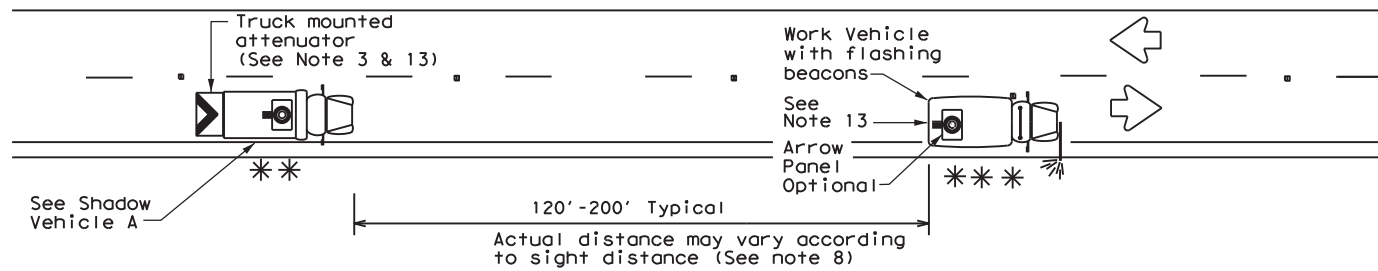
SHEET 1 OF 1 RS-TCP-05 NOT TO SCALE

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REVISED: FEBRUARY 2, 2005 Sign placement in TCP		COUNTY	CONTROL SECTION	JOB	HIGHWAY
		LUBBOCK	6389 47	001	VARIOUS

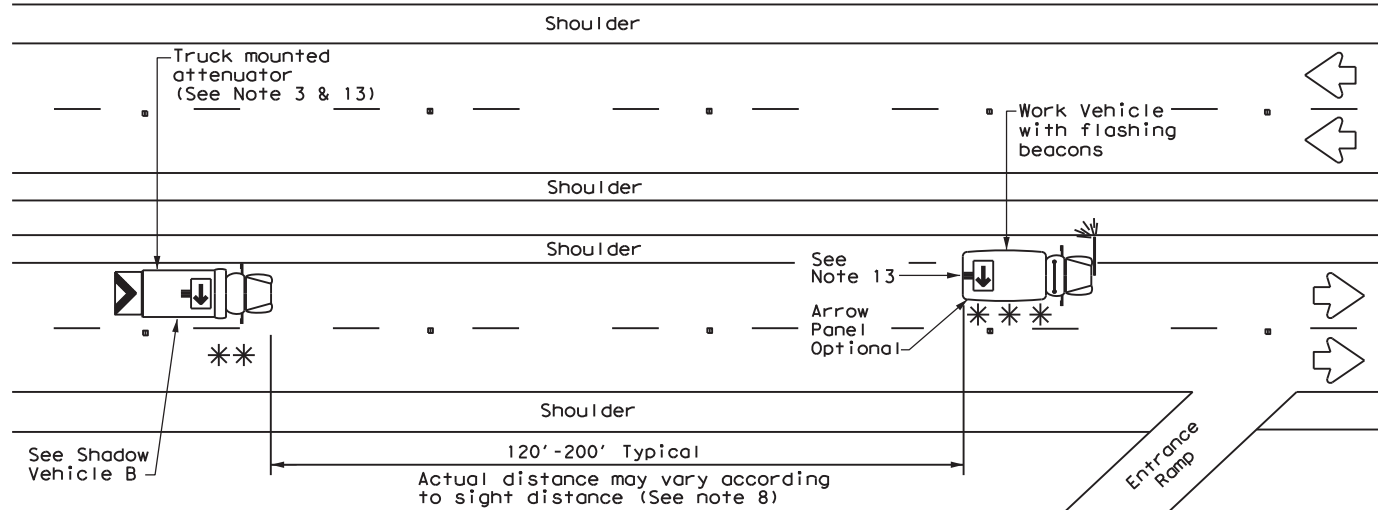
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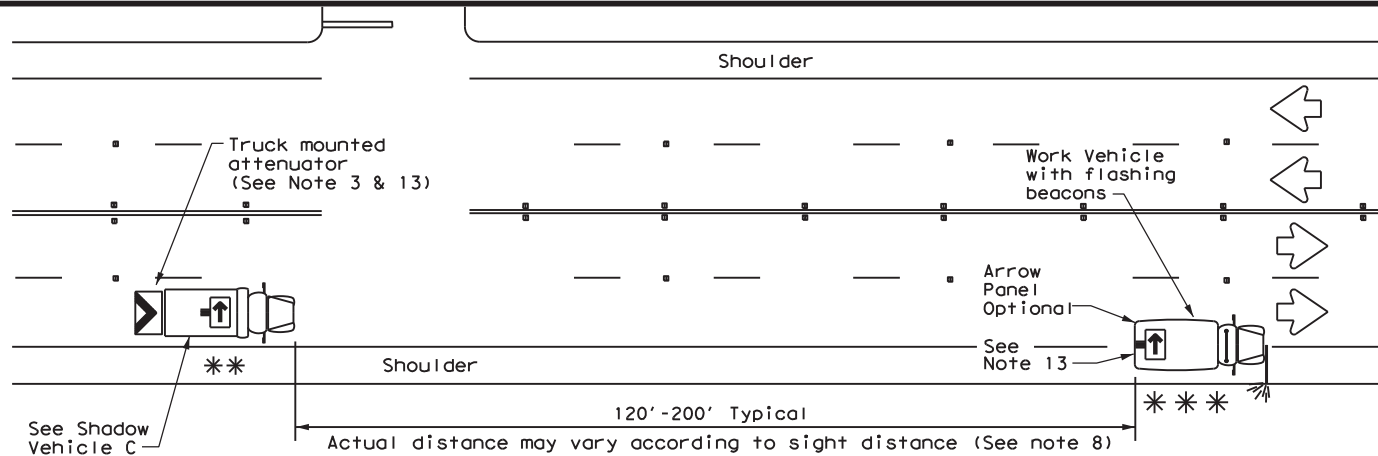
TWO LANE HIGHWAY WITH PAVED SHOULDERS MINIMUM 8'



TWO LANE HIGHWAY WITH NO SHOULDER OR NARROW SHOULDER

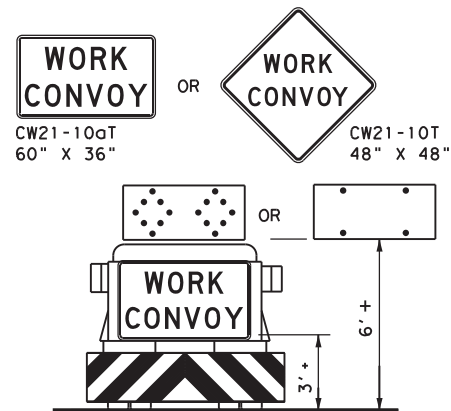


MULTILANE HIGHWAY



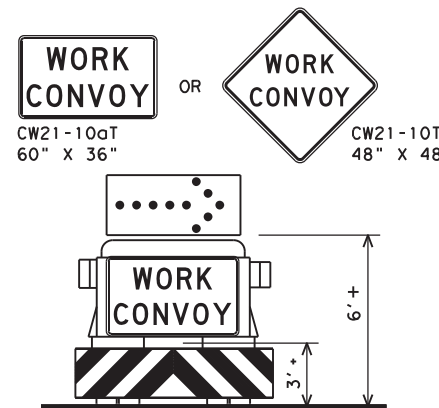
MULTILANE HIGHWAY

DATE: FILE:



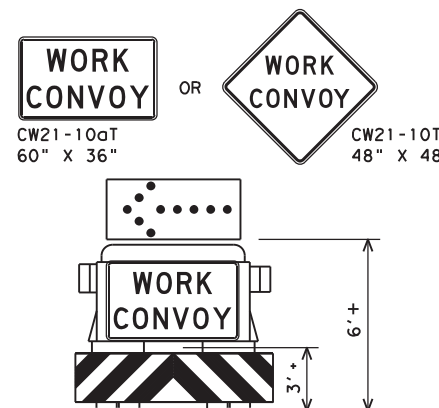
SHADOW VEHICLE A

with Flashing Arrow Board in Caution Mode



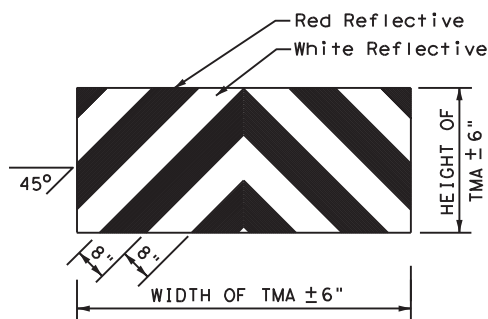
TYPICAL SHADOW VEHICLE B

with RIGHT Directional display Flashing Arrow Board



TYPICAL SHADOW VEHICLE C

with LEFT Directional display Flashing Arrow Board



STRIPING FOR TMA

LEGEND

**	Shadow Vehicle	ARROW BOARD DISPLAY	
***	Work Vehicle		RIGHT Directional
	Sign		LEFT Directional
	Heavy Work Vehicle		Double Arrow
	Traffic Flow		CAUTION (Alternating Diamond or 4 Corner Flash)
	Truck Mounted Attenuator (TMA) or Trailer Attenuator (TA)		

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

- All traffic control devices shall be in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD), latest edition.
- 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 Shadow Vehicle is required.
- Striping on the back panel of all TMAs shall be 8" red reflective sheeting with white background, 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.
- Flashing Arrow Panels shall be Type B or Type C as per BC Standards. The panel operation shall be controlled from inside the vehicle.
- Each vehicle shall have two-way radio communication capability.
- When the work convoy must change lanes, the Shadow Vehicle should change lanes first to protect the Work Vehicle.
- Spacing between Shadow and Work Vehicle will vary depending on sight distance restrictions. Motorists approaching the work convoy should be able to see the Shadow Vehicle in time to slow down and/or change lanes as they approach the Work Convoy.
- Use of an arrow panel on the Work Vehicle is optional except as provided in note 13, but may be required by the Engineer. If an arrow panel is not used, dual flashing beacons, mounted as high and as widely separated as practicable at the rear of the Work Vehicle shall be required.
- On two-lane two-way roadways, the Work and Shadow Vehicles should pull over periodically to allow motor vehicle traffic to pass.
- Work and Shadow Vehicles should stay on the shoulder of highways having 8' or wider shoulders when possible.
- A Trail Vehicle may be added to the operation when approved by the Engineer. See TCP (3) series standards.
- The shadow vehicle may be omitted on conventional roadways when a TMA or TA and arrow panel is mounted to the herbicide vehicle. A separate shadow vehicle will be required on expressways and Freeways.

		Traffic Operations Division Standard	
TRAFFIC CONTROL PLAN MOBILE OPERATIONS HERBICIDE TRUCK OPERATIONS TCP (3-5) - 18			
FILE: tcp3-5.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT
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