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DATE:  
FILE:

Traffic Control Devices shown for one direction

New pavement surface should extend to this point. (See note 2)

CW1-6  
48" X 24"  
(See note 2) ▲

OM-3  
Object  
Markers

4" Solid  
White  
Edgeline

Type II-A-A  
Raised  
Pavement  
Markers on  
40' C-C.

4" Double  
Yellow Line

New pavement  
surface should  
extend to  
this point.  
(See note 5)

END  
ROAD WORK  
G20-2  
48" X 24"

CW1-6  
48" X 24"  
(See note 2) ▲

Warning Reflectors may be added on top of channelizing devices for additional conspicuity at night. Warning Reflectors, chevrons or steady-burn warning lights may be added if drums or longitudinal channelizing devices are used. (Both directions)

Barricades may be offset to permit workers and equipment to enter and exit work space.

CW1-4R  
48" X 48"

XX  
MPH  
CW13-1P  
24" X 24"

ROAD  
CLOSED  
R11-2  
48" X 30"

CW1-6  
48" X 24"

CW1-4L  
48" X 48"

XX  
MPH  
CW13-1P  
24" X 24"  
(See note 2) ▲

ROAD  
WORK  
XXX FT  
CW20-1A, B or C  
48" X 48"

ROAD  
WORK  
AHEAD  
CW20-1D  
48" X 48"  
(Flags-  
See note 1)

TCP (2-7a)

ROADWAY DIVERSION

Traffic Control Devices shown for one direction

END  
ROAD WORK  
G20-2  
48" X 24"

PASS  
WITH  
CARE  
R4-2  
24" X 30"  
If applicable

CTB with safety end treatment, or other barrier system as detailed elsewhere in the plans.

4" Solid  
White  
Edgeline

4" Double  
Yellow Line  
1"-2"  
Type II-A-A  
Raised  
Pavement  
Markers on  
40' C-C.  
+4"

NARROW  
BRIDGE  
CW5-2  
48" X 48"  
(See note 6)

DO  
NOT  
PASS  
R4-1  
24" X 30"

ROAD  
WORK  
AHEAD  
CW20-1D  
48" X 48"  
(Flags-  
See note 1)

TCP (2-7b)

BRIDGE WIDENING

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Raised Pavement Markers Ty II-AA
	Sign		Traffic Flow
	Flag		Flagger

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

- Flags attached to signs where shown are REQUIRED.
- 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.

TCP (2-7a)

- Raised pavement markers shall be placed 40 feet c-c on centerline throughout project.
- Roadway diversion design requirements should be based on posted speed limit or prevailing speed.
- New pavement surface should be extended across existing roadway edge to a point where existing pavement markings left in place during project do not conflict with construction area pavement marking.

TCP (2-7b)

- The CW5-2 "Narrow Bridge" sign may be omitted if lane and shoulder widths are maintained.

For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

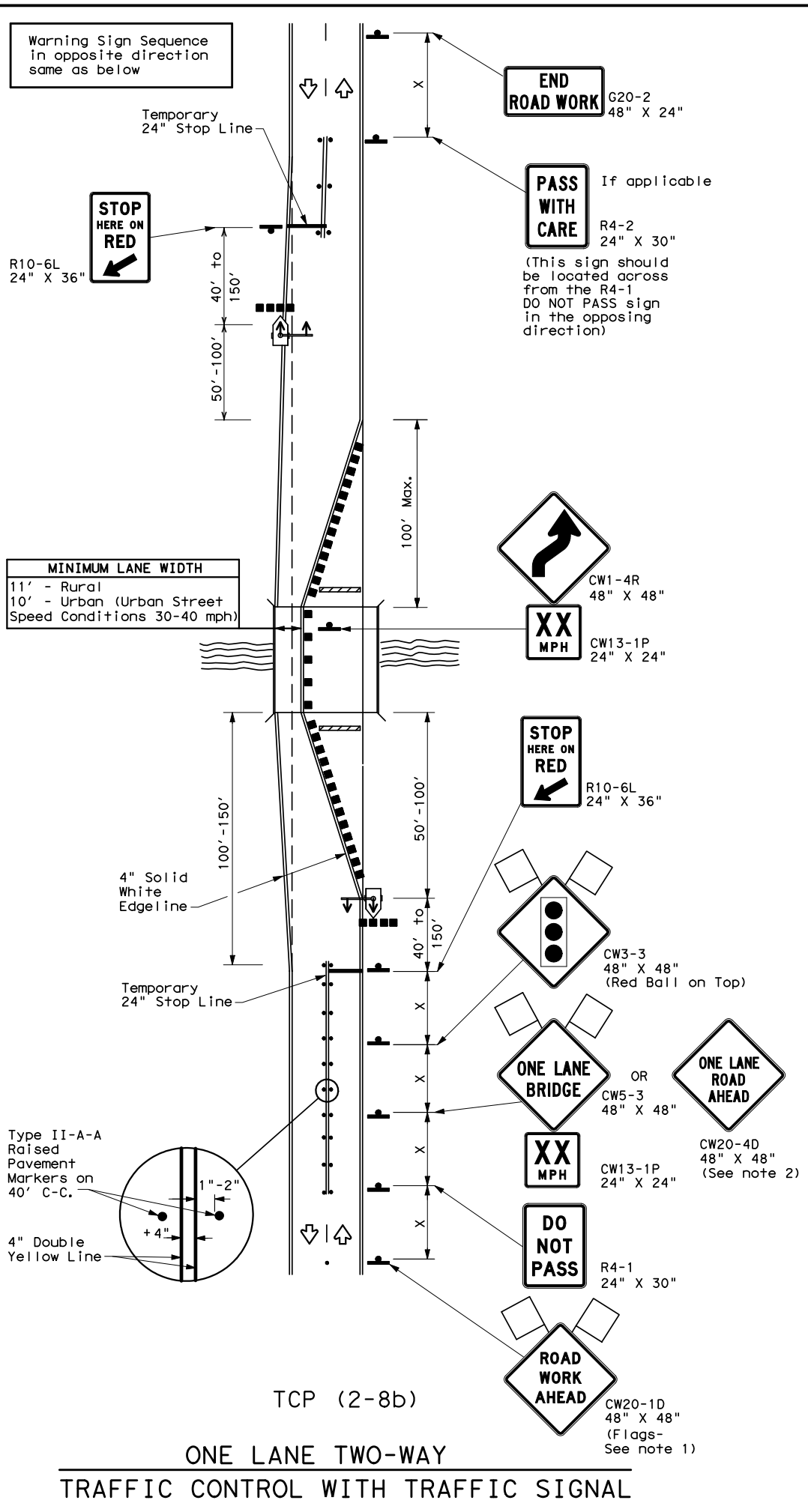
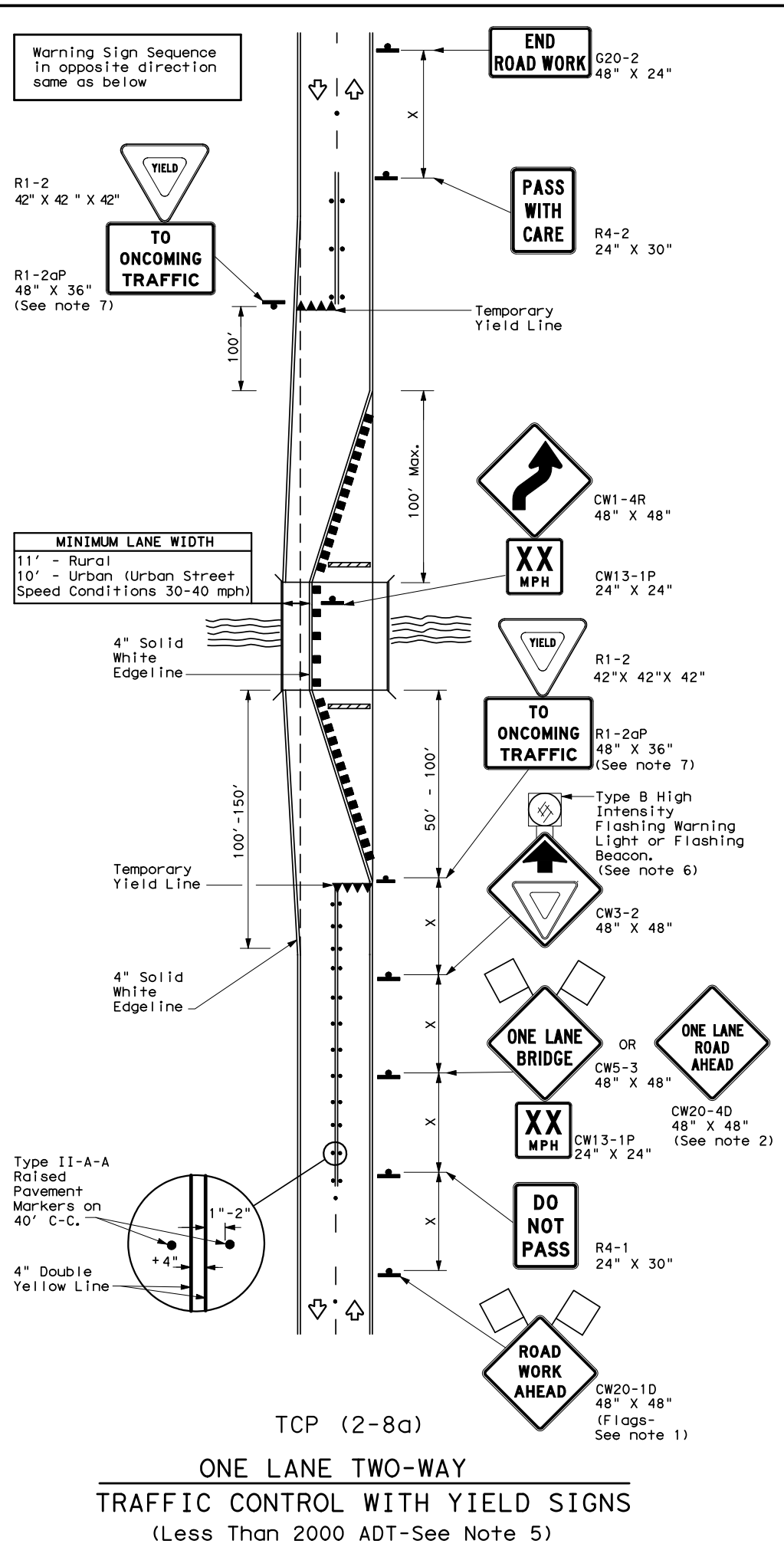
Texas Department of Transportation  
Traffic Operations Division

TRAFFIC CONTROL PLAN  
DIVERSIONS AND  
NARROW BRIDGES

TCP (2-7) - 12

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4-98					
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		DIST	COUNTY		SHEET NO.
					167

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**LEGEND**

	Type 3 Barricade		Channelizing Devices
	Sign		Traffic Flow
	Flag		Flagger
	Raised Pavement Markers Ty II-AA		Temporary or Portable Traffic Signal

**Typical Usage Table:**

Posted Speed *	Formula	Minimum Desirable Taper Lengths **		Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance	
		10' Offset	11' Offset	On a Taper	On a Tangent				
30	L = WS <sup>2</sup> / 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 Table:**

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
			✓	✓

**GENERAL NOTES:**

- Flags attached to signs where shown are REQUIRED.
- When this TCP is used at a location which does not involve a bridge, a 48" x 48" CW20-4D "ONE LANE ROAD AHEAD" sign should be used in lieu of the CW5-3 "ONE LANE BRIDGE" signs. The CW13-1P Advisory Speed Plaque is required with either warning sign.
- Raised pavement markers shall be placed 40 feet c-c on centerline between DO NOT PASS signs and stop or yield lines.
- For intermediate term situations, when it is not feasible to remove and restore pavement markings, the channelization must be made dominant by using a very close spacing. This is especially important in locations of conflicting information, such as where traffic is directed over a double yellow centerline. In such locations a maximum channelizing device spacing of 20 feet is recommended. The 20 foot channelizing device spacing recommendation is intended for the area of conflicting information and not the entire work zone.

**TCP (2-8a)**

- Traffic control by CW3-2 "YIELD AHEAD" symbol signs for one lane two-way traffic control operations should be limited to work spaces less than 400 feet long and roadways with less than 2000 ADT. Otherwise, portable traffic signals should be used.
- If power is available, a flashing beacon should be attached to the CW3-2 "YIELD AHEAD" symbol sign for emphasis.
- The R1-2 "YIELD" and R1-2aP "TO ONCOMING TRAFFIC" signs and other regulatory signs shall be installed at 7 foot minimum mounting height.

**TCP (2-8b)**

- A list of approved Portable Traffic Signals can be found in the "Compliant Work Zone Traffic Control Devices" list.
- Portable traffic signals should be located to provide adequate stopping sight distance for approaching motorist (See table above).

**Texas Department of Transportation**  
Traffic Operations Division

**TRAFFIC CONTROL PLAN**  
**LONG TERM ONE-LANE**  
**TWO-WAY CONTROL**

**TCP (2-8) - 12**

For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

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	DIST	COUNTY	SHEET NO.
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