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LEVELS DISPLAYED  
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16  
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**GENERAL NOTES:**

- SELF-RIGHTING SUPPORTS**
- Channelizing devices on self-righting supports may be a vertical panel, opposing lane divider or chevron.
  - Channelizing devices on self-righting supports shall be used at locations detailed elsewhere in the plans. These devices shall conform to the "Texas Manual on Uniform Traffic Control Devices". Type of base will be as directed by the Engineer.
  - Channelizing devices on self-righting supports should be used in work zone areas where channelizing devices are frequently impacted by errant vehicles. 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. Devices should not be placed within 12 inches of the traveled way. Spacing and placement shall be uniform and in accordance with the "Texas MUTCD".
  - The contractor shall maintain devices in a clean condition and replace damaged, non-reflective, faded, or broken devices and bases as necessary.
  - Devices shall be erected by method shown on this sheet and as approved by the Engineer.
  - Portable bases shall be fabricated from virgin and/or recycled rubber. Approximate weight of portable bases shall be 35 lbs.
  - Pavement surfaces shall be prepared in a manner that will ensure proper bonding of adhesives and fixed mount bases to the pavement surfaces when required. Adhesives shall be prepared and applied as per manufacturers recommendations.
  - Application and removal of 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. All application and removal procedures of fixed bases shall be approved by the Engineer.
  - These devices shall not be paid for directly but shall be considered subsidiary to the Item "Barricades, Signs, and Traffic Handling."

- CONES**
- Traffic cones and tubular markers shall be a minimum of 28 inches in height when used on freeways or used at nighttime. Orange shall be the predominant color of cones and tubular markers. They should be kept clean and bright for maximum visibility. Cones shall have a minimum weight of 9 1/2 lbs.
  - For nighttime use, cones shall be reflectorized. Reflecterized material shall have a smooth, sealed outer surface which will display the same approximate color day and night. When used at night, appropriate personnel shall be present at all times to ensure cones and tubular markers remain in their proper location and in an upright position.
  - Reflecterization of cones shall be a minimum 6 inch band placed at least 3 inches but not more than 4 inches from the top, supplemented by a minimum 4 inch band spaced a minimum of 2 inches below the 6 inch band. Reflecterization of tubular markers shall be a minimum of two 3 inch bands placed a maximum of 2 inches from the top with a maximum of 6 inches between bands.
  - One-piece cones or tubular markers are generally suitable for temporary usage (up to 8 hours) with other channelization devices such as vertical panels, drums or two-piece cones for long term usage. Care should be taken to ensure that they remain in their proper location and in an upright position.
  - \*-SPRAF (stacking/placement/removal assistance feature) may be designed as a handle, hook or other shape, fabricated from non-rigid materials similar to the cone material, and may extend up to a maximum of 8 inches above the top of cone. The length of the SPRAF shall not be considered with regard to the 28 inch minimum height.

**DRUMS**  
Refer to BC(5).

SPECIFICATION REFERENCE TABLE	
MATERIALS AND TEST SPECIFICATIONS (D-9)	
FLAT SURFACE REFLECTIVE SHEETING, TYPE C (HIGH SPECIFIC INTENSITY)	D-9-8300

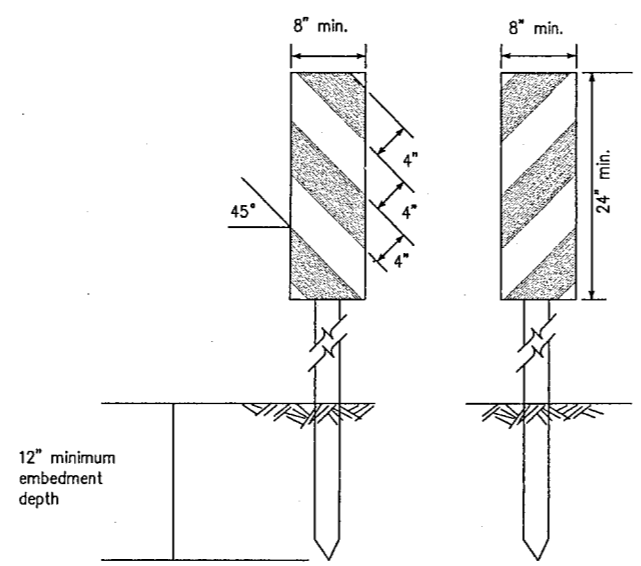
Only pre-qualified products shall be used. A List of compliant products and their sources may be obtained by writing, calling or faxing:

Standards Engineer  
 Traffic Operations Division - TE  
 Texas Department of Transportation (TxDOT)  
 125 East 11th Street  
 Austin, Texas 78701-2483  
 Phone (512) 416-3335  
 Fax (512) 416-3161  
 E-mail TRF-STANDARD @ mailgw.dot.state.tx.us

Posted Speed *	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Device		Minimum Sign Spacing X Distance
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent	
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'-75'	120'
35		205'	225'	245'	35'	70'-90'	160'
40		265'	295'	320'	40'	80'-100'	240'
45	L=WS	450'	495'	540'	45'	90'-110'	320'
50		500'	550'	600'	50'	100'-125'	400'
55		550'	605'	660'	55'	110'-140'	500'
60		600'	660'	720'	60'	120'-150'	* 600'
65		650'	715'	780'	65'	130'-165'	* 700'
70		700'	770'	840'	70'	140'-175'	* 800'

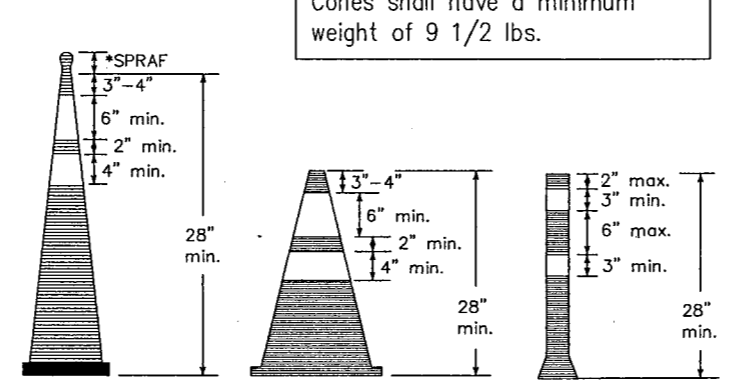
\* Conventional Roads Only  
 \*\* Taper lengths have been rounded off.  
 L=Length of Taper (FT.) W=Width of Offset (FT.) S=Posted Speed (MPH)

**DRIVEABLE RIGID VERTICAL PANEL**



See Compliant Products List for supports and panel substrates

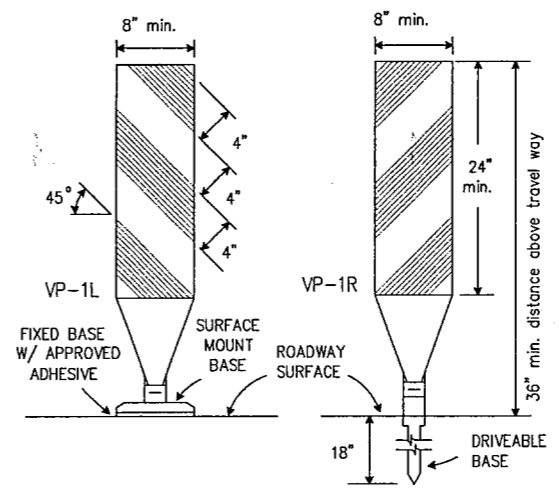
**CONES**



Cones shall have a minimum weight of 9 1/2 lbs.

**SELF-RIGHTING SUPPORTS**

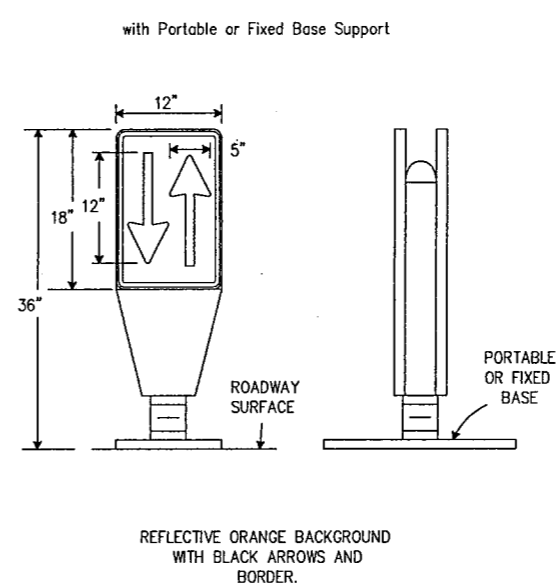
**VERTICAL PANELS**



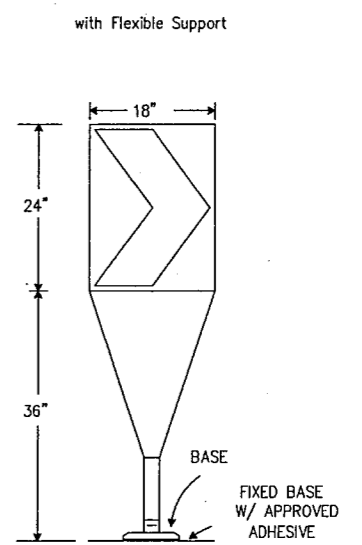
Vertical Panels are normally used as channelizing devices to indicate tangent or nearly tangent roadway alignment where good target value of a device is needed in daytime as well as nighttime. In addition, vertical panels should be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation may be required. Vertical panels 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 traveled way. Vertical Panels used on expressways, freeways, and other high speed roadways shall have a minimum of 2 square feet of retroreflective area facing traffic.

Self-righting supports are available with portable base. See Compliant Products List.

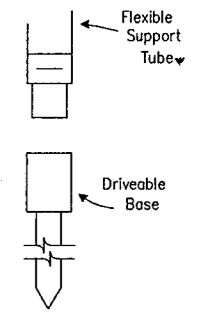
**OPPOSING LANE DIVIDER**



**CHEVRON**

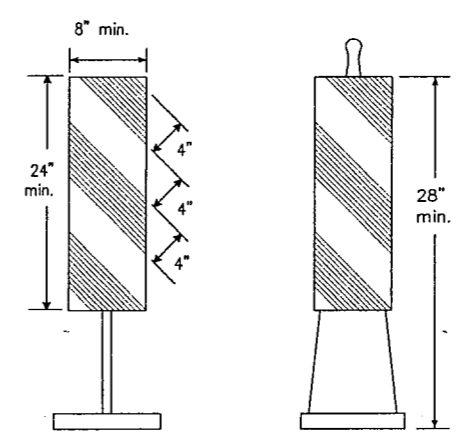


**DRIVEABLE BASE**



Driveable Support for Vertical Panel VP(F)-1 or Chevron CWI-8(F).

**PORTABLE RIGID VERTICAL PANEL**



See Compliant Products List for alternate designs.

STANDARD PLANS  
 TEXAS DEPARTMENT OF TRANSPORTATION  
 Traffic Operations Division

**BARRICADE AND CONSTRUCTION STANDARDS**

CHANNELIZING DEVICES  
 CONES  
 BC(6)-98

© TxDOT February 1998		DC-LR	DC-DTN	DC-DN	DC-GB	REG NO.
STATE DISTRICT	FEDERAL PROJECT	FEDERAL AID PROJECT		SHEET		
DALLAS 6		CM 97 (449)		67		
COUNTY	CONTROL	SECTION	JOB	HIGHWAY		
DALLAS	8050	18	034	BELT LINE		