

SHEET NO.	CONTENTS
1	Preface Manual On Uniform Traffic Control Devices Abbreviations Symbols
2	Definitions Temporary Traffic Control Devices Pedestrian And Bicyclist Overhead Work Railroads Sight Distance Above Ground Hazard
3	Clear Zone Widths For Work Zones Superelevation Overweight/Oversize Vehicles Lane Widths Length of Lane Closures Temporary Raised Rumble Strips
4	High-Visibility Safety Apparel Flagger Control Regulatory Speeds In Work Zones Survey Work Zones
5	Sign Placement Sign Materials Intersecting Road Signing Adjoining And/Or Overlapping Work Zone Signing Sign Covering And Intermittent Work Stoppage Signing Signing for Detours, Lane Shifts & Diversions Extended Distance Advance Warning Signs Utility Work Ahead Sign Length of Road Work Sign Speeding Fines Doubled When Workers Present Sign Grooved Pavement Ahead Sign End Road Work Signs Project Information Signs
6	Work Zone Sign Supports
7	Project Information Sign
8	Commonly Used Warning and Regulatory Signs In Work Zones
9	Manholes/Crosswalks/Joints Truck Mounted Attenuators Removing Pavement Markings Signals Channelizing And Lighting Devices Channelizing And Lighting Devices Consistency Warning Lights Standard Orange Flag Portable Changeable (Variable) Message Signs (PCMS) Advance Warning Arrow Panels
10	Drop-Offs In Work Zones
11	Business Entrance Temporary Asphalt Separator
12	Identifications-Channelizing And Lighting Devices
13	Pavement Markings

## PREFACE

All projects and works on highways, roads and streets shall have a traffic control plan. All work shall be executed under the established plan and Department approved procedures. This index contains information specific to the Federal and State guidelines and standards for the preparation of traffic control plans and for the execution of traffic control in work zones, for construction and maintenance operations and utility work on highways, roads and streets on the State Highway System. Certain requirements in this Index are based on the high volume nature of State Highways. For highways, roads and streets off the State Highway System, the local agency (City/County) having jurisdiction may adopt requirements based on the minimum requirements provided in the MUTCD.

Index No. 600 provides Department policy and standards. Changes are only to be made thru Department approved procedures. Index Nos. 601 thru 670 provide typical applications for various situations. Modification can be made to these Indexes as long as the changes comply with the MUTCD and Department Design Standards.

The sign spacings shown on the Indexes are typical (recommended) distances. These distances may be increased or decreased based on field conditions, in order to avoid conflicts or to improve site specific traffic controls.

## MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

The Florida Department of Transportation has adopted the "Manual On Uniform Traffic Control Devices For Streets And Highways" (MUTCD) and subsequent revisions and addendums, as published by the U.S. Department of Transportation, Federal Highway Administration, for mandatory use on the State Maintained Highway System whenever there exists the need for construction, maintenance operations or utility work.






















## ABBREVIATIONS

Abbreviations assigned to the 600 series Design Standards and applicable to traffic control plans, unless otherwise identified in the plans, are as follows:

CFR	Code of Federal Regulations
DTOE	District Traffic Operations Engineer
FDDT	Florida Department Of Transportation
HAR	Highway Advisory Radio
L	Taper Length, Buffer Length Or Taper Length Plus Buffer Space
MAS	Motorist Awareness System
MOT	Maintenance Of Traffic
MOTC	Maintenance Of Traffic Committee
MUTCD	Manual On Uniform Traffic Control Devices For Streets And Highways
NCHRP	National Cooperative Highway Research Program
PCMS	Portable Changeable (Variable) Message Sign
PRS	Portable Regulatory Sign
R	Radius
RPM	Raised Retroreflective Pavement Marker
RSDU	Radar Speed Display Unit
S	Posted Speed Of Off-Peak 85 Percentile Speed (MPH)
SLED	Speed and Law Enforcement Officer
TTC	Temporary Traffic Control
TCP	Traffic Control Plan(s)
TCZ	Traffic Control Zones
TMA	Truck Mounted Attenuator
VECP	Value Engineering Change Proposal
W	Width Of Taper Transition In Feet, i.e., Lateral Offset

## SYMBOLS

The symbols shown are found in the FDOT site menu under Traffic Control Cell library on the CADD system. Symbols assigned to the 600 series Design Standards and applicable to traffic control plans, unless otherwise identified in the plans, are as follows:

	Work Area, Hazard Or Work Phase (Any pattern within a boundary)
	Sign With 18" x 18" (Min.) Orange Flag And Type B Light
	Channelizing Device
	Type III Barricade
	Work Zone Sign
	Flagger
	Traffic Signal
	Advance Warning Arrow Panel
	Portable Signal
	Crash Cushion
	Stop Bar
	Work Vehicle With Flashing Beacon
	Shadow (S) Or Advance Warning (AW) Vehicle With Advance Warning Arrow Panel And Warning Sign
	Truck Mounted Attenuator (TMA)
	Orange Flag For TCZ Signs
	Type B Light For TCZ Signs
	Law Enforcement Officer
	Portable Regulatory Sign
	Radar Speed Display Unit
	Portable Changeable (Variable) Message Sign
	Lane Identification + Direction Of Traffic



2010 FDOT Design Standards

## GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES

Last Revision	Sheet No.
07/01/09	1 of 13
Index No.	
600	

## DEFINITIONS

### Regulatory Speed (In Work Zones)

The maximum permitted travelspeed posted for the work zone is indicated by the regulatory speed limit signs. The work zone speed must be shown or noted in the plans. This speed should be used as the minimum design speed to determine runout lengths, departure rates, flare rates, lengths of need, clear zone widths, taper lengths, crash cushion requirements, marker spacings, superelevation and other similar features.

### Advisory Speed

The maximum recommended travelspeed through a curve or a hazardous area.

### Travel Way

The portion of the roadway for the movement of vehicles. For traffic controlthrough work zones, travelway may include the temporary use of shoulders and any other permanent or temporary surface intended for use as a lane for the movement of vehicular traffic.

- a. *Travel Lane:* The designated widths of roadway pavement marked to carry through traffic and to separate it from opposing traffic or traffic occupying other traffic lanes.
- b. *Auxiliary Lane:* The designated widths of roadway pavement marked to separate speed change, turning, passing and climbing maneuvers from through traffic.

### Detour, Lane Shift, and Diversion

A detour is the redirection of traffic onto another roadway to bypass the temporary traffic controlzone. A lane shift is the redirection of traffic onto a different section of the permanent pavement. A diversion is the redirection of traffic onto a temporary roadway, usually adjacent to the permanent roadway and within the limits of the right-of-way.

### Above Ground Hazard

An above ground hazard is any object, material or equipment other than traffic controldevices that encroaches upon the travelway or that is located within the clear zone which does not meet the Department's safety criteria, i.e., anything that is greater than 4" in height and is firm and unyielding or doesn't meet breakaway requirements.

## TEMPORARY TRAFFIC CONTROL DEVICES

All temporary traffic controldevices shallbe removed as soon as practical when they are no longer needed. When work is suspended for short periods of time, temporary traffic controldevices that are no longer appropriate shallbe removed or covered. Arrow Panels, Portable Changeable Message Signs, Radar Speed Display Trailers, Portable Regulatory Signs, and any other trailer mounted devices shallbe delineated with retroreflective TTC devices when in use and shallbe moved outside the travelway and clear zone or be shielded by a barrier or crash cushion when not in use.

## PEDESTRIAN AND BICYCLIST

When an existing pedestrian way or bicycle way is located within a traffic controlwork zone, accommodation must be maintained and provision for the disabled must be provided.

Only approved temporary traffic controldevices may be used to delineate a temporary traffic controlzone pedestrian walkway.

Advanced notification of sidewalk closures and marked detours shallbe provided by appropriate signs.

## OVERHEAD WORK

Work is only allowed over a traffic lane when one of the following options is used:

### OPTION 1 (OVERHEAD WORK USING A MODIFIED LANE CLOSURE)

Overhead work using a modified lane closure is allowed if all of the following conditions are met:

- a. Work operation is located in a signalized intersection and limited to signals, signs, lighting and utilities.
- b. Work operations are 60 minutes or less.
- c. Speed limit is 45 mph or less.
- d. Aeriallift equipment in the work area has high-intensity, rotating, flashing, oscillating, or strobe lights operating.
- e. Aeriallift equipment is placed directly below the work area to close the lane.
- f. Traffic controldevices are placed in advance of the vehicle/equipment closing the lane using a minimum 100 foot taper.
- g. Volume or complexity of the roadway may dictate additional devices, signs, flagmen and/or a traffic controlofficer.

### OPTION 2 (OVERHEAD WORK ABOVE AN OPEN TRAFFIC LANE)

Overhead work above a open traffic lane is allowed if all of the following conditions are met:

- a. Work operation is located on a utility pole, light pole, signal pole, or their appurtenances.
- b. Work operations are 60 minutes or less.
- c. Speed limit is 45 mph or less.
- d. No encroachment by any part of the work activities and equipment within an area bounded by 2 feet outside the edge of travelway and 18 feet high.
- e. Aeriallift equipment in the work area has high-intensity, rotating, flashing, oscillating, or strobe lights operating.
- f. Volume or complexity of the roadway may dictate additional devices, signs, flagmen and/or a traffic controlofficer.
- g. Adequate precautions are taken to prevent parts, tools, equipment and other objects from falling into open lanes of traffic.
- h. Other Governmental Agencies, Rail facilities, or Codes may require a greater clearance. The greater clearance required prevails as the rule.

### OPTION 3 (OVERHEAD WORK ADJACENT TO AN OPEN TRAFFIC LANE)

Overhead work adjacent to an open traffic lane is allowed if all of the following conditions are met:

- a. Work operation is located on a utility pole, light pole, signal pole, or their appurtenances.
- b. Work operations are 1 day or less.
- c. Speed limit is 45 mph or less.
- d. No encroachment by any part of the work activities and equipment within 2 foot from the edge of travelway up to 18' height. Above 18' in height, no encroachment by any part of the work activities and equipment over the open traffic lane (except as allowed in Option 2 for work operations of 60 minutes or less).
- e. Aeriallift equipment in the work area has high-intensity, rotating, flashing, oscillating, or strobe lights operating.
- f. Volume or complexity of the roadway may dictate additional devices, signs, flagmen and/or a traffic controlofficer.
- g. Adequate precautions are taken to prevent parts, tools, equipment and other objects from falling into open lanes of traffic.
- h. Other Governmental Agencies, Rail facilities, or Codes may require a greater clearance. The greater clearance required prevails as the rule.

OVERHEAD WORK CONTINUED..

OVERHEAD WORK CONTINUED..

### OPTION 4 (OVERHEAD WORK MAINTAINING TRAFFIC WITH NO ENCROACHMENT BELOW THE OVERHEAD WORK AREA)

Traffic shallbe detoured, shifted, diverted or paced as to not encroach in the area directly below the overhead work operations in accordance with the appropriate standard index drawing or detailed in the plans. This option applies to, but not limited to, the following construction activities:

- a. Beam, girder and segment placement.
- b. Deck form placement and removal.
- c. Concrete deck placement.
- d. Railing construction located at edge of deck.
- e. Structure demolition.

### OPTION 5 (CONDUCTOR/CABLE PULLING ABOVE AN OPEN TRAFFIC LANE)

Overhead cable and/or de-energized conductor installations initialpull to proper tension shallbe done in accordance with the appropriate Standard Index or temporary traffic controlplan.

Continuous pulling operations of secured cable and/or conductors are allowed over open lane(s) of traffic with no encroachment by any part of the work activities, materials or equipment within the minimal vertical clearance above the travelway. The utility shalltake precautions to ensure that pullropes and conductors/cables at no time fallbelow the minimum vertical clearance.

On Limited Access facilities, a site specific temporary traffic controlplan is required. The temporary traffic controlplan shallinclude:

- a. The temporary traffic controlset up for the initialpulling of the pullrope across the roadway.
- b. During pulling operations, advance warning consisting of no less than a Changeable Message Sign upstream of the work area with alternating messages, "Overhead Work Ahead" and "Be Prepared to Stop" followed by a traffic controlofficer and police vehicle with blue lights flashing during the pulling operation.

## RAILROADS

Railroad crossings affected by a construction project should be evaluated for traffic controls to reduce queuing on the tracks. The evaluation should include as a minimum: traffic volumes, distance from the tracks to the intersections, lane closure or taper locations, signal timing, etc.

## SIGHT DISTANCE

Tapers: Transition tapers should be obvious to drivers. If restricted sight distance is a problem (e.g., a sharp vertical or horizontal curve), the taper should begin well in advance of the view obstruction. The beginning of tapers should not be hidden behind curves.

Intersections: Traffic controldevices at intersections must provide sight distances for the road user to perceive potential conflicts and to traverse the intersection safely.

## ABOVE GROUND HAZARD

Above ground hazards (see definitions) are to be considered work areas during working hours and treated with appropriate work zone traffic controlprocedures. During nonworking hours, all objects, materials and equipment that constitute an above ground hazard must be stored/placed outside the travelway and clear zone or be shielded by a barrier or crash cushion.

For above ground hazards within a work zone the clear zone required should be based on the regulatory speed posted during construction.



2010 FDOT Design Standards

GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES

Last Revision	Sheet No.
07/01/09	2 of 13
Index No.	
600	

## CLEAR ZONE WIDTHS FOR WORK ZONES

The term 'clear zone' describes the unobstructed relatively flat area, impacted by construction, extending outward from the edge of the traffic lane. The table below gives clear zone widths in work zones for medians and roadside conditions other than for roadside canals; where roadside canals are present, clear zone widths are to conform with the distances to canals as described in Volume I, Chapter 4, Section 4.2 and Exhibit 4-A and 4-B of the Plans Preparation Manual.

CLEAR ZONE WIDTHS FOR WORK ZONES		
WORK ZONE SPEED (MPH)	TRAVEL LANES & MULTILANE RAMPS (feet)	AUXILIARY LANES & SINGLE LANE RAMPS (feet)
60-70	30	18
55	24	14
45-50	18	10
30-40	14	10
ALL SPEEDS CURB & GUTTER	4' BEHIND FACE OF CURB	4' BEHIND FACE OF CURB

## SUPERELEVATION

Horizontal curves constructed in conjunction with work zone traffic control should have the required superelevation applied to the design radii. Under conditions where normal cross slope controls curvature, the minimum radii that can be applied are listed in the table below.

MINIMUM RADII FOR NORMAL CROSS SLOPES	
DESIGN SPEED	MINIMUM RADIUS
MPH	feet
65	3130
60	2400
55	1840
50	1390
45	1080
40	820
35	610
30	430
Superelevate When Smaller Radii is Used	

## OVERWEIGHT/OVERSIZE VEHICLES

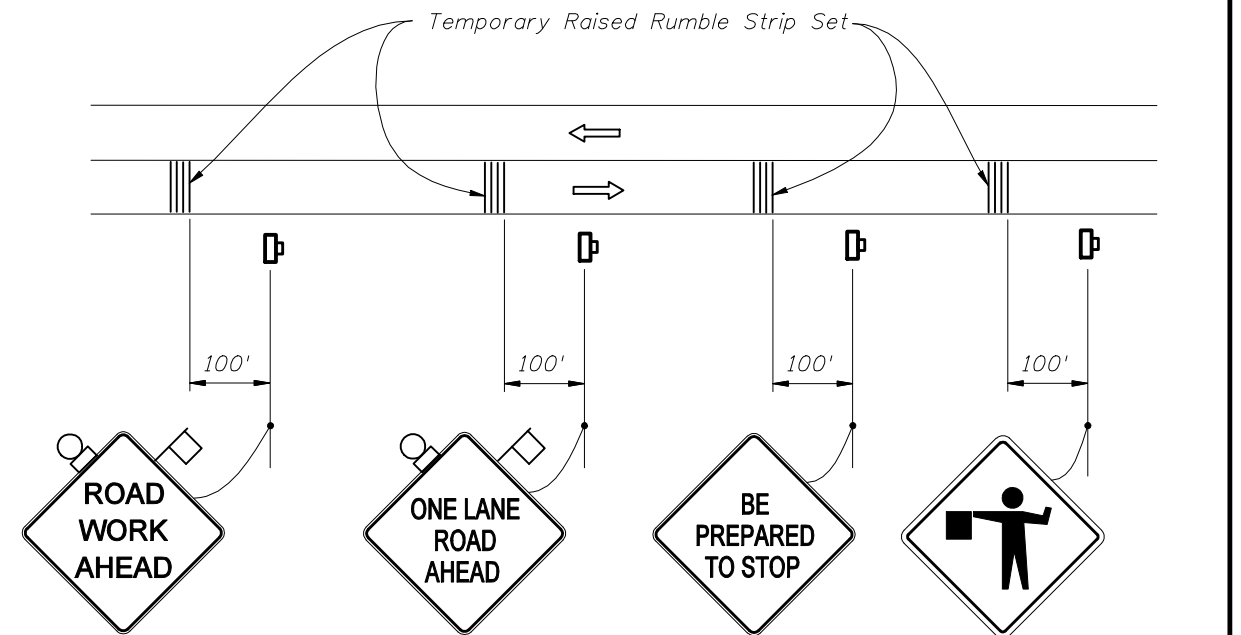
Restrictions to Lane Widths, Heights or Load Capacity can greatly impact the movement of over dimensioned loads. The Contractor shall notify the Engineer who in turn shall notify the State Permits Office, phone no. (850) 410-5777, at least seven calendar days in advance of implementing a maintenance of traffic plan which will impact the flow of overweight/oversized vehicles. Information provided shall include location, type of restriction (height, width or weight) and restriction time frames. When the roadway is restored to normal service the State Permits Office shall be notified immediately.

## LANE WIDTHS

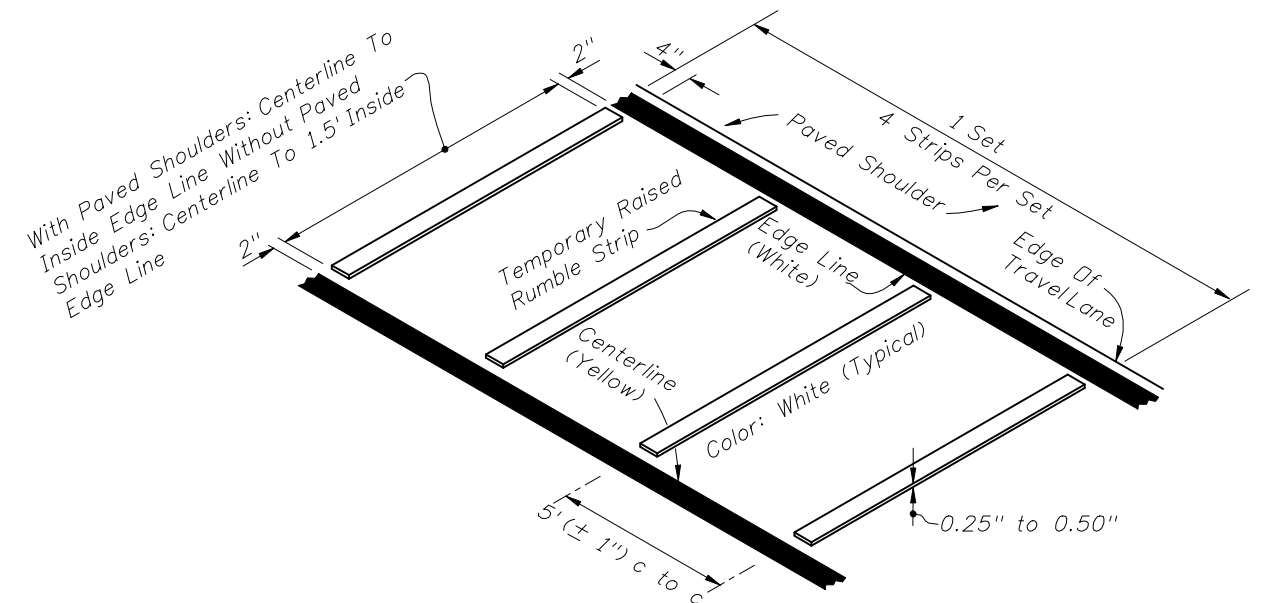
Lane widths of through roadways should be maintained through work zone travelways wherever practical. The minimum widths for work zone travel lanes shall be as follows: 11' for Interstate with at least one 12' lane provided in each direction, unless formally excepted by the Federal Highway Administration; 11' for freeways; and 10' for all other facilities.

## LENGTH OF LANE CLOSURES

Lane closures shall not exceed 2 miles in total length (taper, buffer space and work space) in any given direction on the Interstate or on state highways with a posted speed of 55 MPH or greater.



TYPICAL PLACEMENT OF TEMPORARY RAISED RUMBLE STRIPS



TEMPORARY RAISED RUMBLE STRIP SET (PAVED SHOULDER SHOWN)

## GENERAL NOTES

1. Temporary raised rumble strips sets shall be placed in advance of each flagging station when called for in the plans.
2. Temporary raised rumble strip sets are used to supplement a series of advanced warning signs and shall be installed and removed when the signs are installed and removed.
3. Remove the temporary raised rumble strips prior to removing the advance warning signs.



2010 FDOT Design Standards

GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES

Last Revision	Sheet No.
07/01/09	3 of 13
Index No.	
600	

## HIGH-VISIBILITY SAFETY APPAREL

All high-visibility safety apparel shall meet the requirements of the International Safety Equipment Association (ISEA) and the American National Standards Institute (ANSI) for High-Visibility Safety Apparel", and labeled as ANSI/ISEA 107-2004. The apparel background (outer) material color shall be either fluorescent orange-red or fluorescent yellow-green as defined by the standard. The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1,000 feet. Class 3 apparel may be substituted for Class 2 apparel. Replace apparel that is not visible at 1,000 feet.

**WORKERS:** All workers within the right-of-way shall wear ANSI/ISEA Class 2 apparel. Workers operating machinery or equipment in which loose clothing could become entangled during operation shall wear fitted high-visibility safety apparel. Workers inside the bucket of a bucket truck are not required to wear high-visibility safety apparel.

**UTILITIES:** When other industry apparel safety standards require utility workers to wear apparel that is inconsistent with FDOT requirements such as NFPA, OSHA, ANSI, etc., the other standards for apparel may prevail.

**FLAGGERS:** For daytime activities, Flaggers shall wear ANSI/ISEA Class 2 apparel. For nighttime activities, Flaggers shall wear ANSI/ISEA Class 3 apparel.

## FLAGGER CONTROL

Where flaggers are used, a FLAGGER symbol or legend sign must replace the WORKERS symbol or legend sign.

The flagger must be clearly visible to approaching traffic for a distance sufficient to permit proper response by the motorist to the flagging instructions, and to permit traffic to reduce speed or to stop as required before entering the work site. Flaggers shall be positioned to maintain maximum color contrast between the Flagger's high-visibility safety apparel and equipment and the work area background.

### Hand-Signaling Devices

STOP/SLOW paddles are the primary hand-signaling device. The STOP/SLOW paddle shall have an octagonal shape on a rigid handle. If the STOP/SLOW paddle is placed on a rigid staff, the minimum length of the staff, measured from the bottom of the paddle to the end of the staff that rests on the ground, should be 7 ft. STOP/SLOW paddles shall be at least 24 inches wide with letters at least 6 inches high and should be fabricated from light semirigid material. The background of the STOP face shall be red with white letters and border. The background of the SLOW face shall be orange with black letters and border. When used at night-time, the STOP/SLOW paddle shall be retroreflectorized.

Flag use is limited to immediate emergencies, intersections, and when working on the centerline or shared left turn lanes where two (2) flaggers are required and there is opposing traffic in the adjacent lanes. Flags, when used, shall be a minimum of 24 inches square, made of a good grade of red material, and securely fastened to a staff that is approximately 36 inches in length. When used at nighttime, flags shall be retroreflectorized red.

Flashlight, lantern or other lighted signal that will display a red warning light shall be used at night.

### Flagger Stations

Flagger stations shall be located far enough in advance of the work space so that approaching road users will have sufficient distance to stop before entering the work space. When used at nighttime, the flagger station shall be illuminated.

## REGULATORY SPEEDS IN WORK ZONES

Traffic Control Plans (TCP's) for all projects must include specific regulatory speeds for each phase of work. This can either be the posted speed or a reduced speed. The speed shall be noted in the TCPs; this includes indicating the existing speed if no reduction is to be made. Regulatory speeds are to be uniformly established through each phase.

In general, the regulatory speed should be established to route vehicles safely through the work zone as close as to normal highway speed as possible. The regulatory speed should not be reduced more than 10 mph below the posted speed and never below the minimum statutory speed for the class of facility. When a speed reduction greater than 10 mph is imposed, the reduction is to be done in 10 mph per 500' increments.

Temporary regulatory speed signs shall be removed as soon as the conditions requiring the reduced speed no longer exist. Once the work zone regulatory speeds are removed, the regulatory speed existing prior to construction will automatically go back into effect unless new speed limit signing is provided for in the plans.

On projects with interspaced work activities, speed reductions should be located in proximity to those activities which merit a reduced speed, and not "blanketed" for the entire project. At the departure of such activities, the normal highway speed should be posted to give the motorist notice that normal speed can be resumed.

If the existing regulatory speed is to be used, consideration should be given to supplementing the existing signs when the construction work zone is between existing regulatory speed signs. For projects where the reduced speed conditions exist for greater than 1 mile in rural areas (non-interstate) and on rural or urban interstate, additional regulatory speed signs are to be placed at no more than 1 mile intervals. Engineering judgement should be used in placement of the additional signs. Locating these signs beyond ramp entrances and beyond major intersections are examples of proper placement. For urban situations (non-interstate), additional speed signs are to be placed at a maximum of 1000' apart.

When field conditions warrant speed reductions different from those shown in the TCP the contractor may submit to the project engineer for approval by the Department, a signed and sealed study to justify the need for further reducing the posted speed, or, the engineer may request the District Traffic Operations Engineer (DTOE) to investigate the need. It will not be necessary for the DTOE to issue regulations for regulatory speeds in work zones due to the revised provisions of F.S. 316.07451(2) (b). Advisory Speed plates will be used at the option of the field engineer for temporary use while processing a request to change the regulatory speed specified in the plans when deemed necessary. Advisory speed plates cannot be used alone but must be placed below the construction warning sign for which the advisory speed is required.

For additional information refer to the FDOT Plans Preparation Manual, Volume I, Chapter 10.

## SURVEY WORK ZONES

The SURVEY CREW AHEAD symbol or legend sign shall be the principal Advance Warning Sign used for Traffic Control Through Survey Work Zones and may replace the ROAD WORK AHEAD sign when lane closures occur, at the discretion of the Party Chief. Type B Light or dual orange flags shall be used at all times to enhance the SURVEY CREW AHEAD sign, even with mesh signs.

When Traffic Control Through Work Zones is being used for survey purposes only, the END ROAD WORK sign as called for on certain 600 Series Indexes should be omitted.

### Survey Between Active Traffic Lanes or Shared Left Turn Lanes

The following provisions apply to Main Roadway Traffic Control Work Zones. These provisions must be adjusted by the Party Chief to fit roadway and traffic conditions when the Survey Work Zone includes intersections.

- (A) A STAY IN YOUR LANE (MOT-1-06) sign shall be added to the Advance Warning Sign sequence as the second most immediate sign from the work area.
- (B) Elevation Surveys-Cones may be used at the discretion of the Party Chief to protect prism holder and flagger(s). Cones, if used, may be placed at up to 50' intervals along the break line throughout the work zone.
- (C) Horizontal Control-With traffic flow in the same direction, cones shall be used to protect the backsight tripod and/or instrument. Cones shall be placed at the equipment, and up to 50' intervals for at least 200' towards the flow of traffic.
- (D) Horizontal Control-With traffic flow in opposite directions, cones shall be used to protect the backsight tripod and/or instrument. Cones shall be placed at the equipment, and up to 50' intervals for at least 200' in both directions towards the flow of traffic.



2010 FDOT Design Standards

GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES

Last Revision 07/01/09 Sheet No. 4 of 13

Index No. 600

## SIGN PLACEMENT

Post-mounted signs installed at the side of the road shall be mounted at a height at least 7 feet measured from the bottom of the sign to a horizontal line extended from the near edge of the pavement. Signs mounted on barricades, or other portable supports shall be no less than 1 foot above the traveled way.

## SIGN MATERIALS

Mesh signs may be used only for Daylight Operations as noted in the standards. Type B Lights and Orange Flags are not required except for survey work zones.

Vinyl signs may be used for Day or Night Operations not to exceed 1 day except as noted in the standards. Type B Lights and Orange Flags are not required except for survey work zones.

## INTERSECTING ROAD SIGNING

Signing for the control of traffic entering and leaving work zones by way of intersecting highways, roads and streets shall be adequate to make drivers aware of work zone conditions. Under no condition will intersecting leg signing be less than a ROAD WORK AHEAD sign.

## ADJOINING AND/OR OVERLAPPING WORK ZONE SIGNING

Adjoining work zones may not have sufficient spacing for standard placement of signs and other traffic control devices in their advance warning areas or in some cases other areas within their traffic control zones. Where such restraints or conflicts occur or are likely to occur, one of the following methods will be employed to avoid conflicts and prevent conditions that could lead to misunderstanding on the part of the traveling public as to the intended travel way by the traffic control procedure applied:

- (A) For scheduled projects the engineer in responsible charge of project design will resolve anticipated work zone conflicts during the development of the project traffic control plan. This may entail revision of plans on preceding projects and coordination of plans on concurrent projects.
- (B) Unanticipated conflicts arising between adjoining in progress highway construction projects will be resolved by the Resident Engineer for projects under his residency, and, by the District Construction Engineer for in progress projects under adjoining residencies.
- (C) The District Maintenance Engineer will resolve anticipated and occurring conflicts within scheduled maintenance operations.
- (D) The Unit Maintenance Engineer will resolve conflicts that occur within routine maintenance works; between routine maintenance work, unscheduled work and/or permitted work; and, between unit controlled maintenance works and highway construction projects.

## SIGN COVERING AND INTERMITTENT WORK STOPPAGE SIGNING

Existing or temporary traffic control signs that are no longer applicable or are inconsistent with intended travel paths shall be removed or fully covered.

Sign blanks or other available coverings must completely cover the existing sign. Rigid sign coverings shall be the same size as the sign it is covering, and bolted in a manner to prevent movement.

Sign covers are incidental to work operations and are not paid for separately.

## SIGNING FOR DETOURS, LANE SHIFTS AND DIVERSIONS

Detours should be signed clearly over their entire length so that motorists can easily determine how to return to the original roadway. The reverse curve (W1-4) warning sign should be used for the advanced warning for a lane shift. A diversion should be signed as a lane shift.

## EXTENDED DISTANCE ADVANCE WARNING SIGN

Advance Warning Signs shall be used at extended distance of one-half mile or more when limited sight distance or the nature of the obstruction may require a motorist to bring their vehicle to a stop. Extended distance Advanced Warning Signs may be required on any type roadway, but particularly be considered on multilane divided highways where vehicle speed is generally in the higher range (45 MPH or more).

## UTILITY WORK AHEAD SIGN

The UTILITY WORK AHEAD (W21-7) sign may be used as an alternate to the ROAD WORK AHEAD or the ROAD WORK XX FT (W20-1) sign for utility operations on or adjacent to a highway.

## LENGTH OF ROAD WORK SIGN

The length of road work sign (G20-1) bearing the legend ROAD WORK NEXT----- MILES is required for all projects of more than 2 miles in length. The number of miles entered should be rounded up to the nearest mile. The sign shall be located at begin construction points.

## SPEEDING FINES DOUBLED WHEN WORKERS PRESENT SIGN

The SPEEDING FINES DOUBLED WHEN WORKERS PRESENT sign should be installed on all projects, but may be omitted if the work operation is less than 1 day. The placement should be 500 feet beyond the ROAD WORK AHEAD sign or midway to the next sign whichever is less.

## GROOVED PAVEMENT AHEAD SIGN

The GROOVED PAVEMENT AHEAD sign is required 500 feet in advance of a milled or grooved surface open to traffic.

## END ROAD WORK SIGN

The END ROAD WORK sign (G20-2A) should be installed on all projects, but may be omitted where the work operation is less than 1 day. The sign should be placed approximately 500 feet beyond the end of a construction or maintenance project unless other distance is called for in the plans. When other Construction or Maintenance Operations occur within 1 mile this sign should be omitted and signing coordinated in accordance with Index No. 600, ADJOINING AND/OR OVERLAPPING WORK ZONE SIGNING.

## PROJECT INFORMATION SIGN

The Project information sign shall be installed when called for in the plans.



2010 FDOT Design Standards

## GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES

Last Revision  
07/01/09

Sheet No.  
5 of 13

Index No.  
600

**GENERAL NOTES:**

- All signs shall be post mounted when work operations exceed one day except for:
  - Road closure signs mounted in accordance with the vendor drawing for the Type III Barricade shown on the QPL.
  - Pedestrian advanced warning or regulatory signs mounted on sign supports in accordance with the vendor drawing shown on the QPL.

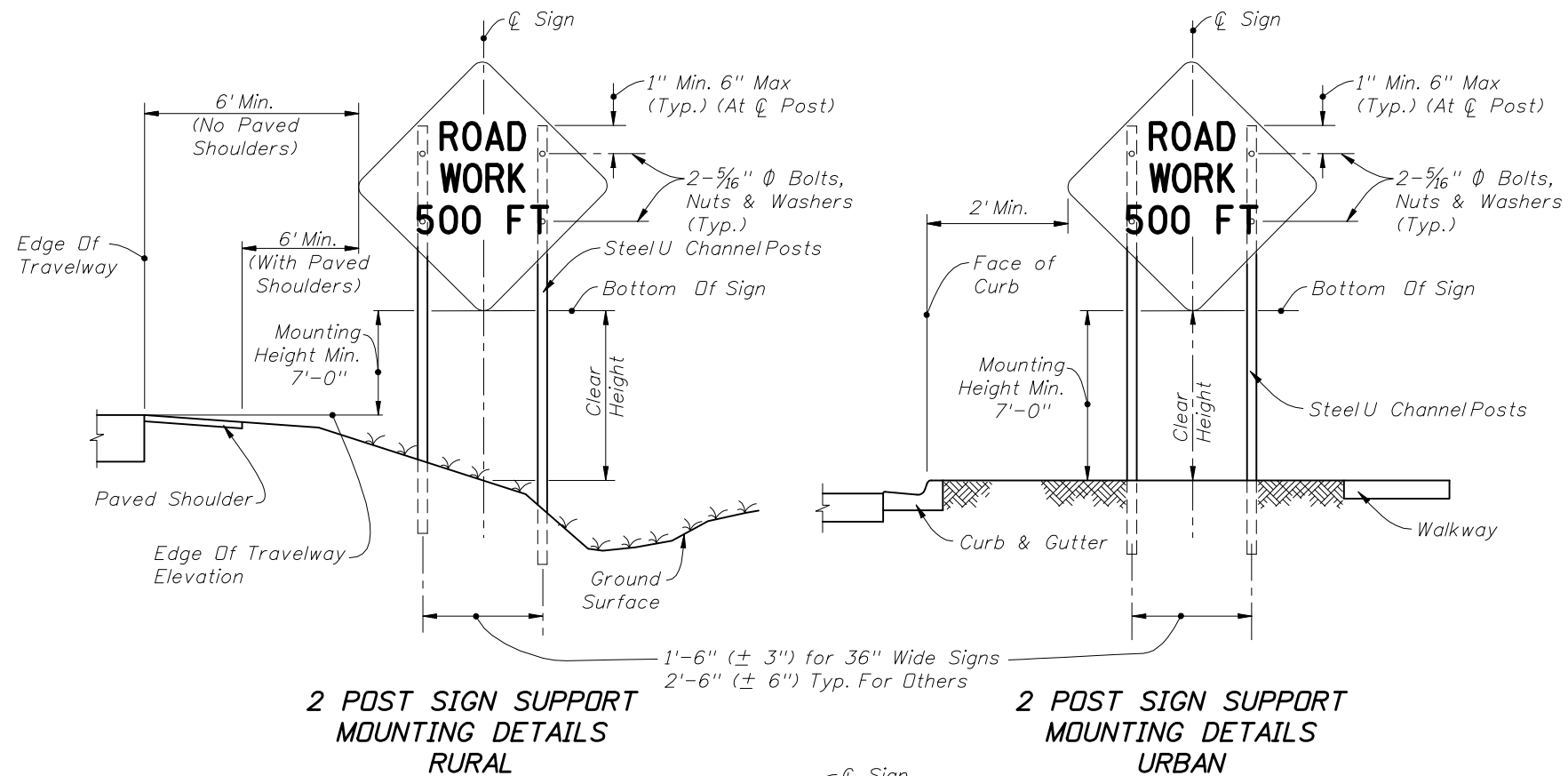
**TEMPORARY SIGN SUPPORT NOTE:**

- Signs mounted on temporary supports or barricades, and barricade/sign combination shall be crashworthy in accordance with NCHRP 350 requirements and included on the Qualified Products List (QPL).

**POST MOUNTED SIGN NOTES:**

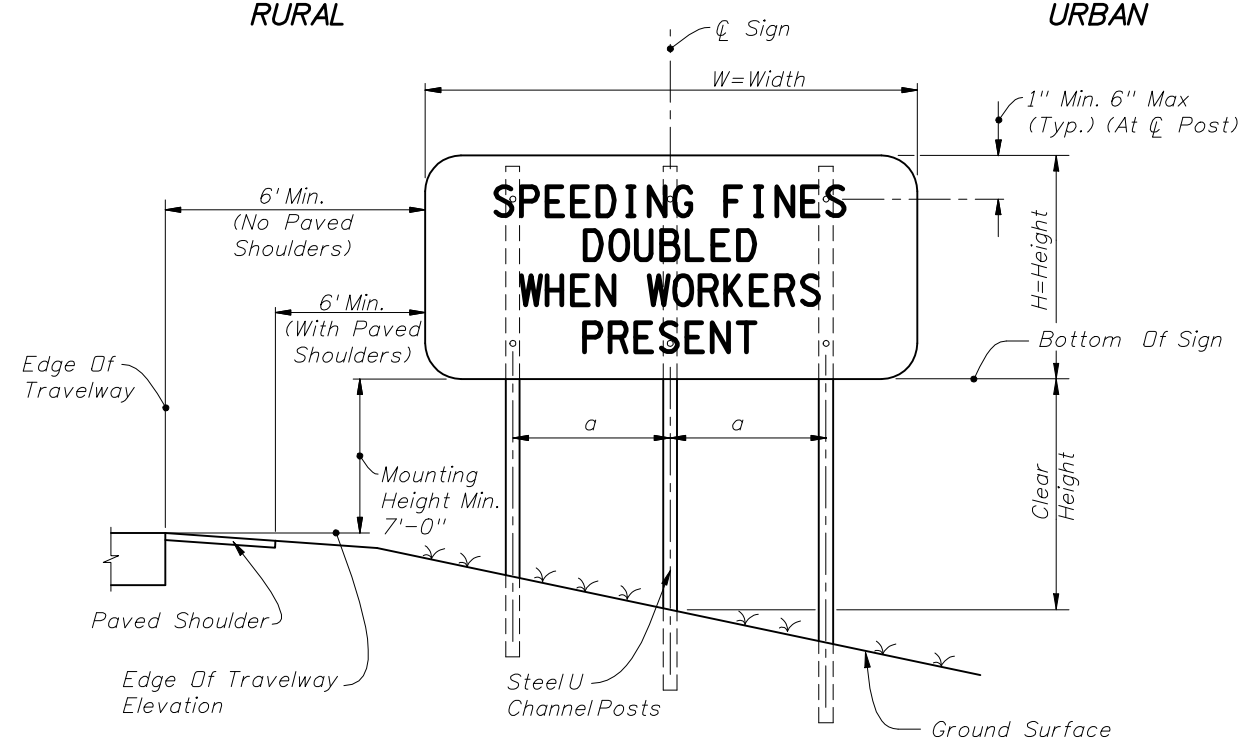
- For Single Post Sign Supports, use the appropriate rural or urban two (2) Post Sign Support Mounting Detail.
- Use only approved systems listed on the Department's Qualified Products List (Manufacturers seeking QPL approval see Index 11860. Submit soil plate details for foundation depth design.).
- Provide 3 lb/ft Steel U Channel Posts with a minimum section modulus of 0.43 in<sup>2</sup> for 60 ksi steel, or a minimum section modulus of 0.37 in<sup>2</sup> for 70 ksi steel.
- Provide 4 lb/ft Steel U Channel Posts with a minimum section modulus of 0.56 in<sup>2</sup> for 60 ksi steel, or a minimum section modulus of 0.47 in<sup>2</sup> for 70 ksi steel.
- Steel U Channel Posts shall meet the material requirements of Specification 700 with the exception that galvanization is not required.
- Sign attachment bolts, washers, nuts and spacers shall conform with ASTM A307 or A 36.
- For diamond warning signs with supplement plaque (up to 3 ft<sup>2</sup> in area), use 4 lb/ft posts for up to 10 ft Clear Height (measure to the bottom of diamond warning sign).
- Install 4 lb/ft Steel U Channel Posts with approved breakaway splice in accordance with the manufacturer's detail shown on the QPL.
- The contractor may install 3 lb/ft Steel U Channel Posts with approved breakaway splice in accordance with the manufacturer's detail shown on the QPL.
- Install all posts plumb.
- The contractor may set posts in preformed holes to the specified depth with suitable backfill tamped securely on all sides, or drive 3 lb/ft sign posts and any size base post in accordance with the manufacturer's detail shown on the QPL.

- The soilplate as shown on the QPL vendor drawing is not required for base posts or sign posts driven through existing asphalt roadway or shoulder pavement.



**2 POST SIGN SUPPORT MOUNTING DETAILS RURAL**

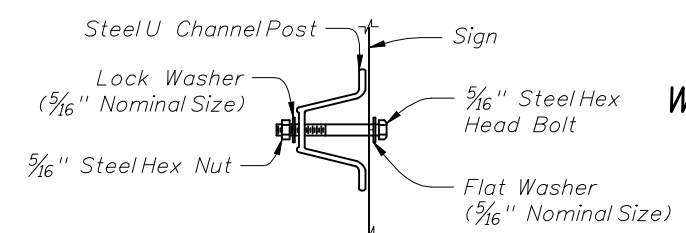
**2 POST SIGN SUPPORT MOUNTING DETAILS URBAN**



**3 POST SIGN SUPPORT MOUNTING DETAILS**

Where  $W = 48''$ :  $a = 1' - 4\frac{1}{2}'' (\pm 1'')$   
 $W = 72''$ :  $a = 2' - 1'' (\pm 1'')$

**WORK ZONE SIGN SUPPORTS**

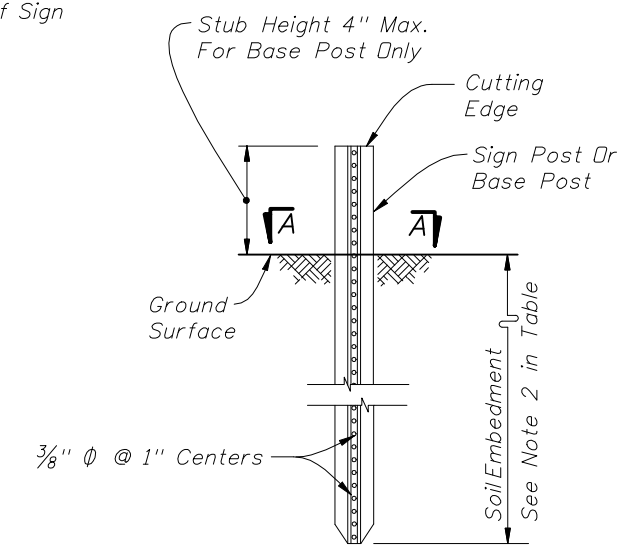


**SIGN ATTACHMENT DETAIL**

**POST AND FOUNDATION TABLE FOR WORK ZONE SIGNS**

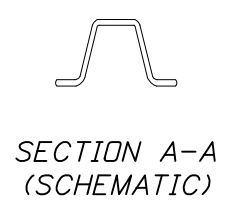
SIGN SHAPE	SIGN SIZE (inches)	NUMBER OF STEEL U CHANNEL POSTS
Octagon	30x30	1
	36x36x36	1
Triangle	48x48x48	1
	60x60x60	2
	24x18	1
Rectangle (W x H)	24x30	1
	30x24	1
	36x18	1
	48x18	1
	36x48	2
	48x30	2
	48x36	2
	54x36	2
	48x60	3
	72x48	3
Square	30x30	1
	36x36	2
	48x48	2
Diamond (See Note 6)	48x48	2
Circle	36Ø	2

Notes For Table:  
 1. Use 3 lb/ft posts for Clear Height up to 10' and 4 lb/ft posts for Clear Height up to 12'.  
 2. Minimum foundation depth is 4.0 feet for 3 lb/ft posts and 4.5 feet for 4 lb/ft posts.

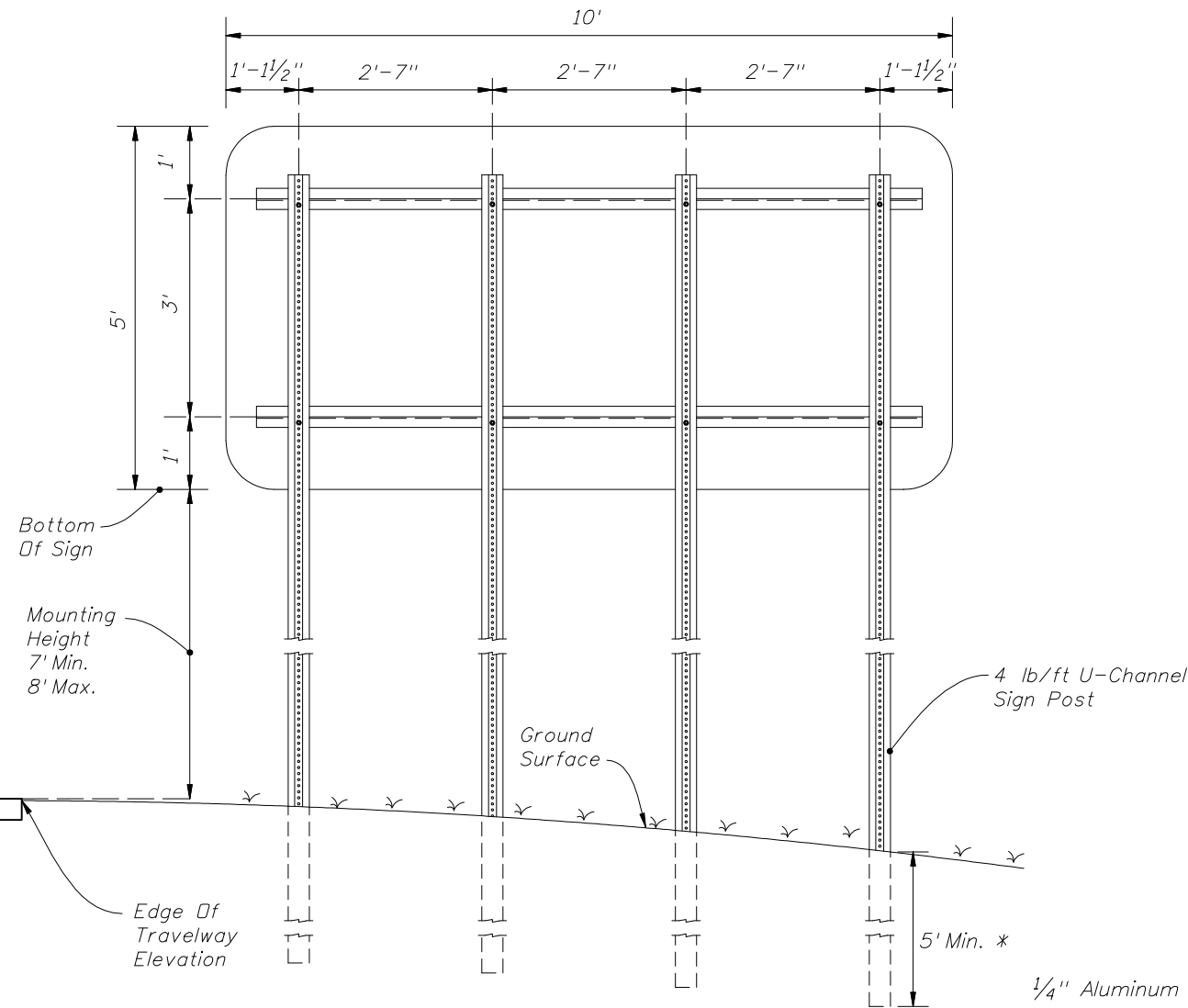


**TYPICAL FOUNDATION DETAIL**

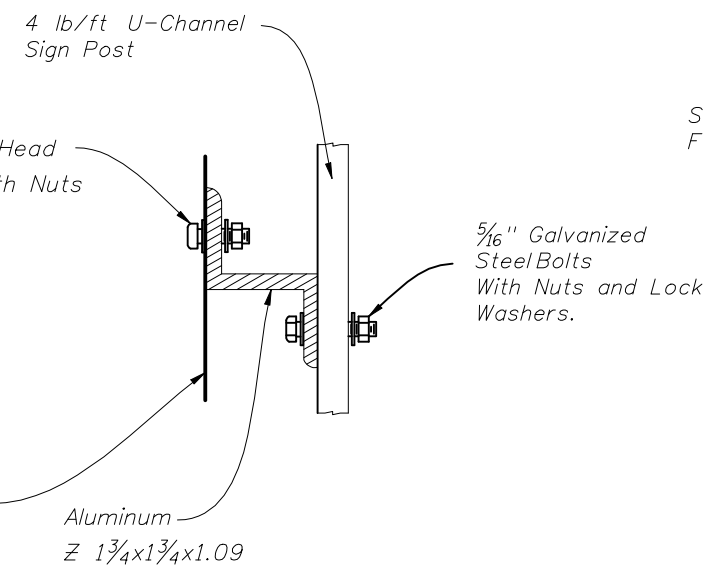
See QPL for post, splice and connection details. No bolts installed closer than 1" to cutting edge.



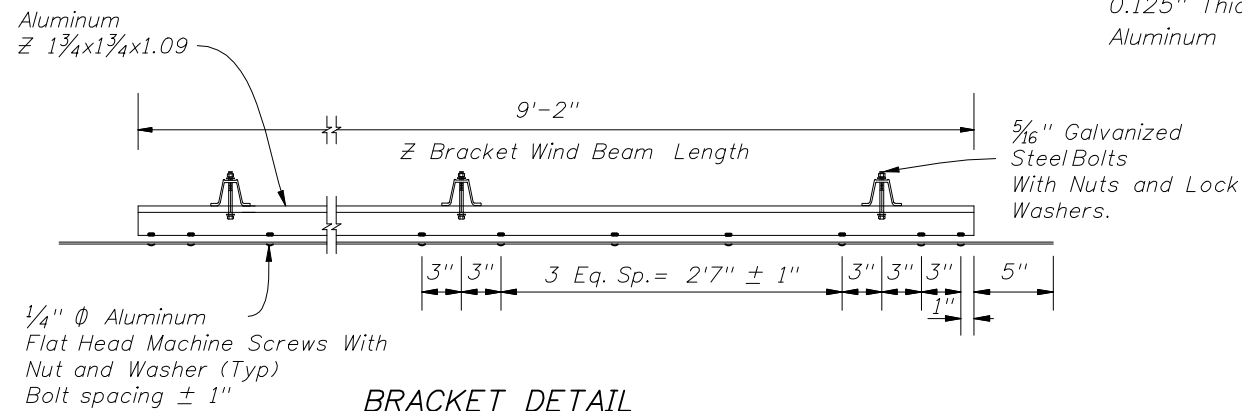
**SECTION A-A (SCHEMATIC)**



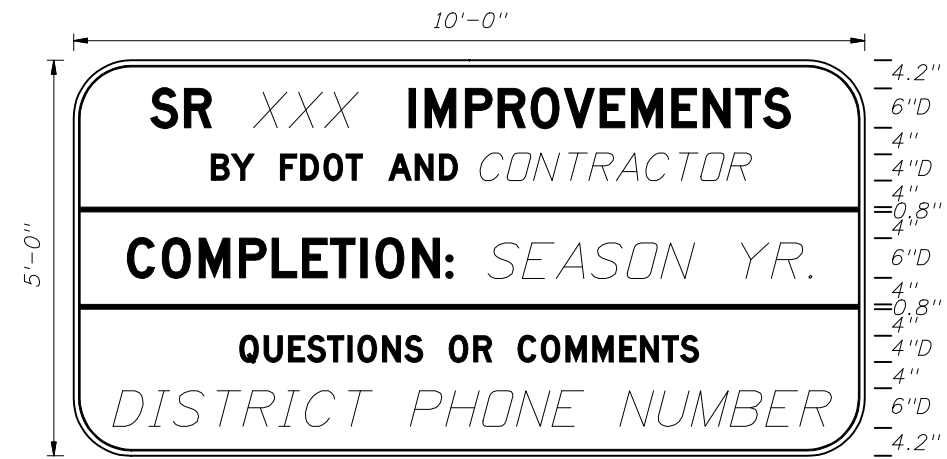
4 POST SIGN SUPPORT MOUNTING DETAIL



SIGN ATTACHMENT DETAIL

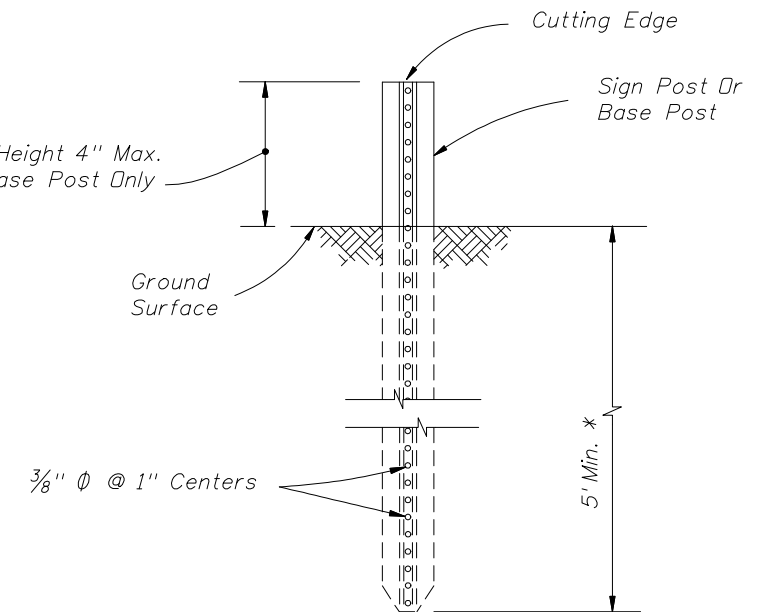


BRACKET DETAIL



BORDER 10'-0"x 5'-0"  
 R=8" 8" Radii  
 TH=0.25" 4" and 6" series D Legend  
 IN=0.75" Blue Background  
 White Legend and Border

PROJECT INFORMATION SIGN DETAIL



TYPICAL FOUNDATION DETAIL

See QPL for post, splice and connection details.  
 No bolts installed closer than 1" to cutting edge.

\* Unless otherwise specified in the vendor drawing on the QPL.

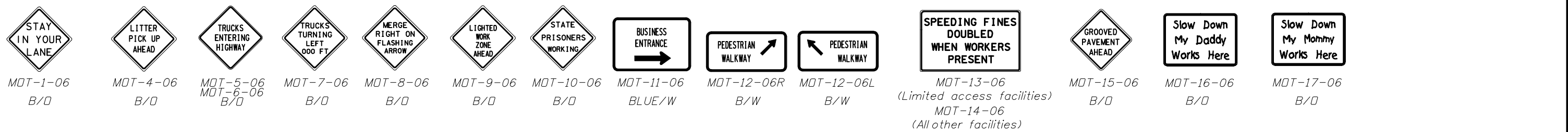
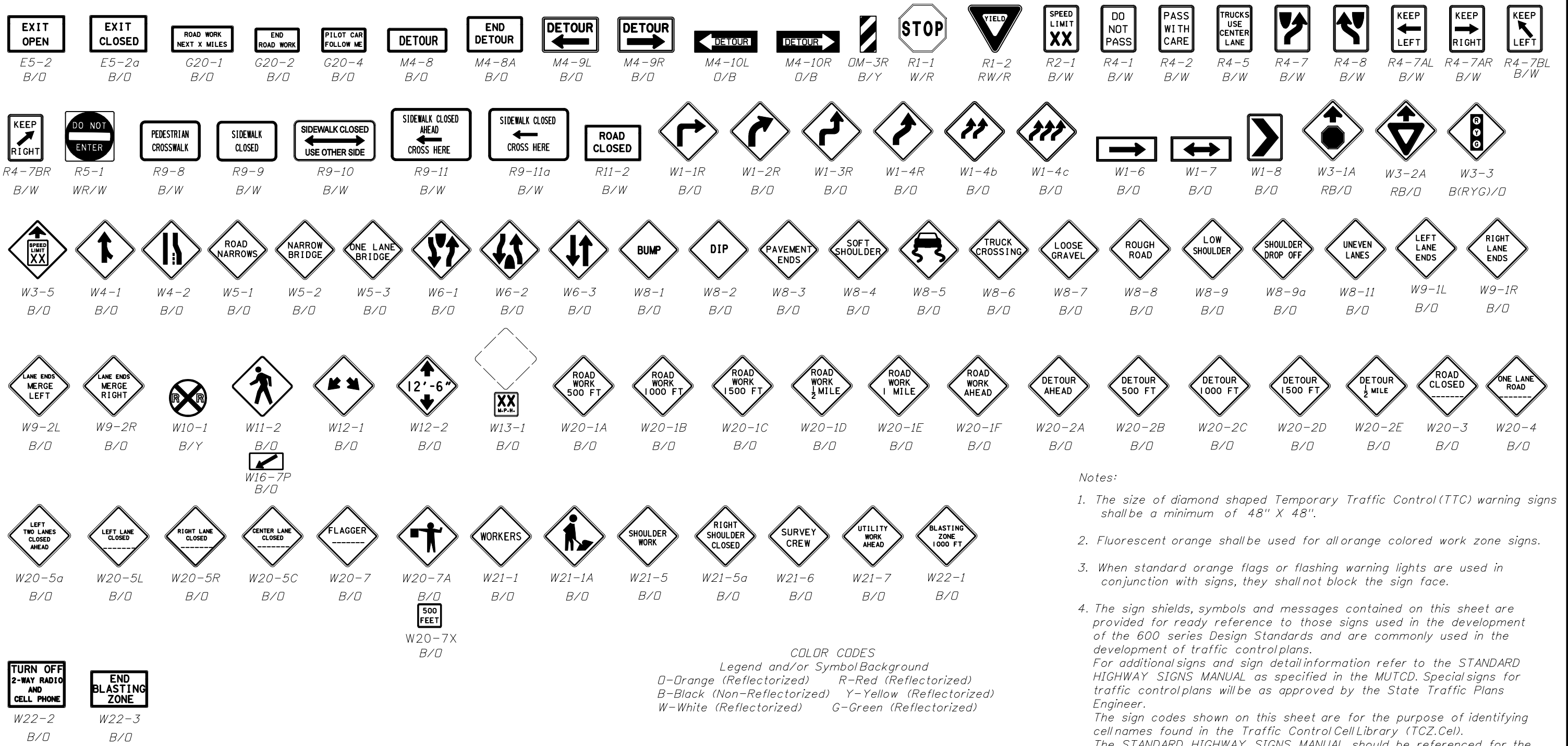
PROJECT INFORMATION SIGN



2010 FDOT Design Standards

GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES

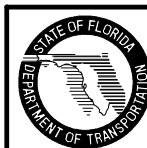
Last Revision	Sheet No.
07/01/09	7 of 13
Index No.	
600	



Notes:

1. The size of diamond shaped Temporary Traffic Control (TTC) warning signs shall be a minimum of 48" X 48".
2. Fluorescent orange shall be used for all orange colored work zone signs.
3. When standard orange flags or flashing warning lights are used in conjunction with signs, they shall not block the sign face.
4. The sign shields, symbols and messages contained on this sheet are provided for ready reference to those signs used in the development of the 600 series Design Standards and are commonly used in the development of traffic control plans. For additional signs and sign detail information refer to the STANDARD HIGHWAY SIGNS MANUAL as specified in the MUTCD. Special signs for traffic control plans will be as approved by the State Traffic Plans Engineer. The sign codes shown on this sheet are for the purpose of identifying cell names found in the Traffic Control Cell Library (TCZ.Cel). The STANDARD HIGHWAY SIGNS MANUAL should be referenced for the official sign codes for use in the development of traffic control plans. See Index No. 17355 for MOT sign details.

**COLOR CODES**  
 Legend and/or Symbol Background  
 O-Orange (Reflectorized) R-Red (Reflectorized)  
 B-Black (Non-Reflectorized) Y-Yellow (Reflectorized)  
 W-White (Reflectorized) G-Green (Reflectorized)

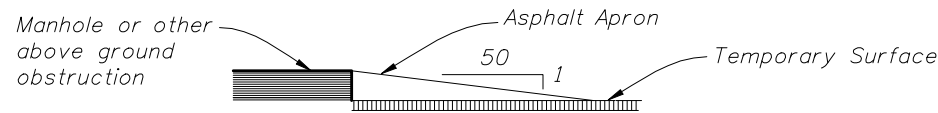




## MANHOLES/CROSSWALKS/JOINTS

Manholes extending 1" or more above the travellane and crosswalks having an uneven surface greater than 1/4" shall have a temporary asphalt apron constructed as shown in the diagram below.

All transverse joints that have a difference in elevation of 1" or more shall have a temporary asphalt apron constructed as shown in the diagram below.



The apron is to be removed prior to constructing the next lift of asphalt. The cost of the temporary asphalt shall be included in the contract unit price for Maintenance of Traffic, LS.

## TRUCK-MOUNTED ATTENUATORS

Truck-mounted attenuators (TMA) can be used for moving operations and short-term stationary operations. For moving operations, see Index Nos. 607 and 619. For short-term, stationary operations, see Part VI of the MUTCD.

## REMOVING PAVEMENT MARKINGS

Existing pavement markings that conflict with temporary work zone delineation shall be removed by any method approved by the Engineer, where operations exceed one daylight period; however, painting over existing pavement markings will not be permitted. Full pavement width overlays of either a structural or friction course are a positive means to achieve obliteration.

## SIGNALS

Existing traffic signal operations that require modification in order to carry out work zone traffic control shall be included in the TCP and be approved by the District Traffic Operations Engineer.

Maintain all existing actuated or traffic responsive mode signal operations for main and side street movements for the duration of the Contract and require restoration of any loss of detection within 12 hours. The contractor shall select only detection technology listed on the Department's Approved Products List (APL) and approved by the Engineer to restore detection capabilities. The plans should identify the intersections where Temporary Traffic Detection is required.

## CHANNELIZING AND LIGHTING DEVICES

Channelizing and lighting devices for work zone traffic control shall be as prescribed in Part VI of the MUTCD, subject to supplemental revisions provided in the contract documents and Index 600 requirements.

Approved devices are listed on the Department's Qualified Product List.

## CHANNELIZING AND LIGHTING DEVICE CONSISTENCY

Barricades, vertical panels, cones, tubular markers and drums shall not be intermixed within either the lateral transition or within the tangent alignment.

## WARNING LIGHTS

Warning lights shall be in accordance with the MUTCD except for the application limitations stipulated below:

### Flashing

Type A Low Intensity Flashing Warning Lights are to be mounted on barricades, drums, vertical panels or advance warning signs (except as noted below) and are intended to continually warn drivers that they are approaching or proceeding in a hazardous area. Flashing lights shall not be used to delineate the intended path of travel, and not placed with spacings that will form a continuous line to the drivers eye. The Type A light will be used to mark obstructions that are located adjacent to or in the intended travelway. Type A lights shall not be used in conjunction with the first advance warning sign nor the second such sign when used.

For post-mounted signs, Type B High Intensity Flashing Warning Lights shall be mounted on the first advanced warning sign and on the first and second advanced warning sign where two or more signs are used; this applies to all approaches to any work zone. The light shall be mounted on the channel post or on the upper edge of the sign nearest the traffic.

### Steady-Burn

Type C Steady-Burn Lights are to be mounted on barricades, drums, concrete barrier walls or vertical panels and used in combination with those devices to delineate the travelway on lane closures, lane changes, diversion curves and other similar conditions. Steady-burn lights are intended to be placed in a line to delineate the traveled way through and around obstructions in the transition, buffer, work and termination areas of the traffic control zone. Their intended purpose is not for warning drivers that they are approaching or proceeding through a hazardous area.

## STANDARD ORANGE FLAG

For post-mounted signs a standard orange flag 18"x 18" (min.) shall be mounted on the first advanced warning sign and on the first and second advanced warning sign where two or more signs are used; this applies to all approaches to any work zone. The flag shall be mounted on the channel post or on the upper edge of the sign furthest from traffic.

## PORTABLE CHANGEABLE (VARIABLE) MESSAGE SIGNS (PCMS)

The PCMS can be used to:

- (1) Supplement standard signing in construction or maintenance work zones.
- (2) Reinforce static advance warning messages.
- (3) Provide motorists with updated guidance information.

PCMS should be placed approx. 500 to 800 feet in advance of the work zone conflicts or 1.5 to 2 miles in advance of complex traffic control schemes which require new and/or unusual traffic maneuvers.

If PCMS are to be used at night, the intensity of the flashers shall be reduced during darkness when lower intensities are desirable.

For additional information refer to the FDOT Plans Preparation Manual, Volume I, Chapter 10.

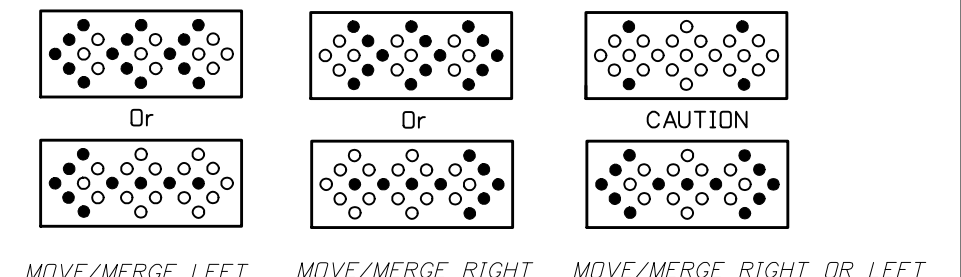
## ADVANCE WARNING ARROW PANELS

An arrow panel in the arrow or chevron mode shall be used only for stationary or moving lane closures on multilane roadways.

For shoulder work, blocking the shoulder, for roadside work near the shoulder, or for temporarily closing one lane on a two-lane, two-way roadway, an arrow panel shall be used only in the caution mode.

A single arrow panel shall not be used to merge traffic laterally more than one lane. When arrow panels are used to close multiple lanes, a single panel shall be used at the merging taper for each closed lane.

When Advance Warning Arrow Panels are used at night, the intensity of the flashers shall be reduced during darkness when lower intensities are desirable.



- Minimum Required Lamps
- Additional Lamps Allowed

## MODES



2010 FDOT Design Standards

## GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES

Last Revision 07/01/09

Sheet No. 9 of 13

Index No. 600

### DROP-OFF CONDITION NOTES

1. A drop-off is defined as a drop in elevation, parallel to the adjacent travel lanes, greater than 3" with slopes (A:B) steeper than 1 : 4. When drop-offs occur within the clear zone due to construction or maintenance activities, protection devices are required. See chart.
2. Distance X is to be the maximum practical under project conditions.
3. Distance from the travel lane to the barrier or warning device should be maximum practical for project conditions.
4. Any drop-off condition that is created and restored within the same work period will not be subject to the use of barriers; however, warning devices will be required.
5. When permanent curb heights are  $\geq 6"$ , no warning device will be required. For curb heights  $< 6"$ , see chart.

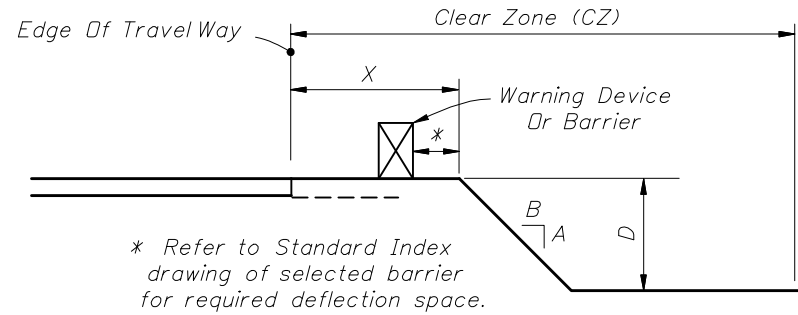
### DROP-OFF NOTES

1. These conditions and treatments can be applied only in work areas that fall within a properly signed work zone.
2. The following are defined as acceptable warning devices:
  - a. Vertical panel
  - b. Type I Or Type II barricades
  - c. Drum
  - d. Cone (where allowed)
  - e. Tubular marker (where allowed)
3. Where a barrier is specified, any of the types below may be used in accordance with the applicable Index:
 

Index No.	Description
400	Temporary guardrail and end anchorage
412	Temporary low profile barrier
414	Type K temporary concrete barrier
415	Temporary concrete barrier

For temporary water filled barriers see the QPL
4. Warning device spacing shall be as shown in Table I.

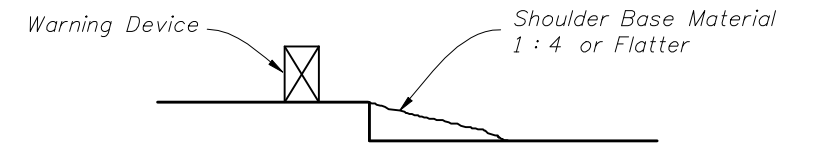
Speed (mph)	Max. Distance Between Devices (ft)			
	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50
50 to 70	25	50	50	100



X (ft.)	D (in.)	Device Required
0-12	> 3	Barrier
12-CZ	>3 to $\leq 5$	Warning Device
0-CZ	> 5	Barrier

For Clear Zone widths, see Index No. 600 sheet 2.

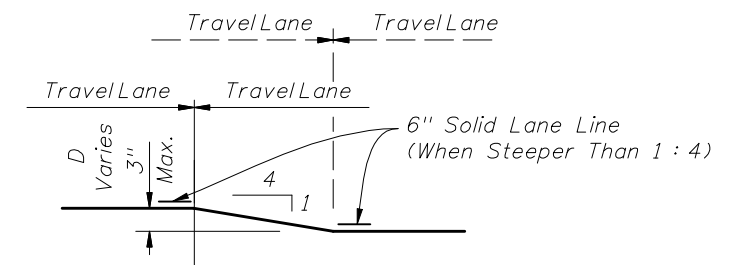
### SHOULDER TREATMENT



#### NOTES

1. Shoulder treatment may be used in lieu of barrier. Warning devices are required.
2. Daily inspections shall be conducted to assure that no erosion, excessive slopes, rutting, or other adverse conditions exist. Any deficiencies shall be repaired immediately.
3. Compensation for the placement and removal of the material required for the shoulder treatment shall be included in the cost for Maintenance Of Traffic, LS. Use of shoulder treatment in lieu of a barrier is not eligible for VECP consideration.

### TRAVEL LANE TREATMENT FOR MILLING OR RESURFACING



#### NOTES

1. This treatment applies to resurfacing or milling operations between adjacent travel lanes.
2. Whenever there is a difference in elevation between adjacent travel lanes, the W8-11 sign with "UNEVEN LANES" is required at intervals of  $\frac{1}{2}$  mile maximum.
3. If D is  $1\frac{1}{2}"$  or less, no treatment is required.
4. Treatment allowed only when D is 3" or less.
5. If the slope is steeper than 1:4 (not to be steeper than 1:1), the R4-1 and MOT-1-06 signs shall be used as a supplement to the W8-11; this condition should never exceed 3 miles in length.

### DROPOFFS IN WORK ZONES

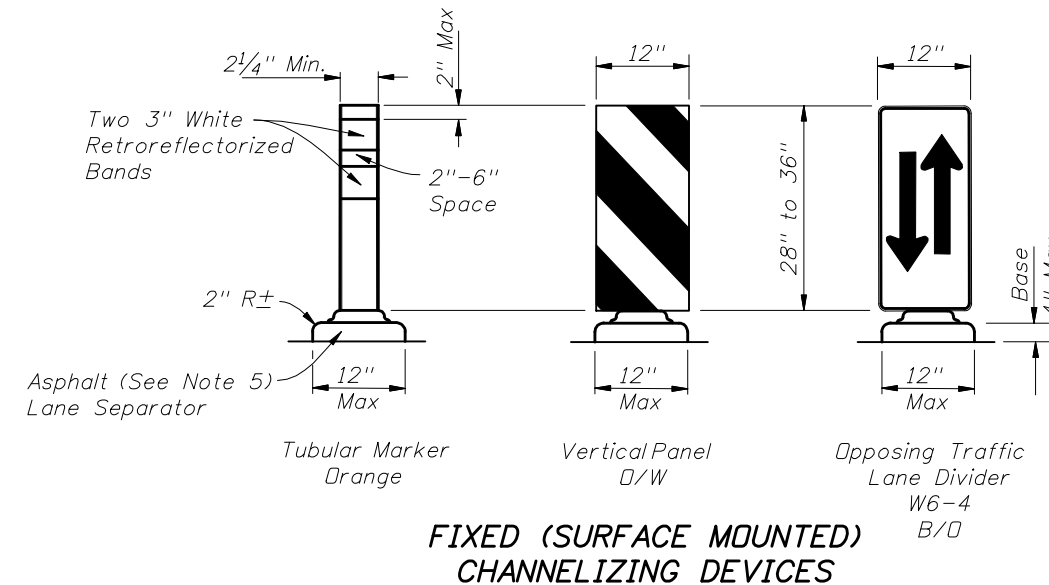
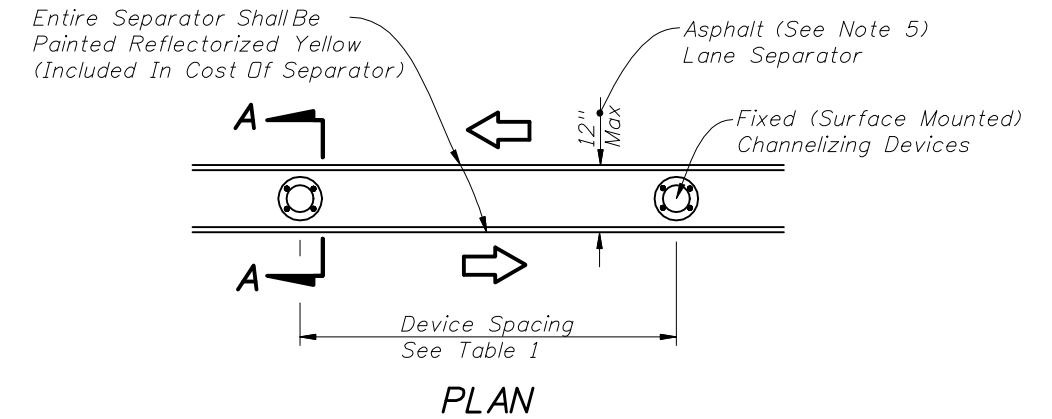


2010 FDOT Design Standards

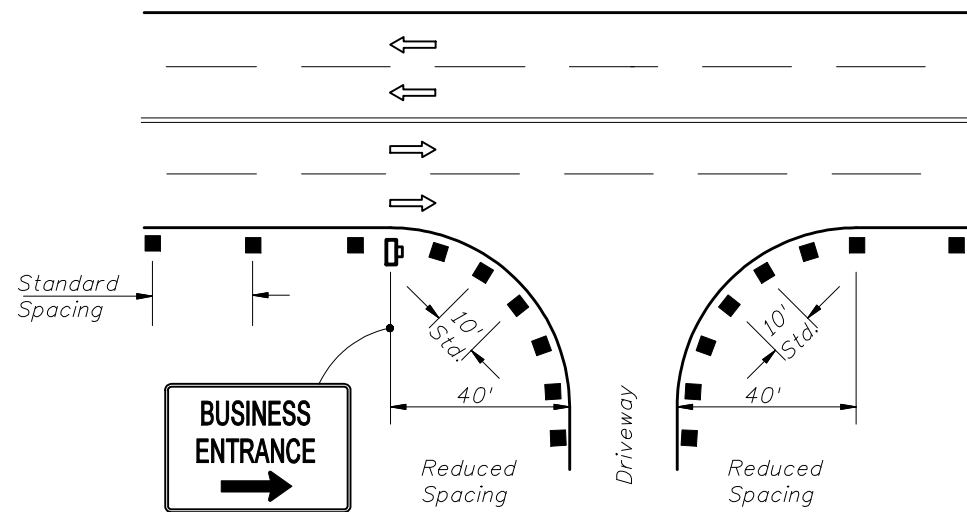
### GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES

Last Revision	Sheet No.
07/01/07	10 of 13
Index No.	
600	

Table I Device Spacing				
Speed (mph)	Max. Distance Between Devices (ft.)			
	Tubular Markers		Vertical Panels or Opposing Traffic Lane Divider	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50
50 to 70	25	50	50	100



SECTION AA

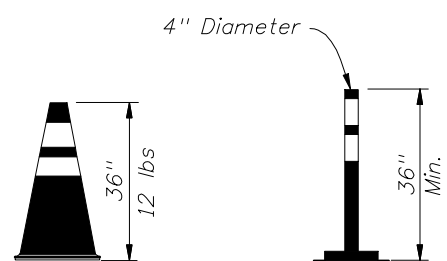


1. Sign height shall be 7' minimum. Sign offset from edge of travelway should be between 6' and 10' and relatively consistent through the project phase.
2. Signs should show specific business names. Logos may be provided by business owners. BUSINESS ENTRANCE sign in accordance with Index 17355 may be used when approved by the Engineer.
3. Place one business sign for each driveway entrance affected. When several businesses share a common driveway entrance, place one sign per common driveway entrance.
4. Channelizing devices should be placed at a reduced spacing on each side of the driveway entrance as to not to interfere with providing sight distances for the driveway user.

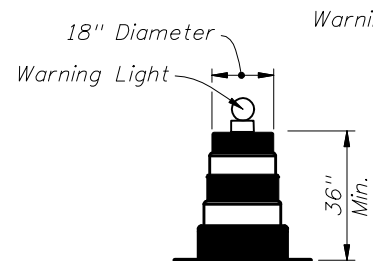
PLACEMENT OF BUSINESS ENTRANCE SIGNS AND CHANNELIZING DEVICES AT BUSINESS ENTRANCE

1. Temporary lane separators shall be supplemented with any of the following approved fixed (surface mounted) channelizing devices: tubular markers, vertical panels, or opposing traffic lane divider panels. Opposing traffic lane divider panels (W6-4) shall only be used as center lane dividers to separate opposing vehicular traffic on a two-lane, two-way operation.
2. Reflectorized materials shall have a smooth sealed outer surface which will display the same approximate color day and night.
3. 12" openings for drainage will be constructed in the separator island every 25' in areas with grades of 1% or less or every 50' in areas with grades over 1% as directed by the Engineer.
4. Tubular Markers, Vertical Panels and Opposing Traffic Lane Divider panels shall not be intermixed within the limits where the temporary lane separator is used.
5. The Contractor has the option of using temporary lane separator systems (including channelizing devices) from the qualified products list in lieu of the temporary asphalt separator and channelizing devices detailed on this sheet.
6. Temporary lane separator shall be paid for under the contract unit price for Maintenance of Traffic, LS, and will include all materials and work necessary to construct, relocate, maintain, and remove the temporary lane separator. Any damage to existing pavement caused by the removal of temporary lane separator shall be satisfactorily repaired and the cost of such repairs are to be included in the cost of Maintenance of Traffic, LS.

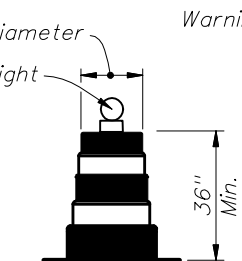
TEMPORARY LANE SEPARATOR



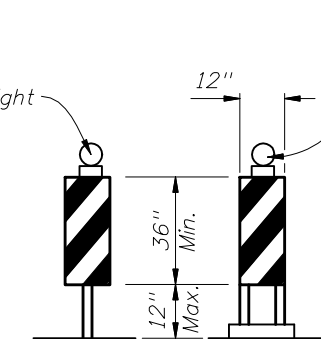
CONES



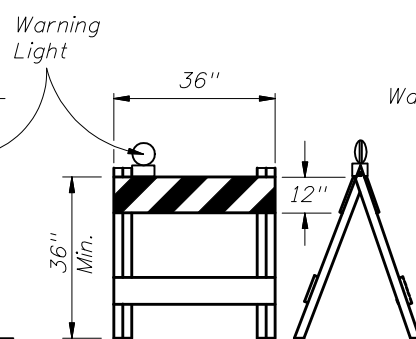
TUBULAR NON-FIXED MARKER TO BE USED DURING DAYLIGHT ONLY  
TUBULAR MARKER



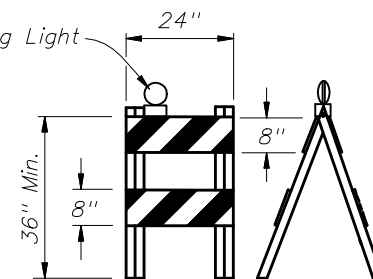
PLASTIC DRUMS



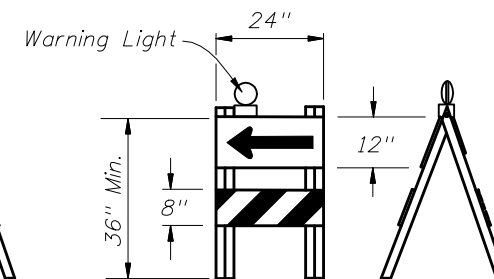
POST MOUNT A-FRAME  
VERTICAL PANEL



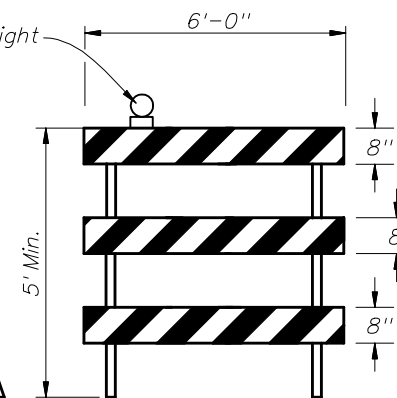
TYPE I BARRICADE



TYPE II BARRICADE



DIRECTION INDICATOR BARRICADE



TYPE III BARRICADE

CHANNELIZING AND LIGHTING DEVICE NOTES

1. Only approved traffic control devices included on the Qualified Products List (QPL) may be used.
2. The FDOT approval number shall be engraved on the device at a convenient and readily visible location. Where engraving is not practical a water-resistant type label may be used.
3. The details shown on this sheet are for the following purposes: (a) For ease of identification and (b) To provide information that supplements or supersedes that provided by the MUTCD.
4. The Type III Barricade shall have a unit length of 6'-0" only. When barricades of greater lengths are required those lengths shall be in multiples of the 6'-0" unit.
5. No sign panel should be mounted on any barricade type unless the barricade/sign combination was found to be crashworthy and the sign panel is mounted in accordance with the vendor drawing for the barricade shown on the QPL.

6. During hours of darkness, warning lights shall be used on drums, vertical panels, Type I, Type II, Type III and direction indicator barricades in accordance with 'Warning Lights' in Index No. 600.
7. Ballast shall not be placed on top rails or any striped rails or higher than 13" above the driving surface.
8. The direction indicator barricade may be used in tapers and transitions where specific directional guidance to drivers is necessary. If used, direction indicator barricades shall be used in series to direct the driver through the transition and into the intended travel lane.
9. The splicing of sheeting is not permitted on either channelizing devices or MDT signs.
10. For rails less than 3'-0" long, 4" stripes shall be used.

11. Cones shall:
  - a. Be used only in active work zones where workers are present.
  - b. Not exceed 2 miles in length of use at any one time.
  - c. Be reflectorized as per the MUTCD with Department approved reflective collars when used at night.

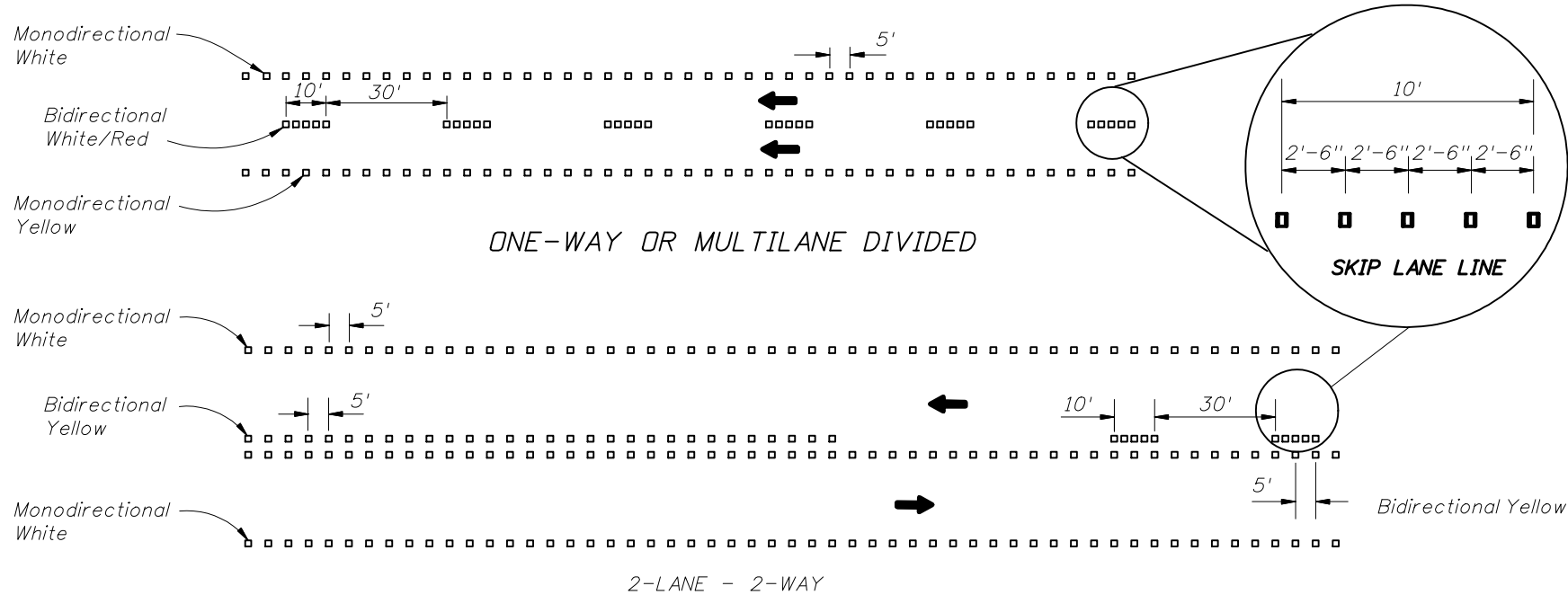
IDENTIFICATIONS - CHANNELIZING AND LIGHTING DEVICES



2010 FDOT Design Standards

GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES

Last Revision	Sheet No.
07/01/09	12 of 13
Index No.	
600	



**TEMPORARY SUBSTITUTION OF RPM'S FOR PAINT OR REMOVABLE TAPE**

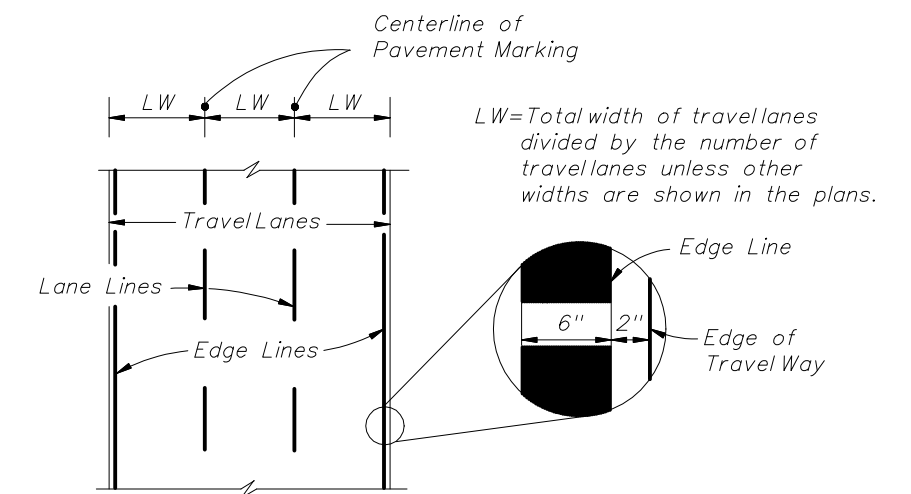
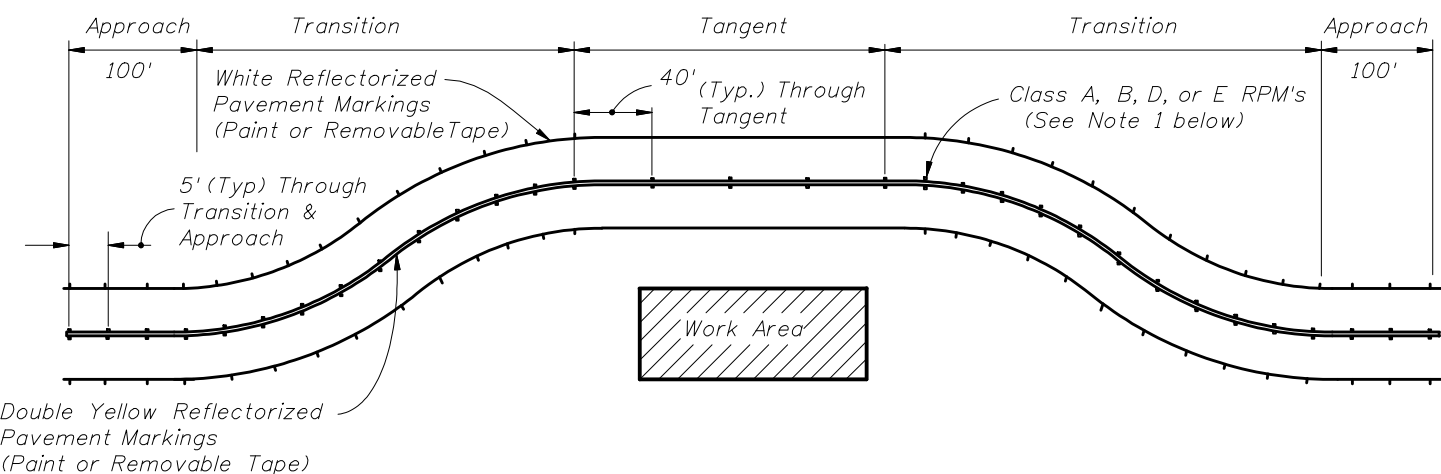
1. Paint or removable tape are the required work zone markings and shall be placed in accordance with the plans and specifications. If these work zone markings can not be placed due to weather restrictions identified in the appropriate specification, temporary substitution of RPM's for work zone markings will be allowed until the weather condition permits the placement of appropriate work zone marking. Temporary substitution of RPM's for work zone markings will be allowed for equipment malfunction, placement of the appropriate work zone marking shall be made within 3 days, or sooner if possible. When RPM's are used as a temporary substitution for work zone markings the following shall apply:
  - a) Lane widths identified in the plans must be maintained. Placement of RPM's should consider where work zone markings will be placed as soon as conditions allow. If the RPM's can not be placed so that the lane width is maintained after the placement of the work zone markings, the conflicting RPM's must be removed.
  - b) The color of the RPM body and the reflective face shall conform to the color of the marking for which they substitute.
  - c) In work zones, CLASS A, B or D RPM's may be used to form lane lines, edge lines and temporary gore areas as a temporary substitute for paint or removable tape at the spacing shown above. Where the RPM's will be used for five (5) days or less, CLASS E RPM's may be used.

**RPM CLASS APPLICATION FOR REFLECTIVE PAVEMENT MARKERS**

- A Work Zone Applications Only, For Traffic And Nontraffic Areas.
- B Permanent Application In Traffic And Nontraffic Areas Or Can Be Used In Work Zone Applications For Traffic And Nontraffic Areas.
- D Work Zone Application Only, For Traffic And Nontraffic Areas.
- E Temporary Work Zone Application Only, Not Exceeding Five (5) Continuous Days, For Traffic And Nontraffic Areas.

**NOTES FOR REFLECTIVE PAVEMENT MARKERS**

1. The color of the raised pavement marker under both day and night conditions shall conform to the color of the marking for which they serve as a positioning guide, or for which they supplement or substitute.
2. To provide contrast on concrete pavement, or light asphalt, the five (5) white RPM's shall be followed by five black RPM's. The spacing between RPM's shall be 2'-6". Black RPM's will not be required for contrast with yellow RPM's.
3. RPM's used to supplement lane lines are to be paid for as Reflective Pavement Marker (Temporary), EA. RPM's used as a temporary substitute for paint or removable tape due to weather restrictions are to be paid for as Reflective Pavement Marker (Temporary), EA. RPM's used as a temporary substitute for paint or removable tape due to equipment malfunction are to be placed at the Contractor's expense.



**PLACEMENT OF PAVEMENT MARKINGS**

**USE OF RPMS TO SUPPLEMENT PAINT OR REMOVABLE TAPE IN WORK ZONES**

1. RPM's shall be installed as a supplement to:
  - a) All lane lines.
  - b) Edge lines in transition & approach areas.
  - c) Edge lines of gore areas.
2. Placement of RPM's should be as shown in Index No. 17352 with the following exceptions: RPM's shall be placed at 5 feet center to center in approach and transition areas. Class D markers be placed at a maximum spacing of 5 feet center to center.



2010 FDOT Design Standards

**GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES**

Last Revision	Sheet No.
07/01/09	13 of 13
Index No.	
600	