

## **4. CROSS SECTION ELEMENTS**

### **Practices and Procedures**

#### **4-1 ROADWAY SECTION**

##### **4-1.01 Travel Lanes**

###### **Widths**

See [EI C1 - Lane Width and Shoulder Width](#).

###### **Cross Slopes**

See [EI C4 – Cross Slopes](#).

###### **Pavement Design**

See 8-2 Structural Pavement Design in [Pavement Design](#)

##### **4-1.02 Shoulders and Curb Offsets**

###### **Widths**

See [EI C1 - Lane Width and Shoulder Width](#).

###### **Transitions**

Use 50 feet of length for every 2 foot width of transition. For transitions of paved shoulders to gravel shoulders, transition from full width to 2 feet.

###### **Surface Type**

See [Maine Department of Transportation Shoulder Surface Type Policy](#).

###### **Cross Slopes**

See both [EI C4 – Cross Slopes](#) and [Design Guidance – High Side Shoulder Rollover](#).

###### **Pavement Design**

See 8-2.02 Shoulder HMA Thickness in [Pavement Design](#)

## **4-1.03 Auxiliary Lanes**

### **Widths**

See [EI C1 - Lane Width and Shoulder Width](#).

### **Cross Slopes**

Reference Section 4.2.2 Cross Slope in the *AASHTO Green Book*.

### **Transition Lengths**

See 5-5 Auxillary Lanes in [Intersections and Interchanges](#).

## **4-1.04 On-Street Parking**

See [Design Guidance – On and Off-Street Parking](#).

## **4-1.05 Curbs**

See [Design Guidance – Curb Type and Mold Usage](#).

## **4-1.06 Sidewalks**

### **Width**

Standard sidewalk width will be 5 feet, exclusive of the curb width. Where utilities and other appurtenances are present, a width of 4 feet is acceptable, exclusive of curb width. In extreme situations, a minimum clear width of 3 feet can be used. Where widths of less than 5 feet are used, 5 foot by 5 foot passing spaces must be provided at least every 200 feet. Entrances may be used as passing spaces.

Preferably, any roadside appurtenances (e.g. utility poles, traffic signs, fire hydrants) will be placed behind the sidewalk. In highly urbanized areas (central business districts), sidewalks are often paved from the back of the curb to the front edge of the building.

### **Cross Slope**

Sidewalk cross slopes shall be a maximum of 2.0%. Typically, sidewalk cross slopes are 2.0% and are sloped towards the roadway for drainage purposes.

### **Curb Ramps**

See [Design Guidance - Minimum ADA Requirements for Pedestrian Facilities](#).

## **4-2 MEDIANS**

### **4-2.01 Width**

Reference Section 4.11 Medians in the *AASHTO Green Book*.

### **4-2.02 Type**

See [Design Guidance – Medians and Islands](#).

## **4-3 ROADSIDE ELEMENTS**

For information on fill slopes, earth cuts and rock cuts see [Design Guidance – Sideslopes and Backslopes](#).

## **4-4 TYPICAL SECTIONS**

The following figures present typical sections which will apply to all new construction and reconstruction projects. The typical section figures are:

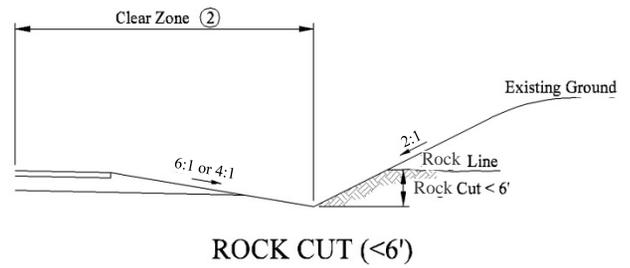
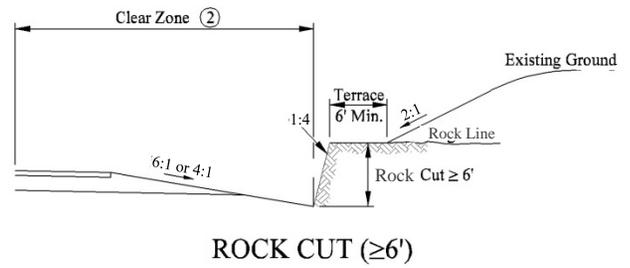
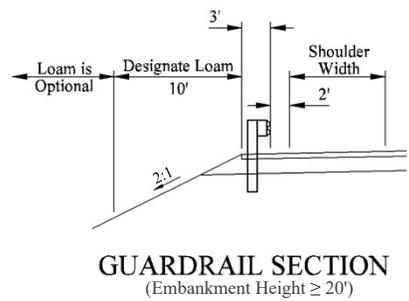
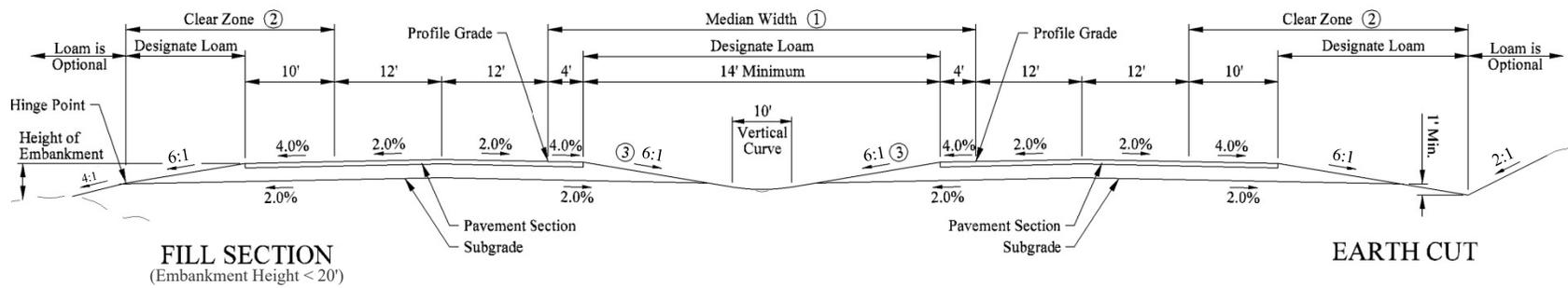
[Figure 4-1 Typical Depressed Median Section](#)

[Figure 4-2 Typical Two-Lane Rural Highway](#)

[Figure 4-3 Typical Raised Median Section](#)

[Figure 4-4 Typical Two-Lane Urban Street](#)

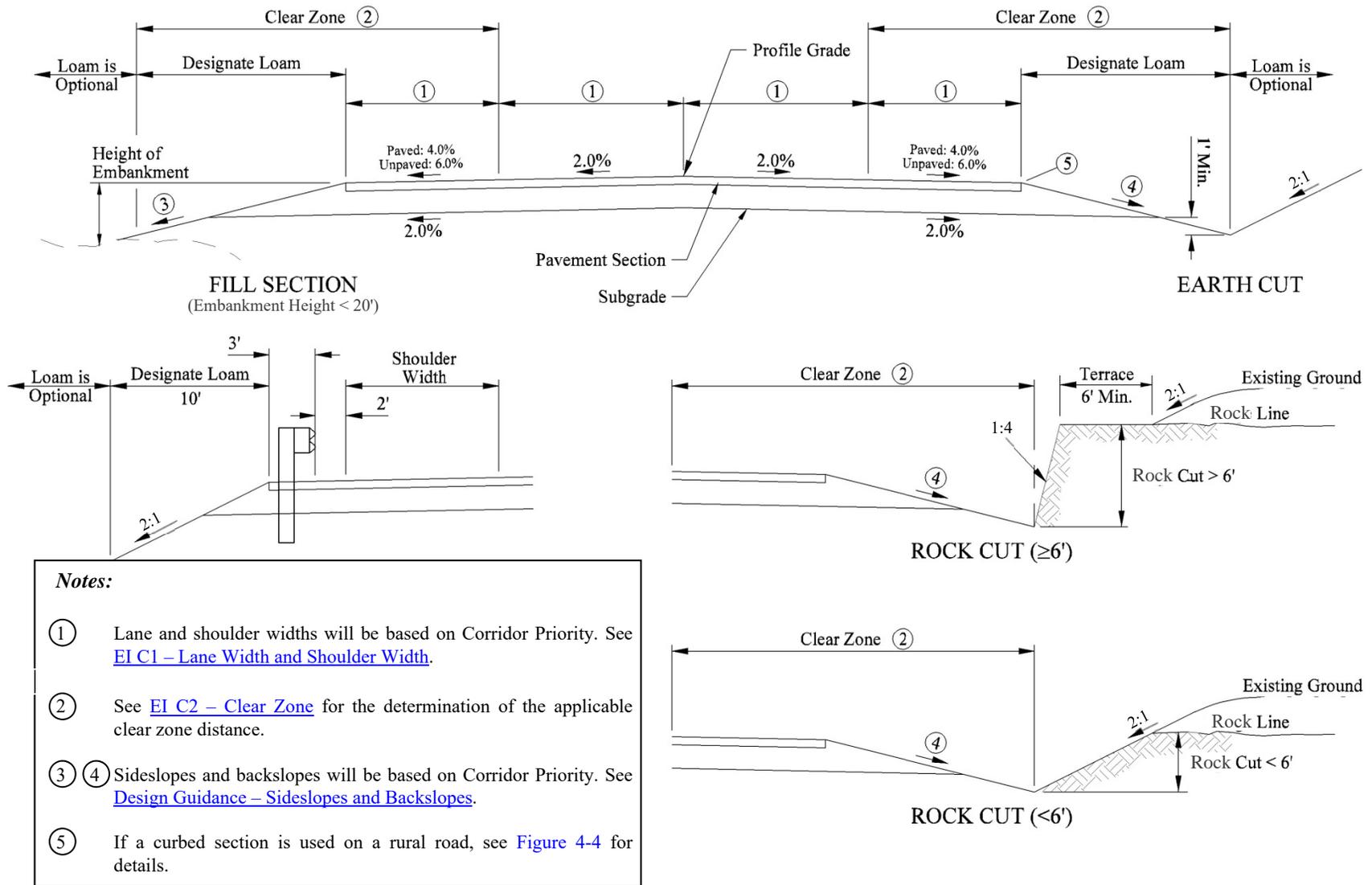
[Figure 4-5 Miscellaneous Details](#)



- Notes:**
- ① The width of the depressed median will be determined by field conditions. The minimum width will be 22 feet. Where a median barrier is warranted, see [Figure 4-5](#) for typical section.
  - ② See [EI C2 – Clear Zone](#) for the determination of the applicable clear zone distance. On fill slopes, the hinge point at the 6:1/4:1 break will be placed at the subgrade intersection with the fill slope or at the clear zone distance, whichever is the greater distance from the roadway.
  - ③ If it is anticipated that a median barrier may be warranted in the future, consider providing 10:1 median slopes, if practical.

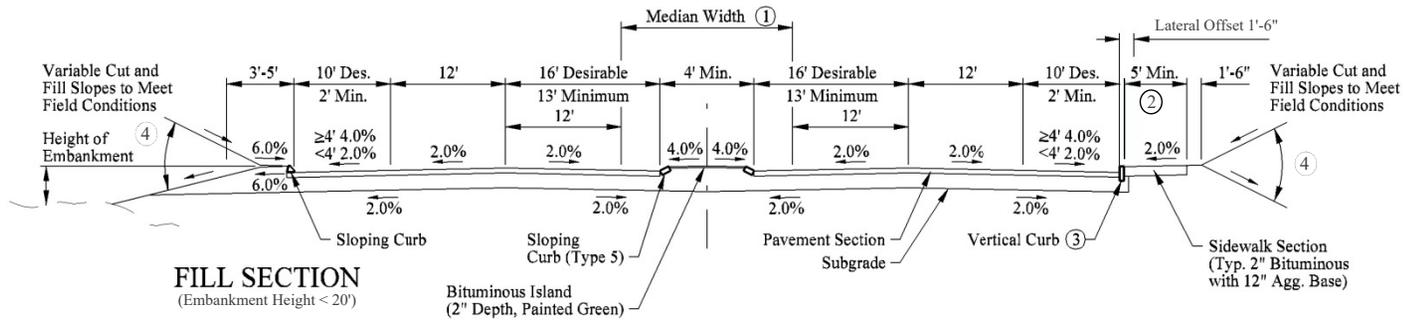
**TYPICAL DEPRESSED MEDIAN SECTION**

**Figure 4-1**



**TYPICAL TWO-LANE RURAL HIGHWAY**

**Figure 4-2**

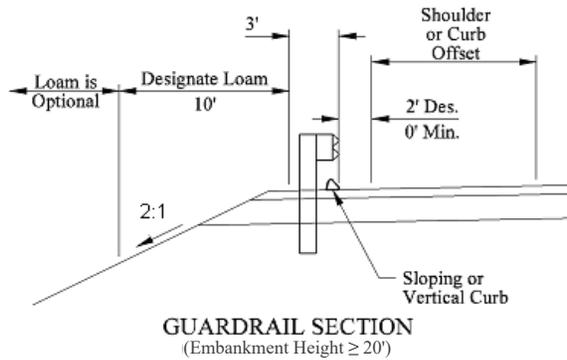
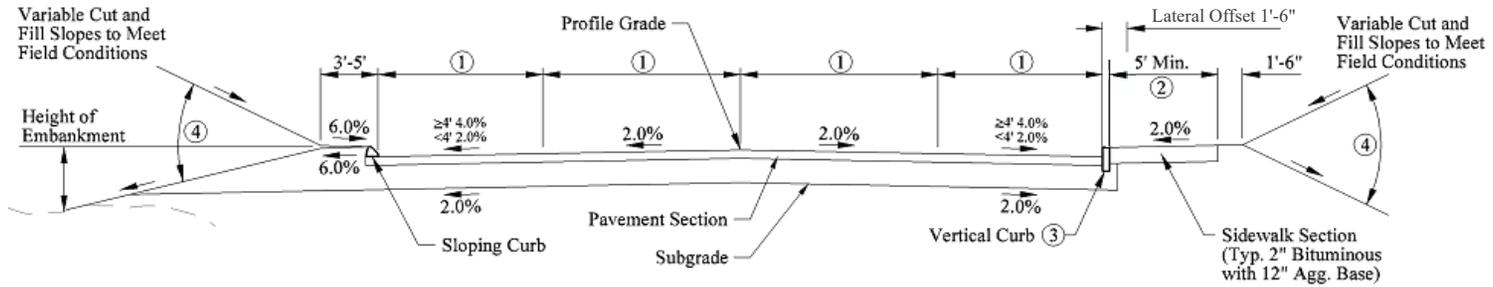


**Notes:**

- ① The median width will be determined by the width of the raised island plus the shoulder width or curb offset on either side of the raised island. See [Section 4-2](#) for more discussion on the width of raised medians. In addition to raised medians, a flush median or a continuous two-way, left-turn lane may be used on an urban arterial.
- ② Where utilities or other appurtenances are present, a clearance width of 4 feet is acceptable, however a minimum clearance width of 3 feet must be provided. See [Figure 4-5](#) for a typical sidewalk section with a buffer area.
- ③ A vertical curb should be used where sidewalks are present. Where there is no curb or sidewalk, the roadside design will be according to the criteria for rural arterials. See [Figure 4-2](#).
- ④ See [Section 4-3](#) for more information.

**TYPICAL RAISED MEDIAN SECTION**

**Figure 4-3**

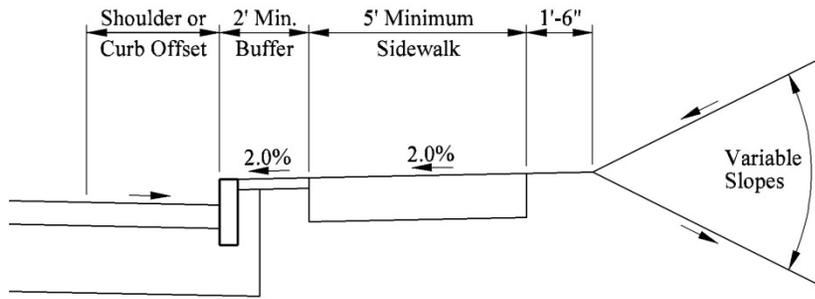


**Notes:**

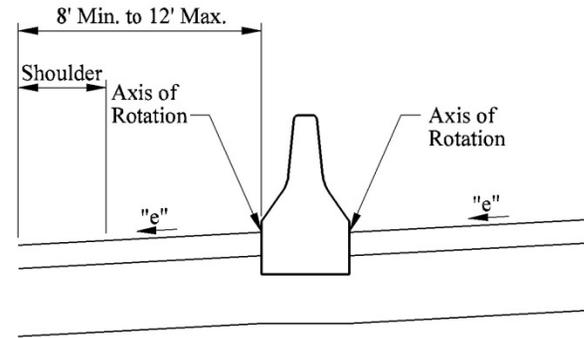
- ① Lane and shoulder/curb offset widths will be based on Corridor Priority. See [EI C1 – Lane Width and Shoulder Width](#).
- ② Where utilities or other appurtenances are present, a clearance width of 4 feet is acceptable, however a minimum clearance width of 3 feet must be provided. See [Figure 4-5](#) for a typical sidewalk section with a buffer area.
- ③ A vertical curb should be used where sidewalks are present. Where there is no curb or sidewalk, the roadside design will be according to the criteria for rural arterials. See [Figure 4-1](#).
- ④ See [Section 4-3](#) for more information.

**TYPICAL TWO-LANE URBAN STREET**

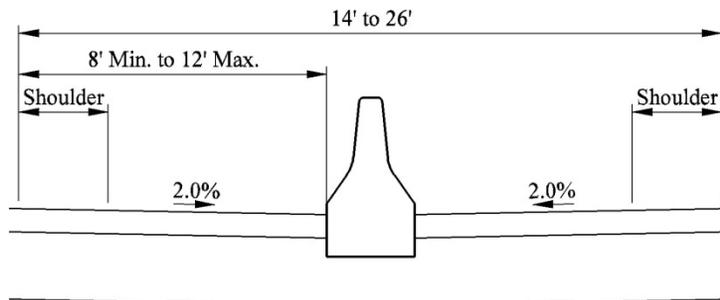
**Figure 4-4**



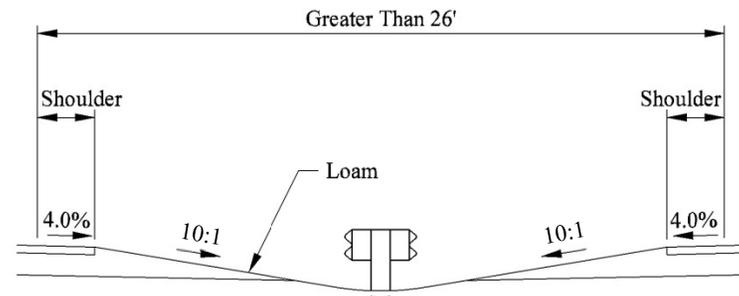
TYPICAL SIDEWALK WITH BUFFER



CONCRETE MEDIAN BARRIER  
(Superelevated Section)



CONCRETE MEDIAN BARRIER  
(Where Warranted)



METAL MEDIAN BARRIER  
(Where Warranted)

MISCELLANEOUS DETAILS

Figure 4-5