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## ORIGINATION FORM

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### Proposed Revisions to a Standard Plans Index

(Please provide all information — Incomplete forms will be returned)

**Contact Information:**

Date: June 20, 2023

Originator: Kelli Phillips

Phone: (850) 414-4553

Email: Kelli.Phillips@dot.state.fl.us

**Standard Plans:**

Index Number: 509-070

Sheet Number (s): 1, 2, and 3 of 3

Index Title: Railroad Grade Crossing Traffic Control Devices

**Summary of the changes:**

Sheet 1: Change General Note 5 , Class VI to 3-4; Delete Type V and Type VI from Traffic Control Devices for Flush Shoulder Roadway Details: Added "Std." to the 27" dimension in Type I through Type V.

Sheet 2: Added "Std." to the 27" dimension in Type II through Type IV.

Sheet 3: Change 12'-5" min to 12'-6" Min. in PLAN; Change 51" Max to 57" Min in Median Section at Signal Gates Detail.

**Commentary / Background:**

These changes are being made to revert to previous versions of the Index.

**Other Affected Offices / Documents: (Provide name of person contacted)**

Yes	No	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other Standard Plans –
<input type="checkbox"/>	<input checked="" type="checkbox"/>	FDOT Design Manual –
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Basis of Estimates Manual –
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Standard Specifications –
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Approved Product List –
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Construction –
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Maintenance –

**Origination Package Includes:** (Submit package to Rick Jenkins)

Yes	N/A	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Redline Mark-ups
<input type="checkbox"/>	<input type="checkbox"/>	Revised or Proposed Standard Plan Instruction (SPI)
<input type="checkbox"/>	<input type="checkbox"/>	Other Support Documents

**Implementation:**

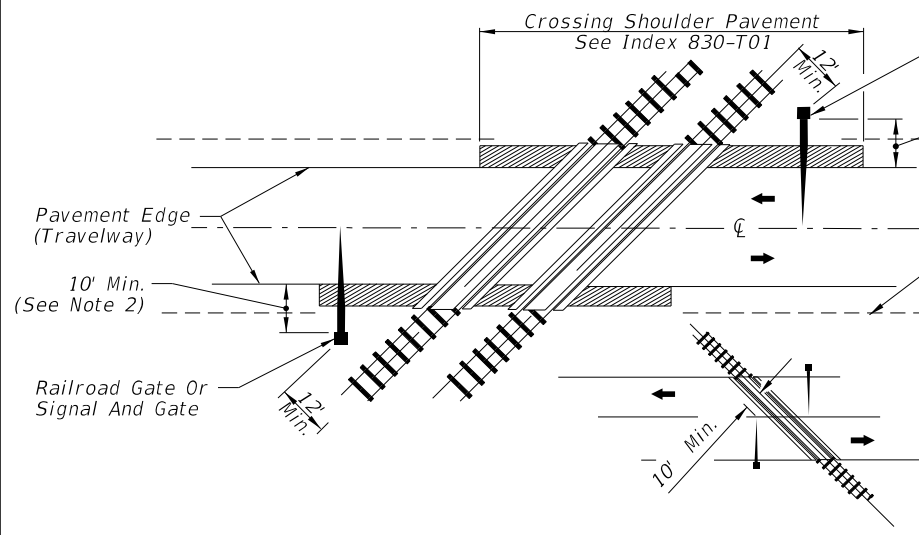
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<input type="checkbox"/>	DCE Memo
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<input checked="" type="checkbox"/>	FY-Standard Plans (Next Release)

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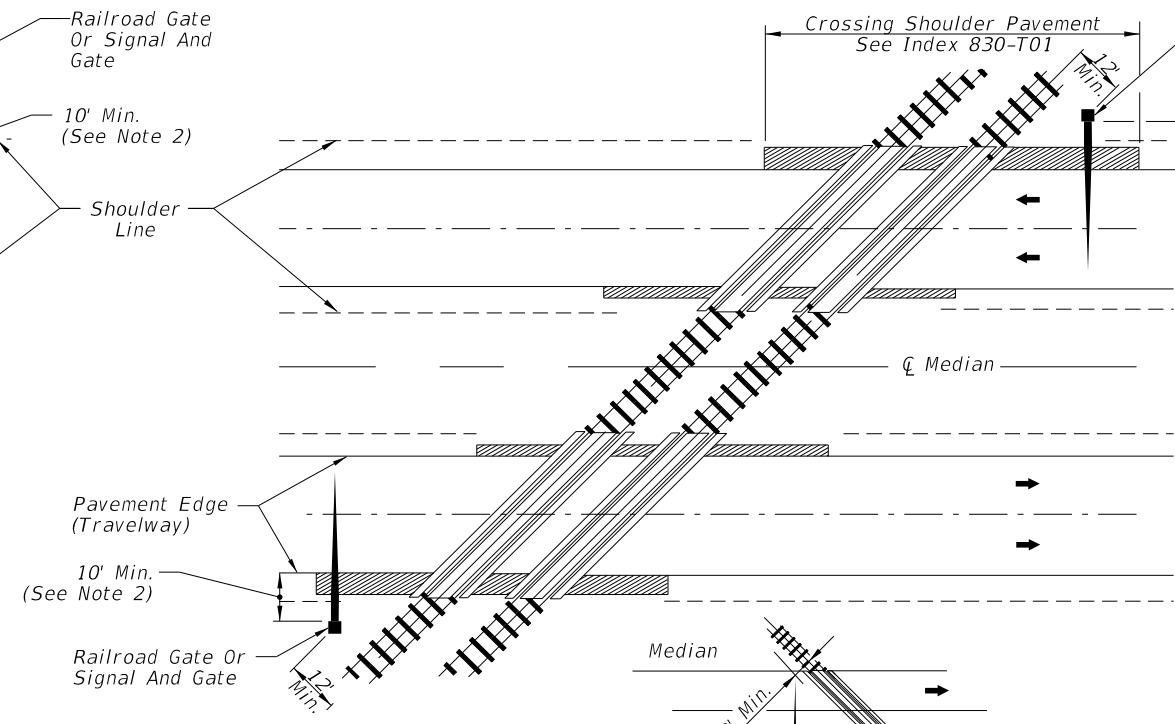
Contact the Roadway Design Office for assistance in completing this form

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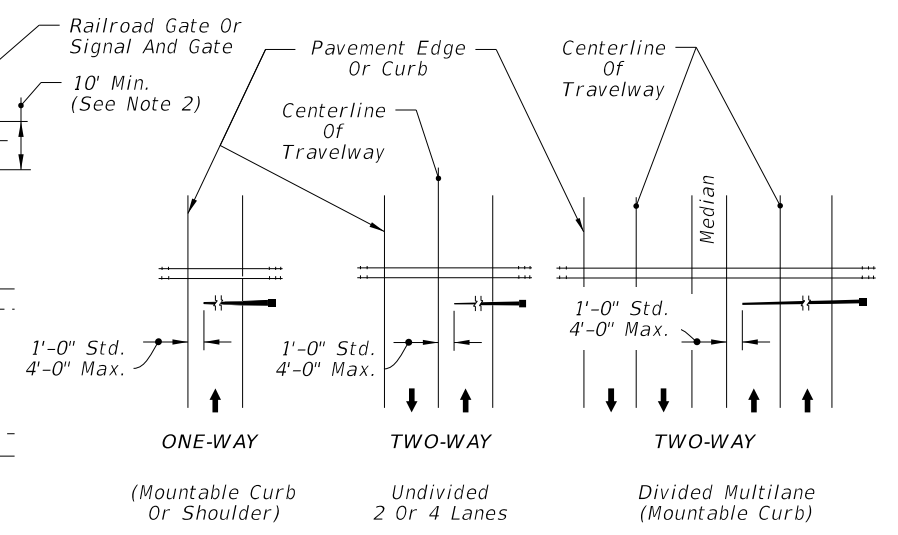
Email to: Rick Jenkins [rick.jenkins@dot.state.fl.us](mailto:rick.jenkins@dot.state.fl.us) and Darren Martin [darren.martin@dot.state.fl.us](mailto:darren.martin@dot.state.fl.us)



**SIGNAL PLACEMENT AT RAILROAD CROSSING  
(2 - LANE DESIGN)**



**SIGNAL PLACEMENT AT RAILROAD CROSSING  
(4 - LANE DESIGN)**



**FIGURE 1**

NOTE: Arrows denote direction of travel not pavement markings.

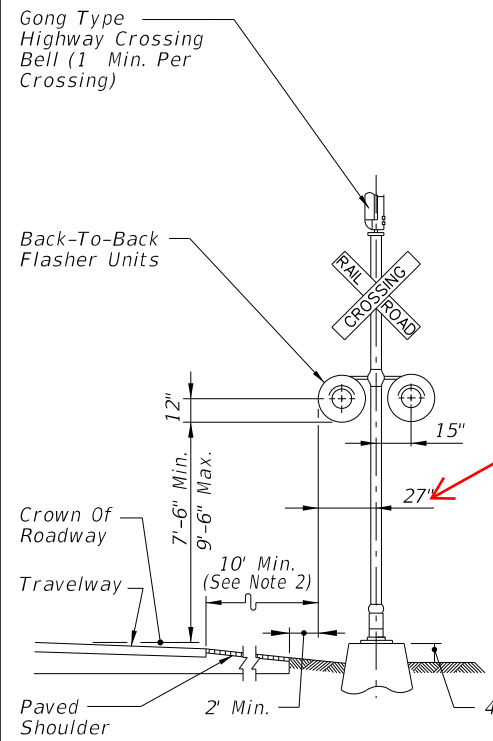
**GENERAL NOTES:**

- No guardrail is proposed for signals; however, some form of impact attenuation device may be specified for certain locations.
- Advance flasher to be installed when and if called for in Plans or Specifications.
- Top of foundation shall be no higher than 4" above finished shoulder grade.
- Type of traffic control device
  - Flashing warning devices
  - Flashing warning devices with cantilever
  - Flashing warning devices with gate
  - Flashing warning devices with cantilever and gate
  - Gate
- Class of traffic control devices (Not Shown)
  - 2 Quadrant flashing warning devices-one track
  - 2 Quadrant flashing warning devices-multiple tracks
  - 2 Quadrant flashing warning devices and gates-one track
  - 2 Quadrant flashing warning devices and gates-multiple tracks
  - 3-4 Quadrant flashing warning devices and gates-one track
  - 2-4 Quadrant flashing warning devices and gates-multiple tracks

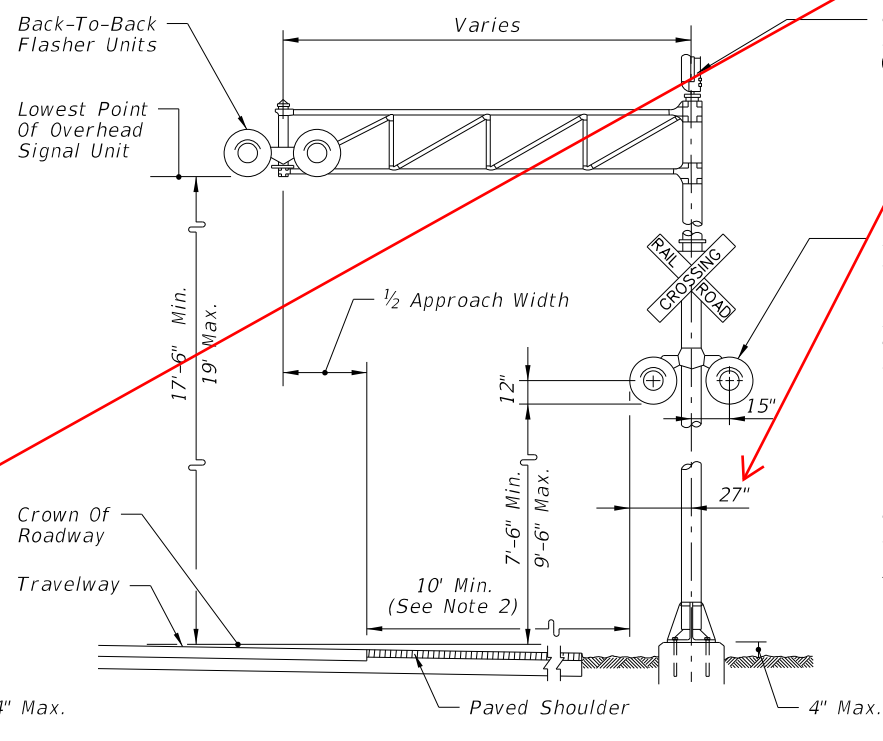
CHANGED TO: 3-4

**NOTE:**

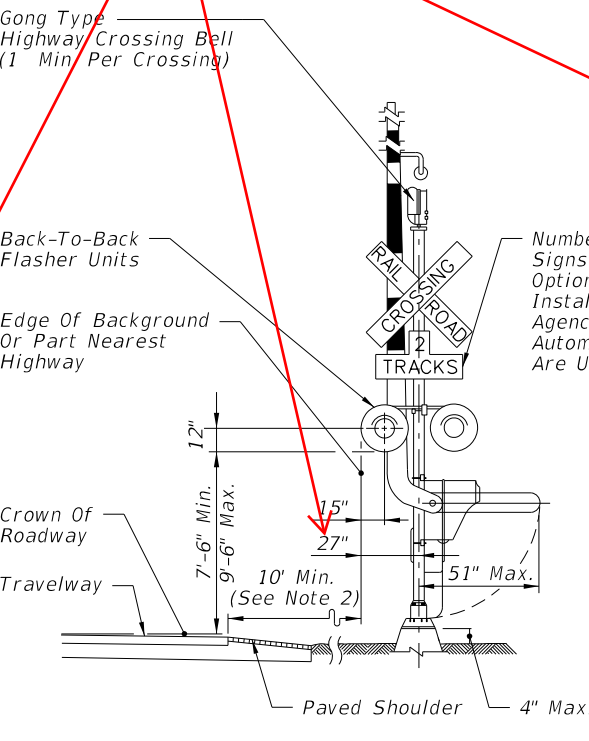
- Two separate foundations may be required (one for signals, one for gate), depending on type of equipment used.
- When 10' is deemed impractical the control device can be located as close as 2' from the edge of a paved shoulder but not less than 6' from the edge of the near traffic lane.



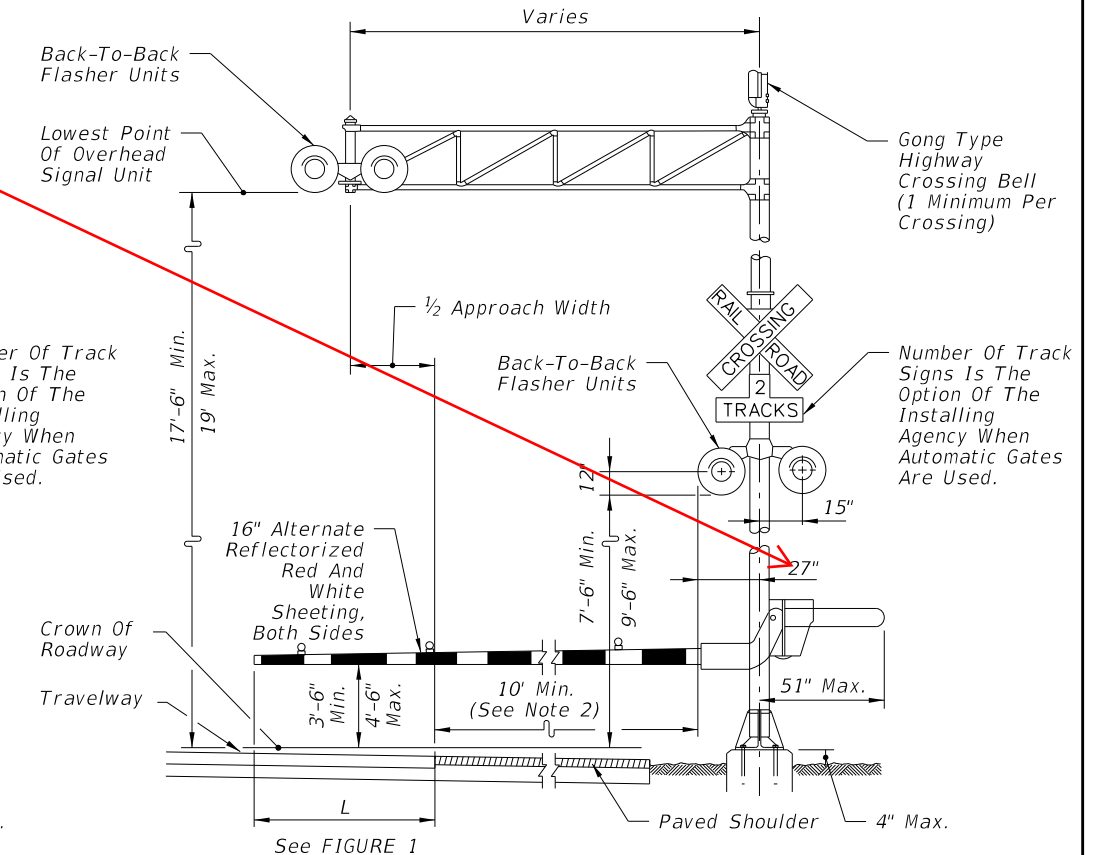
**TYPE I**



**TYPE II**



**TYPE III AND TYPE V**

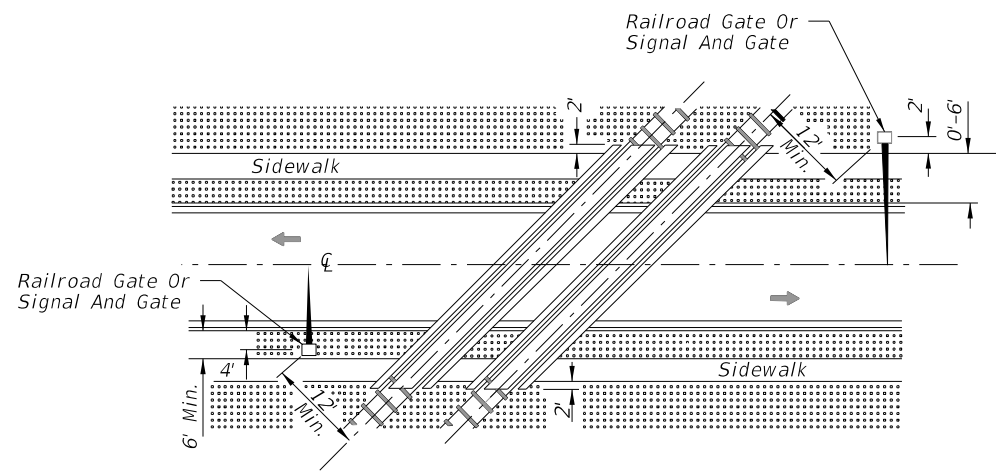


**TYPE IV AND TYPE VI**

**TRAFFIC CONTROL DEVICES FOR FLUSH SHOULDER ROADWAY**

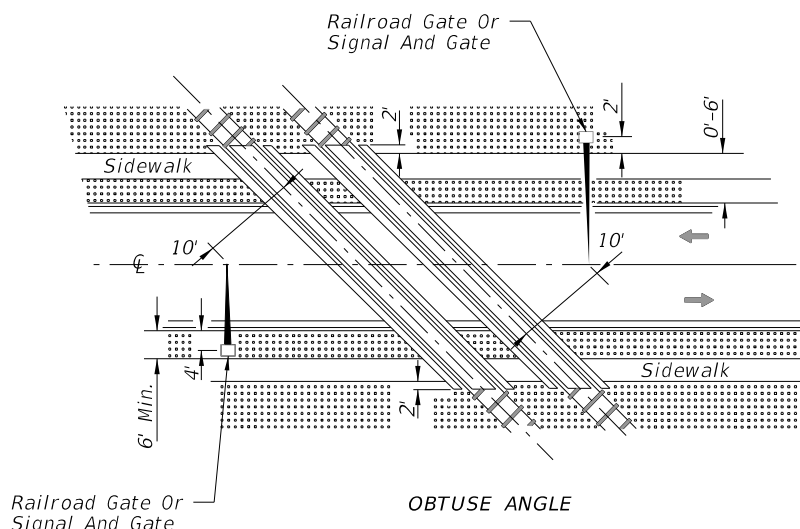
10/16/2022 2:03:16 PM

LAST REVISION 02/05/21	REVISION 11/01/23	DESCRIPTION:	FY 2023-24 STANDARD PLANS	RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES	INDEX 509-070	SHEET 1 of 3
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ACUTE ANGLE (AND RIGHT ANGLE)

SIGNAL PLACEMENT AT RAILROAD CROSSING  
(2 LANES, CURB & GUTTER)

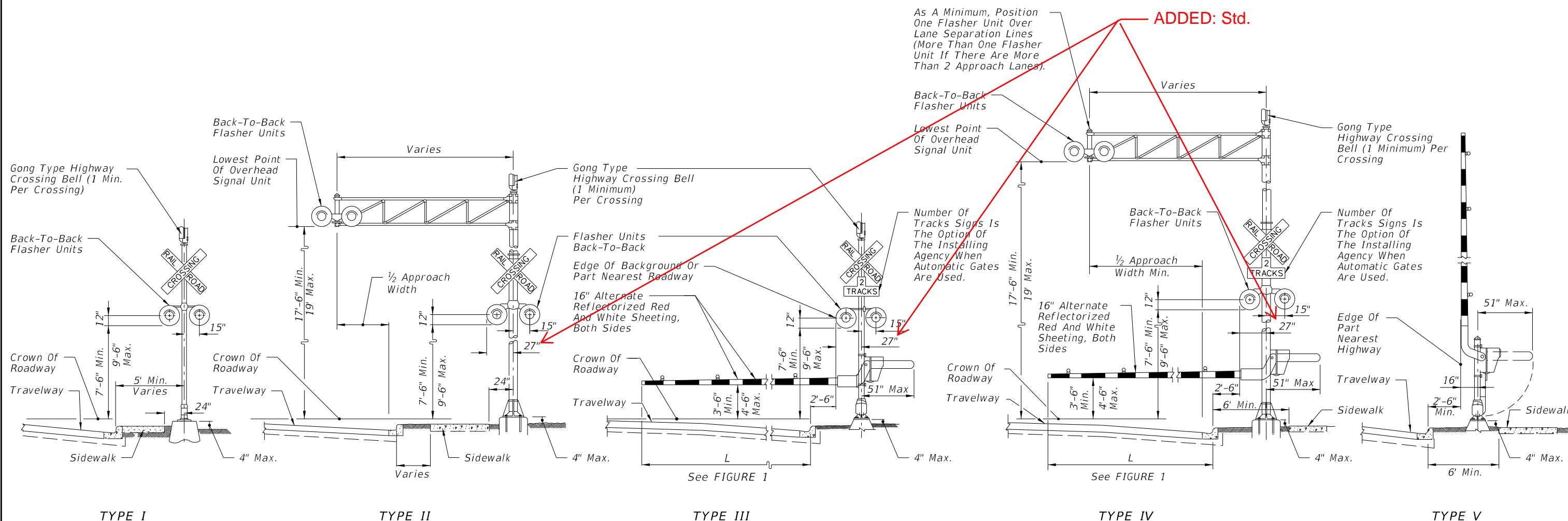


OBTUSE ANGLE

SIGNAL PLACEMENT AT RAILROAD CROSSING  
(2 LANES, CURB & GUTTER)

NOTES:

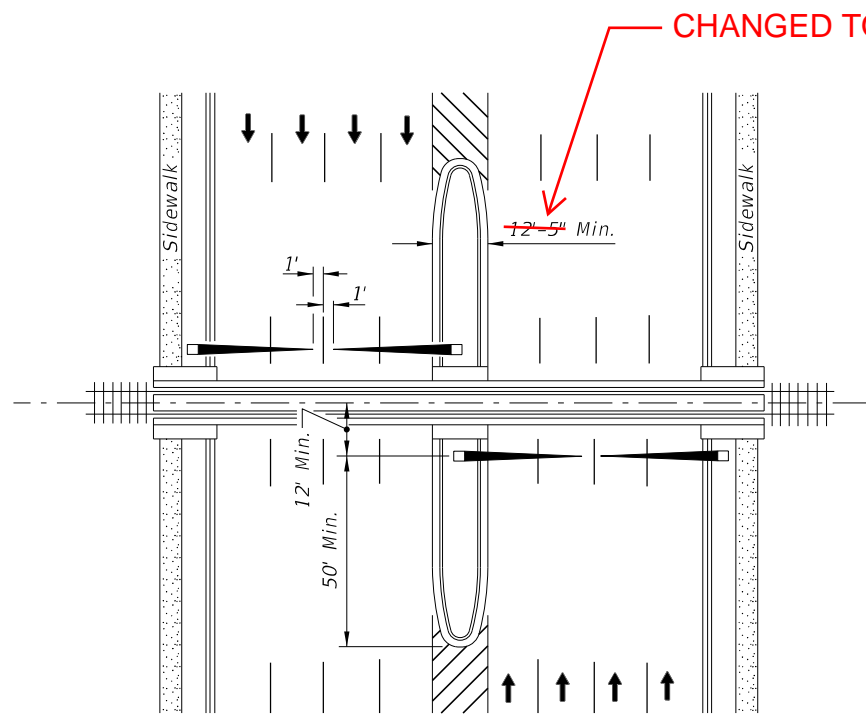
1. The location of flashing warning devices and stop lines shall be established based on future (or present) installation of gate with appropriate track clearances.
2. Where plans call for railroad traffic control devices to be installed in curbed medians, the minimum median width shall be 12'-6".
3. Location of railroad traffic control device is based on the distance available between face of curb & sidewalk. 0' to 6' - Locate device outside sidewalk. Over 6' - Locate device between face of curb and sidewalk.
4. Stop line to be perpendicular to edge of roadway, approx. 15' from nearest rail; or 8' from and parallel to gate when present.
5. When a cantilevered-arm flashing warning device is used, the minimum vertical clearance shall be 17'-6" from above the Crown of Roadway to the Lowest Point of the Overhead Signal Unit.



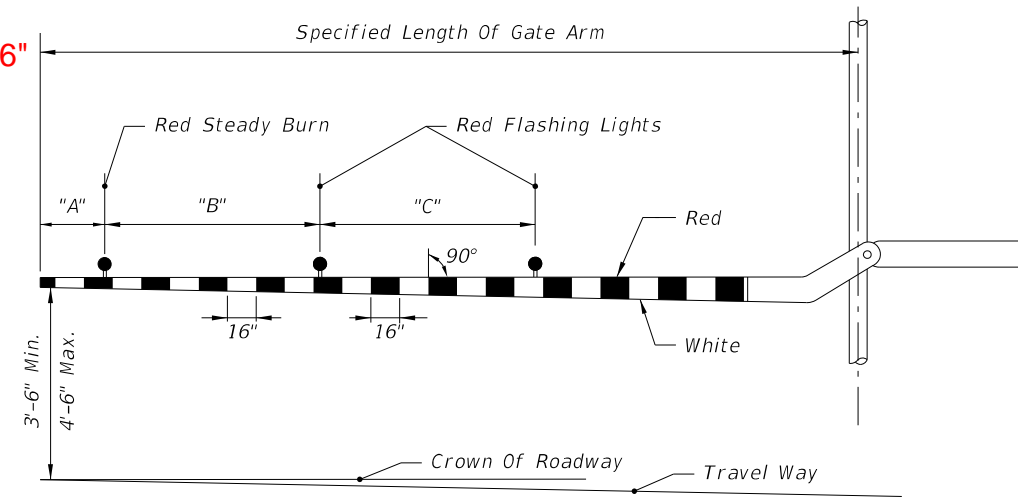
TRAFFIC CONTROL DEVICES FOR CURBED ROADWAY

10/16/2022 2:03:41 PM

LAST REVISION 02/05/21	DESCRIPTION: 11/01/23	FDOT	FY 2023-24 STANDARD PLANS	RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES	INDEX 509-070	SHEET 2 of 3
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PLAN

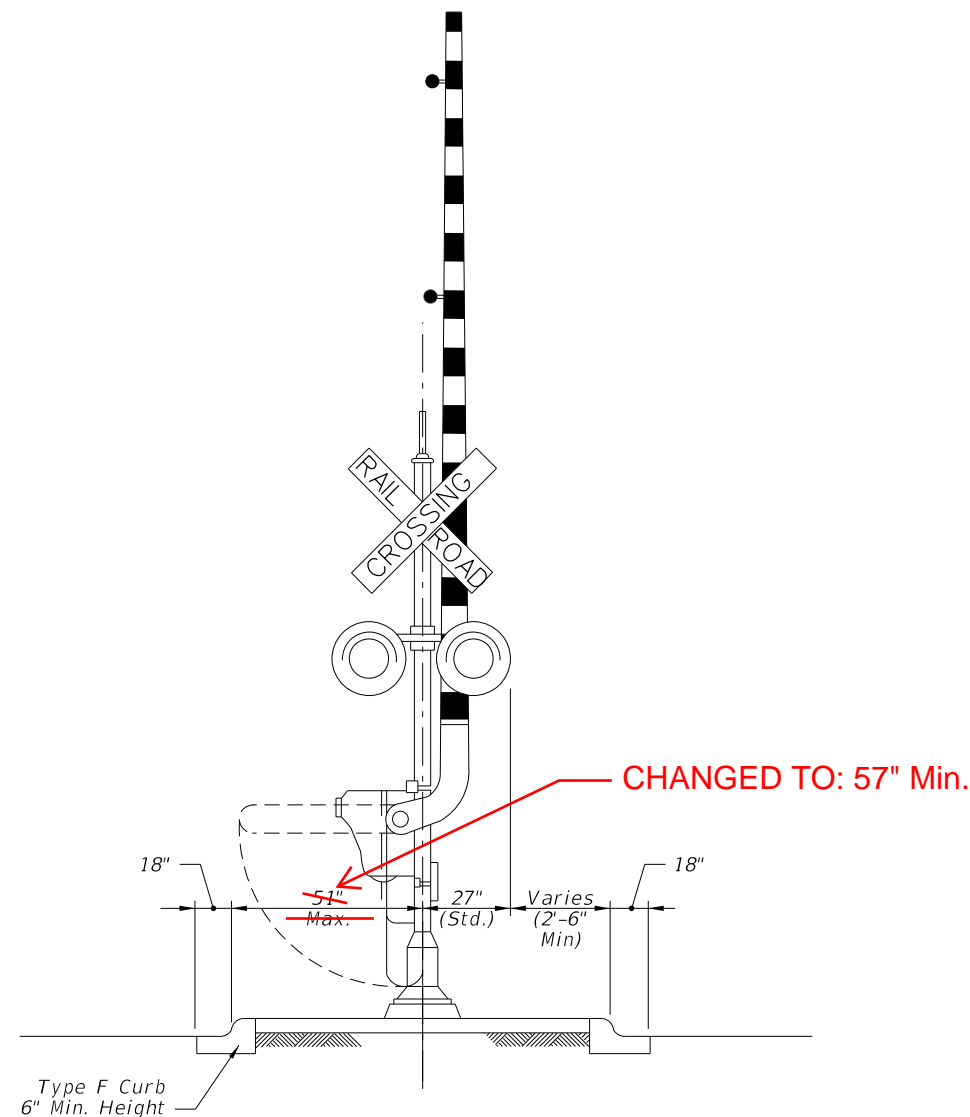


GATE ARM DETAIL

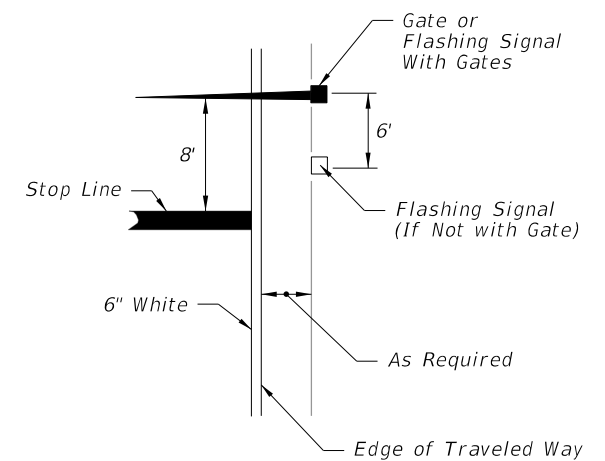
RAILROAD GATE ARM LIGHT SPACING			
Specified Length Of Gate Arm	Dimension "A"	Dimension "B"	Dimension "C"
14 Ft.	6"	36"	5'
15 Ft.	18"	36"	5'
16-17 Ft.	24"	36"	5'
18-19 Ft.	28"	41"	5'
20-23 Ft.	28"	4'	5'
24-28 Ft.	28"	5'	5'
29-31 Ft.	36"	6'	6'
32-34 Ft.	36"	7'	7'
35-37 Ft.	36"	9'	9'
38 And Over	36"	10'	10'

**NOTE:**

For additional information see the "Manual On Uniform Traffic Control Devices", Part 8; The "Traffic Control Handbook", Part VIII; and AASHTO "A Policy On Geometric Design Of Streets And Highways".



MEDIAN SECTION AT SIGNAL GATES



RELATIVE LOCATION OF CROSSING TRAFFIC CONTROL DEVICES

MEDIAN SIGNAL GATES FOR MULTILANE UNDIVIDED URBAN SECTIONS  
(Three or More Driving Lanes in one Direction, 45 mph or less)

10/6/2022 2:03:42 PM

LAST REVISION 02/05/21	DESCRIPTION: 11/01/23
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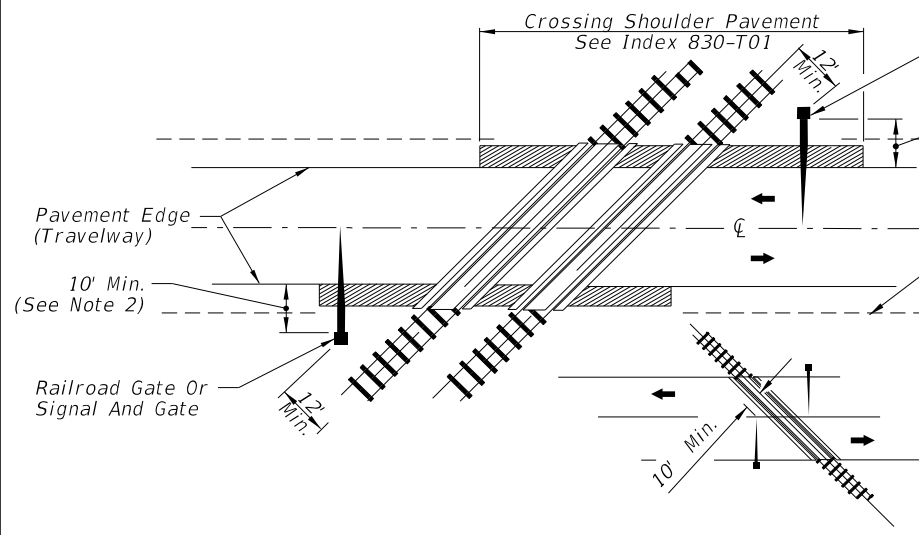


FY 2023-24  
STANDARD PLANS

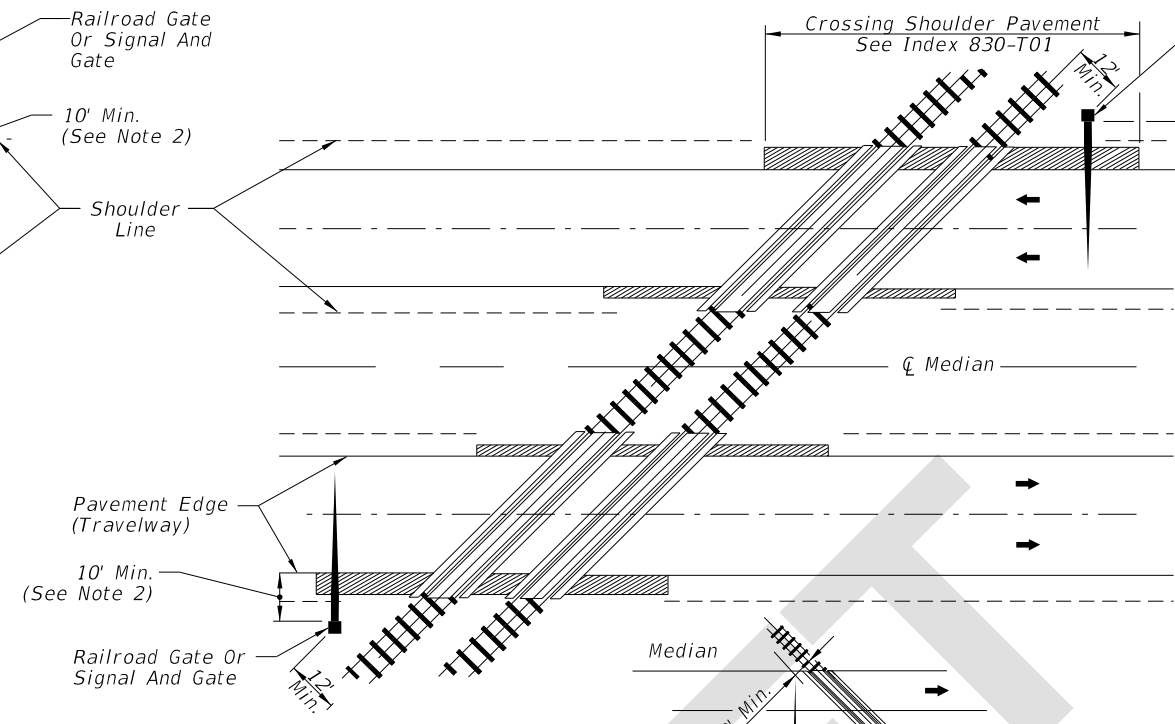
RAILROAD GRADE CROSSING  
TRAFFIC CONTROL DEVICES

INDEX  
509-070

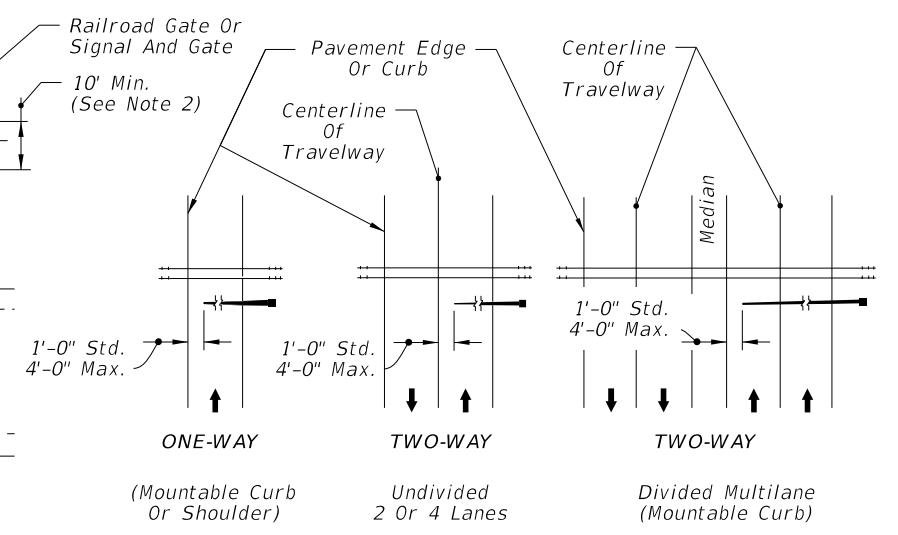
SHEET  
3 of 3



**SIGNAL PLACEMENT AT RAILROAD CROSSING  
(2 - LANE DESIGN)**



**SIGNAL PLACEMENT AT RAILROAD CROSSING  
(4 - LANE DESIGN)**



**FIGURE 1**

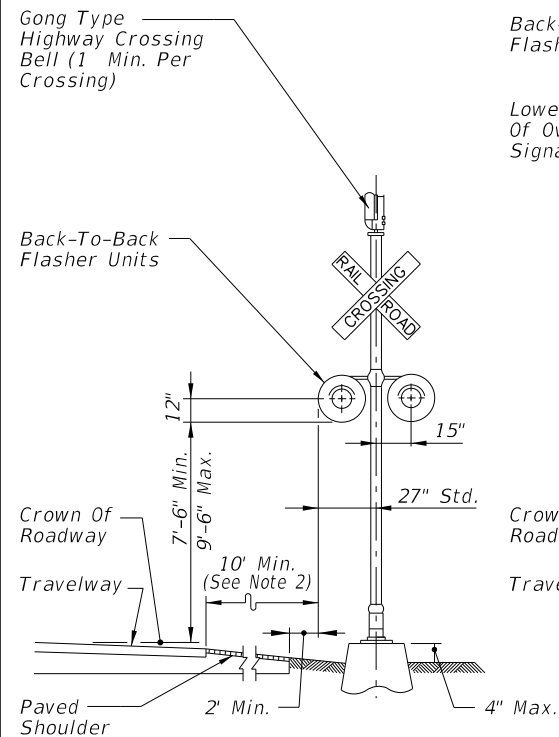
NOTE: Arrows denote direction of travel not pavement markings.

NOTE:

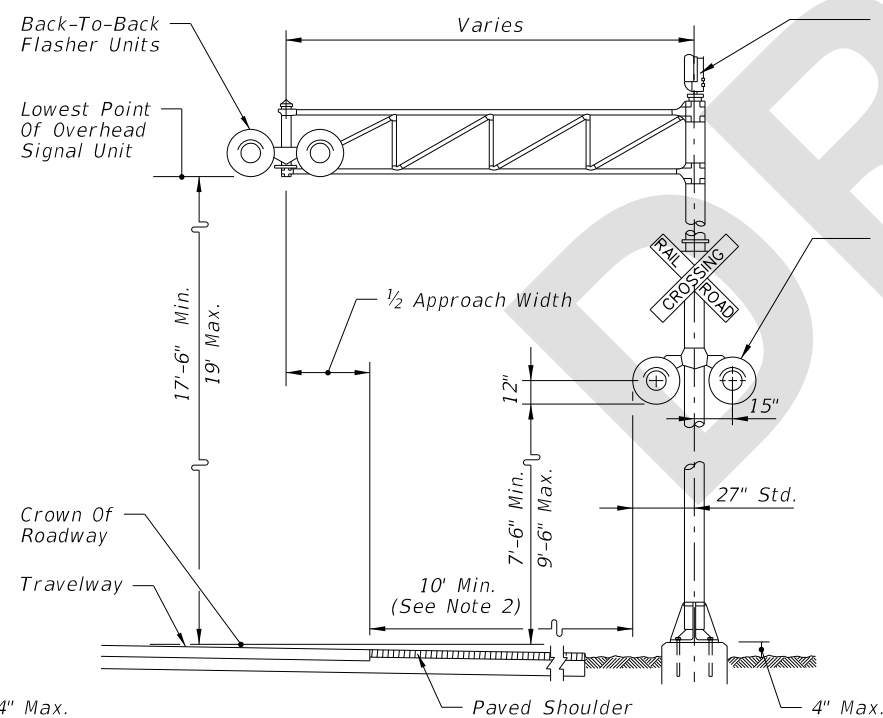
- Two separate foundations may be required (one for signals, one for gate), depending on type of equipment used.
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**GENERAL NOTES:**

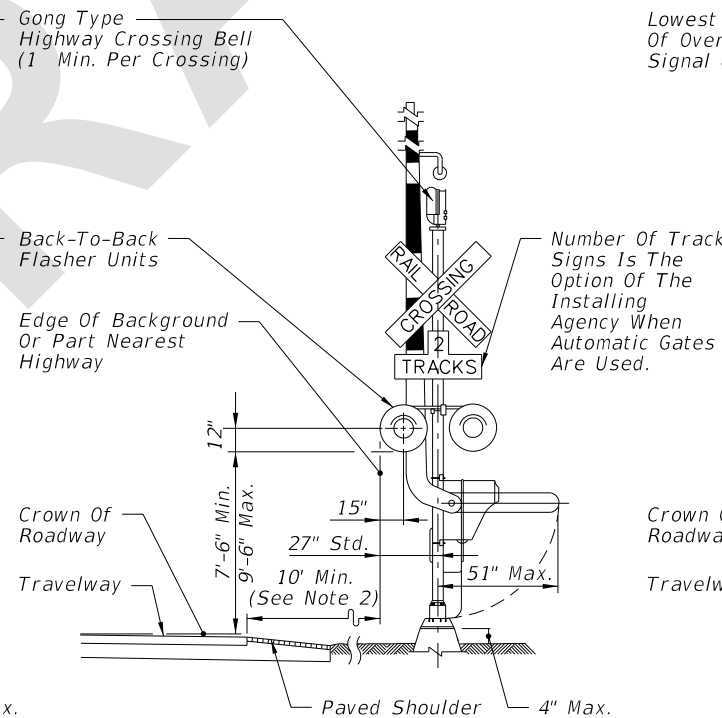
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  - 2 Quadrant flashing warning devices and gates-multiple tracks
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  - 3-4 Quadrant flashing warning devices and gates-multiple tracks



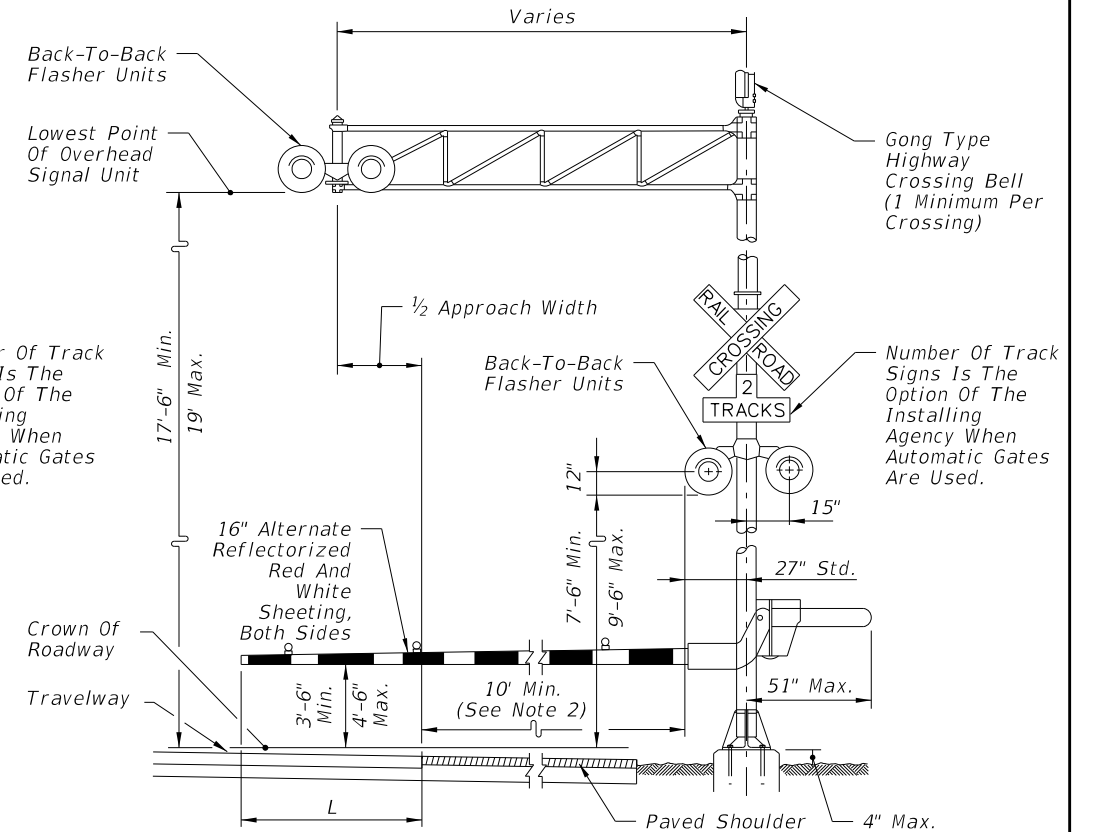
**TYPE I**



**TYPE II**



**TYPE III**

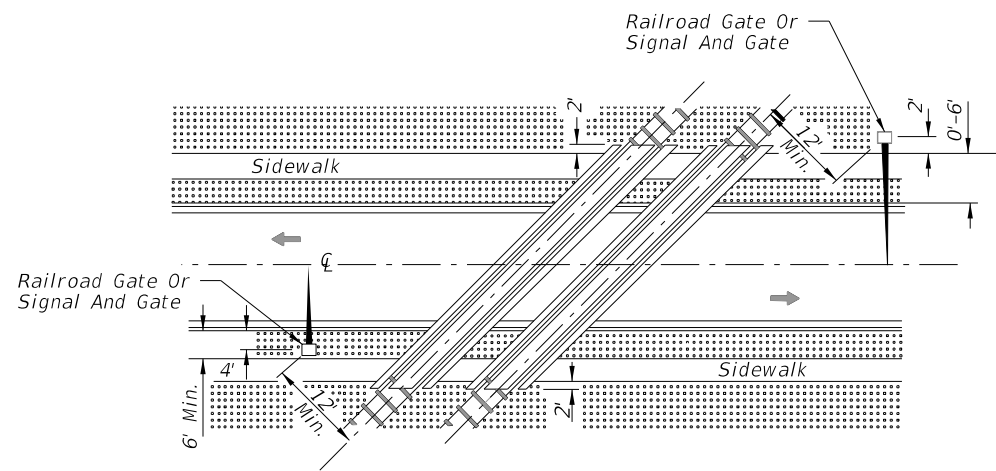


**TYPE IV**

**TRAFFIC CONTROL DEVICES FOR FLUSH SHOULDER ROADWAY**

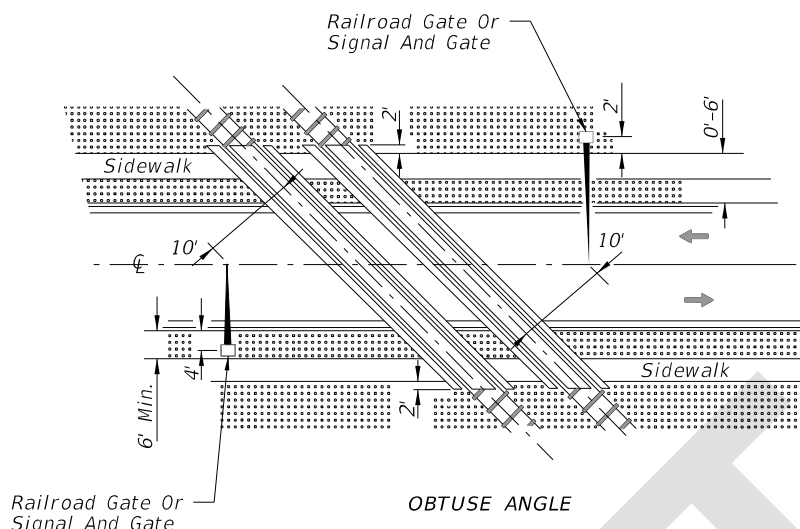
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LAST REVISION 11/01/23	REVISION	DESCRIPTION:		FY 2024-25 STANDARD PLANS	RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES	INDEX 509-070	SHEET 1 of 3
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ACUTE ANGLE (AND RIGHT ANGLE)

SIGNAL PLACEMENT AT RAILROAD CROSSING  
(2 LANES, CURB & GUTTER)

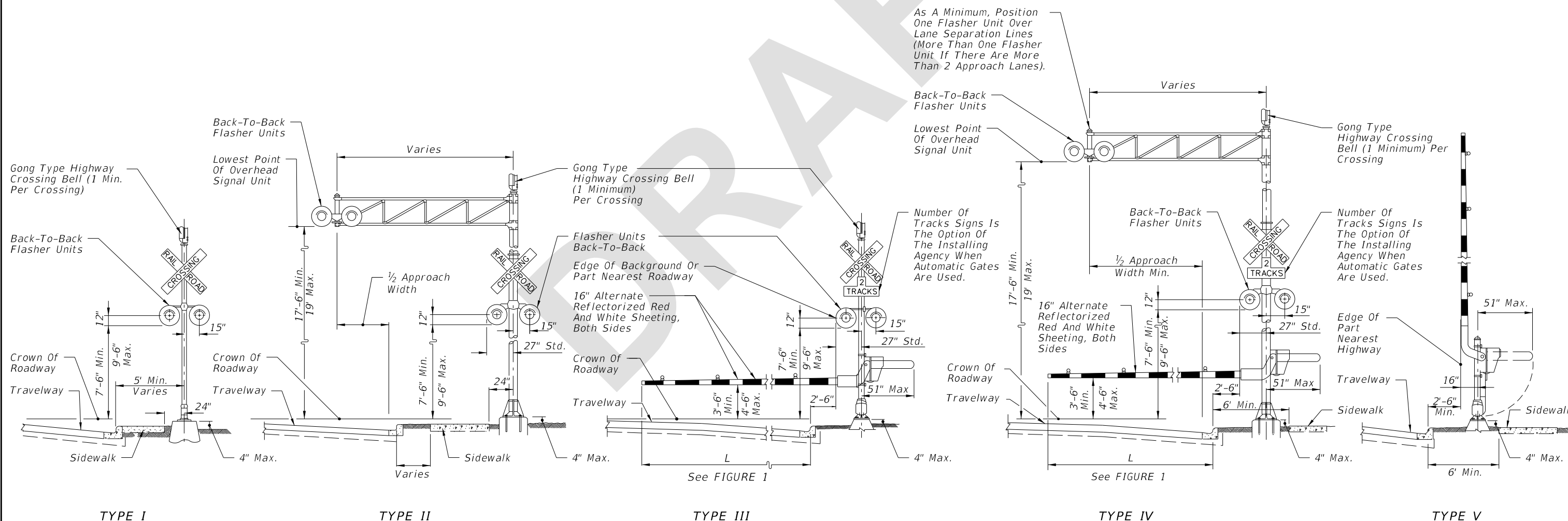


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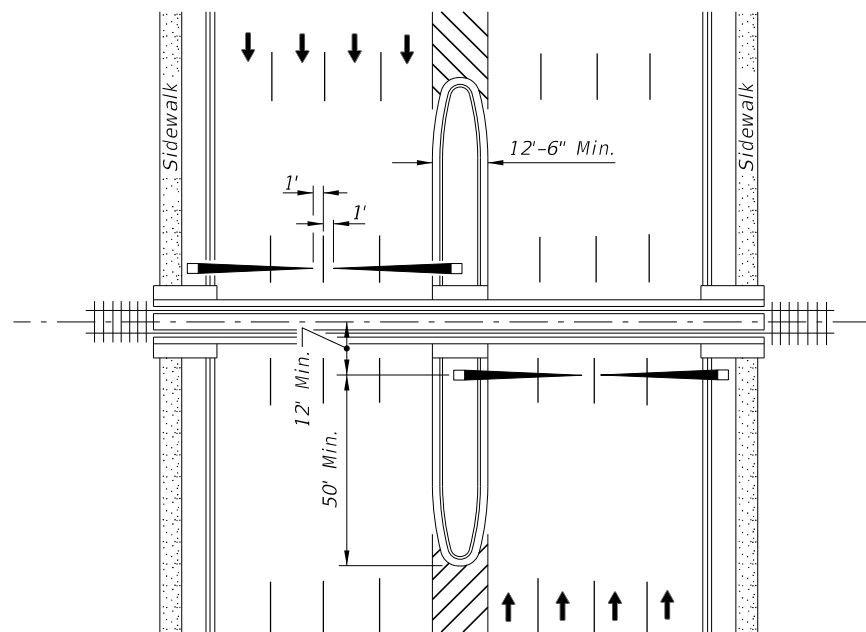


As A Minimum, Position One Flasher Unit Over Lane Separation Lines (More Than One Flasher Unit If There Are More Than 2 Approach Lanes).

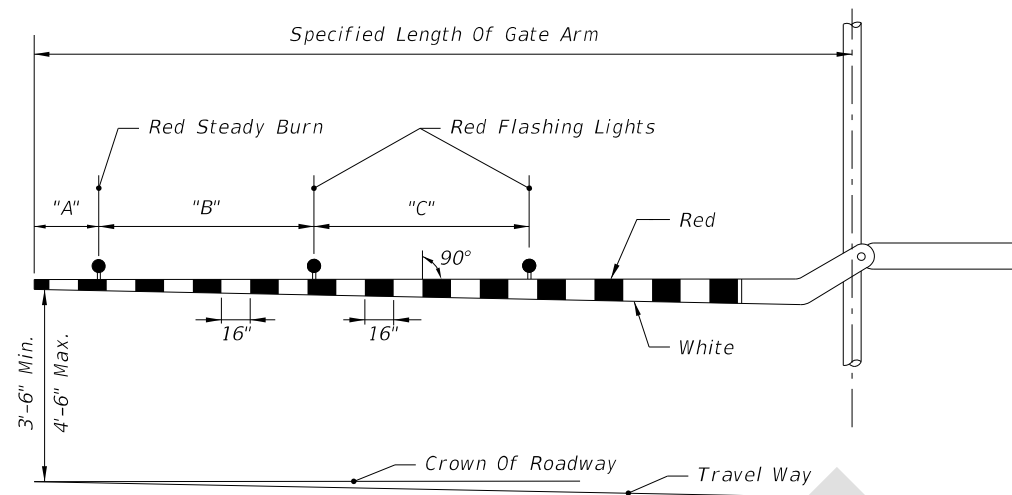
TRAFFIC CONTROL DEVICES FOR CURBED ROADWAY

6/26/2023 7:23:36 AM

LAST REVISION 11/01/23	REVISION	DESCRIPTION:		FY 2024-25 STANDARD PLANS	RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES	INDEX 509-070	SHEET 2 of 3
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PLAN

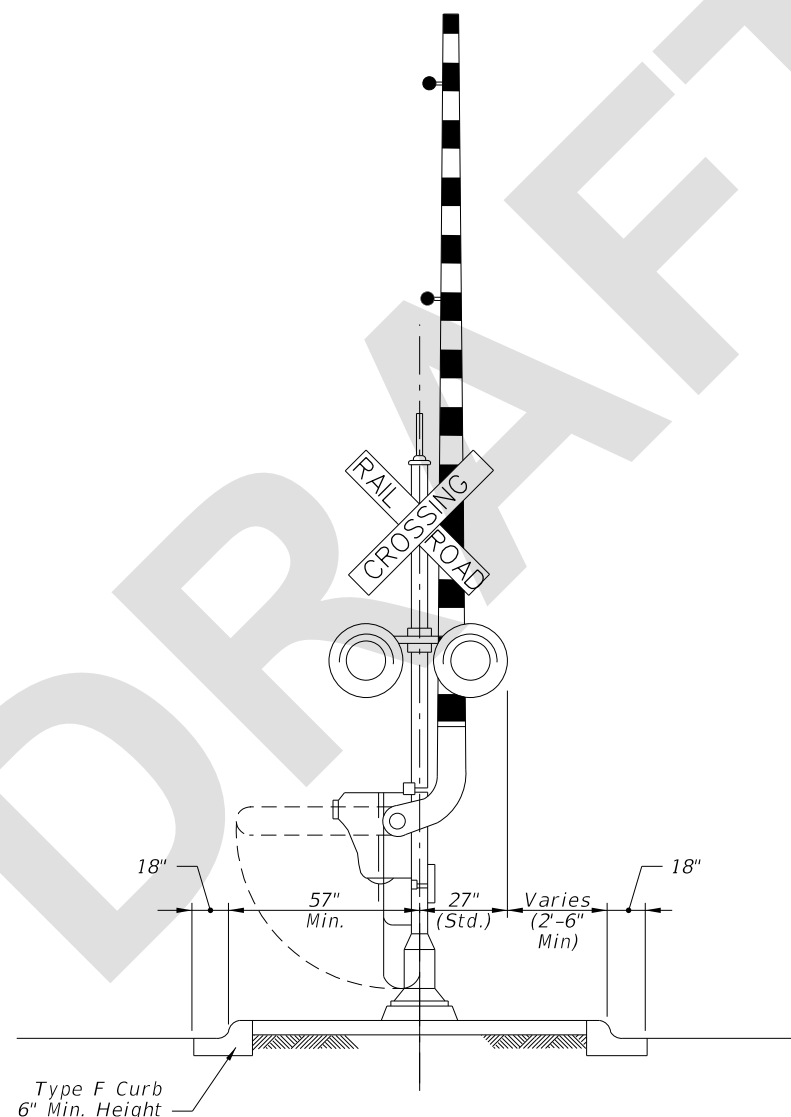


GATE ARM DETAIL

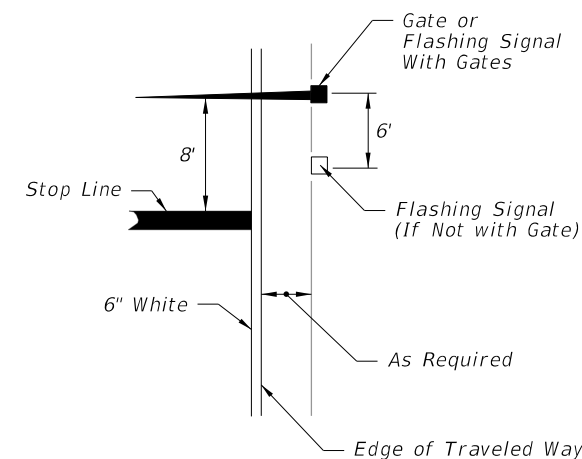
RAILROAD GATE ARM LIGHT SPACING			
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MEDIAN SECTION AT SIGNAL GATES



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MEDIAN SIGNAL GATES FOR MULTILANE UNDIVIDED URBAN SECTIONS  
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6/26/2023 7:24:02 AM