
ORIGINATION FORM

Proposed Revisions to a Standard Plans Index
(Please provide all information — Incomplete forms will be returned)

Contact Information:

Date: January 27, 2021
Originator: Ben Gerrell
Phone: (850) 414-4318
Email: benjamin.gerrell@dot.state.fl.us

Standard Plans:

Index Number: 000-511
Sheet Number (s): 1 and 2
Index Title: Superelevation Transitions - Low Speed Roadways

Summary of the changes:

Sheet 1: Updated Note 4 to match values in FDM; added ONE Lane option to the Facilities to be consistent with FDM.

Sheet 2: Update table to match FDM; Changed ratio in the PROFILE views for clarity.

Commentary / Background:

These revisions to the Superelevation Transition Indexes are proposed to make the Standard Plans more consistent with the FDOT Design Manual and Table 210.9.3.

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

Yes	No	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Other Standard Plans – Rick Jenkins
<input checked="" type="checkbox"/>	<input type="checkbox"/>	FDOT Design Manual – Ben Gerrell
<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:

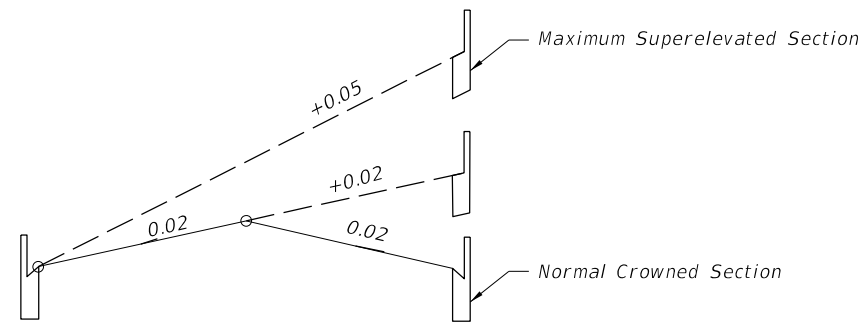
(Email or hand deliver package to Rick Jenkins)

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

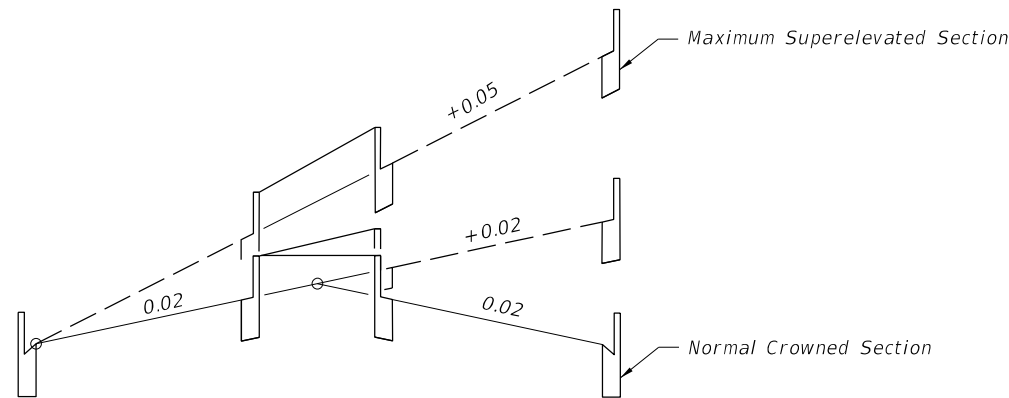
Implementation:

<input type="checkbox"/>	Design Bulletin (Interim)
<input type="checkbox"/>	DCE Memo
<input type="checkbox"/>	Program Mgmt. Bulletin
<input checked="" type="checkbox"/>	FY-Standard Plans (Next Release)

Contact the Roadway Design Office for assistance in completing this form

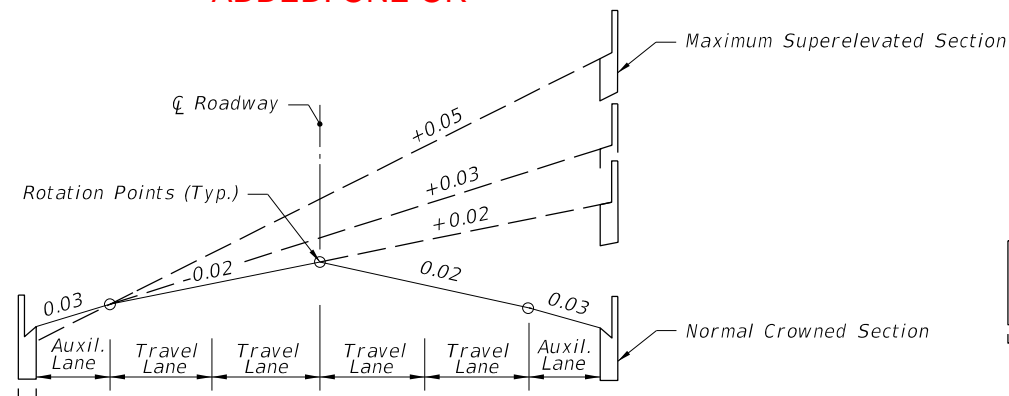


TWO TRAVEL LANES EACH DIRECTION
 ADDED: ONE OR

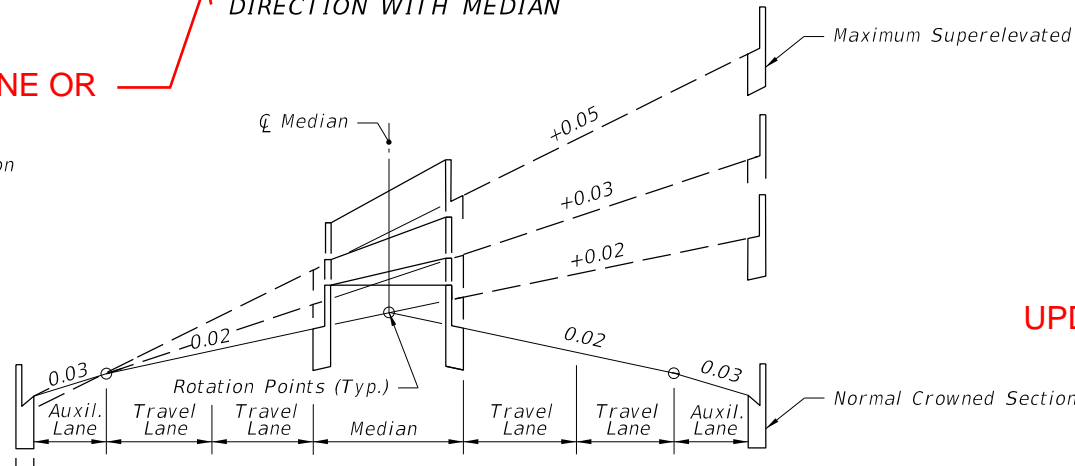


TWO TRAVEL LANES EACH DIRECTION WITH MEDIAN

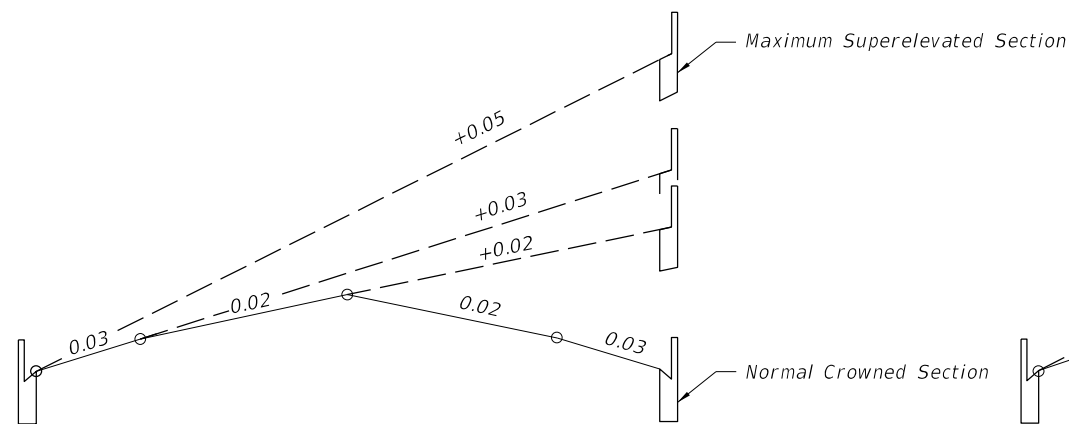
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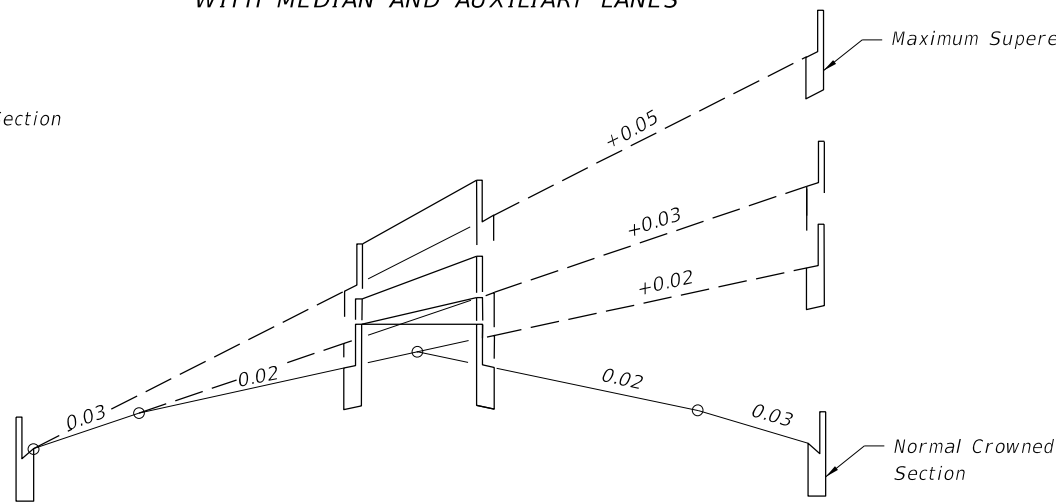
TWO TRAVEL LANES EACH DIRECTION WITH AUXILIARY LANES



TWO TRAVEL LANES EACH DIRECTION WITH MEDIAN AND AUXILIARY LANES



UNDIVIDED FACILITIES



THREE TRAVEL LANES EACH DIRECTION WITH MEDIAN

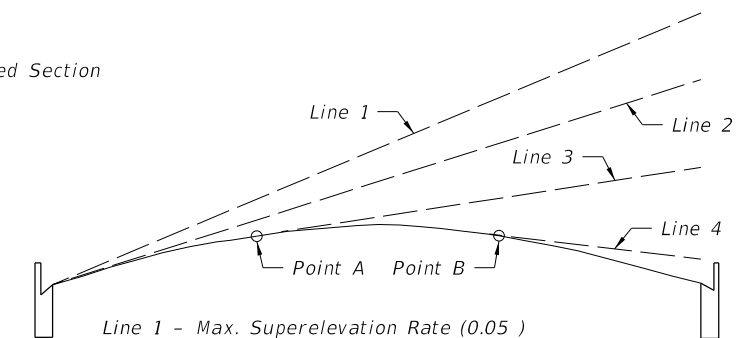
DIVIDED FACILITIES

UPDATED TO: 25-30 MPH

at all angular profile breaks elevation transition.

1. Obtain Superelevation by rotating the plane successively about the break points of the section until the plane has attained a slope equal to that required by the Plans. Should the rotation traverse the entire section and further superelevation be required, the remaining rotation of the plane shall be about the low edge of the inside travel lane. Crown is to be removed in the auxiliary lane to the outside of the curve only when the adjoining travel lanes require positive superelevation.
2. When positive superelevation is required, continue the slope of the pavement across the gutter on the high side.
4. The variable superelevation transition length "L" has a minimum value of 50 feet for design speeds under 40 MPH and 75 feet for design speeds of 40 MPH or greater.
5. Roadway sections having lane arrangements different from those shown, but composed of a series of planes, are superelevation in a similar manner.

UPDATED TO: 40-45 MPH



- Line 1 - Max. Superelevation Rate (0.05)
- Line 2 - Slope Of Parabola At Inside Edge Of Pavt.
- Line 3 - Positive Superelevation Rate Less Than Max. Slope Of Parabola.
- Line 4 - Adverse Superelevation.

When this section is used, superelevation is established by rotating a tangent about the arc of the parabolic crown until the desired slope is attained (points A & B on sketch). The normal parabolic crown will be maintained outside the limits of the plane thus formed.

PARABOLIC SECTION

SUPERELEVATION TRANSITION SECTIONS FOR LOW SPEED HIGHWAYS

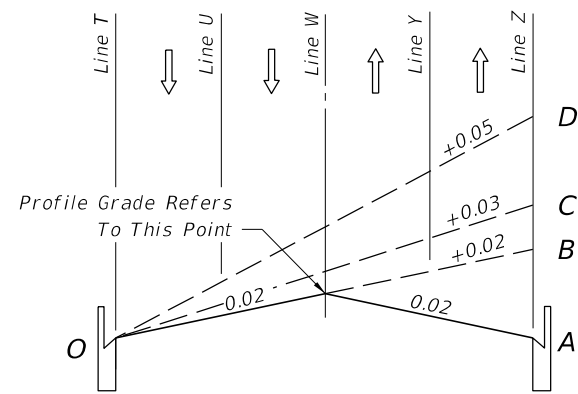
10/9/2020 1:07:33 PM

LAST REVISION	DESCRIPTION:
11/01/18	
	11/01/21

	FY 2021-22 STANDARD PLANS
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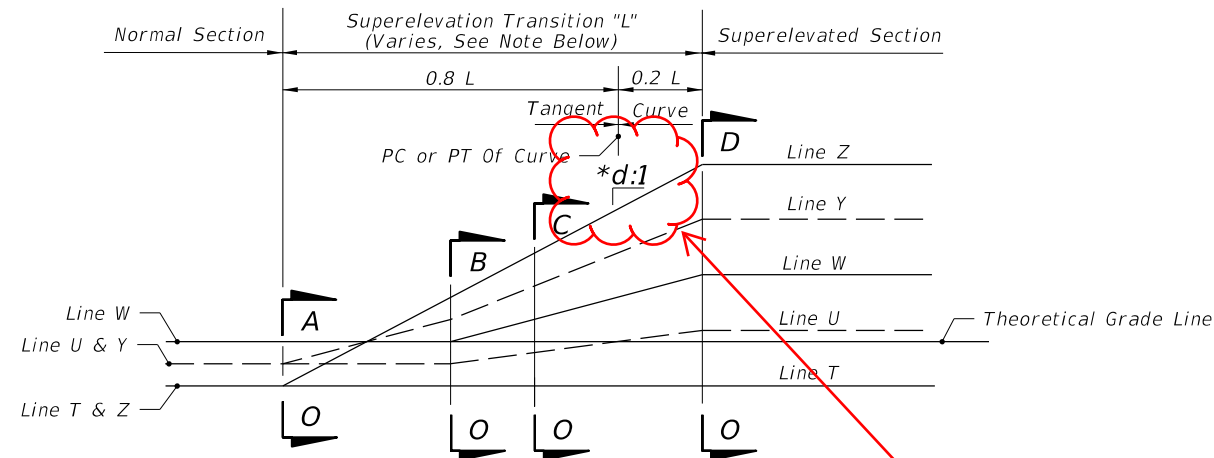
SUPERELEVATION TRANSITIONS - LOW SPEED HIGHWAYS
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INDEX	SHEET
000-511	1 of 2



SECTION 0-A to 0-D

TWO LANES EACH DIRECTION

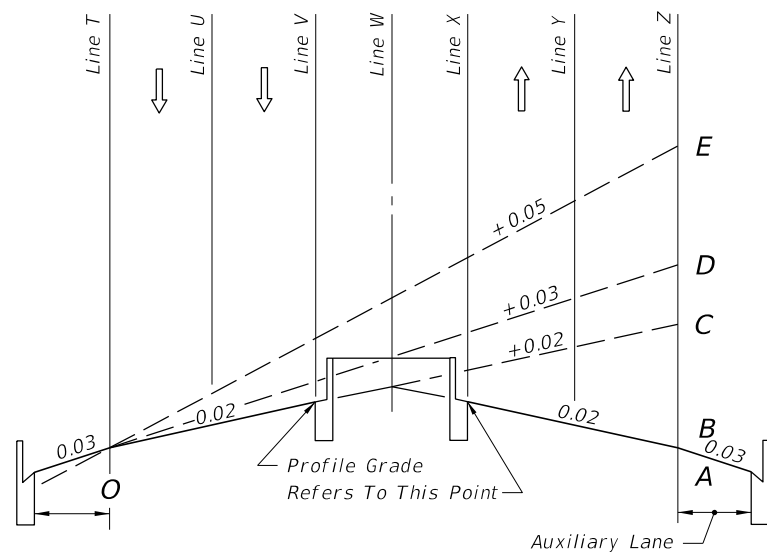


PROFILE

CHANGED TO: 1 ^d

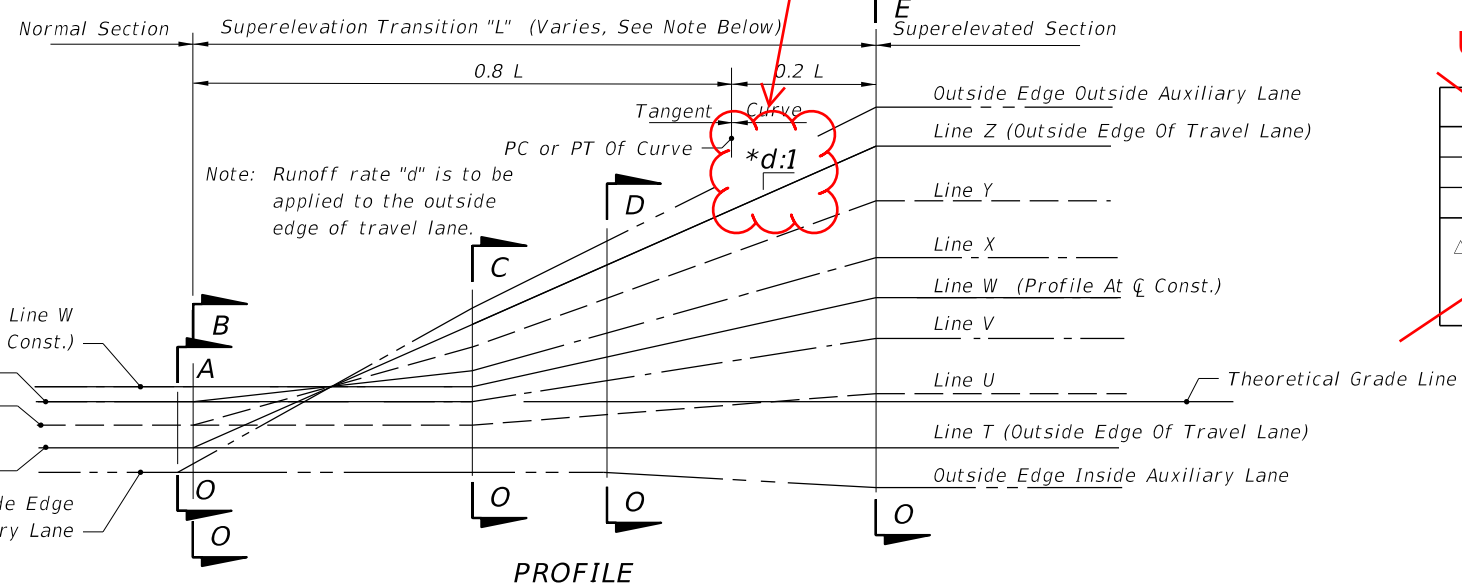
LINE	DESCRIPTION
T	Inside Travel Lane
U	Inside Lane Line
V	Inside Median Edge Pavement
W	℄ Construction
X	Outside Median Edge Pavement
Y	Outside Lane Line
Z	Outside Travel Lane

Inside And Outside Are Relative To Curve Center



SECTION 0-A to 0-E

TWO LANES EACH DIRECTION WITH MEDIAN AND AUXILIARY LANE



PROFILE

UPDATED TABLE

*d (Slope Ratio)	
30 MPH	1: 100
40 MPH	1: 125
45 MPH Δ	1: 150

Δ 1: 125 May Be Used For 45 MPH Under Restricted Conditions.

Note: The sections and profiles shown are examples of superelevation transitions. Similar schemes should be used for roadways having other sections.

EXAMPLE SUPERELEVATION SECTIONS AND PROFILES FOR LOW SPEED HIGHWAYS

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11/01/21	

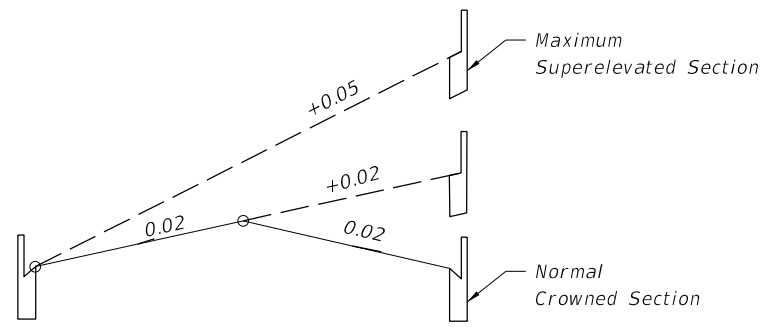


FY 2021-22
STANDARD PLANS

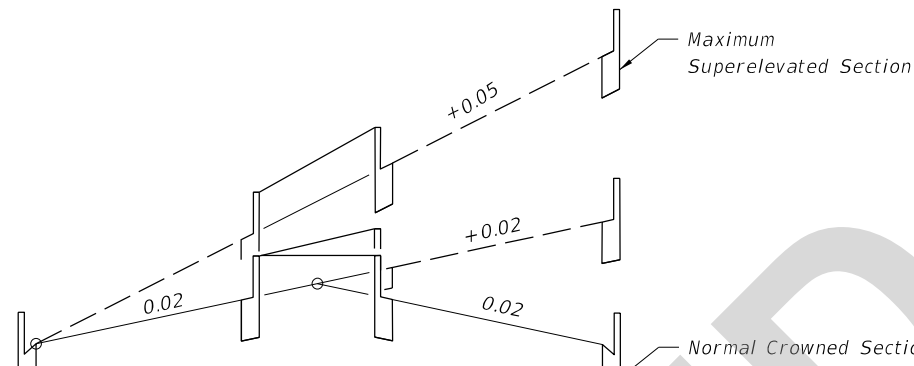
SUPERELEVATION TRANSITIONS -
LOW SPEED HIGHWAYS

INDEX
000-511

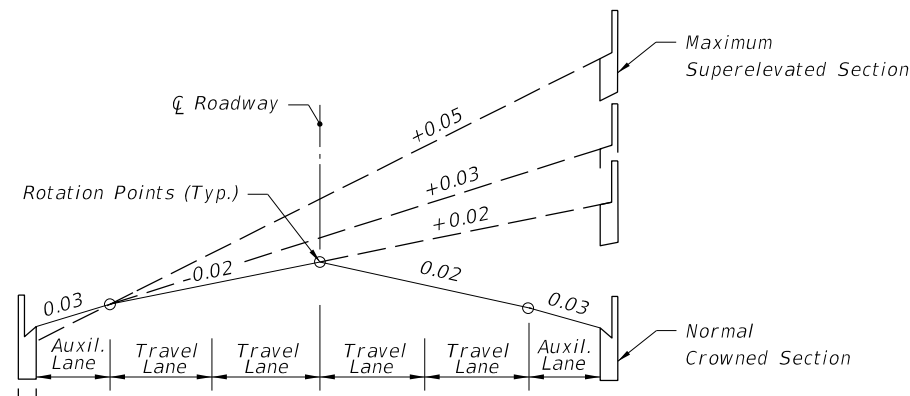
SHEET
2 of 2



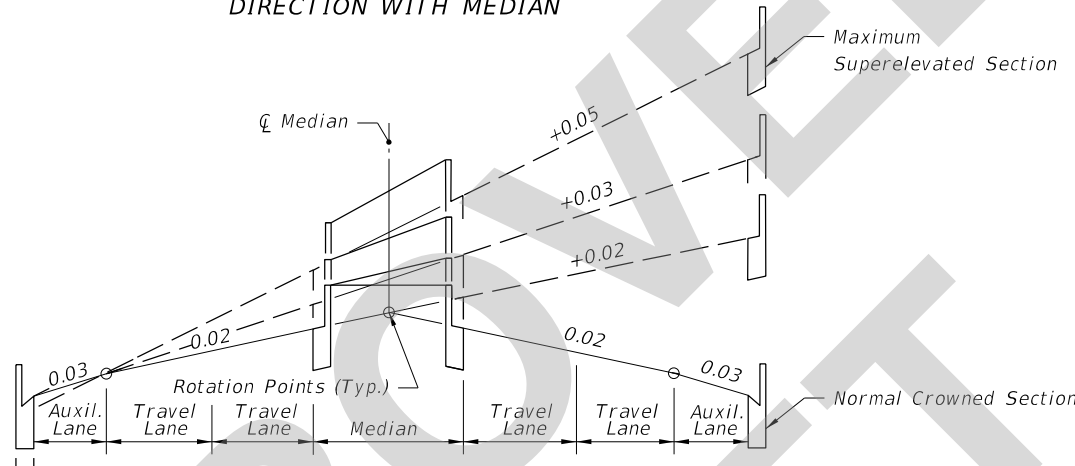
ONE OR TWO TRAVEL LANES EACH DIRECTION



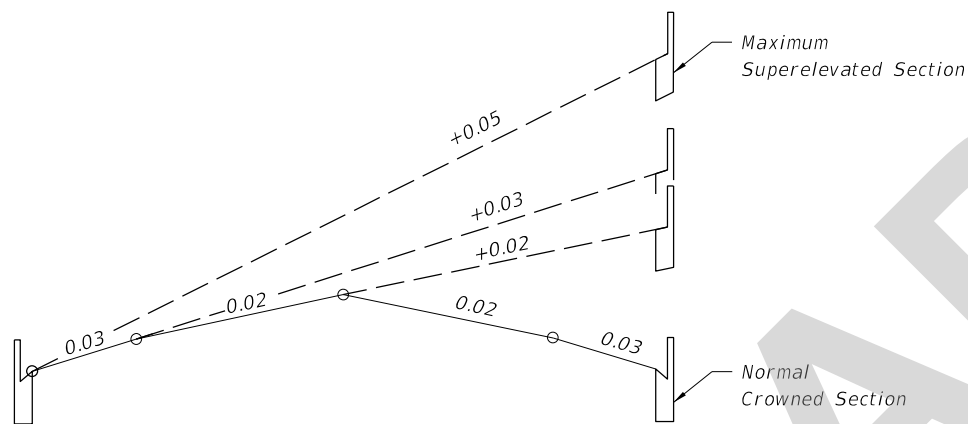
ONE OR TWO TRAVEL LANES EACH DIRECTION WITH MEDIAN



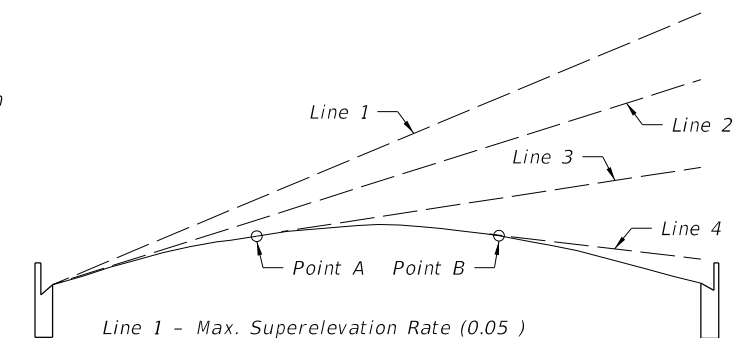
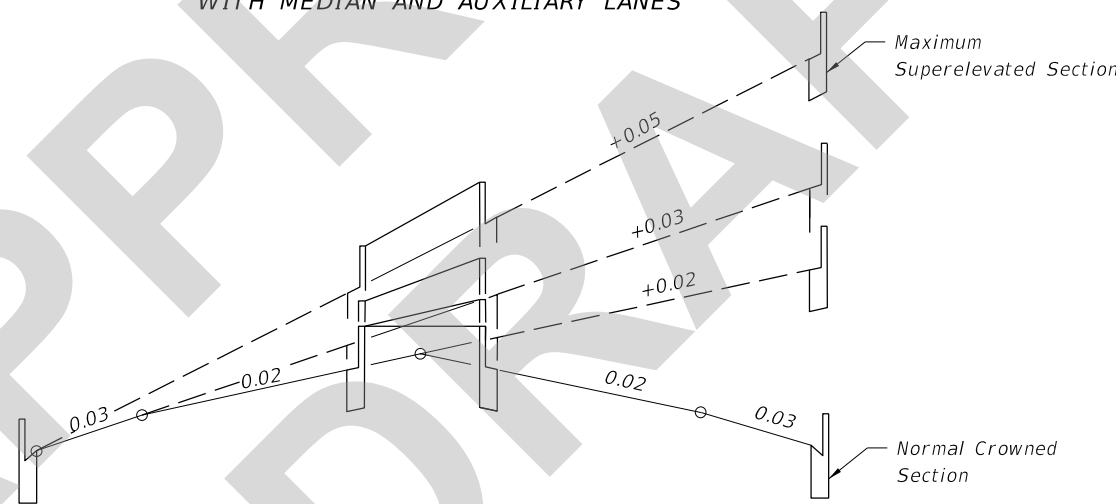
TWO TRAVEL LANES EACH DIRECTION WITH AUXILIARY LANES



TWO TRAVEL LANES EACH DIRECTION WITH MEDIAN AND AUXILIARY LANES



THREE TRAVEL LANES EACH DIRECTION WITH MEDIAN



Line 1 - Max. Superlevation Rate (0.05)
 Line 2 - Slope Of Parabola At Inside Edge Of Pavt.
 Line 3 - Positive Superlevation Rate Less Than Max. Slope Of Parabola.
 Line 4 - Adverse Superlevation.

When this section is used, superlevation is established by rotating a tangent about the arc of the parabolic crown until the desired slope is attained (points A & B on sketch). The normal parabolic crown will be maintained outside the limits of the plane thus formed.

GENERAL NOTES:

1. Obtain Superlevation by rotating the plane successively about the break points of the section until the plane has attained a slope equal to that required by the Plans. Should the rotation traverse the entire section and further superlevation be required, the remaining rotation of the plane shall be about the low edge of the inside travel lane. Crown is to be removed in the auxiliary lane to the outside of the curve only when the adjoining travel lanes require positive superlevation.
2. When positive superlevation is required, continue the slope of the pavement across the gutter on the high side.
3. Place short vertical curves at all angular profile breaks within the limits of the superlevation transition.
4. The variable superlevation transition length "L" has a minimum value of 50 feet for design speeds of 25-30 MPH and 75 feet for design speeds of 40-45 MPH.
5. Roadway sections having lane arrangements different from those shown, but composed of a series of planes, are superlevation in a similar manner.

UNDIVIDED FACILITIES

DIVIDED FACILITIES

PARABOLIC SECTION

SUPERELEVATION TRANSITION SECTIONS FOR LOW SPEED HIGHWAYS

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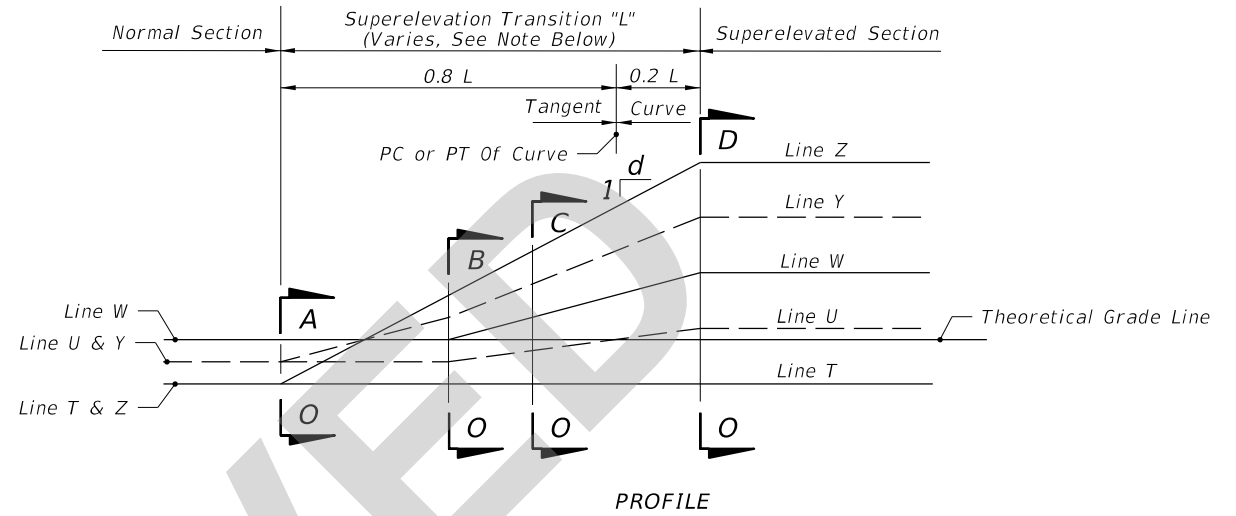
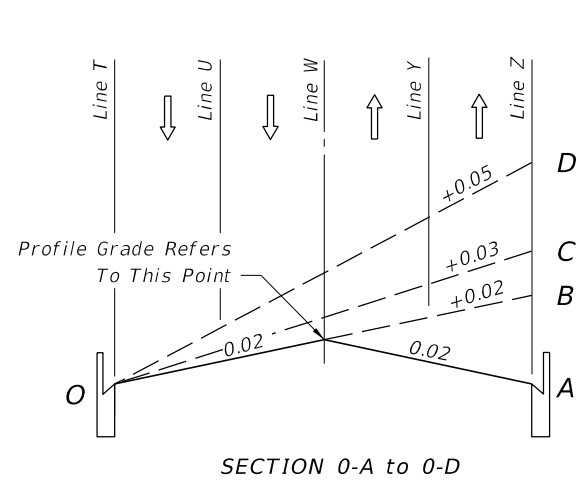
LAST REVISION 11/01/21	REVISION	DESCRIPTION:		FY 2022-23 STANDARD PLANS	SUPERELEVATION TRANSITIONS - LOW SPEED HIGHWAYS	INDEX 000-511	SHEET 1 of 2
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NOTE:

The sections and profiles shown are examples of superelevation transitions. Similar schemes should be used for roadways having other sections.

LINE	DESCRIPTION
T	Inside Travel Lane
U	Inside Lane Line
V	Inside Median Edge Pavement
W	℄ Construction
X	Outside Median Edge Pavement
Y	Outside Lane Line
Z	Outside Travel Lane

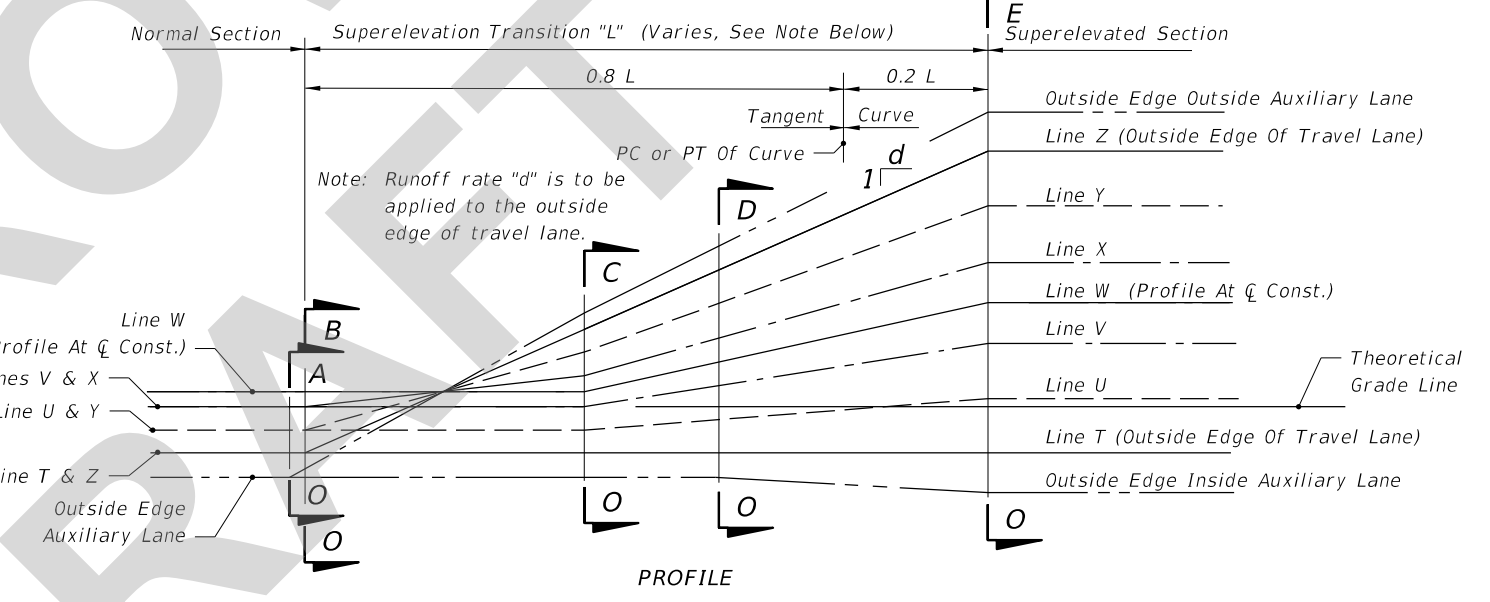
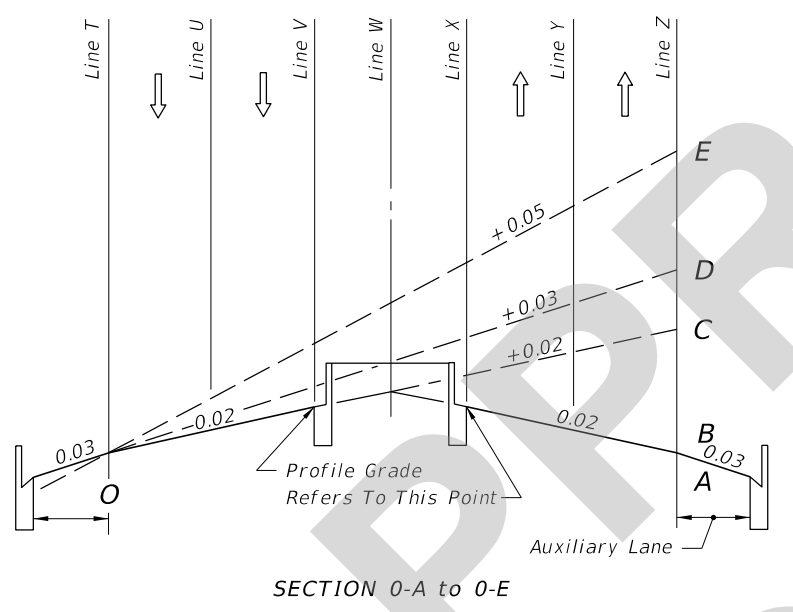
Inside And Outside Are Relative To Curve Center



TWO LANES EACH DIRECTION

SLOPE RATIOS FOR SUPERELEVATION TRANSITIONS	
DESIGN SPEED MPH	1:d
25-35	1:100
40	1:125
45	1:150

1:125 May Be Used For 45 mph Under Restricted Conditions.



TWO LANES EACH DIRECTION WITH MEDIAN AND AUXILIARY LANE

EXAMPLE SUPERELEVATION SECTIONS AND PROFILES FOR LOW SPEED HIGHWAYS

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