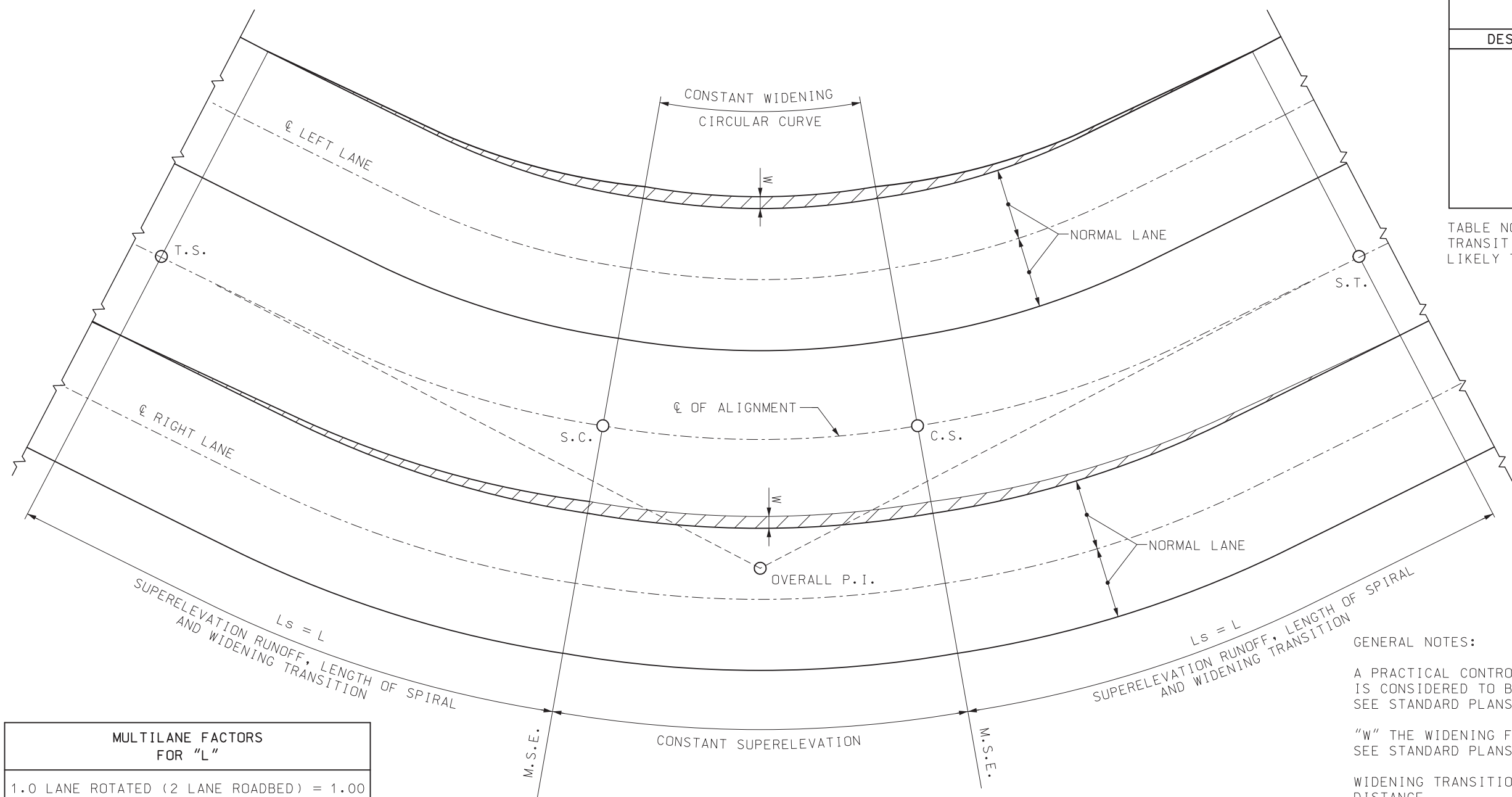


MAXIMUM RADIUS FOR USE OF A SPIRAL CURVE TRANSITION	
DESIGN SPEED	MAXIMUM RADIUS (FT)
30	456
35	620
40	810
45	1025
50	1265
55	1531
60	1822
65	2138
70	2479

TABLE NOTE: THE EFFECT OF SPIRAL CURVE TRANSITION ON LATERAL ACCELERATION IS LIKELY TO BE NEGLIGIBLE FOR LARGER RADII.



GENERAL NOTES:

A PRACTICAL CONTROL FOR THE LENGTH OF SPIRAL "Ls" IS CONSIDERED TO BE THE SUPERELEVATION RUNOFF "L", SEE STANDARD PLANS 203.22 SHEET 1 OF 2.

"W" THE WIDENING FOR SURFACING AT INSIDE SHOULDER, SEE STANDARD PLANS 203.22 SHEET 2 OF 2.

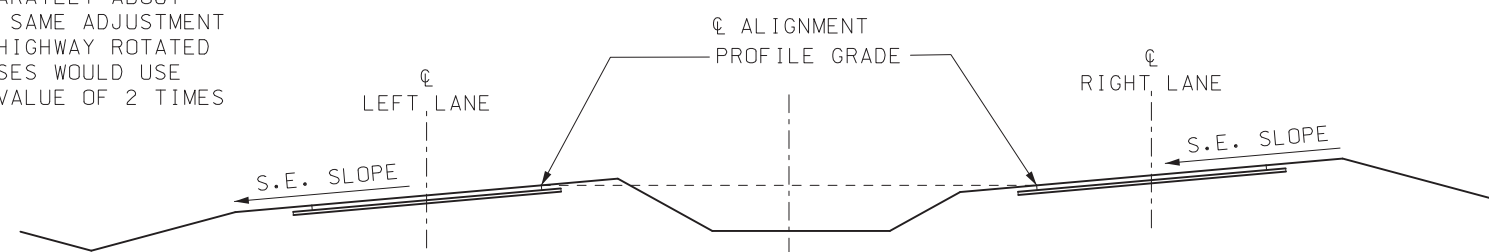
WIDENING TRANSITION VARIES IN DIRECT PROPORTION TO DISTANCE.

SPIRAL CURVES ARE USED ON ALL ROADWAYS THAT HAVE DESIGN TRAFFIC GREATER THAN 400 VEHICLES PER DAY, AND HAVE A RADIUS LESS THAN THE VALUES LISTED IN THE "MAXIMUM RADIUS FOR USE OF A SPIRAL CURVE TRANSITION" TABLE.

MULTILANE FACTORS FOR "L"
1.0 LANE ROTATED (2 LANE ROADBED) = 1.00
1.5 LANE ROTATED (3 LANE ROADBED) = 1.25
2.0 LANE ROTATED (4 LANE ROADBED) = 1.50
2.5 LANE ROTATED (5 LANE ROADBED) = 1.75
3.0 LANE ROTATED (6 LANE ROADBED) = 2.00
3.5 LANE ROTATED (7 LANE ROADBED) = 2.25

EXAMPLE: A SIX LANE DIVIDED HIGHWAY (3 LANES IN EACH DIRECTION) ROTATED SEPARATELY ABOUT ITS MEDIAN EDGES WOULD USE THE SAME ADJUSTMENT VALUE AS A SIX LANE UNDIVIDED HIGHWAY ROTATED ABOUT THE CENTERLINE. BOTH CASES WOULD USE THE 3 LANE ROTATED ADJUSTMENT VALUE OF 2 TIMES THE VALUE OF ONE LANE ROTATED.

SPIRALED CURVE AND WIDENING TRANSITIONS



SECTION ON SUPERELEVATED CURVE
CURVE TO LEFT (ILLUSTRATED)

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1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI
KENNETH L. VOSS
NUMBER PE-2002016747
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

SUPERELEVATION, SPIRALS AND WIDENING DIVIDED HIGHWAYS

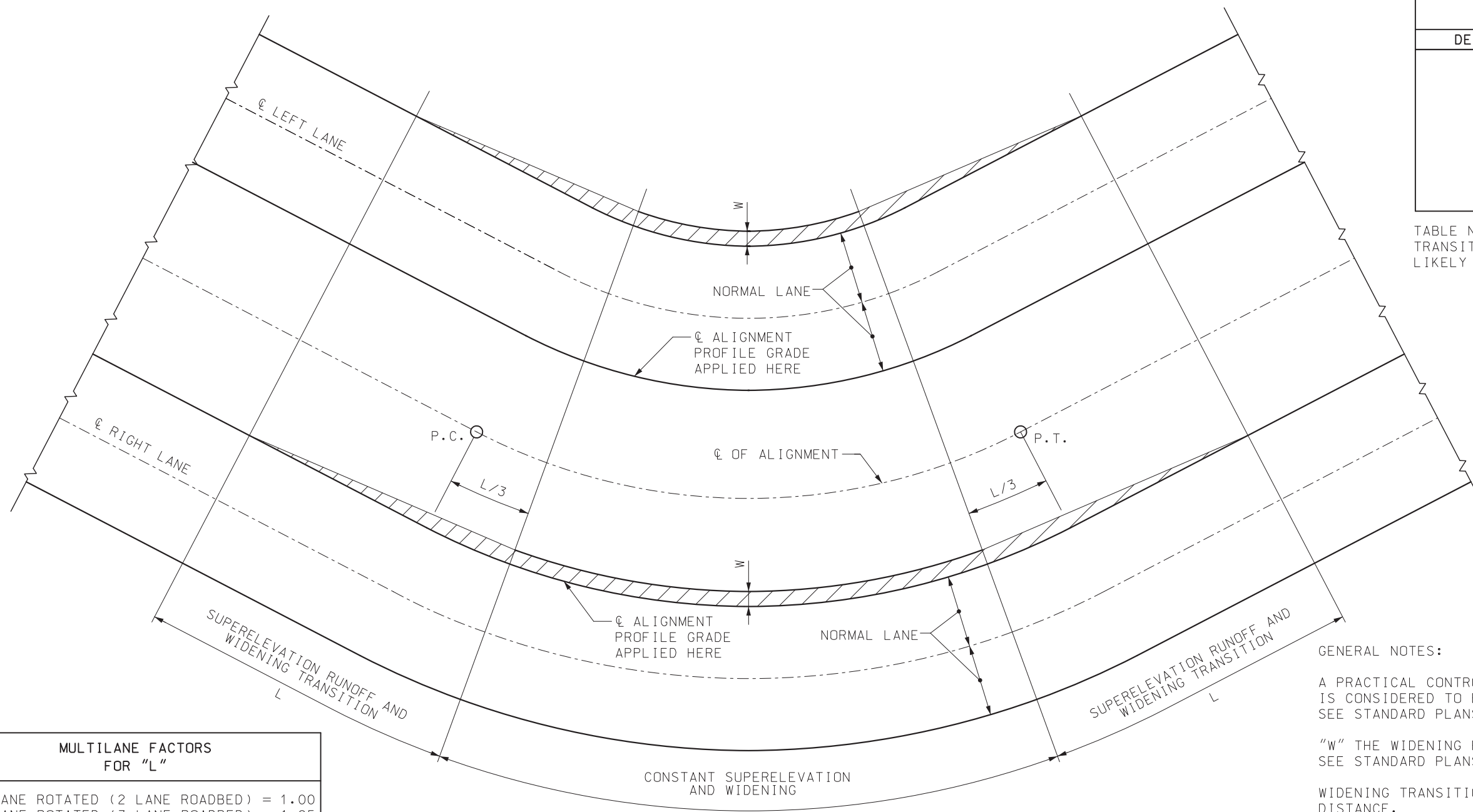
DATE EFFECTIVE: 07/01/2017
DATE PREPARED: 1/16/2024

203.21K

SHEET NO. 1 OF 3

MAXIMUM RADIUS FOR USE OF A SPIRAL CURVE TRANSITION	
DESIGN SPEED	MAXIMUM RADIUS (FT)
30	456
35	620
40	810
45	1025
50	1265
55	1531
60	1822
65	2138
70	2479

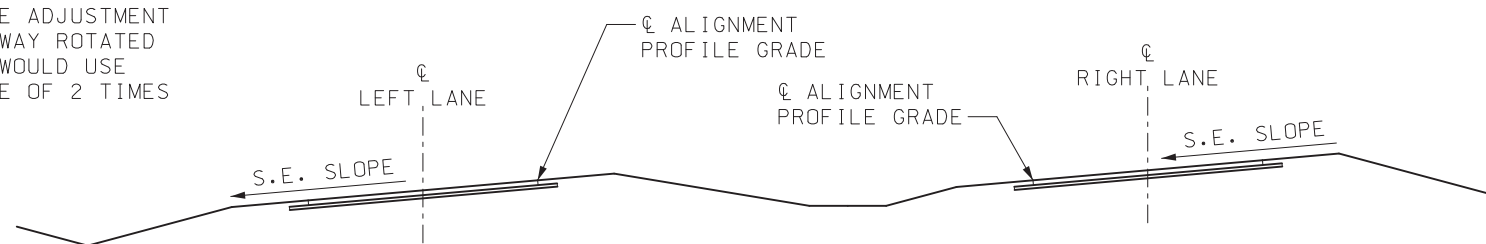
TABLE NOTE: THE EFFECT OF SPIRAL CURVE TRANSITION ON LATERAL ACCELERATION IS LIKELY TO BE NEGLIGIBLE FOR LARGER RADII.



MULTILANE FACTORS FOR "L"
1.0 LANE ROTATED (2 LANE ROADBED) = 1.00
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3.5 LANE ROTATED (7 LANE ROADBED) = 2.25

EXAMPLE: A SIX LANE DIVIDED HIGHWAY (3 LANES IN EACH DIRECTION) ROTATED SEPARATELY ABOUT ITS MEDIAN EDGES WOULD USE THE SAME ADJUSTMENT VALUE AS A SIX LANE UNDIVIDED HIGHWAY ROTATED ABOUT THE CENTERLINE. BOTH CASES WOULD USE THE 3 LANE ROTATED ADJUSTMENT VALUE OF 2 TIMES THE VALUE OF ONE LANE ROTATED.

SUPERELEVATION RUNOFF AND WIDENING TRANSITIONS WITHOUT SPIRALS



SECTION ON SUPERELEVATED CURVE
CURVE TO LEFT (ILLUSTRATED)

GENERAL NOTES:

A PRACTICAL CONTROL FOR THE LENGTH OF SPIRAL "Ls" IS CONSIDERED TO BE THE SUPERELEVATION RUNOFF "L", SEE STANDARD PLANS 203.22 SHEET 1 OF 2.

"W" THE WIDENING FOR SURFACING AT INSIDE SHOULDER, SEE STANDARD PLANS 203.22 SHEET 2 OF 2.

WIDENING TRANSITION VARIES IN DIRECT PROPORTION TO DISTANCE.

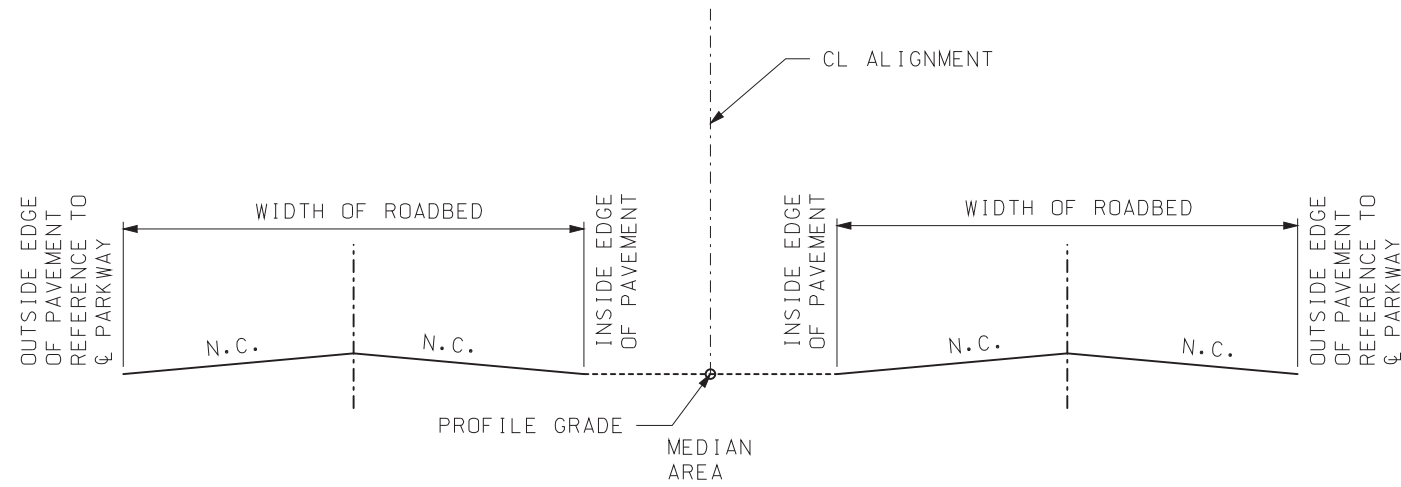
SPIRAL CURVES ARE USED ON ALL ROADWAYS THAT HAVE DESIGN TRAFFIC GREATER THAN 400 VEHICLES PER DAY, AND HAVE A RADIUS LESS THAN THE VALUES LISTED IN THE "MAXIMUM RADIUS FOR USE OF A SPIRAL CURVE TRANSITION" TABLE.

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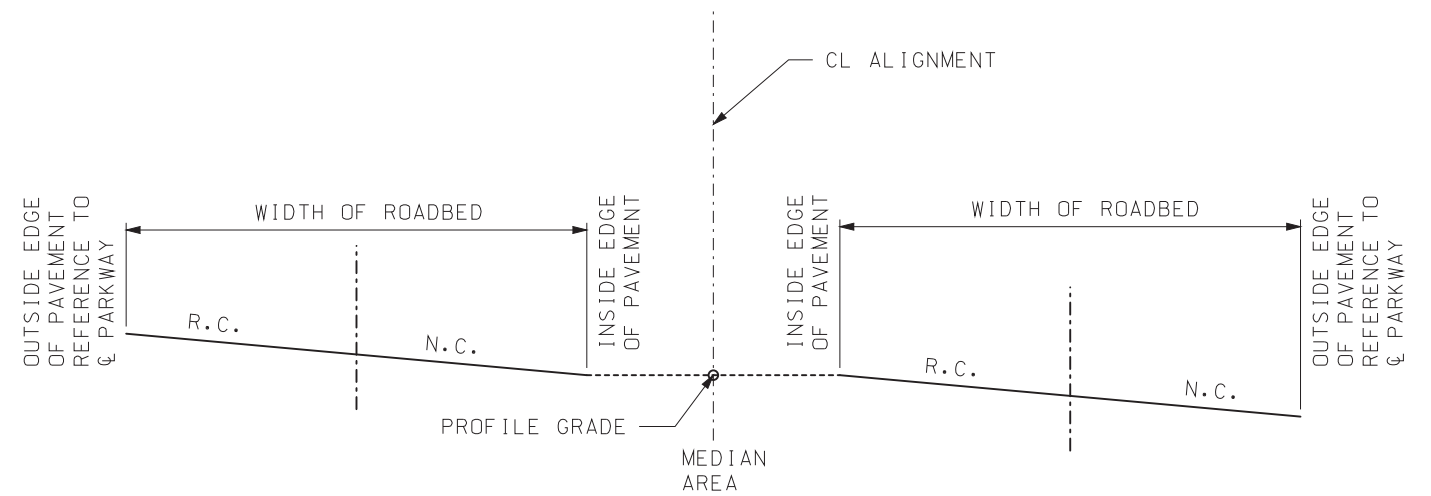
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SUPERELEVATION, SPIRALS AND WIDENING DIVIDED HIGHWAYS

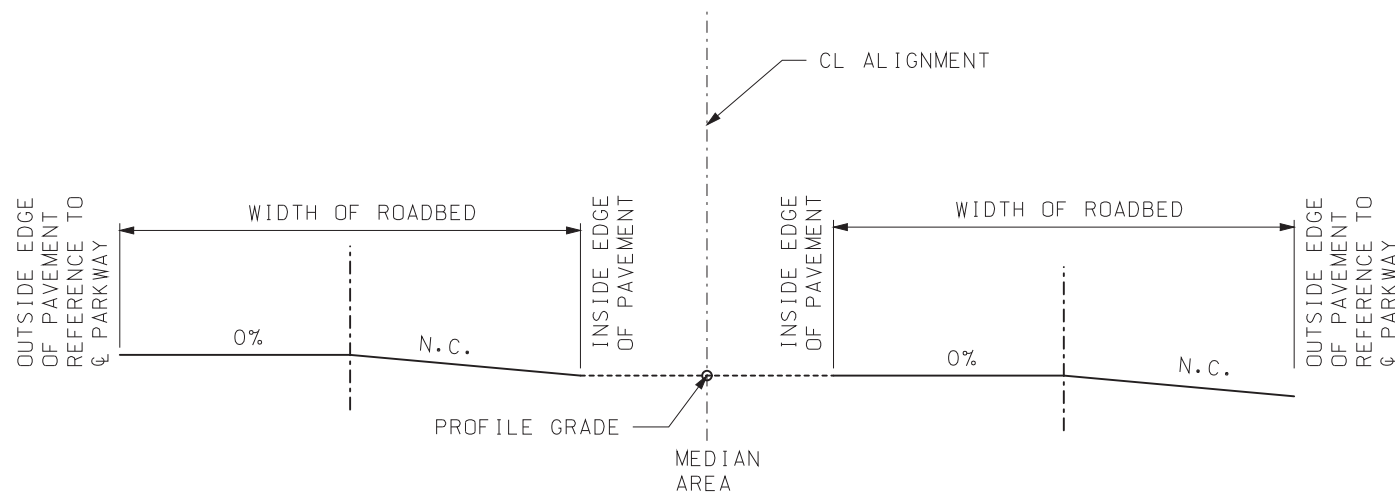
DATE EFFECTIVE: 07/01/2017	203.21K	SHEET NO. 2 OF 3
DATE PREPARED: 1/16/2024		



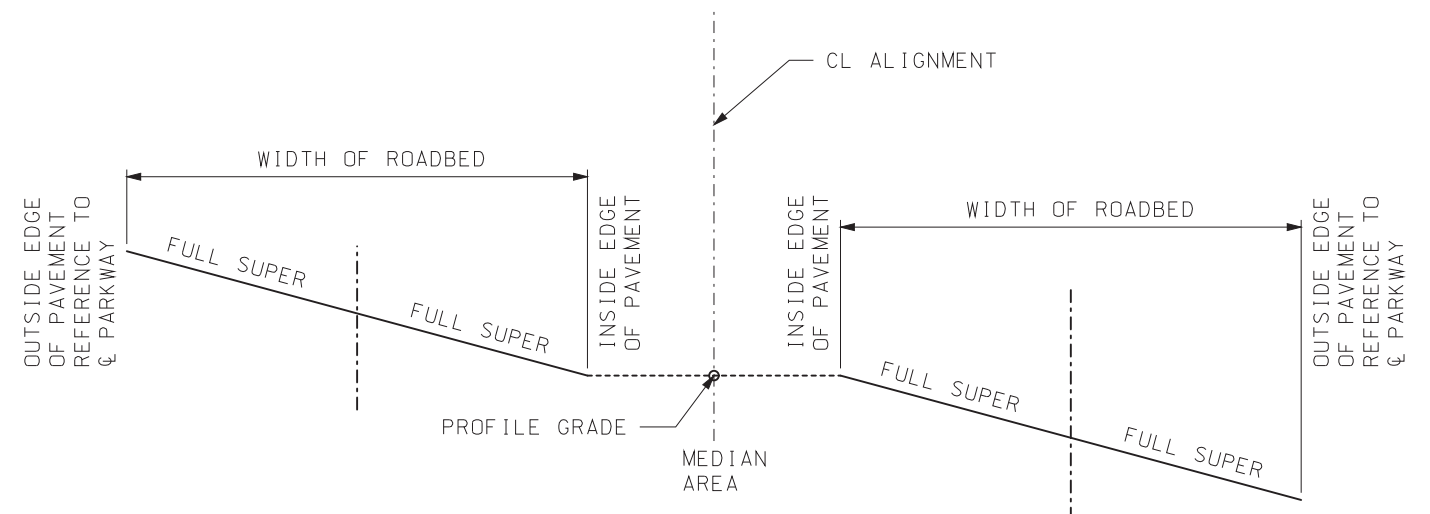
SECTION A-A



SECTION C-C
(CURVE TO RIGHT)



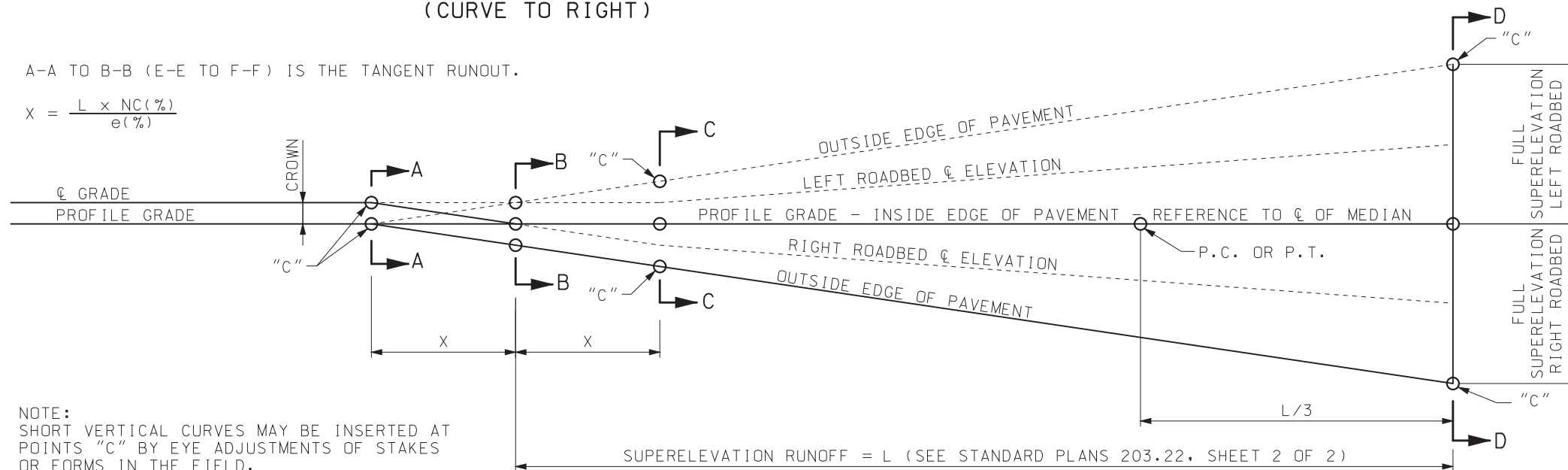
SECTION B-B
(CURVE TO RIGHT)



SECTION D-D
(CURVE TO RIGHT)

A-A TO B-B (E-E TO F-F) IS THE TANGENT RUNOUT.

$$x = \frac{L \times NC(\%)}{e(\%)}$$



NOTE:
SHORT VERTICAL CURVES MAY BE INSERTED AT POINTS "C" BY EYE ADJUSTMENTS OF STAKES OR FORMS IN THE FIELD.

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**SUPERELEVATION,
SPIRALS AND WIDENING
DIVIDED HIGHWAYS**

DATE EFFECTIVE: 07/01/2017
DATE PREPARED: 5/1/2017

203.21K

SHEET NO.
3 OF 3