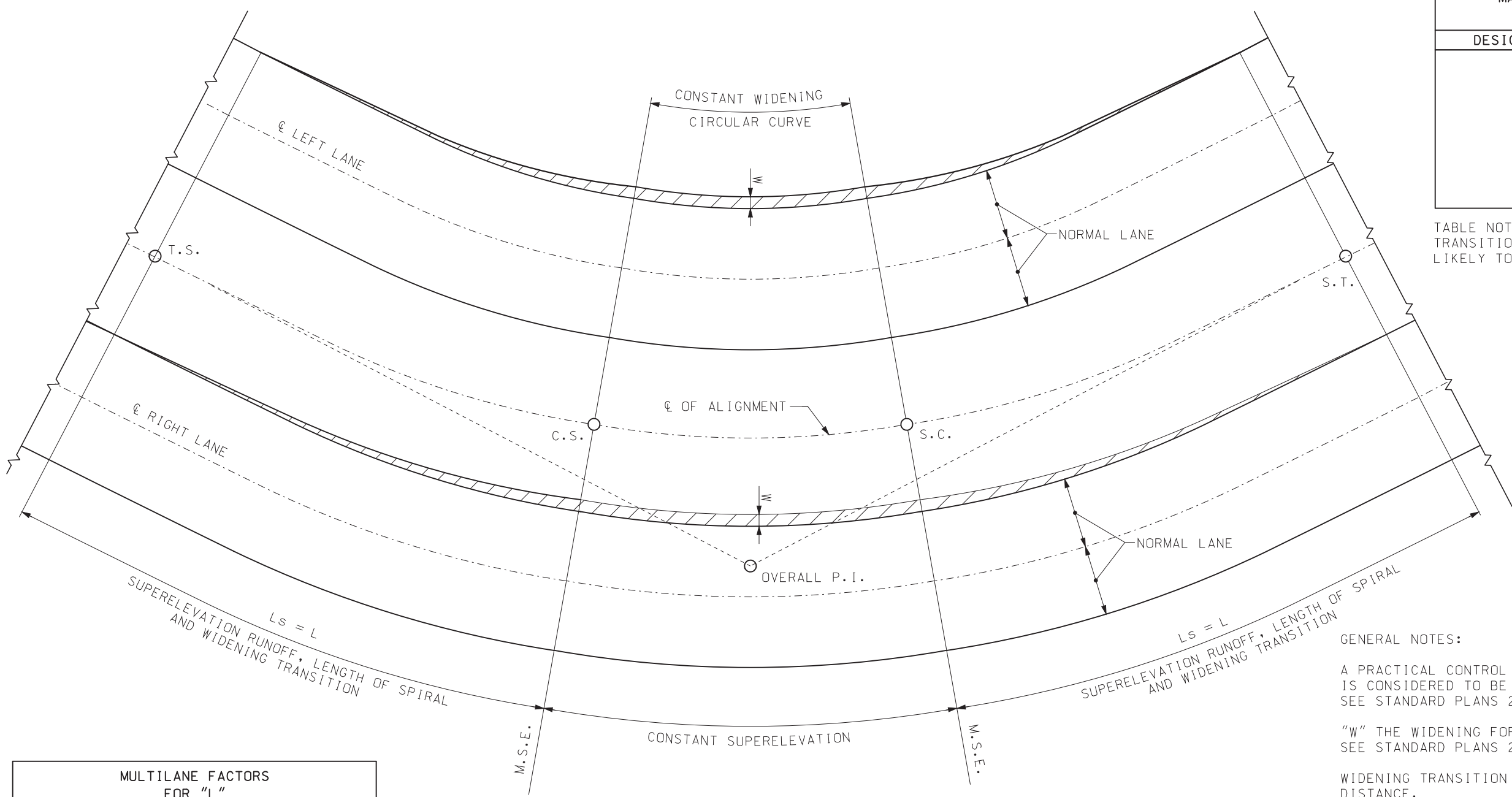


IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

| 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.

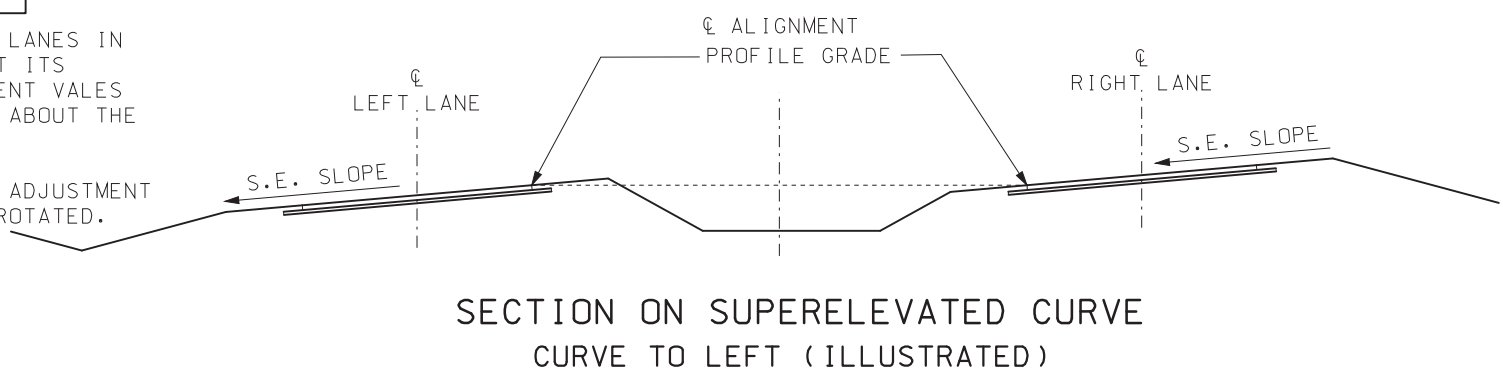
SPIRAL CURVES ARE USED ON ALL ROADWAYS THAT HAVE DESIGN TRAFFIC GREATER THAN 400 VEHICLES PER DAY, AND HAVE A RADIUS LESS THAN THE VALUES LISTED IN THE "MAXIMUM RADIUS FOR USE OF A SPIRAL CURVE TRANSITION" TABLE.

| 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 VALES 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)**

**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION**

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

**SUPERELEVATION,  
SPIRALS AND WIDENING  
DIVIDED HIGHWAYS**

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

**DATE EFFECTIVE: 07/01/2017**

**DATE PREPARED: 5/1/2017**

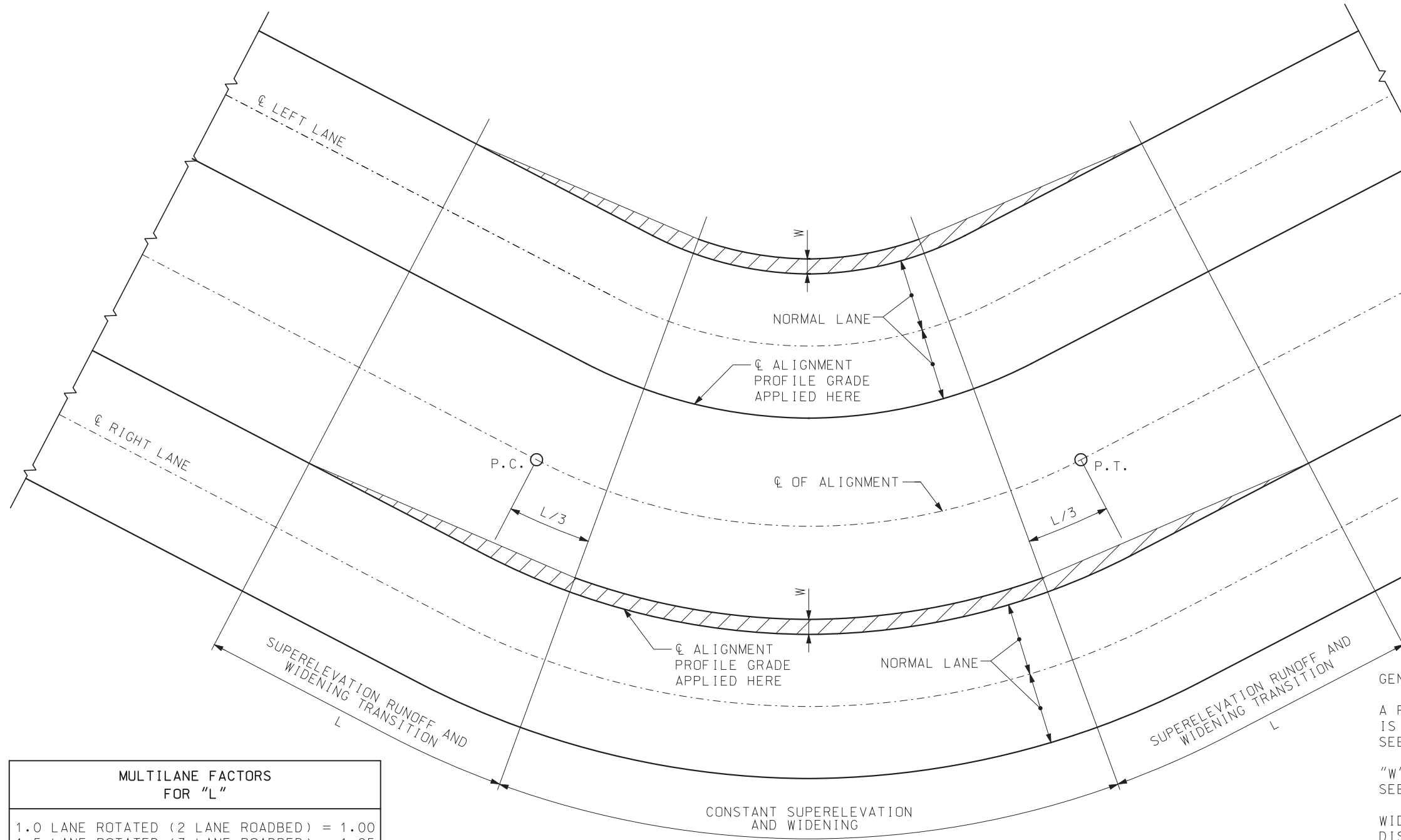
**203.21K**

**SHEET NO.  
1 OF 3**

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

| 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.

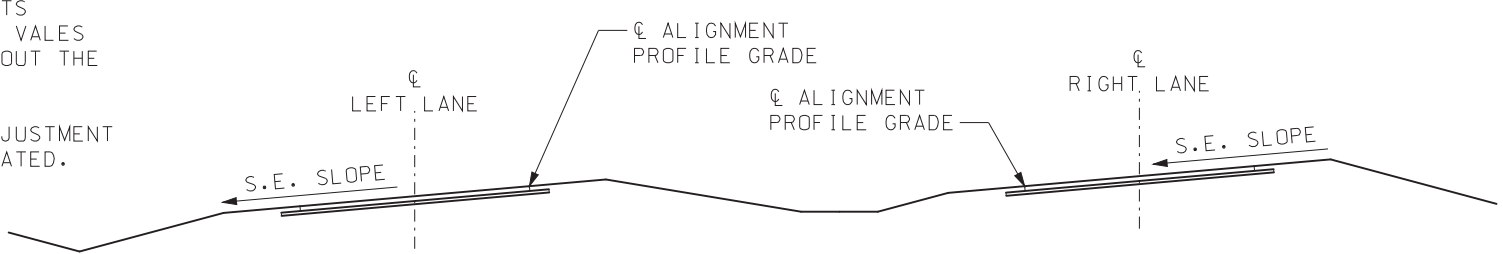


| MULTILANE FACTORS FOR "L"                |
|--|
| 1.0 LANE ROTATED (2 LANE ROADBED) = 1.00 |
| 1.5 LANE ROTATED (3 LANE ROADBED) = 1.25 |
| 2.0 LANE ROTATED (4 LANE ROADBED) = 1.50 |
| 2.5 LANE ROTATED (5 LANE ROADBED) = 1.75 |
| 3.0 LANE ROTATED (6 LANE ROADBED) = 2.00 |
| 3.5 LANE ROTATED (7 LANE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

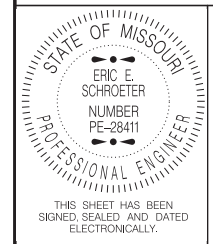
WIDENING TRANSITION VARIES IN DIRECT PROPORTION TO DISTANCE.

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 "MAXIUM RADIUS FOR USE OF A SPIRAL CURVE TRANSITION" TABLE.



**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION**

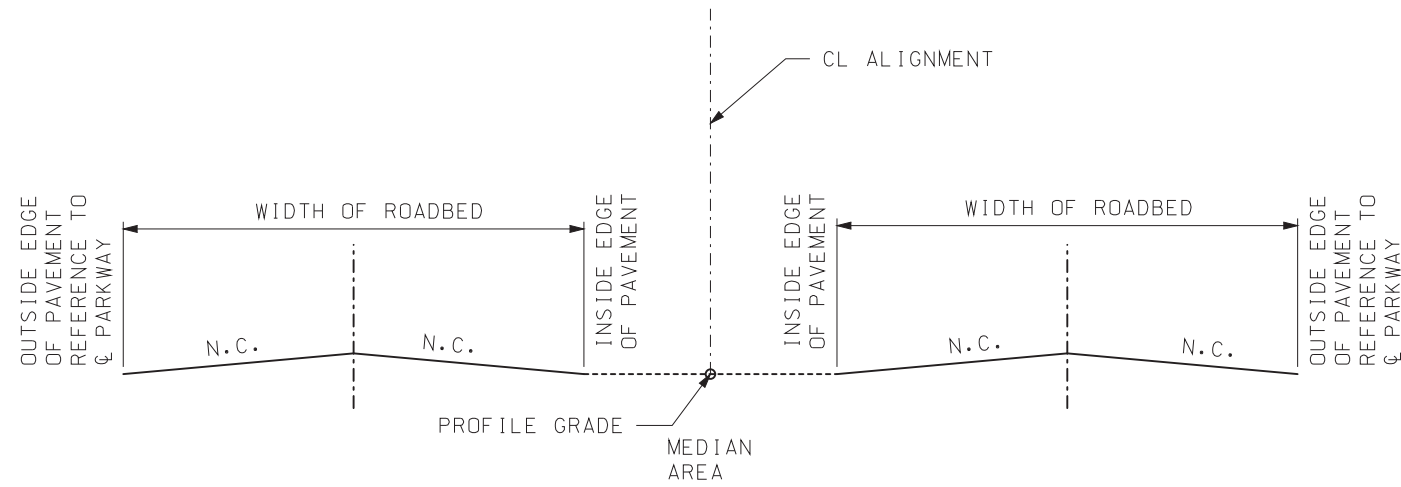
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)



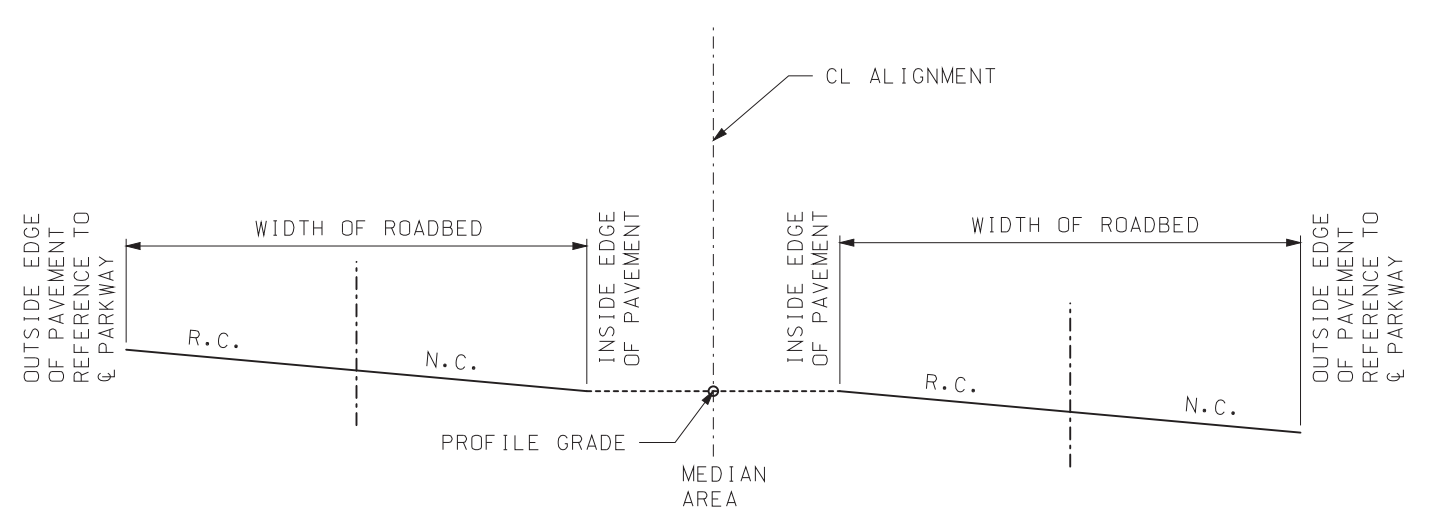
DATE EFFECTIVE: 07/01/2017  
DATE PREPARED: 5/1/2017

**SUPERELEVATION, SPIRALS AND WIDENING DIVIDED HIGHWAYS**

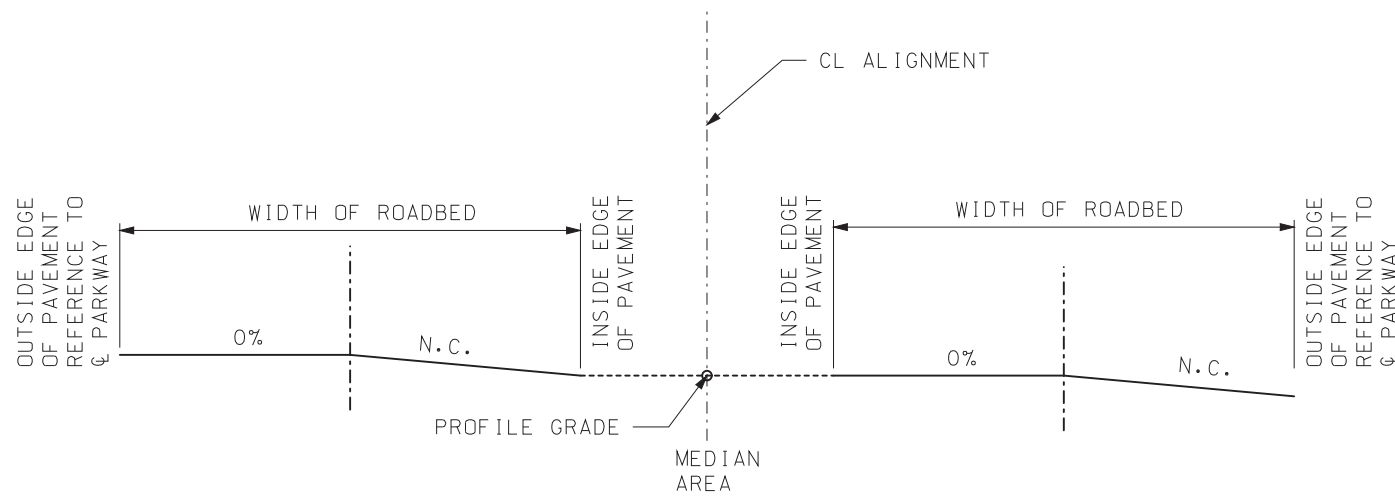
203.21K SHEET NO. 2 OF 3



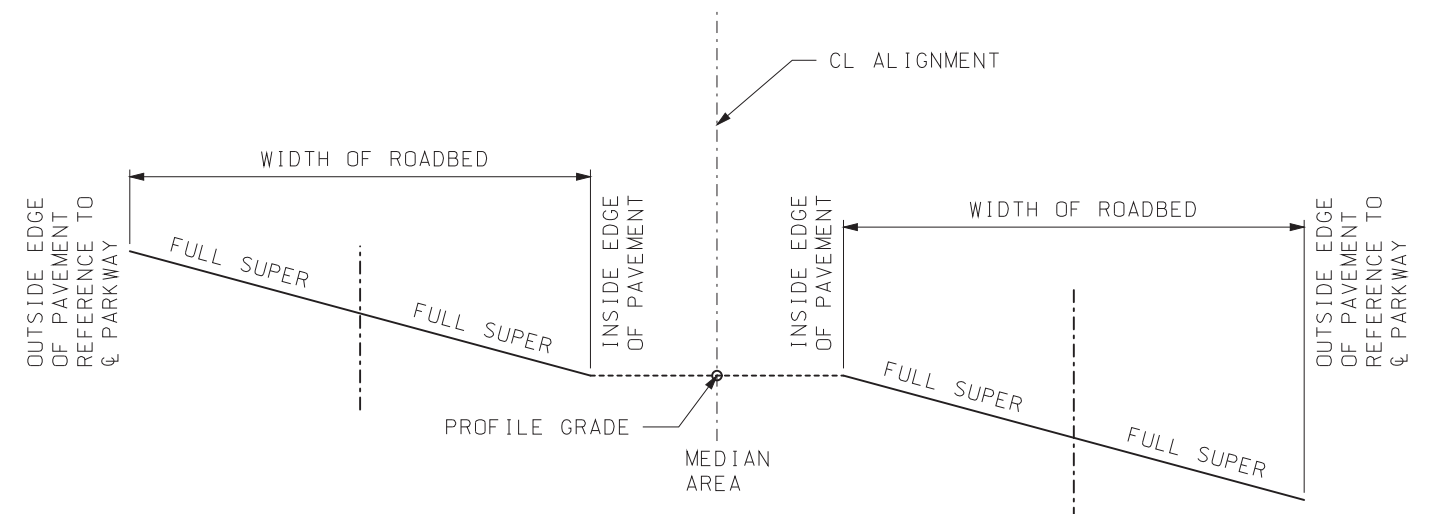
SECTION A-A



SECTION C-C  
(CURVE TO RIGHT)



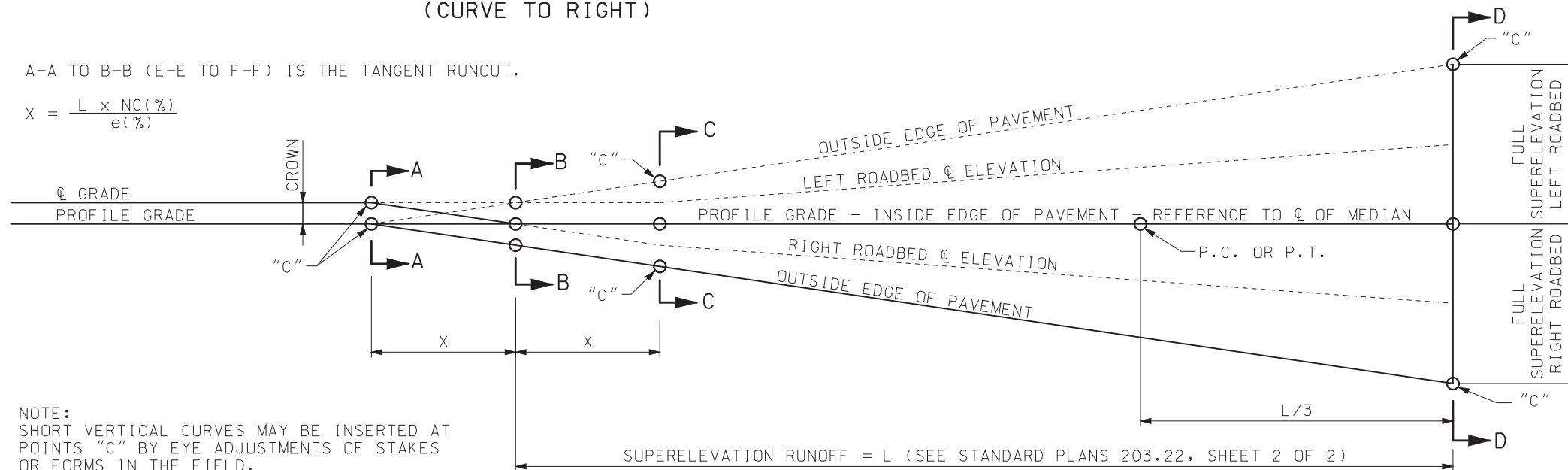
SECTION B-B  
(CURVE TO RIGHT)



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.

**MoDOT** MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION  
 105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI  
 ERIC E. SCHROETER  
 NUMBER PE-28411  
 PROFESSIONAL ENGINEER  
 THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

**SUPERELEVATION,  
 SPIRALS AND WIDENING  
 DIVIDED HIGHWAYS**

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

203.21K

SHEET NO.  
 3 OF 3

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.