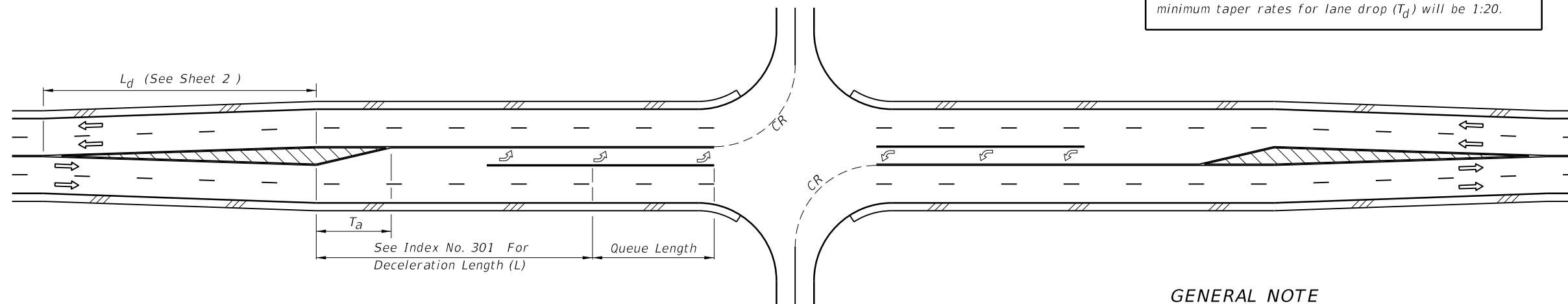


4-LANE WITH TWO-WAY LEFT-TURN LANES

DESIGN SPEED (mph)	T_a (FEET)	T_d
	ADD LANE	LANE DROP
<30	50' (\pm 1:4)	1:25
30-45		1:30
>45		1:40

Note: For locations with unrelocatable control points minimum taper rates for lane drop (T_d) will be 1:20.



4-LANE UNDIVIDED FLARED - SYMMETRICAL

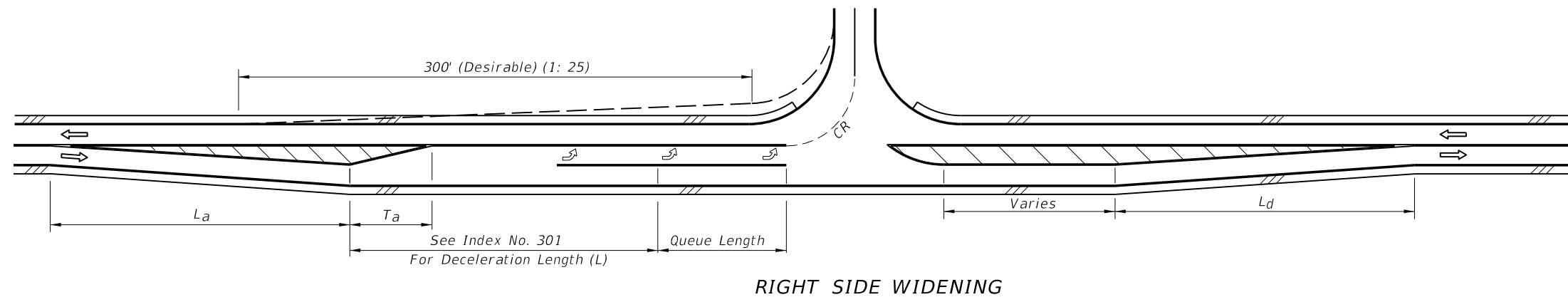
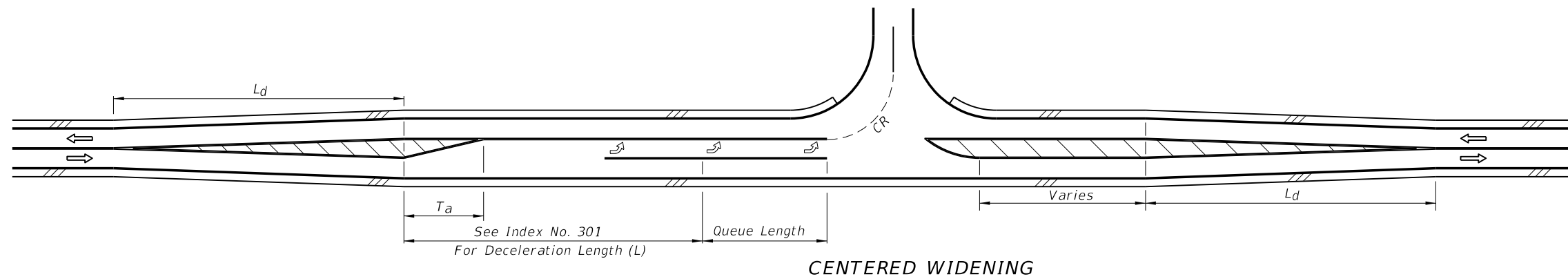
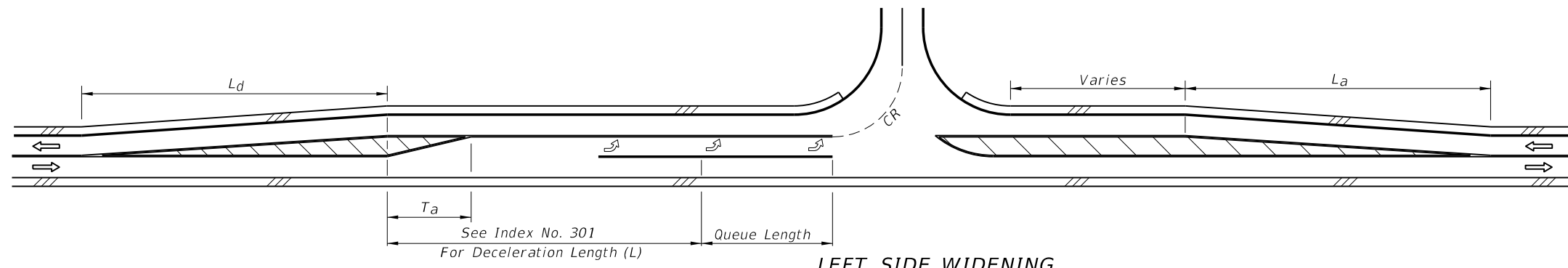
GENERAL NOTE

1. For pavement markings refer to Index No. 17346.

INTERSECTION TURNS AND STORAGE

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LAST REVISION	DESCRIPTION:
07/01/00	



FLARED & PAINTED LEFT TURNS FOR 2-LANE 2-WAY ROADWAYS

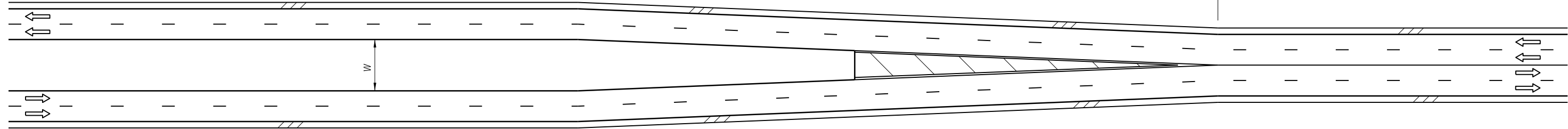
DESIGN SPEED (mph)	L_a (Ft.)	
	STANDARD	MINIMUM UNDER RESTRAINTS
30	180	120
40	320	150
50	500	180
60	720	240

(mph)	L_d (Ft.)	
30	180	120
40	240	150
50	360	180
60	480	240

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$$L = \frac{WS}{2} \geq 45 \text{ mph}$$

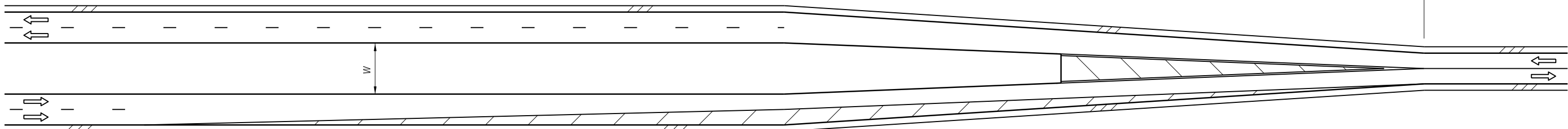
$$L = \frac{WS^2}{120} < 45 \text{ mph}$$



4-LANE DIVIDED TO 4-LANE UNDIVIDED

$$L = \frac{WS}{2} \geq 45 \text{ mph}$$

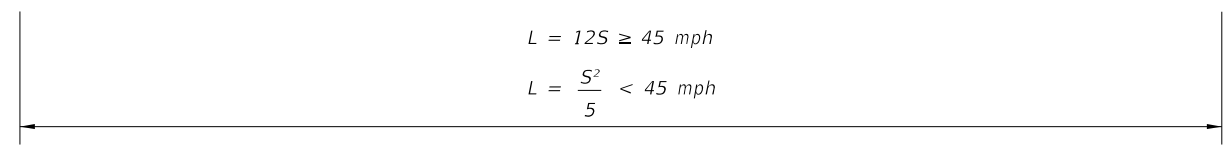
$$L = \frac{WS^2}{120} < 45 \text{ mph}$$



4-LANE DIVIDED TO 2-LANE UNDIVIDED

$$L = 12S \geq 45 \text{ mph}$$

$$L = \frac{S^2}{5} < 45 \text{ mph}$$



$$L = 12S \geq 45 \text{ mph}$$

$$L = \frac{S^2}{5} < 45 \text{ mph}$$


4-LANE UNDIVIDED TO 2-LANE UNDIVIDED

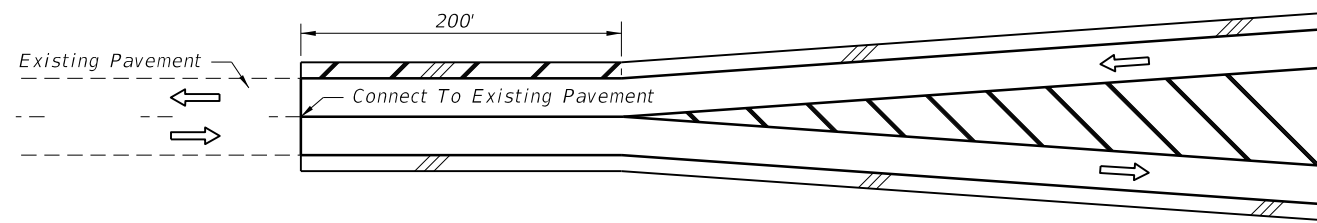
2L

LANE DIVERGENCE AND CONVERGENCE FOR CENTERED ROADWAYS

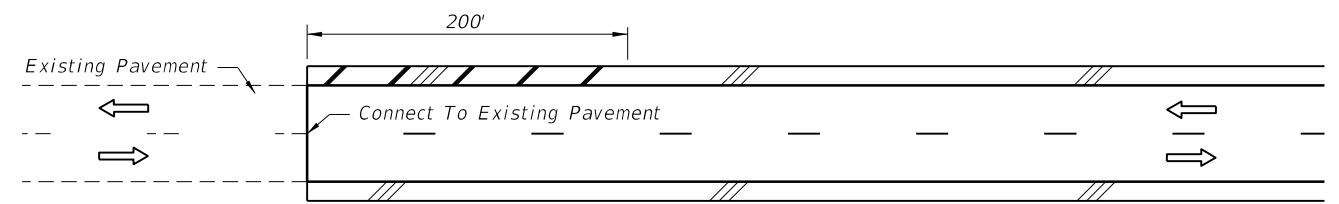
S=Design speed (mph)

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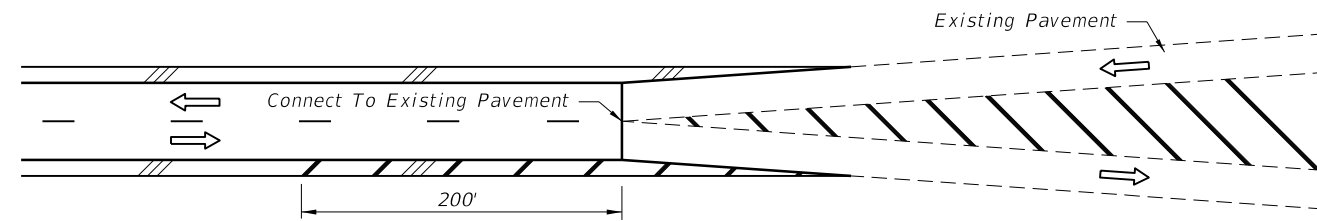
LAST REVISION 07/01/00	REVISION	DESCRIPTION:	 2015 DESIGN STANDARDS	ROADWAY TRANSITIONS	INDEX NO. 526	SHEET NO. 3 of 8
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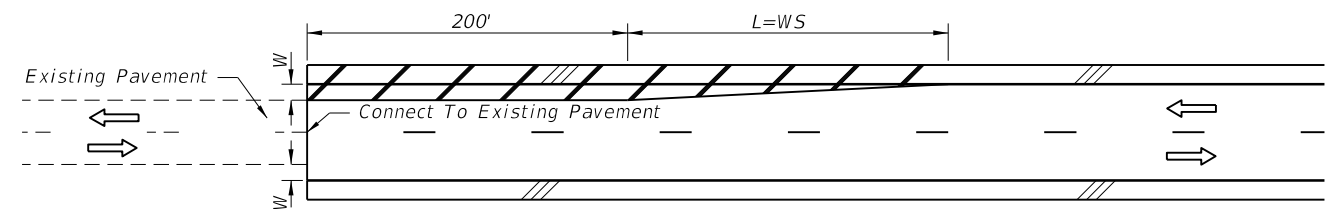
CONNECTING FLARE WITH PAVED SHOULDERS TO EXISTING ROADWAY WITHOUT PAVED SHOULDERS



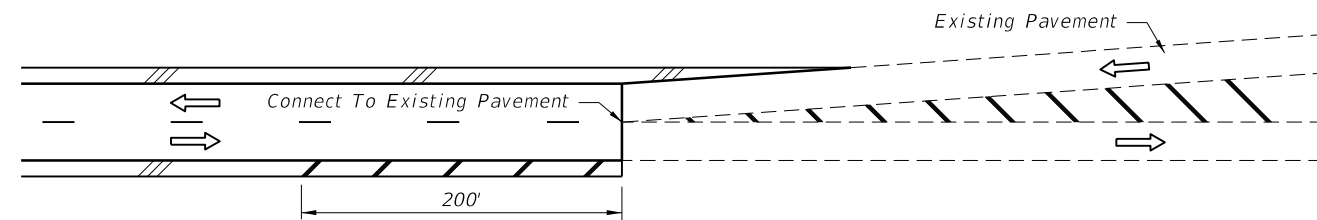
CONNECTING SIMILAR WIDTH PAVEMENTS



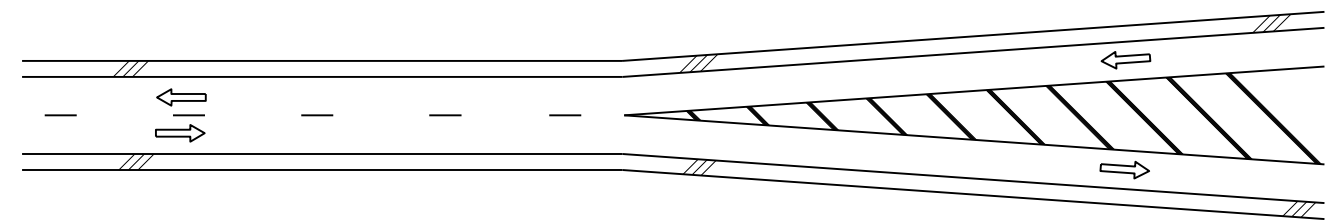
CONNECTING ROADWAY WITH PAVED SHOULDERS TO EXISTING SYMMETRICAL FLARE WITHOUT PAVED SHOULDERS



CONNECTING DIFFERENT WIDTH PAVEMENTS



CONNECTING ROADWAY WITH PAVED SHOULDERS TO EXISTING ASYMMETRICAL FLARE WITHOUT PAVED SHOULDERS



FLARED - PAVED SHOULDERS

$S = \text{Design speed (mph)}$

PAVED SHOULDER TREATMENT AT TRANSITIONS AND CONNECTIONS

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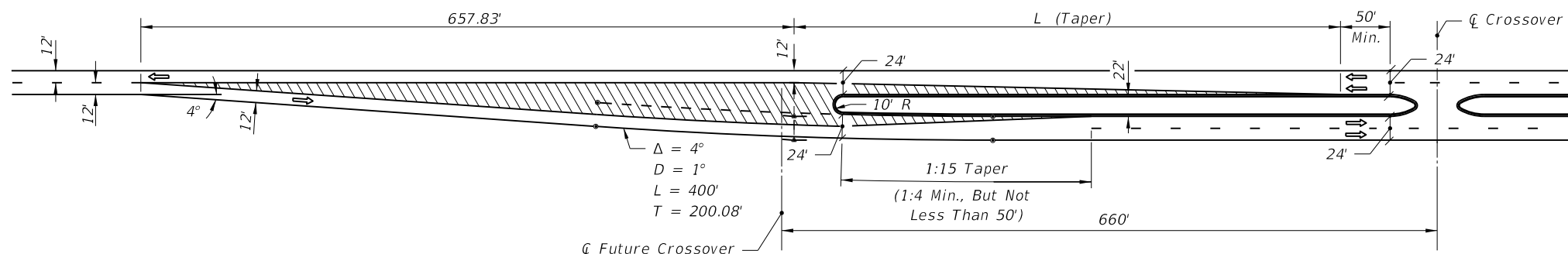
DESCRIPTION:	
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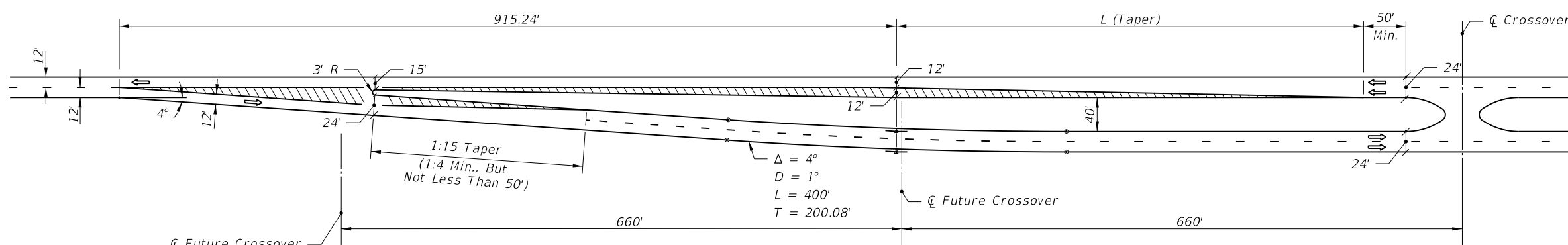
ROADWAY TRANSITIONS

INDEX NO.	526
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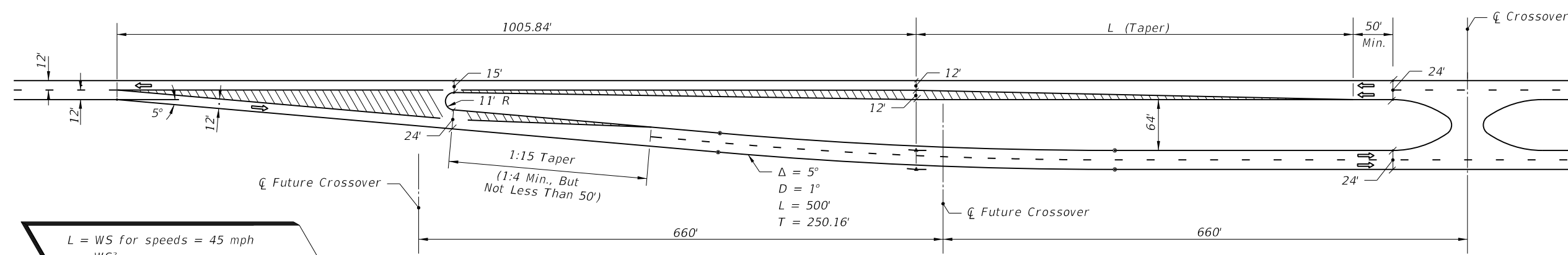
SHEET NO.	4 of 8
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22' MEDIAN



40' MEDIAN



64' MEDIAN


$L = WS$ for speeds = 45 mph
 $L = \frac{WS^2}{60}$ for speeds ≤ 40 mph
 Where:
 W=Width of lateral transition in feet.
 S=Design speed.

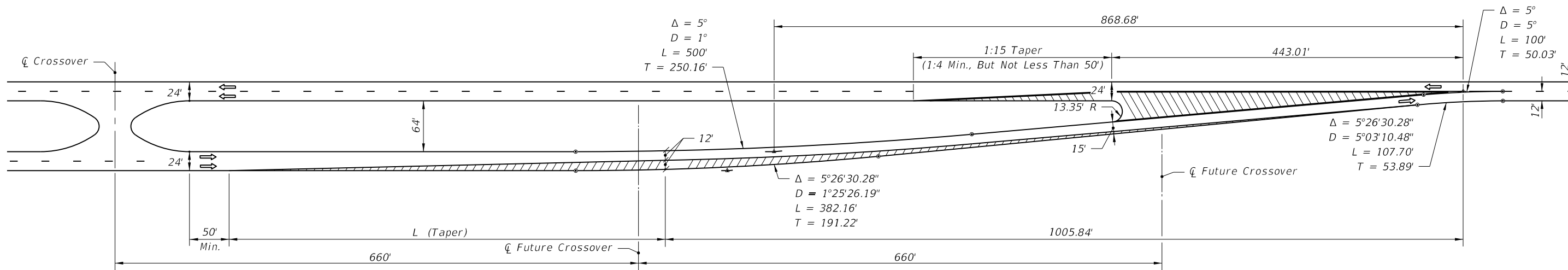
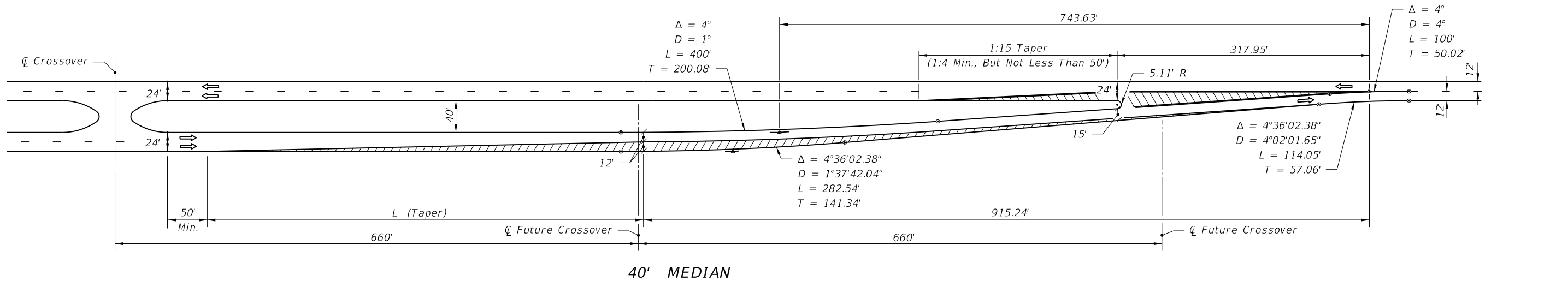
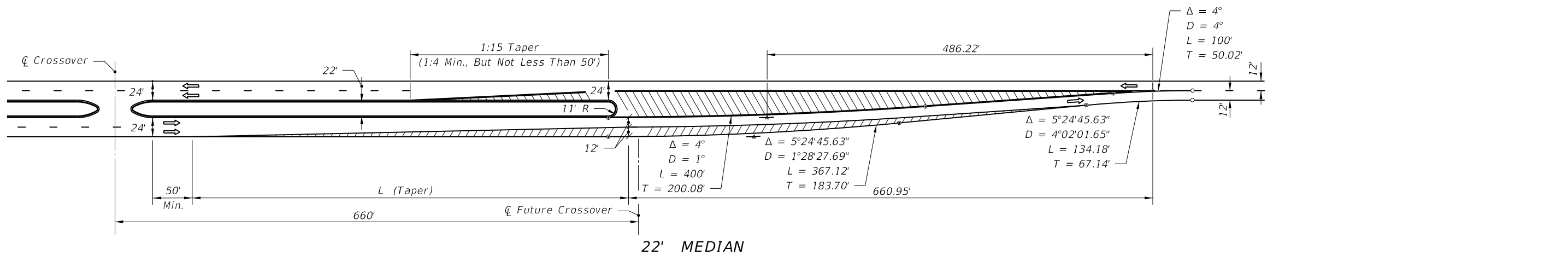
NOTES FOR SHEETS 5 THRU 8

1. The transition details as represented on sheets 5 thru 8 are intended as guidelines only. The transition lengths, curve data, nose radii and offsets are valid only for tangent alignment, design speeds ≤ 45 mph, the median widths and lane widths shown.
2. Approach lane departures ($\Delta = 5^\circ$) are suitable for design speeds up to 60 mph. Interior curves ($D = 1^\circ$) are suitable for normal crown for design speeds up to 50 mph. Merging curves ($D \geq 5^\circ$) will require superelevation.
3. The geometrics of these schemes are associated with the standard subsectional spacing for side roads, but in any case will require modification to accommodate side road location, multilane and/or divided side roads, oblique side roads, crossover widths, storage and speed change lane requirements, and, other related features.

LEFT ROADWAY CENTERED ON APPROACH ROADWAY
 TWO LANE TO FOUR LANE TRANSITION

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LAST REVISION 07/01/00	REVISION	DESCRIPTION:	 2015 DESIGN STANDARDS	ROADWAY TRANSITIONS	INDEX NO. 526	SHEET NO. 5 of 8
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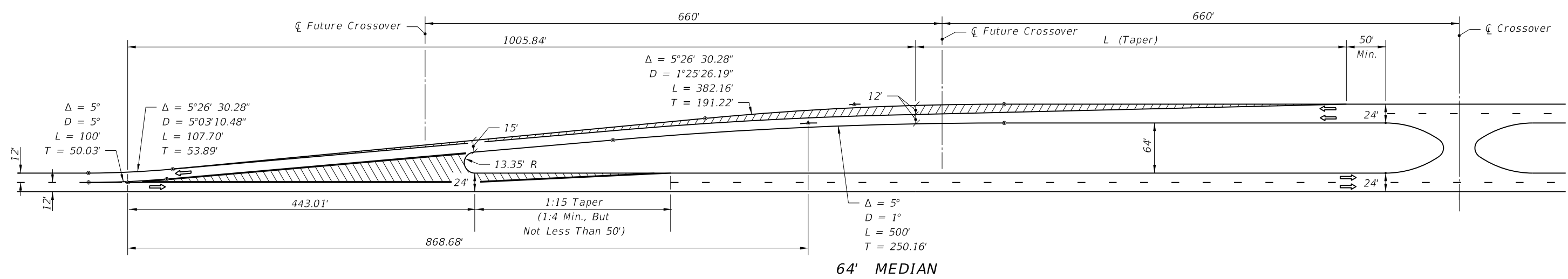
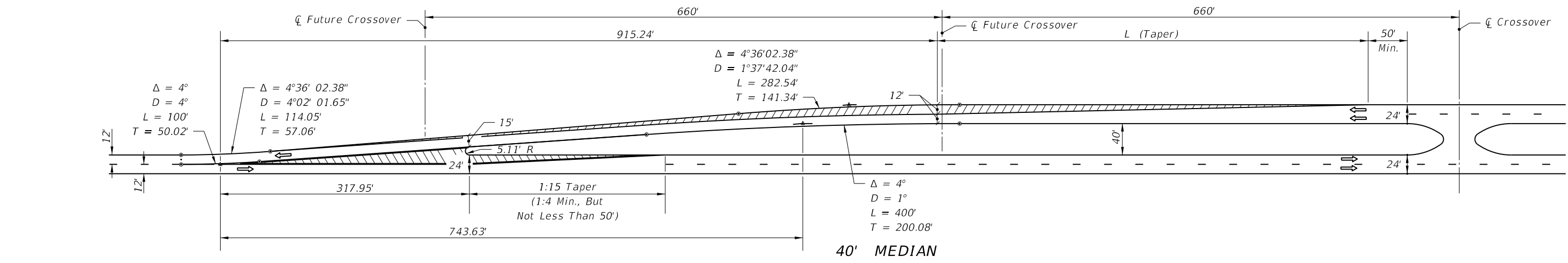
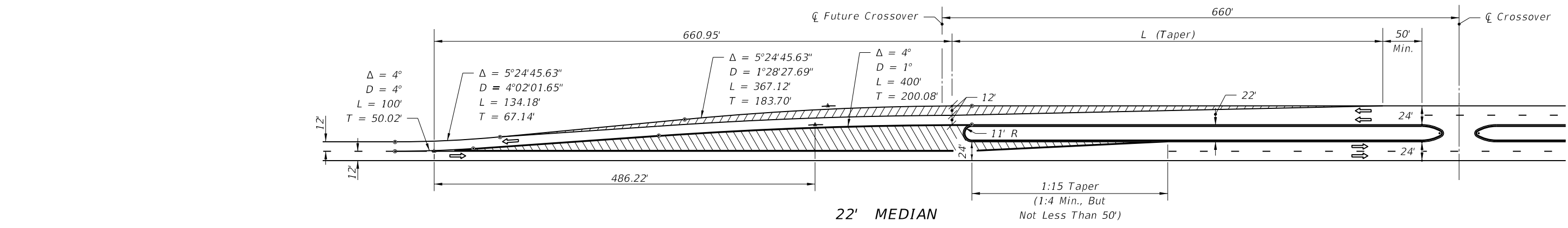


$L = WS$ for speeds = 45 mph
 $L = \frac{WS^2}{60}$ for speeds ≤ 40 mph
 Where:
 W = Width of lateral transition in feet.
 S = Design speed.

LEFT ROADWAY CENTERED ON THRU ROADWAY
 FOUR LANE TO TWO LANE TRANSITION

5/20/2014 3:21:36 PM

LAST REVISION 07/01/00	DESCRIPTION:	2015 DESIGN STANDARDS	ROADWAY TRANSITIONS	INDEX NO. 526	SHEET NO. 6 of 8
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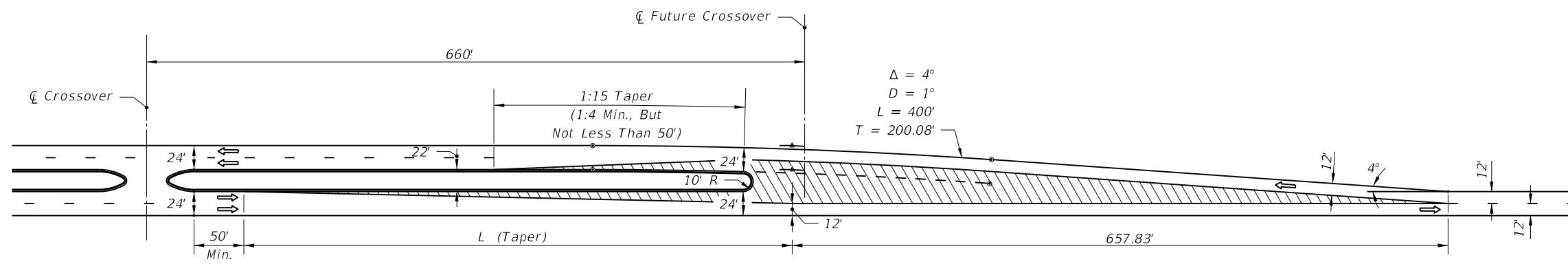


$L = WS$ for speeds = 45 mph
 $L = \frac{WS^2}{60}$ for speeds ≤ 40 mph
 Where:
 W = Width of lateral transition in feet.
 S = Design speed.

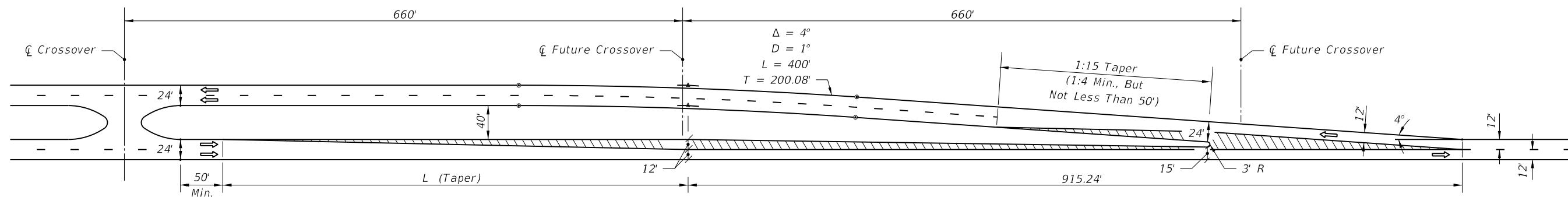
RIGHT ROADWAY CENTERED ON APPROACH ROADWAY
 TWO LANE TO FOUR LANE TRANSITION

5/20/2014 3:21:37 PM

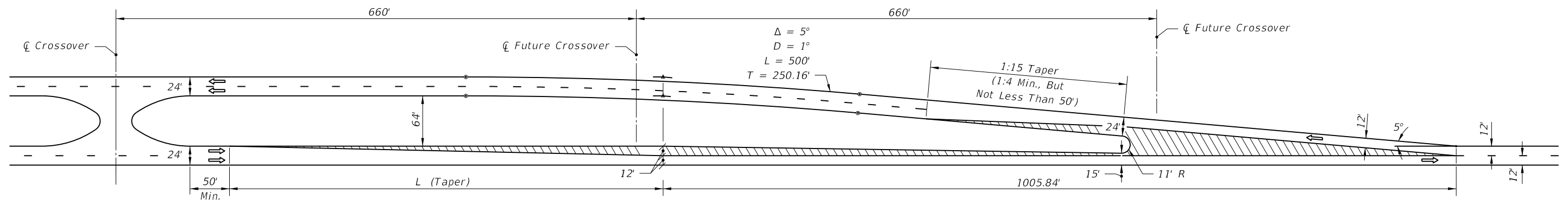
LAST REVISION	REVISION	DESCRIPTION:	 2015 DESIGN STANDARDS	ROADWAY TRANSITIONS	INDEX NO. 526	SHEET NO. 7 of 8
07/01/00						



22' MEDIAN



40' MEDIAN




64' MEDIAN

$L = WS$ for speeds = 45 mph
 $L = \frac{WS^2}{60}$ for speeds ≤ 40 mph
 Where:
 W = Width of lateral transition in feet.
 S = Design speed.

RIGHT ROADWAY CENTERED ON THRU ROADWAY
 FOUR LANE TO TWO LANE TRANSITION

5/20/2014 3:21:37 PM

LAST REVISION	REVISION	DESCRIPTION:	 2015 DESIGN STANDARDS	ROADWAY TRANSITIONS	INDEX NO. 526	SHEET NO. 8 of 8
07/01/00						