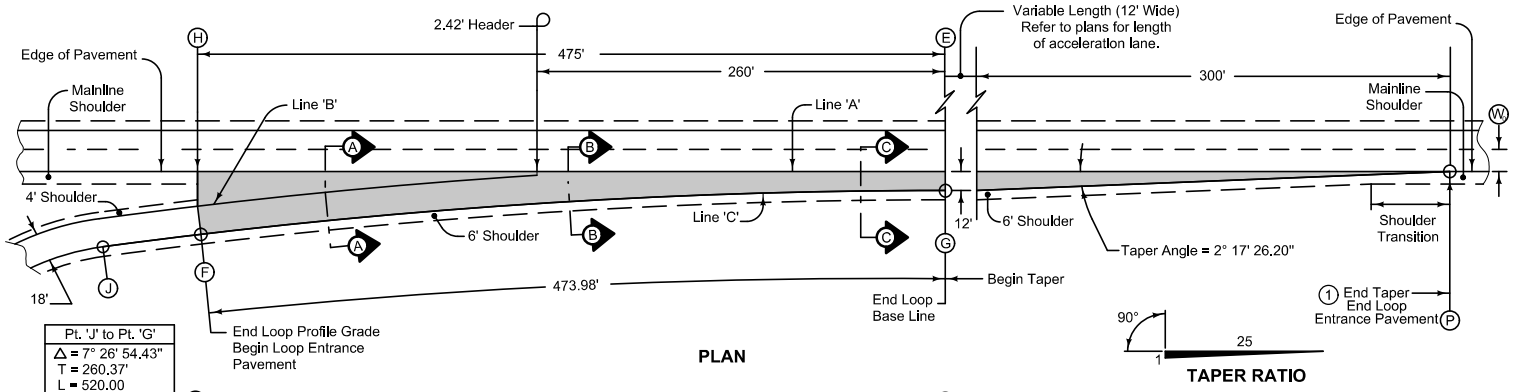
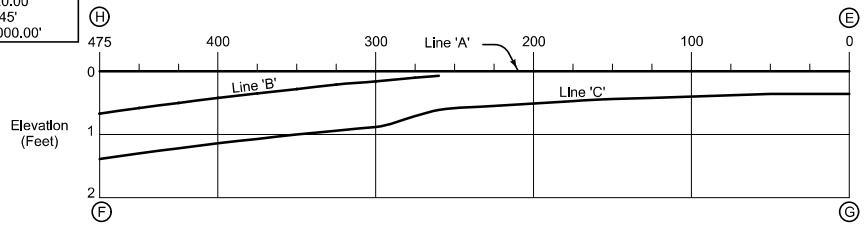


Pt. 'J' to Pt. 'G'
Δ = 7° 26' 54.43"
T = 260.37'
L = 520.00
E = 8.45'
R = 4000.00'

PLAN

TAPER RATIO



NOTE: The algebraic difference between profile grade for Loop Base Line at (F) and relative profile grade of Mainline at (H) is 0.36%.

PROFILE

Construct loop entrance pavement the same thickness as mainline pavement.

Loop entrance pavement shown by shaded area is 1329 square yards.

For joint details, see PV-101.

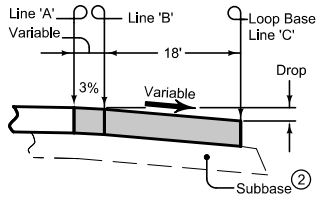
(1) For header construction details at the end of taper, see Typical 7101 or Typical 7102.

(2) Construct subbase for loop entrance pavement the same thickness as mainline subbase.

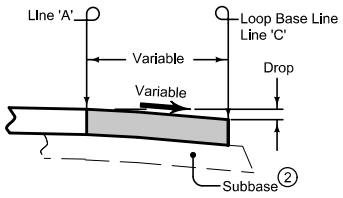
TABLE OF OFFSETS AND DROPS FOR 18' LOOP TAPER

Distance From Point (E) Along Line 'A' (Ft.)		475	450	425	400	375	350	325	300	275	260	225	200	175	150	125	100	75	50	25	0
From Line 'A' To Line 'B'	Offset (Ft.)	22.18	19.28	16.54	13.96	11.54	9.27	7.17	5.22	3.42	2.42										
	Slope (%)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00										
	Drop (Ft.)	0.67	0.58	0.50	0.42	0.35	0.28	0.22	0.16	0.10	0.07										
From Line 'B' To Line 'C'	Offset (Ft.)	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0										
	Slope (%)	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.38	3.00										
	Drop (Ft.)	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.61	0.54										
From Line 'A' To Line 'C'	Offset (Ft.)											18.33	17.00	15.83	14.81	13.95	13.25	12.70	12.31	12.08	12.00
	Slope (%)											3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
	Drop (Ft.)	1.39	1.30	1.22	1.14	1.07	1.00	0.94	0.88	0.71	0.61	0.55	0.51	0.47	0.44	0.42	0.40	0.38	0.37	0.36	0.36
Distance From Point (G) Along Line 'C' (Ft.)		473.98	448.93	423.89	398.87	373.86	348.87	323.90	298.93	273.98	260.18	225.12	200.08	175.06	150.03	125.02	100.01	75.00	50.00	25.00	0.00

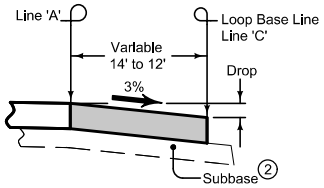
NOTE: From (G) to (P) cross-slope between Line 'A' and Line 'C' is a constant 3%.



SECTION A-A



SECTION B-B



SECTION C-C

TABLE OF SHOULDER TRANSITION LENGTHS

(W)	Shoulder Width beyond Edge of Mainline Pavement		
	8'	10'	12'
12'	NA	100'	150'
14'	50'	100'	NA

NOTE: W_o is the width of the outside lane to the Edge of Pavement.

Iowa Department of Transportation

STANDARD ROAD PLAN

REVISION	
2	10-18-11

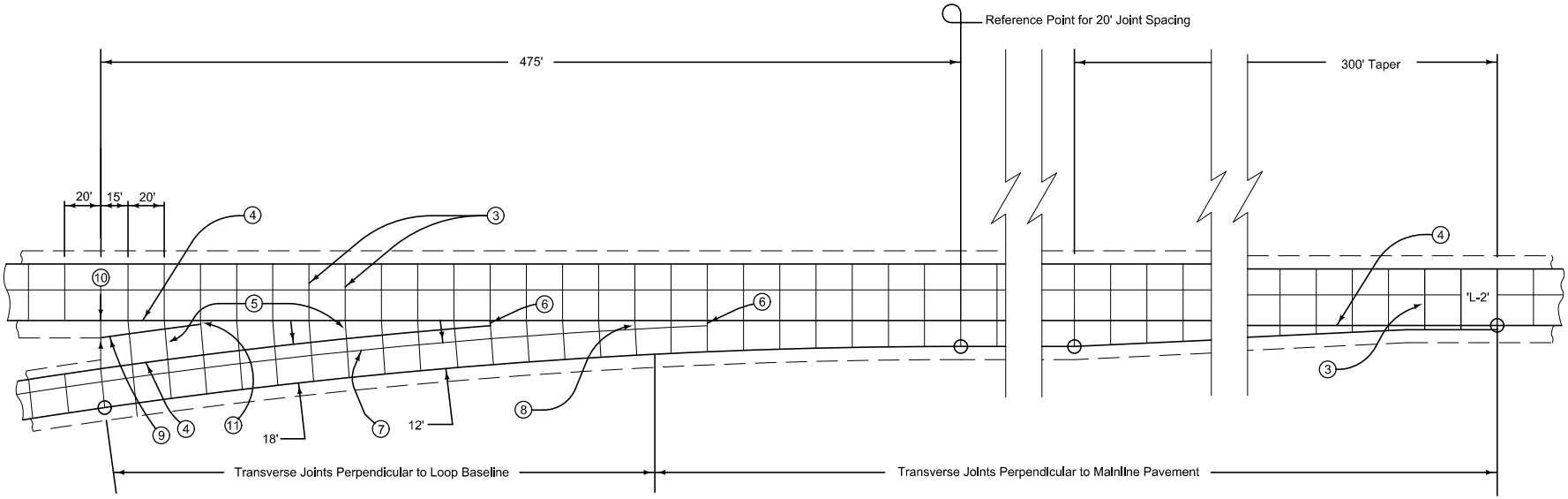
PV-414

SHEET 1 of 2

REVISIONS: Added 'C' Joint and circle notes 9, 10, and 11.

Deanna Maifield
APPROVED BY DESIGN METHODS ENGINEER

ACCELERATION TAPER FOR 18' ENTRANCE LOOP



18' ENTRANCE LOOP

(3) 'CD' Joints at 20' spacing.

(4) 'BT-2' or 'KT-2' Joint.

(5) 'C' Joint.

(6) 'B' Joint. 2' minimum, 4' maximum.

(7) 'L-2' Joint.

(8) Construct transverse joints on the exit ramp taper perpendicular to the ramp baseline where the gore area is 4 feet or greater.

(9) 'C' Joint parallel to loop baseline.

(10) 10' minimum or equal to mainline shoulder width.

(11) 'B' or 'C' Joint. 2' minimum. 4' maximum.

Iowa Department of Transportation

STANDARD ROAD PLAN

REVISION	
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PV-414

SHEET 2 of 2

REVISIONS: Added 'C' Joint and circle notes 9, 10, and 11.

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