℄ CONSTRUCTION

A
S
W
PROFILE GRADE
e
e
B
C — 1.0%
SUBGRADE
e
-4% MAX
2'
C

SECTION D-D
(FULL SUPERELEVATION)

L_R

PROFILE GRADE
A
4%
W
2.0%
2.0%
4%
C — 1.0%
2.0%
2.0%
2.0%
C
SUBGRADE

SECTION C-C
(REVERSE CROWN)

$L_T \times 2$

PROFILE GRADE
4%
W
0.0%
2.0%
4%
C — 1.5%
0.0%
2.0%
2.0%
C
SUBGRADE

SECTION B-B
(REMOVE ADVERSE CROWN)

L_T

PROFILE GRADE
4%
W
2.0%
2.0%
4%
C — 2.0%
2.0%
2.0%
2.0%
C
SUBGRADE

SECTION A-A
(NORMAL CROWN)

℄ CONSTRUCTION

A
W
PROFILE GRADE
-1.0%
e
e
B
C — 1.0%
e
e
SUBGRADE
-4% MAX
2'
C

(SECTION WHERE e = 6.0%)

A
W
PROFILE GRADE
3.0%
4.0%
4.0%
4.0%
C — 1.0%
4.0%
4.0%
4.0%
C
SUBGRADE

(SECTION WHERE LOW SIDE
SHOULDER CROWN BREAK RULE OCCURS
WHERE e = 4%)

A
W
PROFILE GRADE
4.0%
3.0%
3.0%
4.0%
C — 1.0%
3.0%
3.0%
3.0%
C
SUBGRADE

(SECTION WHERE HIGH SIDE
SHOULDER CROWN BREAK RULE OCCURS
WHERE e = 3%)

SECTION WHERE SHOULDER
SLOPE TRANSITION BEGINS

DESIGN NOTES

A HIGH SIDE SHOULDER: MAINTAIN NORMAL SHOULDER CROSS SLOPE (S), UNTIL THE CROSS SLOPE BREAK WITH THE ADJACENT PAVEMENT REACHES A MAXIMUM ALGEBRAIC DIFFERENCE IN GRADES OF 7%. THEN THE SHOULDER SLOPE SHALL BEGIN TO ROTATE TO MAINTAIN THE ALGEBRAIC DIFFERENCE IN GRADES OF 7% BETWEEN THE SHOULDER AND ROADWAY SLOPE.

B LOW SIDE SHOULDER: MAINTAIN NORMAL SHOULDER CROSS SLOPE (S) UNTIL THE ADJACENT PAVEMENT SLOPE EQUALS (S), THEN THE SLOPE OF THE SHOULDER ROTATES AT THE SAME CROSS SLOPE AS THE ADJACENT PAVEMENT.

C SUBGRADE SLOPE:
FOR SHOULDERS IN TANGENT SECTION:
THE SUBGRADE MATCHES THE PAVEMENT SLOPE AND NOT THE SHOULDER SLOPE.

FOR SHOULDERS IN FULL SUPERELEVATION SECTION;
LOW SIDE MATCHES THE PAVEMENT SLOPE AND NOT THE SHOULDER SLOPE UNTIL SUPERELEVATION REACHES 4%. WHEN THE SUPERELEVATION IS GREATER THAN 4% THE SUBGRADE WILL HAVE A BREAK IN SUBGRADE 2' BACK UNDER THE SHOULDER AND THE GRADE RUNNING OUT WILL MAINTAIN A 4% SLOPE. SEE SECTION D-D FOR DETAILS.
HIGH SIDE SHOULDER AND ADJACENT PAVEMENT SUBGRADE CHANGE MUST NOT EXCEED AN ALGEBRAIC DIFFERENCE IN GRADES OF 7%.

WHEN SUBGRADE TRANSITIONS FROM LOW SIDE TO HIGH SIDE ON THE OUTSIDE SHOULDER FOR SUPERELEVATION; THE SHOULDER SUBGRADE ON THE OUTSIDE MUST ROTATE UP FROM 2% TO 1%. THIS SUBGRADE TRANSITION FOR THE SHOULDER, OCCURS DURING THE TRANSITION FROM NORMAL CROWN TO REVERSE CROWN. SEE SECTIONS A-A, B-B AND C-C FOR DETAILS.