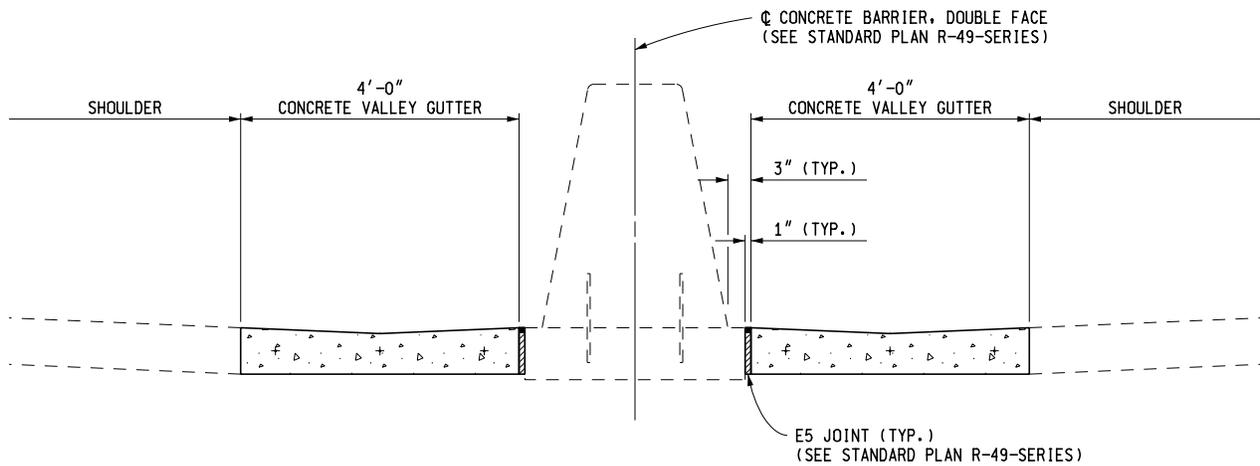
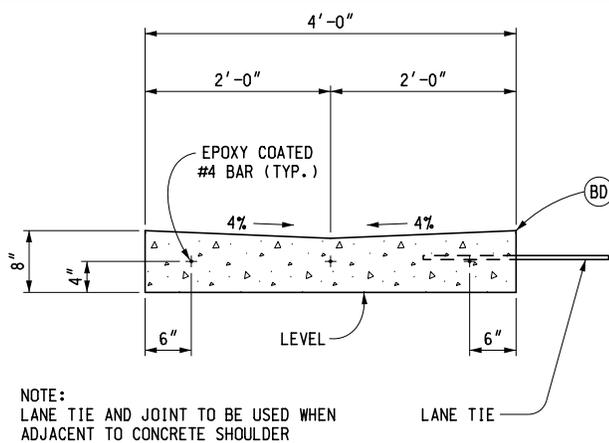


CONCRETE VALLEY GUTTER
WITH CONCRETE BARRIER, DOUBLE FACE, TYPE A



CONCRETE VALLEY GUTTER
WITH CONCRETE BARRIER, DOUBLE FACE, TYPE B



CONCRETE VALLEY GUTTER

NOTES:

THE SHOULDER AND VALLEY GUTTER OR CURB AND GUTTER MAY BE CAST INTEGRALLY WHEN THE SHOULDER AND VALLEY GUTTER OR CURB AND GUTTER ARE THE SAME SLOPE. WHEN THEY ARE CAST INTEGRALLY, THE SLOPE ON THE BOTTOM OF THE SHOULDER MAY BE EXTENDED THROUGH THE VALLEY GUTTER OR CURB AND GUTTER.

TRANSVERSE JOINTS IN CURB AND GUTTER OR VALLEY GUTTER SHALL BE ALIGNED WITH THE SAME SIZE, TYPE, AND SEALANT AS IN THE PAVEMENT AND SHOULDER, EXCEPT THAT NO LOAD TRANSFER ASSEMBLY WILL BE PROVIDED IN THE SHOULDER OR CURB AND GUTTER. NO PLANE OF WEAKNESS JOINTS WILL BE PLACED IN CURB AND GUTTER.

JOINTS, CURB AND GUTTER, AND CONCRETE BARRIER, DOUBLE FACE SHALL BE ACCORDING TO STANDARD PLANS R-30, R-31, R-39, R-40, R-41, AND R-49-SERIES, EXCEPT AS SPECIFIED ON THESE PLANS.

OMIT LONGITUDINAL REINFORCEMENT WHEN CONCRETE VALLEY GUTTER OR URBAN FREEWAY CURB IS TIED TO A NON-REINFORCED PAVEMENT.



PREPARED
BY
DESIGN DIVISION

DRAWN BY: B.L.T.

CHECKED BY: W.K.P.

DEPARTMENT DIRECTOR
Paul C. Ajegba

APPROVED BY: _____
DIRECTOR, BUREAU OF FIELD SERVICES

APPROVED BY: _____
DIRECTOR, BUREAU OF DEVELOPMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

CONCRETE VALLEY GUTTER
AND URBAN FREEWAY CURB

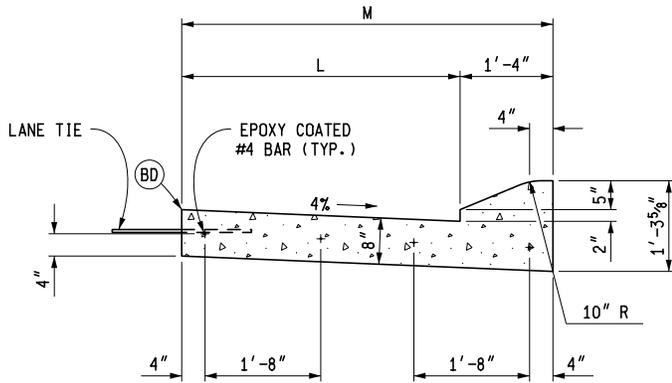
F.H.W.A. APPROVAL

8-14-2019
PLAN DATE

R-33-G

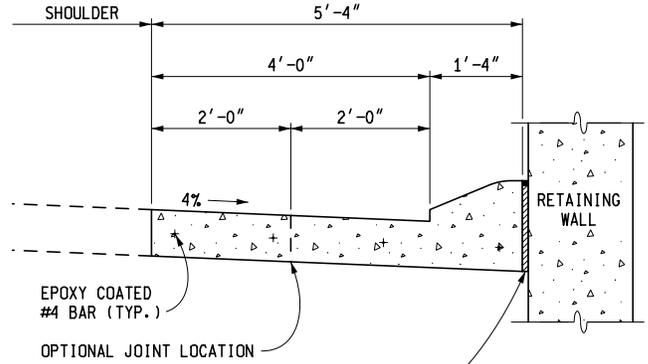
SHEET
1 OF 2

NOTE: LANE TIE AND JOINT TO BE USED WHEN ADJACENT TO CONCRETE SHOULDER



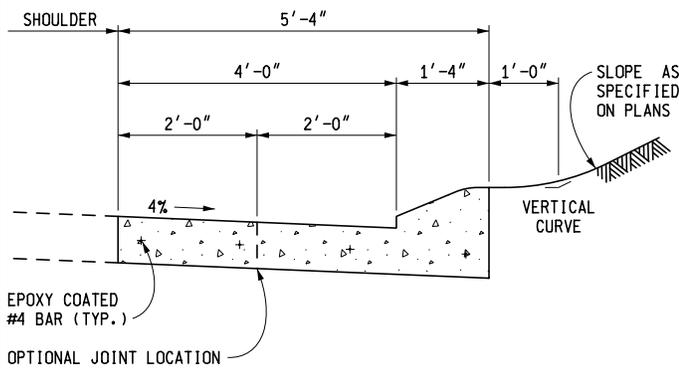
| DETAIL | DIMENSION | | LANE TIES | CONCRETE CYD / LFT |
|--------|-----------|-------|-----------|--------------------|
| | L | M | | |
| G1 | 2'-0" | 3'-4" | AS SHOWN | 0.1019 |
| G2 | 4'-0" | 5'-4" | AS SHOWN | 0.1515 |

G

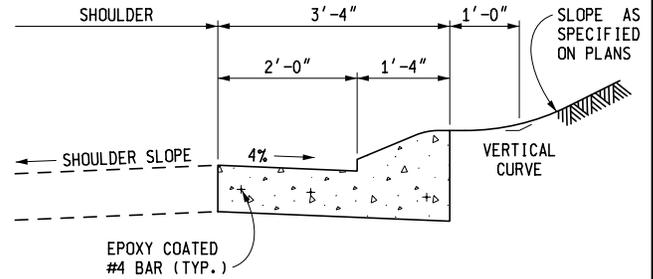


E5 JOINT (SEE STANDARD PLAN R-49-SERIES)

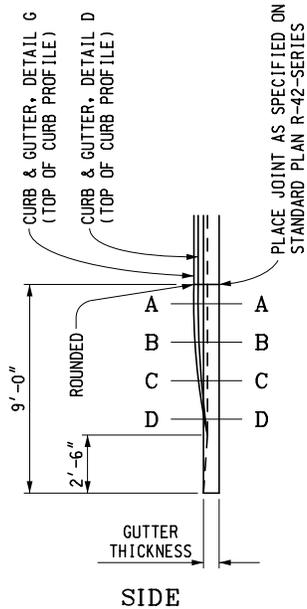
DETAIL G1 OR G2
ABUTTING RETAINING WALL



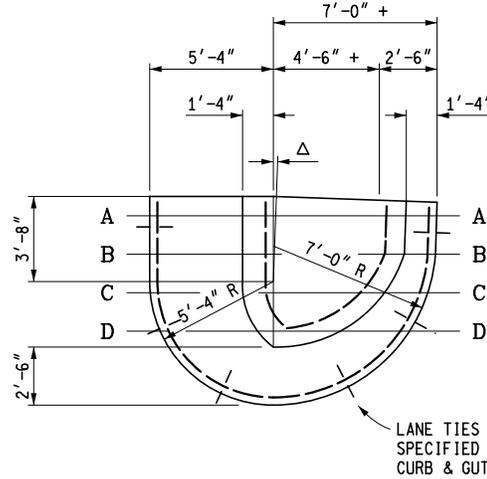
DETAIL G1 OR G2
IN CUT SECTION



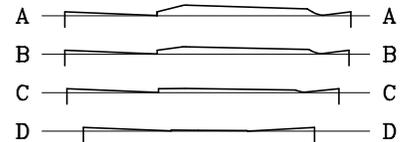
DETAIL G1
IN SUPERELEVATION OR TRANSITION



CURB & GUTTER, DETAIL G
CURB & GUTTER, DETAIL D
SEE STANDARD PLAN R-30-SERIES



Δ = DEFLECTION ANGLE FOR RAMP



PLAN
CURB NOSE DETAIL

SECTIONS THROUGH NOSE

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
**CONCRETE VALLEY GUTTER
AND URBAN FREEWAY CURB**

| | | | |
|-------------------|------------------------|--------|-----------------|
| F.H.W.A. APPROVAL | 8-14-2019 PLAN DATE | R-33-G | SHEET 2 OF 2 |
|-------------------|------------------------|--------|-----------------|