CONCRETE BARRIER

20'-0" MAXIMUM BETWEEN JOINTS

BARRIER REFLECTIVE MARKER
SEE STANDARD SPECIFICATIONS

HATCHED AREA INDICATES
1/4" FIBER JOINT FILLER

ES JOINT (TYP)

1" EXPANSION JOINT AT BEGINNING
AND END OF SPLIT SECTIONS
SEE EXPANSION JOINT DETAIL

ELEVATION

TYPE A BARRIER

CONSTRUCTION STATIONING SHALL BE PLACED ON
BOTH SIDES OF THE BARRIER. USE 3" TO 4"
PAVEMENT STENCILS IMPRINTED 1/2" DEEP.
CONCRETE BARRIER SPLIT

20'-0" MAXIMUM BETWEEN JOINTS

PLACE 1/4" x 4" FIBER JOINT FILLER BETWEEN BACK OF CONCRETE BARRIER AND CONCRETE FILLER WALL SLAB

6'-0" TYPICAL JOINT SPACING IN CONCRETE FILLER SLAB

1'-6" MIN.

2'-0" CLEARANCE FOR SLIP-FORMING (TYP)

1" EXPANSION JOINT AT BRIDGE PIERS
SEE EXPANSION JOINT DETAIL

PLAN

HATCHED AREA INDICATES 1/4" FIBER JOINT FILLER

ELEVATION

TYPE A BARRIER
**SECTION A-A**

Concrete Valley Gutter or Concrete Shoulder (Typ)

1/8" Bevel or 1/3" R. (Typ)

Expansion Joint Detail

1/4" R Top and Sides

1" Fiber Joint Filler

**SECTION B-B**

Type A Barrier

Concrete Valley Gutter or Concrete Shoulder (Typ)

1/8" Bevel or 1/3" R. (Typ)

Thickness of Adjacent Valley Gutter/Shoulder or 3", whichever is greater

**CONCRETE BARRIER**

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SECTION C-C

TO BE FILLED WITH GRANULAR MATERIAL CLASS II OR OTHER MATERIAL APPROVED BY THE ENGINEER (SEE NOTES)

ES JOINT (TYP)

CONCRETE VALLEY GUTTER OR CONCRETE SHOULDER (TYP)

THICKNESS OF ADJACENT VALLEY GUTTER/SHOULDER OR 3\(^{\circ}\) WHICHEVER IS GREATER

SECTION D-D

TYPE A BARRIER
CONCRETE BARRIER

20'-0" MAXIMUM BETWEEN JOINTS

CONCRETE BARRIER - SPLIT

8'-0" TAPERED SECTION
(SEE NOTES)

E5 JOIN (TYP)

PLAN

1" EXPANSION JOINT AT BEGINNING
AND END OF SPLIT SECTIONS
SEE EXPANSION JOINT DETAIL

CONSTRUCTION STATIONING SHALL BE PLACED ON
BOTH SIDES OF THE BARRIER. USE 3" TO 4"
Pavement Stencils Imprinted 1/4" DEEP.

ELEVATION

TYPE B BARRIER

BARRIER REFLECTIVE MARKER
SEE STANDARD SPECIFICATIONS

HATCHED AREA INDICATES
1/4" FIBER JOINT FILLER

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

CONCRETE BARRIER

3-29-2018
F.H.W.A. APPROVAL

2-24-2017
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CONCRETE BARRIER SPLIT

PLANE

PLACE 1/4" x 4" FIBER JOINT FILLER BETWEEN BACK OF CONCRETE BARRIER AND CONCRETE FILLER WALL SLAB

DESIGN JOINT (TYP)

1" EXHANSION JOINT AT BRIDGE PIERS SEE EXPANSION JOINT DETAIL

平面

在混凝土屏障和混凝土填充板之间放置1/4" x 4"纤维接头填料

设计接头（典型）

1" 表面接头

ELEVATION

TYPE B BARRIER

剖面

TYPE B BARRIER

PIER COLUMNS

4" DRAIN HOLE (TYP)
NOTES:

WHEN "CONCRETE BARRIER, DOUBLE FACE, TYPE A" IS DESIGNATED ON THE PLANS, THE BARRIER MAY BE CONSTRUCTED USING DOWELS AND A WIDENED BASE AS SPECIFIED FOR THE "CONCRETE BARRIER, DOUBLE FACE, TYPE B". THE DOWELS, EXTRA WIDTH OF BASE, OR ANY EXTRA WORK REQUIRED WILL BE INCLUDED IN THE PAY ITEM "CONCRETE BARRIER, DOUBLE FACE, TYPE A".

WHEN "CONCRETE BARRIER, DOUBLE FACE, TYPE B" IS DESIGNATED ON THE PLANS, THE BARRIER SHALL BE CONSTRUCTED ON AN EXISTING BASE OR SHOULDER AND DOWELLED WITH EPOXY COATED #6 DEFORMED BARS 1"-3" LONG. DOWEL PLACEMENT SHALL START 1'-6" FROM END OF STANDARD SECTION. DOWELS SHALL BE PLACED EVERY 3'-0" ALONG THE BARRIER ALTERNATING FROM SIDE TO SIDE 16'-0" C-C ALONG EACH SIDE. DOWELS ARE INCLUDED IN THE PAY ITEM "CONCRETE BARRIER, DOUBLE FACE, TYPE B". ON SPLIT SECTIONS, DOWELS SHALL BE PLACED 3'-0" C-C ALONG EACH SIDE OF THE BARRIER. SPACING MAY BE ADJUSTED TO AVOID CONFLICT WITH JOINTS. DOWELS ARE INCLUDED IN THE PAY ITEM "CONCRETE BARRIER, DOUBLE FACE, TYPE B". THE BASE FOR "CONCRETE BARRIER, DOUBLE FACE, TYPE B" WILL BE PAID FOR SEPARATELY (FOR EXAMPLE: AS CONCRETE SHOULDER, CONCRETE BASE COURSE, ETC.).

THE TAPERED SECTIONS AT THE BEGINNING AND END OF CONCRETE BARRIER, SPLIT ARE INCLUDED IN THE PAY ITEM "CONCRETE BARRIER, SPLIT, TYPE _".

THE TOP AND FACES OF THE BARRIER SHALL NOT VARY MORE THAN 1/8" IN 10' WHEN CHECKED WITH A 10' STRAIGHTEDGE, EXCEPT AT GRADE CHANGES AND CURVES, AND SHALL BE FREE OF HUMPS, SAGS, AND OTHER IRREGULARITIES.

THE CONCRETE FILLER SLAB SHALL BE PAID FOR AS "SIDEBARL, CONC. 4 INCH". THE 1/4" FIBER JOINT FILLER SHALL BE INCLUDED IN THE PAY ITEM "SIDEBARL, CONC. 4 INCH".

THE CLASS II GRANULAR MATERIAL USED IN FILLING SPLIT BARRIER SECTIONS WILL BE PAID FOR AS "CONC BARRIER BACKFILL, 3IN".

PLACE 1" EXPANSION JOINTS AT 400' INTERVALS IN BOTH TYPE A AND TYPE B BARRIERS. PLACE 1" EXPANSION JOINTS AT SPLIT SECTIONS AND ON BOTH ENDS OF ALL STRUCTURES (INCLUDING SIGN SUPPORT FOUNDATIONS, LIGHT STANDARD FOUNDATIONS, BRIDGE PIERS, OR ANY STRUCTURE WITH A FOUNDATION). PLACE 1" EXPANSION JOINTS IN 4" CONCRETE FILLER SLAB ALONG WITH EXPANSION JOINTS IN BARRIER.

PLANE OF WEAKNESS JOINT SPACING SHALL BE 20'-0" MAXIMUM AND 10'-0" MINIMUM. PLANE OF WEAKNESS JOINTS IN THE BARRIER SHALL BE TO A DEPTH OF AT LEAST 4" AND SHALL BE EDGED.

BARRIER SHALL BE ENDED SO AS NOT TO PRESENT A HAZARD TO APPROACHING TRAFFIC, SUCH AS BY CURVING IT AWAY FROM A TARGET POSITION BEYOND THE CLEAR ZONE, BY ENDING AT A STRUCTURE, OR BY UTILIZING AN IMPACT ATTENION DEVICE.

FOR VALLEY GUTTER DETAILS, SEE STANDARD PLAN R-33-SERIES.

ES LONGIUDINAL JOINT WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE PAYMENT FOR THE VALLEY GUTTER OR SHOULDER WHICH IS ADJACENT TO THE BARRIER WALL OR THE BASE FOR THE CONCRETE BARRIER.

BARRIER REFLECTOR MARKERS ARE TO BE SPACED AT THE FOLLOWING INTERVALS:

1) 50'-0" ON TANGENT SECTIONS AND CURVES WITH A RADIUS OF 1150' OR MORE.

2) 25'-0" ON CURVES WITH A RADIUS LESS THAN 1150'.

BARRIER REFLECTOR MARKERS SHALL MATCH COLOR OF EDGE LINE.

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

CONCRETE BARRIER

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