CONCRETE CURBS

1" (25) DEEP CONTRACTION JOINT PLACED AT 10' (3000) MAXIMUM INTERVALS, GROOVES ARE CONTINUOUS ON THE TOP EXPOSED SURFACE FOR THE WIDTH OF CURB AND GUTTER

4½ X SLOPE

2" R

6" (150) FACE OF CURB

12" (300)

LAYDOWN CURB
STRAIGHT LINE TRANSITION FROM FLOWLINE TO TOP BACK OF CURB

6" (150) OR OTHERWISE AS REQUIRED

4X2 SLOPE

EDGE OF PAVEMENT

P = AREA TO BE PAINTED, WHEN PAINTED CURB IS REQUIRED

110 SQ. FT. PER 100 FT. OF CURB [10.7 m² PER 100 m OF CURB]

CURB & GUTTER SECTION

Q, 0.48 C.Y. CONC. PER 1' (0.110 CUBIC METERS CONC. PER METER)

OF CURB FOR 6" (150) GUTTER.

JOINTS:

(A) WHEN INTEGRAL WITH, TIED TO, OR PLACED AGAINST PORTLAND CEMENT CONCRETE PAVEMENT (P.C.C.P.), MATCH TRANSVERSE CONTRACTION AND/OR EXPANSION JOINTS IN THE ADJACENT P.C.C.P. SLAB. IF REQUIRED, EXTEND 1/2" (13) MIN. WIDTH OF EXPANSION JOINTS COMPLETELY THROUGH CURB AND GUTTER AT THE SAME WIDTH AS THE P.C.C.P. SLAB. JOINT, FILL CURB AND GUTTER EXPANSION JOINTS WITH PREEXPANDED JOINT FILLER.

(B) ALL OTHER CASES:

SPACE CONTRACTION JOINTS IN CURB AND GUTTER AT 10 FOOT (3000) INTERVALS OR LESS EXCEPT AS SPECIFIED IN (A) ABOVE. EXTEND 1/2" (13) MIN. WIDTH OF EXPANSION JOINTS COMPLETELY THROUGH CURB AND GUTTER EVERY 100 FEET (30 m) OR 20 FEET (6 m), AT INTERVALS EQUAL TO THE NEAREST MULTIPLE OF THE CONTRACTION JOINT INTERVAL, AND FILL WITH EXPANSION JOINT FILLER.

(C) CONTRACTION JOINTS:

CONTRACTION JOINTS ARE 1/8" (3) MAX. AND 3/8" (10) MAX. IN WIDTH, FORM JOINTS BY SAWING OR SCORING TO A MINIMUM DEPTH OF 1" (25). FORM SCORED JOINTS BY A TOOL WHICH WILL LEAVE ROUNDED CORNERS AND DESTROY AGGREGATE INTERLOCK TO A MINIMUM DEPTH OF 1" (25).

(D) OTHER JOINTS:

SEPARATE THE CURB AND GUTTER FROM ADJACENT SIDEWALK AT POINTS SHOWN ON Dwg. NO. 609-05 WITH A BOND BREAKER MATERIAL, EXCEPT AT APPROACH LAYDOWN CURB LOCATIONS, WHICH REQUIRE SEPARATION USING 1/2" (13) MIN. WIDTH OF PREEXPANDED EXPANSION JOINT MATERIAL, PLACE 1/2" (13) MIN. WIDTH OF PREEXPANDED EXPANSION JOINT MATERIAL AT ALL CURB RETURNS, BRIDGES, DROP INLETS, AND WHERE MEETING CURB AND GUTTER IN PLACE.

CONCRETE CURBS

6" (150)

4" (100)

2" R

1" (25)

CURB SECTION

1 CUBIC FOOT OF CONCRETE WILL MAKE ABOUT 8 LINEAR FEET OF CURB. 

1 CUBIC METER OF CONCRETE WILL MAKE ABOUT 69 METERS OF CURB.

UNIT SHOWN IN BRACKETS ( ) ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

CURB SECTION

1 CUBIC FOOT OF CONCRETE WILL MAKE ABOUT 5 LINEAR FEET OF CURB. 

1 CUBIC METER OF CONCRETE WILL MAKE ABOUT 64 METERS OF CURB.

NOTES:

1. WHEN CURB IS USED IN CONJUNCTION WITH GUARDRAIL, USE THE 4" (100) HIGH TYPE. OTHERWISE, THE CONTRACTOR MAY USE EITHER SECTION.

2. CONFORM ALL MATERIALS AND CONSTRUCTION PER SECTION 609.

3. PROVIDE CONTRACTION JOINTS IN CONCRETE CURBS AS DESCRIBED IN NOTE (A) ABOVE.

DetaileD DRAWING

REFERENCE: DWG. NO.

STANDARD SPEC.

SECTION: 609, 707

609-05

MISCELLANEOUS CURBS

EFFECTIVE SEPTEMBER 2014

MT D® MONTANA DEPARTMENT OF TRANSPORTATION
CONSTRUCTION:

1. CURBS MAY BE CONSTRUCTED USING ANY OF THE FOLLOWING THREE METHODS:
   (1) PRECAST
   (2) CAST IN PLACE
   (3) CONSTRUCTED BY THE USE OF AN APPROVED CURB FORMING OR SLIP FORM MACHINE.

2. WHEN USING EITHER METHOD (2) OR (3), REINFORCING STEEL IS NOT REQUIRED, WITH THE EXCEPTION OF THE PINS, SCREWS OR SAW CUT CURBS TO A DEPTH OF 1" (25) TO FORM CONTRACTION JOINTS AT INTERVALS OF 10 FT. (3000) OR LESS. EXTEND 1/2" (13) MIN. WIDTH EXPANSION JOINTS COMPLETELY THROUGH CURB EVERY 100 FT. (30 M) AT INTERVALS EQUAL TO THE NEAREST MULTIPLE OF THE CONTRACTION JOINT INTERVAL AND FILL WITH PREFORMED EXPANSION JOINT FILLER MEETING SECTION T07.

3. FORM PRECAST CURBS IN THEIR INVERTED POSITION, IN LENGTHS NOT LESS THAN 4 FT. (120), OR MORE THAN 10 FT. (3050).

MATERIAL:

1. CONSTRUCT CURBS WITH CLASS GENERAL CONCRETE OR AN APPROVED EQUIVALENT MIX.

2. EPOXY BINDER FOR GROUTING MUST MEET THE REQUIREMENTS OF AASHTO M 235 (235 M) OR ASTM C 881 (881 M).

UNITS SHOWN IN BRACKETS [ ] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DETAILED DRAWING

REFERENCE: DWG. NO. 609-10

SECTION 609. 707

MONTANA DEPARTMENT OF TRANSPORTATION
NOTES:

1/2" [.13] EXPANSION JOINTS ARE SHOWN AS DARK SOLID LINES FOR VISUAL PURPOSES.
BOND BREAKER IS SHOWN AS DARK DASHED LINE FOR VISUAL PURPOSES.

SECTION A A

NOTES:

1. INSTALL PREFORMED EXPANSION JOINT FILLER, PER SECTION 707, AT ALL EXPANSION JOINTS, FOR THE FULL THICKNESS OF THE CONCRETE MEDIAN CAP.

2. INSTALL A BOND BREAKER FOR THE FULL THICKNESS OF THE CONCRETE MEDIAN CAP BETWEEN THE CAP AND THE CURB. USE A 15 OR 55 POUND (.6 OR 3.6 kg) ROOFING FELT MATERIAL, OR OTHER PRODUCT AS APPROVED BY THE PROJECT MANAGER, FOR THE BOND BREAKER. DO NOT USE EXPANSION JOINT MATERIAL AS A BOND BREAKER.

3. ALL JOINTS MUST BE STRAIGHT AND PERPENDICULAR TO THE CENTERLINE AND THE SURFACE OF THE MEDIAN CAP. WHERE PRACTICAL, ALIGN ALL JOINTS WITH LIKE JOINTS IN ADJOINING WORK. USE JOINTS TO OUTLINE ALL PANELS IN THE MEDIAN CAP. USE SQUARE PANELS WHEN PRACTICAL. ON NARROW MEDIAN CAPS RECTANGULAR SHAPED PANELS ARE ACCEPTABLE.

4. PROVIDE CONTRACTION JOINTS NO LESS THAN 1/8" [.3] WIDE AND NO MORE THAN 1/4" [.6] WIDE AND NO LESS THAN 1" [.25] IN DEPTH. CONTRACTION JOINTS MAY BE CUT BY A GROOVE FORMING TOOL.


6. USE LONGITUDINAL CONTRACTION JOINTS IN MEDIAN CAPS WIDER THAN 6 FT. (1.83 M), WITH SPACING NOT TO EXCEED 6 FT. (1.83 M). SPACE TRANSVERSE CONTRACTION JOINTS EQUAL TO THE LONGITUDINAL SPACING ON MEDIAN CAPS WIDER THAN 6 FT. (1.83 M), FOR MEDIAN CAPS NARROWER THAN 6 FT. (1.83 M), SPACE TRANSVERSE CONTRACTION JOINTS 10 FT. (3.05 M) OR LESS.

7. CONSTRUCT CONCRETE MEDIAN CURB AND CAP WITH CLASS GENERAL CONCRETE OR APPROVED EQUAL.

UNITS SHOWN IN BRACKETS [ ] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.

DISTRIBUTED DRAWING
REFERENCE DWG. NO. 609-12
SECTION 609.707

CONCRETE MEDIAN CAPS

EFFECTIVE: SEPTEMBER 2014

MONTANA DEPARTMENT OF TRANSPORTATION