**Plan View**

- **Typical for Types 1, 2, and 3**

**Median Inlet**

**Details**

- **Detail 1**
  - **Weld Flange on Pipe Ends**

- **Detail 2**
  - **Median Slope 6:1**

**Cover Details**

- **Detail 1**
  - **Types 2 & 3**

**Dimensions**

- **Medians**
  - **1.0** 50
  - **1.1** 85
  - **1.0** 85
  - **1.2** 165

**Grate and Rebar**

- **Types 1, 2, and 3**

- **Cover Details**
  - **Types 2 & 3**

- **Medians**
  - **1.0** 50
  - **1.1** 85
  - **1.0** 85
  - **1.2** 165

- **Note:** Quantities are for estimating purposes only. Type 3 is a special case to be figured for the particular installation.

**Materials**

- **Grates and Reinforcing Steel:**
  - **Types 1, 2, and 3**

- **Medians**
  - **1.0** 50
  - **1.1** 85
  - **1.0** 85
  - **1.2** 165

**Paint and Coating**

- **All Exposed Metal Parts**
  - **One Coat of Zinc Rich Paint**
  - **Two Coats of Aluminum Paint**

- **Detail:**
  - **Symmetrical**

**Optional Details**

- **Detail 2**
  - **Weld Flange on Pipe Ends**

- **Detail 3**
  - **Median Slope 6:1**

**References**

- **Reference:**
  - **Dwg. No.:** 604-00
  - **Section:** 604-710
  - **Effective:** January 2018
  - **Section:** 604-00
  - **Effective:** September 2014

**Note:**

- Paint all exposed metal parts with one coat of zinc rich paint and two coats of aluminum paint per Section 710.
- When median inlet cover is installed over pipes smaller than 36" in diameter, without adequate cover to permit the use of Type 1 installation, provide a detail of the installation in the plans.
** STANDARD UNLESS OTHERWISE NOTED ON THE PLANS.

NOTE: ALL CONCRETE IS CLASS GENERAL OR APPROVED EQUAL.

* SEE QUALIFIED PRODUCTS LIST FOR APPROVED GRATES.

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

SEE DETAILED DRAWING NO. 604-02 FOR DIAMETER, SLAB THICKNESS AND REINFORCING REQUIREMENTS FOR COMBINATION TYPE 3 MANHOLE, DO NOT USE TYPE I COMBINATION INLETS FOR MANHOLE DEPTHS GREATER THAN 4 FEET (1.2 m).

** STANDARD UNLESS OTHERWISE NOTED ON THE PLANS.
DIRECTION OF INTAKE FLOW

PLAN

SECTION A-A

SECTION B-B

NOTE:
ALL CONCRETE IS CLASS
GENERAL OR APPROVED EQUAL.

* SEE QUALIFIED PRODUCTS LIST
FOR APPROVED GRATES.

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

DETAIL DRAWING
REFERENCE: DWG. NO.
STANDARD SPEC.
SECTION 604, 708

DROP INLET
TYPE IV

EFFECTIVE: SEPTEMBER 2014

MDT® MONTANA DEPARTMENT OF TRANSPORTATION
**PLAN**

- **SECTION A-A**
  - Connect elbow to slotted drain with modified hugger band and seam solvent or approved equal.
  - **D + 6' [152.4] (TYP.)**

- **SECTION B-B**
  - **CROSS BAR SPACER**
  - **GUTTER SURFACE**
  - **D**
  - **CROSS BAR SPACER**
  - **9 1/2" [240]**
  - **1 1/2" [40]**
  - **1 3/4" [44.5]**
  - **3/16" [6 mm]**
  - **5/32" [4.8]**

- **SECTION C-C**
  - **GRATE SLOT WELDING DETAIL**
  - **6" [152.4] (TYP.)**
  - **3/16" [6 mm]**
  - **2 PIECE ELBOW WITH 2'-0" [609.6] AND 3'-5" [1041.4] LEGS WITH THE JOINT WELDED WATERTIGHT**

- **SECTION D-D**
  - **CROSS BAR SPACER**
  - **6" [152.4] O.C. (TYP.)**

**ELEVATION**

- **STORM DRAIN LATERAL**
- **DRAIN**
- **STANDARD CONCRETE CURB - MODIFIED**
- **#4 [#13] REBAR, EXTEND REBAR TO INLET GRATE (TYP.)**
- **D + 3" [76.2]**
- **MINIMUM EXCAVATION LEAN CONCRETE**
- **6" [152.4] DEEP GRATE SLOT**
- **DEPRESS TOP OF SLOTTED DRAIN AND CATCH BASIN GRATE 1/2" [12.7] BELOW THE GUTTER GRADE**
- **1 3/4" [44.5]**

**NOTES:**

1. Paint all welds and other non-galvanized parts, except rebar, with one coat of zinc rich paint and two coats of aluminum paint per Section 710.
2. Use a 15 or 30 pound (6.8 or 13.6 kilogram) roofing felt material or other product as approved by the project manager, for a bond breaker.

**DETAILS:**

- **GRATE SLOT DETAIL**
- **GRATE SLOT WELDING DETAIL**
- **UNITS SHOWN IN BRACKETS [ ] ARE METRIC AND ARE IN MILLIMETERS (mm) UNLESS OTHER UNITS ARE SHOWN.**

**REFERENCES:**

- **DETAILED DRAWING**
  - **DWG. NO. 604-06**
  - **TYPE IV DROP INLET WITH SLOTTED DRAIN**
  - **EFFECTIVE: SEPTEMBER 2014**

**MONTANA DEPARTMENT OF TRANSPORTATION**
**SECTION A-A**

**CURB TO GRATE**

32" (812.8) ROOF SLAB OPENING IN ROOF SLAB

32" (812.8) ROOF SLAB OPENING & OPENING CENTER OF STRUCTURE & OPENING

**SECTION B-B**

**STRAIGHT BAR GRATE**

TYPE I *

3/8" (9.5) WIRE MESH 6" x 6" (152.4 x 152.4) x W2.9 (AASHTO M 170)

48" (1219.2) RCP CLASS 2 **

40" (1016.0) 12" (304.8) MIN. - 12" (304.8) MAX. RINGS AS NECESSARY

CONCRETE ADOJUSTING RINGS AND REBAR GRIZZLY 1/2" (12.7) MIN. - 1/2" (12.7) MAX.

48" (1219.2) RCP CLASS 2

TYPE V *

VANE STYLE GRATE

SEC. 25 (635) SLAB TO DRAIN

**SECTION C-C**

**VANE STYLE GRATE**

TYPE I *

SECTION VIEW

33 3/4" (857.3) 33 3/4" (857.3) 33 3/4" (857.3)

3" (76.2) 3" (76.2) 3" (76.2) 3" (76.2)

3/8" (9.5) 3/8" (9.5) 3/8" (9.5) 3/8" (9.5)

1 1/2" (38.1) 1 3/8" (34.9) 1 3/8" (34.9) 1 3/8" (34.9)

4" (101.6)

WIRE MESH 6" x 6" (152.4 x 152.4) x W2.9

**NOTES:**

- ALL CONCRETE IS CLASS GENERAL OR APPROVED EQUAL UNLESS OTHERWISE NOTED ON PLANS.
- ADD A GRATE TO MATCH FLOW DIRECTION SHOWN.
- PROVIDE SAFETY LUG ON STRAIGHT BAR GRATE.
- TYPE I AND TYPE V GRATES ARE INTERCHANGEABLE BETWEEN EACH RIMG.
- SEE QUALIFIED PRODUCTS LIST FOR APPROVED GRATE TYPES.
- STANDARD UNLESS OTHERWISE NOTED ON PLANS.
- PLAN SECTIONS AND OFFSETS TO CENTER OF THE STRUCTURE.
- PLAN STATION AND OFFSETS TO CENTER OF THE STRUCTURE.
**SECTION A-A**

**SECTION B-B**

**SECTION C-C**

**STRAIGHT BAR GRATE**

**VANE STYLE GRATE**

**TYPE III**

**TYPE VI**

**NOTES:**

- All concrete is Class General or approved equal.
- Set all final inlet grate elevations to ensure that positive drainage is provided from the culvert line of the curb and gutter section into the inlet.
- Standard unless otherwise noted on plans.
- Flow station and offset is to the center of the structure.
- Type III and Type VI grates are interchangeable with the same frame and have the ability to be rotated 90 degrees in any direction. Install grate to match flow direction shown.
- Provide safety lug on straight bar grate between each bar.
- * See qualified products list for approved grates.

**UNLESS OTHERWISE NOTED ON PLANS.**

**DETAILED DRAWING**

**REFERENCES**

- DWG. NO.
- PLAN STATION AND OFFSET IS TO THE CENTER OF THE STRUCTURE.
- OPTIONED SUMP

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

**SEPTEMBER 2014**

**DWG. NO.**

**SECTION**

**STANDARD SPEC.**

**EFFECTIVE:**