5" CONCRETE SIDEWALK
20' RESERVE

6" VERTICAL CURB AND GUTTER

0.33' OF 3/4" CRUSHED AGG BASE

0.33' OF 3/4" CRUSHED AGG BASE UNDER CURB

0.35' OF 3/4" HMA SUPERPAVE PAVEMENT

0.5' OF 3/4" CRUSHED AGG BASE

1 1/2" CHIP SEAL WITHIN 12 MONTHS

COMPACTED SUBGRADE

1.5' OF GRANULAR SUBBASE

DETAILS:

CITY OF BLACKFOOT

ARTERIAL STREET TYPICAL SECTION

CITY OF BLACKFOOT

STANDARD DETAILS

12/13/2019

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**City of Blackfoot Standard Details**

**Collector Typical Street Section**

**Description:**

- **5' Concrete Sidewalk**
- **10' Reserve**
- **6' Vertical Curb and Gutter**
- **0.33' of 3/4" Crushed Agg Base Under Curb**
- **0.33' of 3/4" Crushed Agg Base**
- **0.35' of 2" HMA Superpave Pavement**
- **0.5' of 2" Crushed Agg Base**
- **0.5' of 3/4" Crushed Agg Base**
- **1.5' of Granular Subbase**
- **Compacted Subgrade**
- **1/2" Chip Seal Within 12 Months**
- **No Trees**
- **5' Concrete Sidewalk**
- **5' Concrete Sidewalk Under Curb**

**Dimensions:**

- 80' Length
- 16' Width
- 14' Width
- 10' Width
- 5' Width
- 5' Width

**Notes:**

- **S = 2% Max**
- **R = 40'**

**Construction Details:**

- **Reserve:**
  - 6" Vertical Curb and Gutter
  - 10' Reserve
4' 32' ASPHALT
60' RIGHT OF WAY
7' RESERVE
NO TREES
5' CONCRETE SIDEWALK
7' RESERVE
6" VERTICAL CURB AND GUTTER
0.25' OF
1 2
" HMA SUPERPAVE PAVEMENT
0.33' OF
3 4
" CRUSHED AGG BASE
1' OF GRANULAR SUBBASE
COMPACTED SUBGRADE
5' CONCRETE SIDEWALK
7' RESERVE
2'

DETAILS:
DATE 12/13/2019
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CITY OF BLACKFOOT
STANDARD DETAILS
RESIDENTIAL STREET
TYPICAL SECTION
1. The location and construction of mailboxes shall conform to the rules and regulations of the United States Postal Service. In conformance with Section 504 of the Americans with Disabilities Act, mailbox installation is prohibited within a public sidewalk or pedestrian way.

2. Mailboxes will not be permitted on interstate highways, freeways, or other highways where prohibited by law or regulation.

3. Mailboxes on curbed highways, roads and streets shall be set with the face of the box 12" back of the face of curb.
NOTES:
1. WATERLINE IN LANDSCAPE IN ARTERIAL AND COLLECTOR
NOTES:
A. LOCATION, GRADE & WIDTH OF SIDEWALK TO BE ESTABLISHED OR APPROVED BY OWNER.
B. GRAVEL BASE UNDER CONCRETE TO BE COMPACTED TO 95% OF STANDARD DENSITY
C. SLOPE DRIVEWAY TOWARDS THE STREET NOT TO EXCEED 1.75% ± 0.25% UNLESS OTHERWISE SPECIFIED BY THE OWNER.
D. SCORE AT INTERVALS TO MATCH WIDTH OF SIDEWALK NOT TO EXCEED 5 FEET SPACING. IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTION FOR SIDEWALKS GREATER THAN 5 FEET IN WIDTH.
E. 2" TRANSVERSE PREFORMED BITUMINOUS AT THE TERMINUS POINTS AT CURVE AND WHERE SIDEWALK IS PLACED BETWEEN TWO PERMANENT FOUNDATIONS OR ADJACENT TO A STRUCTURE, PLACE 2" EXPANSION JOINT MATERIAL ALONG THE BACK OF THE WALK THE FULL LENGTH.
F. DRIVEWAY APPROACH ACROSS PLANTER STRIP TO BE 5" MINIMUM CONCRETE OVER 4" OF 3/4" MINUS CRUSHED BASE.
G. SIDEWALK CONSTRUCTION JOINTS SHALL BE CONSTRUCTED APPROXIMATELY 1/2" WIDE 3/4" IN DEPTH AND FINISHED AND EDGED SMOOTH. A PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED EVERY 40' FOR NEW SIDEWALK CONSTRUCTION.
H. ALL CONCRETE SHALL BE CLASS 3000 PER SECTION-703 ISPWC, UNLESS NOTED OTHERWISE.
I. STAMP EVERY 150 FEET WITH DATE OF INSTALLATION
E MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

G SECURE RIGHT-OF-WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.

H VERTICAL CURB AND GUTTER IS THE ONLY CURB ALLOWED FOR NEW CONSTRUCTION.

NOTES:

A GRADE AND ALIGNMENT TO BE ESTABLISHED OR APPROVED BY THE ENGINEER AND THE CITY OF BLACKFOOT.

B BASE: 4-INCH COMPACTED DEPTH OF 3/4-INCH CRUSHED AGGREGATE BASE MATERIAL, PLACED AS SPECIFIED AND COMPACTED TO EXCEED 95% OF STANDARD PROCTOR; A MINIMUM WIDTH OF 3-FEET TO GRADE, PRIOR TO SETTING CURB FORMS.

D CONTINUOUS PLACEMENT PREFERRED, SCORE INTERVALS 10-FEET MAXIMUM SPACING (8-FEET W/SIDEWALK).

E MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.

F BACKFILL AS PER SECTION-706 ISPWC SPECIFICATIONS.

G SECURE RIGHT-OF-WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.

H VERTICAL CURB AND GUTTER IS THE ONLY CURB ALLOWED FOR NEW CONSTRUCTION.
NOTES:
A. GRADE OF GUTTER MINIMUM 0.4%
B. EXPANSION JOINT 1/2" PREFORMED JOINT MATERIAL (AASHTO M 213)
C. FILLET AND BASE SECTION THICKNESS SHALL MATCH THE VALLEY GUTTER, TYPICAL.
D. VALLEY GUTTER FOR REHABILITATION ONLY, NOT FOR NEW CONSTRUCTION.
E. VALLEY GUTTER CONCRETE SHALL CONTAIN FIBER REINFORCEMENT.
INSTALL PREFORMED EXPANSION JOINT MATERIAL AT CURB TERMINUS

FLOW LINE

5'-0"
TRANSITION SECTION

4" OF 3/4" MINUS GRAVEL BASE MATERIAL

10"
14"
25"

1" BATTER

8"
6"
6"
NOTES:
A. GRADE AND ALIGNMENT TO BE ESTABLISHED OR APPROVED BY THE ENGINEER.
B. BASE: 4-INCH COMPACTED DEPTH OF \( \frac{3}{4} \)" MINUS CRUSHED AGGREGATE BASE MATERIAL, PLACED AS SPECIFIED AND PAID UNDER SECTION-802 ISPWC; COMPACTED TO EXCEED 95% OF STANDARD PROCTOR; A MINIMUM WIDTH OF 3'-6" TO GRADE, PRIOR TO SETTING CURB FORMS.
C. \( \frac{1}{2} \)" PREFORMED EXPANSION JOINT MATERIAL (AASHTO M 213) AT TERMINAL POINTS OF RADIUS.
D. CONTINUOUS PLACEMENT PREFERRED, SCORE INTERVALS 8-FEET MAXIMUM SPACING.
E. MATERIALS AND CONSTRUCTION IN COMPLIANCE WITH ISPWC SPECIFICATIONS.
F. BACKFILL AS PER ISPWC SECTION-706.
G. SECURE RIGHT-OF-WAY PERMIT BEFORE BEGINNING CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.
H. FOR PEDESTRIAN RAMPS, CONSTRUCT TRANSITION PER A.D.A REQUIREMENTS IN LIEU OF 3" RADIUS.
NOTES:

A. APPROACH TO CONFORM TO THE LATEST A.D.A. STANDARDS
B. INSTALL EXPANSION JOINT AT TIP OF APPROACH WINGS AND WHERE SIDEWALK CHANGES THICKNESS
C. BASE TO BE A 4" THICKNESS OF 3/4" MINUS CRUSHED AGGREGATE PER SECTION - 802.
D. APPROACH THROAT WIDTHS SET BY POLICY AND APPLICATION. ALL CONCRETE TO BE 6" THICK FROM TIP OF WING TO TIP OF WING UP TO THE EXPANSION JOINT. WHEN SIDEWALK IS SEPARATE FROM CURB THE SIDEWALK IMMEDIATELY BEHIND THE APPROACH THROAT SHALL BE 6" THICK ALSO.
E. ALL CONCRETE SHALL BE CLASS 3000 PER SECTION 703.
F. SIDEWALK WIDTH MAY VARY.
G. PAY QUANTITIES FOR URBAN APPROACHES SHALL INCLUDE THE APPROACH RAMP/DRIVEWAY AREA, AND THE APPROACH FLARES/WINGS.
H. ROUTING OF SIDEWALK AROUND APPROACH IS NOT NECESSARY WHEN THE PLANTING STRIP EQUALS OR EXCEEDS 6- FEET.
NOTES
TEXTURE RAMP WITH TRUNCATED DOMES AS DESCRIBED BY ISPWC
STANDARD DRAWING SD-712 RAMP WINGS SHALL BE TEXTURED
WITH A COURSE BROOM SURFACE ONLY. RAMP AND WING GRADES
NOT TO EXCEED 1:12 OR 8.33%
NOTES:
A. THIS TYPE RAMP MAY BE USED FOR SIDEWAYS IN AREAS THAT DO NOT HAVE ADEQUATE SPACE FOR LANDINGS REQUIRED TO MEET A.D.A.
B. THROAT OF RAMP WILL BE 1.75% ± 0.25% PER A.D.A. REQUIREMENTS.
C. ALL SIDEWALK SURFACES SLOPING TO PEDESTRIAN RAMP MUST BE 12:1 SLOPE TO CONFORM TO A.D.A. REQUIREMENTS.
D. CONCRETE CURB WILL BE PLACED AT THE BACK OF THE RAMP AND ADJOINING SLOPING SIDEWALK. HEIGHT OF THE CURB WILL BE DETERMINED BY THE ADJACENT PROPERTY BEING TIED INTO. CURB WILL BE 0 INCHES HIGH AT THE TOP OF THE SLOPING SIDEWALK.
E. ALL CONCRETE ADJOINING THE RADIUS WITHIN AND AROUND THE RAMPS WILL BE 5 INCHES THICK WITH 4 INCHES OF 3/4 BASE.
F. SLOPES SHOWN ARE MAXIMUMS. THE CONTRACTOR SHOULD ACCOUNT FOR CONSTRUCTION TOLERANCES TO PREVENT EXCEEDING THE MAXIMUM SLOPES.
G. FOR REHABILITATION ONLY, NOT NEW CONSTRUCTION.
POTABLE WATERLINES

1. WATER LINES SHALL BE CLASS 50 DUCTILE IRON OR C900 PVC
   MINIMUM WATER MAIN SIZE SHALL BE 8-INCH DIAMETER, UNLESS A 6-INCH LINE IS SPECIFICALLY APPROVED BY THE CITY ENGINEER.

2. WATER SERVICE STUB OUTS ARE TO BE PLACED AT CORNER OF THE LOT WHERE PRACTICAL. WATER METERS AND CURB STOPS ARE TO BE PLACED WITHIN THE LANDSCAPING STRIP. THE WATER SERVICE LINES ARE TO BE EXTENDED FROM THE METER PIT TO THE HOME PRIOR TO THE SIDEWALK BEING INSTALLED. REFER TO UTILITY LOCATION STANDARD DRAWING.

3. FIRE FLOW REQUIREMENTS, FIRE HYDRANT SPACING AND RELATED WATERLINE SIZE(S) SHALL BE AS REQUIRED IN THE INTERNATIONAL FIRE CODE FOR ZONES OR DEVELOPMENTS.

4. GRIDDED AND/OR LOOPED WATER MAINS ARE TO BE INSTALLED WHENEVER POSSIBLE. SIX (6)-INCH MAINS MAY HAVE UP TO THREE HUNDRED (300) FEET OF DEAD END SERVICE WITH ONE STANDARD FIRE HYDRANT; EIGHT (8) -INCH OR LARGER MAINS, UP TO FIVE HUNDRED (500) FEET OF DEAD-END SERVICE WITH UP TO TWO (2) STANDARD FIRE HYDRANTS; FLUSH HYDRANTS ARE NOT ALLOWED.

5. MINIMUM DEPTH OF COVER OVER WATER MAINS SHALL BE 5 FEET UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

6. ALL WATER MAINS SHALL HAVE A SOLID 12AWG DIRECT BURY TRACE WIRE INSTALLED WITH PIPE AND BURY TAPE 18" ABOVE PIPE

7. WATER MAINS SHALL BE VALVED AT INTERSECTIONS AND OTHER LOCATIONS SO THAT NOT MORE THAN 600-FOOT-LONG SEGMENT OF WATER MAIN HAS TO BE TAKEN OUT-OF-SERVICE TO PROVIDE NEEDED MAINTENANCE / REPAIR WORK. ADDITIONAL VALVING MAY BE REQUIRED FOR CONSTRUCTION AND TESTING PURPOSES.

8. WATER MAINS SHALL BE STUBBED-OUT TO THE EDGES OF DEVELOPING PROPERTY TO ALLOW FOR FUTURE WATER MAIN SERVICE TO ADJACENT PROPERTY AND TO PROVIDE THE REQUIRED LOOPING / GRIDDING OF THE OVERALL WATER MAIN SYSTEM.

9. INDIVIDUAL HOUSE/BUSINESS WATER SERVICE LINES SHALL BE STUBBED-OUT TO LOTS ADJACENT TO NEW STREETS TO ELIMINATE THE NEED FOR FUTURE EXCAVATION WORK IN NEW STREETS.

10. DEVELOPERS ARE FINANCIALLY RESPONSIBLE FOR A MINIMUM EIGHT (8) -INCH DIAMETER WATER MAIN OR SUCH LARGER SIZE WATER MAIN AS MAY BE NEEDED TO PROVIDE THE REQUIRED FIRE FLOW FOR THE PROPOSED NEW DEVELOPMENT. (SEE ITEM 3 ABOVE AND INTERNATIONAL FIRE CODE REQUIREMENTS.)

11. WATER LINE STUB-OUTS TO BE BALL-TYPE CORPORATION VALVE (MUELLER H-15008 OR FORD F10004-TW-Q-NL. C.C. X CTS COMPRESSION) AND CURB STOP VALVE (MUELLER H-10291 WITH CTS COMPRESSION X FEMALE IRON PIPE OR FORD 841-444-Q-NL). AND RATED AT 300 PSI MINIMUM WORKING PRESSURE. WATER SERVICE LINE MATERIALS ARE K-TYPE SOFT COPPER TUBE OR CLASS 200 PSI CTS POLYETHYLENE PIPE (WITH APPROVAL). METER PIT MUST BE INSTALLED BY CONTRACTOR.

12. WATER STUB OUTS ARE TO BE MARKED WITH A 2X4 AT THE END OF THE SERVICE LINE INSTALLED, RISING 36" ABOVE GRADE AND PAINTED BLUE

13. ALL WATER MAIN AND AUXILIARY VALVE BOXES SHALL HAVE A CONCRETE COLLAR AT GRADE LEVEL
14. RED FIRE HYDRANT TO BE MUELLER, CLOW, OR WATEROUS BRANDS WITH KOCHÉK (MODEL SZMC4045-2 STORZ ADAPTER OR APPROVED EQUAL.

15. WATER MAIN VALVES TO BE RESILIENT WEDGE GATE VALVES FOR 12” AND SMALLER DIAMETER PIPES AND BUTTERFLY VALVES FOR LARGER DIAMETER PIPES RATED AT 250 PSI OR MORE WORKING PRESSURE. DOUBLE DISC GATE VALVES WILL NOT BE ACCEPTED.

16. FINAL ACCEPTANCE OF THE WATER LINES ARE BASED ON THE FOLLOWING CRITERIA:
   a. BEDDING AND BACKFILLING OF TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ISPWC, UNLESS OTHERWISE SPECIFIED BY CITY ENGINEER.
   b. PERFORM ALL TESTING IN THE PRESENCE OF THE CITY ENGINEER OR HIS ASSIGNED AGENT.
   c. ALL TESTING IN ACCORDANCE WITH ISPWC SPECIFICATIONS.
      i. CLEAN BAC-T SAMPLE RESULT SENT TO WATER DEPARTMENT.
      ii. COPY OF PRESSURE TEST RESULTS SENT TO WATER DEPARTMENT.
      iii. ALL METER PITS AND VALVE BOXES INSTALLED AND SET TO FINAL GRADE.
      iv. ALL CURB STOP VALVES ARE STRAIGHT AND ACCESSIBLE.
      v. TRACE WIRE ACCESSIBLE IN METER PIT.
   d. NO WATER SERVICE WILL BE PROVIDED UNTIL PROVISIONAL ACCEPTANCE OF THE NEWLY INSTALLED WATER SYSTEM.
   e. A SIGNED “LETTER OF ACCEPTANCE” FROM THE CITY WILL BE REQUIRED PRIOR TO FINAL SURFACE RECONSTRUCTION (I.E.: PAVING, LANDSCAPING, ETC.)
   f. AFTER SURFACE RESTORATION AND COMPLETION OF PROJECT, A STAMPED “AS-BUILT” DRAWING WILL BE SUBMITTED TO THE CITY IN BOTH PRINTED AND DIGITAL FORM.
WATER DEPARTMENT 1" SERVICE LINE SPECS.

1. **1" CORP STOP MUELLER B-25008N OR FORD F1004-Q-NL. C.C. X CTS COMPRESSION**
   (DUCTILE MAINS MAY BE DIRECT TAPPED OR SADDLE. C-900 OR HDPE MAINS MUST HAVE APPROPRIATE SADDLE.
   USING CTS POLY REQUIRE THE USE FORD F1004-TW-Q-NL OR EQUIVALENT).

2. **1" K-TYPE COPPER TUBING OR CTS POLY WITH TRACE WIRE. (THIS SHOULD BE 1 SOLID PIECE FORMING
   GOOSENECK AND SERVICE LINE).**

3. **1" METER SETTER ANCHORED TO MOVEABLE PLATFORM**

4. **1" CURB STOP VALVE MUELLER H-10291 + H15428N, B-25172N OR FORD B41-444-Q-NL.**

5. **5' BURY 94-E BUFFALO STYLE ADJUSTABLE VALVE BOX (NO RISING STEM).**

6. **1" X 8" DOMESTIC BRASS NIPPLE.**

7. **1" SERVICE LINE**

8. **BEDDING PER ISPWC SECTION 300**

9. **(4) BRICKS EVENLY SPACED BENEATH METER PIT**

10. **1-1" SENSIUS IPERL METER (NO EQUAL) TO BE PURCHASED BY THE DEVELOPER UNLESS OTHERWISE APPROVED
    BY THE CITY WATER DEPARTMENT.**

11. **1- SENSIUS MS20M RADIO (NO EQUAL) TO BE PURCHASED BY THE DEVELOPER UNLESS OTHERWISE APPROVED
    BY THE CITY WATER DEPARTMENT.**

12. **1-18" FLAT METER LID**

13. **ADJUSTA-COIL 18" METER BOX OR APPROVED BY CITY EQUAL**

14. **INSULATING PAD**

ALL BRASS FITTINGS MUST COMPLY WITH NSF 372, REDUCTION OF LEAD IN DRINKING WATER ACT.
ALL GALVANIZED PIPE MUST BE DOMESTIC.
ALL DEVIATIONS MUST BE APPROVED BY THE WATER SUPERINTENDENT PRIOR TO INSTALLATION.
TRACE WIRE SHALL BE 12AWG DIRECT BURY WIRE. MUST BE TIED INTO TRACE WIRE ON MAIN OR
USE CTS Q-TW-NL NUT
1. **1 1/2” CORP STOP MUeller H-15008 or FORD F10004-Q-NL, C.C. X CTS COMPRESSION**

   (ALL MAIN TYPES MUST HAVE APPROPRIATE SADDLE. CTS POLY REQUIRES F1004-TW-Q-NL OR EQUIVALENT).

2. **1 1/2” K-TYPE COPPER TUBING OR 1 1/2” CTS SIZE POLY WITH TRACE WIRE (THIS SHOULD BE 1 SOLID PIECE FORMING GOOSENECK AND SERVICE LINE).**

3. **2 - 1 1/2” CTS POLY STIFFENER (IF USING CTS POLY).**

4. **1 - 1 1/2” CURB STOP VALVE MUeller H-10291 + H15428N, B-25172N OR FORD B41-444-Q-NL.**

5. **5’ BURY 94-E BUFFALO STYLE ADJUSTABLE VALVE BOX (NO RISING STEM).**

6. **1 - ENLARGED FOOT ADAPTER FOR Valve BOX IF Valve DOESNT FIT INSIDE FOOT OF THE ABOVE Valve BOX.**

7. **1 - 1 1/2” X 8” DOMESTIC GALVANIZED NIPPLE.**

8. **CAP SERVICE LINE**

9. **2 - 1 1/2” METER LEG ASSEMBLIES**

10. **INSULATING PAD**

11. **1 - 1 1/2” BRASS METER FLANGE KIT WITH GASKET AND BOLTS**

12. **1 - 1 1/2” SENSUS OMNI R2 METER (NO EQUAL) TO BE PURCHASED BY THE DEVELOPER UNLESS OTHERWISE APPROVED BY THE CITY WATER DEPARTMENT.**

13. **1 - SENSUS M520M RADIO (NO EQUAL) TO BE PURCHASED BY THE DEVELOPER UNLESS OTHERWISE APPROVED BY THE CITY WATER DEPARTMENT.**

14. **1 36” EZ-VAULT METER PIT FORD PSBB-688-36-54-NL OR APPROVED BY CITY EQUAL**

15. **1 - 36” FLAT METER LID**

16. **4 - (2”X8”X12”) CONCRETE BLOCKS. BRICKS TO BE UNDER METER BOX EDGE AND NOT PIPE**

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ALL BRASS FITTINGS MUST COMPLY WITH NSF 372, REDUCTION OF LEAD IN DRINKING WATER ACT.

ALL GALVANIZED PIPE MUST BE DOMESTIC.

ALL DEVIATIONS MUST BE APPROVED BY THE WATER SUPERINTENDENT PRIOR TO INSTALLATION.

TRACE WIRE SHALL BE 12AWG DIRECT BURY WIRE.
WATER DEPARTMENT 2" SERVICE LINE SPECS.

1. 1 - 2" CORP STOP MUELLER H-15008 OR FORD F10004-Q-NL. C.C. XCTS COMPRESSION
   (ALL MAIN TYPES MUST HAVE APPROPRIATE SADDLE. USINGCTS POLY REQUIRES FORD F10004-TW-Q-NL OR EQUIVALENT).
2. 2" K-TYPE COPPER TUBING OR 2" CTS SIZE POLY WITH TRACE WIRE (THIS SHOULD BE 1 SOLID PIECE FORMING GOOSENECK AND
   SERVICE LINE).
3. 2 - 2"CTS POLY STIFFENER (IF USING 2"CTS POLY).
4. 1 - 2" CURB STOP VALVE MUELLER H-10291 + H15428N, B-25172N OR FORD B41-444-Q-NL.
5. 5' BURY 94-E BUFFALO STYLE ADJUSTABLE VALVE BOX (NO RISING STEM).
6. 1 - ENLARGED FOOT ADAPTER FOR VALVE BOX IF VALVE DOESN'T FIT INSIDE FOOT OF THE ABOVE VALVE BOX.
7. 1 - 2" X 8" DOMESTIC GALVANIZED NIPPLE.
8. CAP SERVICE LINE
9. 2 - 2" METER LEG ASSEMBLIES
10. INSULATING PAD
11. 1 - 2"BRASS METER FLANGE KIT WITH GASKET AND BOLTS
12. 1 - 2"SENSUS OMNI R2 METER (NO EQUAL)
13. 1 - SENSUS M520M RADIO (NO EQUAL)
14. 1 - 36" EZ-VAULT METER BOX FORD PSBB-788-56-NL OR APPROVED BY CITY EQUAL
15. 1 - 36" FLAT METER LID
16. 4 - (2"X8"X12") CONCRETE BLOCKS. BRICKS TO BE UNDER METER BOX EDGE AND NOT PIPE.

ALL BRASS FITTINGS MUST COMPLY WITH NSF 372, REDUCTION OF LEAD IN DRINKING WATER ACT.
ALL GALVANIZED PIPE MUST BE DOMESTIC.
ALL DEVATIONS MUST BE APPROVED BY THE WATER SUPERINTENDENT PRIOR TO INSTALLATION.
TRACE WIRE SHALL BE 12AWG DIRECT BURY WIRE.
1. WATER MAIN (PVC.)
2. FLANGE X M.J. GATE VALVE.
3. (2" X 8" X 12") CONCRETE BLOCK.
4. CONCRETE BLOCKING.
5. COMPRESSION TYPE FIRE HYDRANT (M.J.) OR APPROVED EQUIVALENT. WITH STORZ COUPLING (SEE MATERIAL SPECIFICATIONS.)
6. TYPE 1A AGGREGATE BEDDING.
7. VALVE BOX.
8. FLANGE X M.J. TEE OR TAPPING SLEEVE.
9. FIRE HYDRANT SERVICE LINE LATERAL (DUCTILE IRON.)

NOTES:
1. HYDRANT LOCATION: HYDRANTS SHALL BE LOCATED AT THE STREET INTERSECTION OR AT THE LOT LINE BETWEEN ADJACENT PROPERTIES. THE HYDRANT SHALL BE INSTALLED SO THAT THE FACE OF THE STANDPIPE FLANGE IS LOCATED BEHIND THE STREET RIGHT OF WAY AND 2" MIN. AND 8" MAX. ABOVE FINISHED GRADE.
2. CUL-DE-SAC SERVICE LATERALS MUST FOLLOW THE MOST DIRECT ROUTE POSSIBLE BETWEEN TAPPING TEE AND HYDRANT.
3. SIZE ON SIZE TAPS REQUIRE A MUELLER TAPPING SLEEVE OR APPROVED EQUIVALENT. IN THE CASE OF A PLANTING STRIP, THE FIRE HYDRANT SHOULD BE PLACED AT MIDPOINT BETWEEN CURB AND SIDEWALK.
SANITARY SEWER

1. MINIMUM SANITARY SEWER MAIN SIZE SHALL BE 8-INCH DIAMETER.
2. SANITARY SEWER LINES TO BE ASTM D3034, SDR 35, OR ASTM F679 OR ENGINEERS ACCEPTED EQUIVALENT FOR GRAVITY SEWER AND ANSI/AWWA C900, CLASS 150, OR ENGINEERS ACCEPTED EQUIVALENT FOR PRESSURE SEWER LINES. THE SANITARY SEWER PIPE SHALL BE GREEN IN COLOR.
3. MANHOLES SHALL BE NO MORE THAN 400 FEET APART OR PER ISPWC.
4. AT MANHOLES, PIPES OF DIFFERING DIAMETERS SHALL BE LOCATED (VERTICALLY) SO AS TO MATCH THEIR 0.6 DIAMETER POINTS.
5. MINIMUM PIPE GRADES SHALL BE PER THE IDAPA.
6. SEWER MAINS SHALL BE STUBBED OUT TO THE EDGES OF DEVELOPING PROPERTY TO ALLOW FOR FUTURE SEWER MAIN SERVICE TO ADJACENT PROPERTY. SEWER MAINS SHALL BE KEPT AS DEEP AS PRACTICAL SO AS TO PROVIDE THE POSSIBILITY OF SEWER SERVICE TO AS LARGE AN AREA AS POSSIBLE.
   a. NO SEWER SERVICE MAY BE CONNECTED TO A MAIN LINE THAT DOES NOT HAVE AN UPSTREAM MANHOLE.
7. ALL SANITARY SEWER MAINS SHALL BE CONSTRUCTED IN THE PUBLIC RIGHT OF WAY. THERE SHALL BE NO SEWER MAINS CONSTRUCTED THROUGH PRIVATE PROPERTY, EVEN WITH A UTILITY EASEMENT.
8. ALL SANITARY SEWER MANHOLE COVERS AND RINGS SHALL BE A HINGED RING AND COVER. THE RING AND COVER SHALL ME THE ERGO ASSEMBLY BY EJ, PRODUCT NUMBER 00104102L02.
   a. THE SEWER MANHOLE COVER SHALL BE INSTALLED SO THAT THE HINGE IS ON THE DOWNSTREAM SIDE OF THE MANHOLE. WHEN THE LID IS OPEN IT WILL BE TO THE DOWNSTREAM SIDE OF THE MANHOLE ALSO.
   b. MANHOLES COVERS SHALL BE INSTALLED TO GRADE IN ACCORDANCE WITH ISPWC.
   c. SEWER LINES SHALL BE INSTALLED SO THAT NO MANHOLES WILL BE INSTALLED IN A VEHICLES WHEEL PATH.
9. INDIVIDUAL HOUSE/BUSINESS SEWER SERVICE LINES SHALL BE STUBBED-OUT TO LOTS ADJACENT TO NEW STREETS SO AS TO ELIMINATE THE NEED FOR FUTURE EXCAVATION WORK IN NEW STREETS. SERVICE LINES TO BE NEAR THE CENTER OF THE LOTS AND 10' HORIZONTALLY FROM THE WATER SERVICE.
   a. THE END OF THE SERVICE LINE MUST BE MARKED BY A 2X4 BURIED AT THE END OF PIPE AND EXTENDING AT LEAST THREE (3) FEET ABOVE THE GROUND. THE ABOVE GROUND PORTION OF THE 2X4 MUST BE PAINTED GREEN
   b. DEVELOPER IS RESPONSIBLE FOR MAINTAINING THE MARKER UNTIL BUILD OUT OF THE PROPERTY.
10. DEVELOPERS ARE FINANCIALLY RESPONSIBLE FOR A MINIMUM EIGHT (8) - INCH DIAMETER SEWER MAIN OR SUCH LARGER SIZE SEWER MAIN AS MAY BE NEEDED TO PROVIDE SEWER SERVICE FOR THE PROPOSED NEW DEVELOPMENT.
11. DEVELOPERS ARE FINANCIALLY RESPONSIBLE FOR SANITARY SEWER OR STORM DRAIN LINE DEPTH UP TO SIXTEEN FEET (16’) TO PIPE FLOW LINE. DEEPER DEPTHS THAT ARE NECESSITATED TO SERVE ADJACENT YET-TO-BE DEVELOPED PROPERTY MAY BE PARTICIPATED IN BY THE CITY AS MAY BE APPROVED IN THE ANNEXATION/DEVELOPMENT AGREEMENT.
12. IN AN AREA WERE CITY SEWER SERVICES ARE UNAVAILABLE, A HOUSE SEWER SERVICE LINE SHALL BE CONSTRUCTED AND MARKED ANYWHERE FROM 10’ FROM THE SIDE OF THE HOUSE FACING THE STREET TO THE EDGE OF THE UTILITY EASEMENT TO FACILITATE AN EASY CONNECTION TO A FUTURE SANITARY SEWER MAIN IN THE STREET.
SANITARY SEWER CONTINUED

13. THERE SHALL BE NO BUILDINGS ALLOWED TO BE CONSTRUCTED OVER A CITY SEWER LINE.

14. ACCEPTANCE OF THE SANITARY SEWER ARE BASED ON THE FOLLOWING CRITERIA, AS PER THE CURRENT EDITION OF ISPWC:
   a. BEDDING AND BACKFILLING OF TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ISPWC, UNLESS OTHERWISE SPECIFIED BY CITY ENGINEER.
   b. PERFORM ALL TESTING IN THE PRESENCE OF THE CITY ENGINEER OR HIS ASSIGNED AGENT.
   c. TESTING PER ISPWC SPECIFICATIONS.
   d. PIPE CLEANING
      i. AFTER THE PIPE ENDS HAVE BEEN GROUTED ACCORDING TO ISPWC DIVISION 500 SECTION 502.3.5 AND PRIOR TO CCTV INSPECTION, THE COMPLETED PIPELINE WILL BE CLEANED WITH A HYDRO CLEANER ACCORDING TO ISPWC DIVISION 500 SECTION 501.3.4.

E.CLOSED CIRCUIT TELEVISION (CCTV) INSPECTION
   i. ACCEPTANCE CRITERIA:
      1. NO VISIBLE STANDING WATER IN PIPELINE CAUSED BY GRADE DEFECTS
      2. NO PIPELINE STRUCTURAL DEFECTS OBSERVED
      3. NO PIPELINE INSTALLATION DEFECTS OBSERVED
      4. NO INFILTRATION OBSERVED
   ii. CCTV SEWER LINE INSPECTION MAY BE DONE BY A CITY CREW AT CONTRACTOR EXPENSE.
   iii. CCTV SEWER LINE INSPECTION IS TO BE DONE AFTER BACKFILL AND COMPACTION, BUT PRIOR TO SURFACE CONSTRUCTION (I.E.: PAVING, LANDSCAPING, ETC.). UNCOVER AND REPAIR OR REINSTALL SECTIONS OF PIPE FOUND TO HAVE DEFECTS AS DIRECTED BY THE CITY ENGINEER OR HIS AGENTS.
   iv. CCTV SHALL BE DONE AT LEAST TEN WORKING DAYS PRIOR TO FINAL SURFACE RECONSTRUCTION TO ALLOW FOR CCTV INSPECTION TO BE REVIEWED BY THE CITY AND REPAIRS TO BE DONE IF NECESSARY.
   v. ANY REPAIRS WILL NEED TO BE RE-INSPECTED AFTER THE REPAIR IS COMPLETED.
   vi. SURFACE RESTORATION SHALL NOT BE DONE UNTIL AFTER THE CCTV INSPECTION HAS BEEN REVIEWED AND APPROVED BY THE CITY WASTEWATER SUPERINTENDENT.

15. AFTER SURFACE RESTORATION AND COMPLETION OF PROJECT, A STAMPED “AS-BUILT” DRAWING WILL BE SUBMITTED TO THE CITY IN BOTH PRINTED AND DIGITAL FORM.

A SIGNED “LETTER OF ACCEPTANCE” FROM THE CITY WILL BE REQUIRED PRIOR TO FINAL SURFACE RECONSTRUCTION (I.E.: PAVING, LANDSCAPING, ETC.).
Lift Station Standards for Construction

1. MILLTRONICS TYPE CONTROLS WITH PRESSURE SENSOR. MUST BE ABLE TO BE SET UP TO MEASURE WET WELL LEVEL. AT THE CITY'S DISCRETION, THE HYDRORANGER MAY BE REPLACED WITH AN ALLEN-BRADLEY PLC.
   a. HYDRORANGER 200 PANEL MOUNT. MODEL NUMBER 7ML50343AB01
   b. PRESSURE TRANSDUCER NEEDS TO BE WEIGHTED AND A 0-15 PSI
   c. POWER FOR THE TRANSDUCER IS 12 - 30 VDC
2. 3-PHASE POWER OR VFD'S TO CONVERT TO 3-PHASE. THIS ALLOWS THE OPERATORS THE OPTION TO RUN THE PUMP IN REVERSE TO UN-JAM A CLOG IN THE PUMP. ALSO ALLOWS FOR THE USE OF MORE ENERGY EFFICIENT PUMPS. VFD'S ALSO ALLOW FOR MONITORING OF THE PUMP AMPERAGE. VFD'S WILL BE ALLEN-BRADLEY WITH ETHERNET CONNECTIVITY.
3. WIRELESS TELEMETRY WILL BE COMPATIBLE WITH THE EXISTING SCADA SYSTEM. CONTACT KEVIN SKINNER AT INTEGRATED SOLUTIONS AND DESIGN 208.841.2777 FOR TELEMETRY REQUIREMENTS. THE TELEMETRY WOULD BE USED FOR ALARM NOTIFICATION AS WELL AS TRANSMITTING LIFT STATION DATA TO THE PLANT SCADA SYSTEM. IF DIRECT COMMUNICATIONS FIBER NETWORK IS AVAILABLE, THEN TELEMETRY NEEDS TO BE HOOKED TO FIBER. NO WIRELESS TELEMETRY WOULD BE NEEDED.
4. A GENERATOR OF SUFFICIENT SIZE TO OPERATE THE LIFT STATION IN THE EVENT OF POWER FAILURE. THE GENERATOR MUST BE HOUSED IN A PROTECTIVE BUILDING OR SHELTER THAT CAN BE SECURED. IF LARGE ENOUGH CAN HOUSE LIFT STATION CONTROLS ALSO.
5. HOISTING MECHANISM FOR PUMPS NEED TO BE STEEL STEEL CABLE TO BE ABLE TO CONNECT OF THE CITY OF BLACKFOOT'S HOIST. CABLE MUST REACH AT LEAST 15' OUT OF THE VAULT.
6. ALL CONTROLS HOUSED IN ONE WEATHERPROOF CABINET THAT CAN BE SECURED WITH CITY SUPPLIED PADLOCK OR KEYED TO ACCEPT CITY KEY. INSIDE PANEL DOOR SHALL HAVE A PANEL MOUNTED HYDRORANGER 200 SET TO DISPLAY LIQUID LEVEL AND THE FOLLOWING FOR EACH PUMP:
   a. HOA SWITCH
   b. PUMP RUN INDICATOR LIGHT
   c. PUMP FAULT INDICATOR LIGHT
   d. PUMP AMP METER
   e. PUMP RUN TIME METER
   f. PUMP RESET
   g. SILENCE ALARM
   h. SEE BSD-20 FOR PANEL LAYOUT
   i. FLOW TOTALIZER DISPLAY
7. EXTERNAL 110 VAC POWER OUTLET FOR TEST EQUIPMENT AND TOOLS AND A 110 VAC POWER OUTLET WITHIN THE CONTROL CABINET.
8. 3-PHASE 240/480 VAC PUMPS. THE CITY'S PREFERENCE IS FLYGT, AND PREFERABLY IN HP THAT WE ALREADY OWN AS TO NOT REQUIRE ADDITIONAL REPLACEMENT PUMPS ON-HAND. CONTROLS FOR THE PUMPS SHOULD BE COMPATIBLE WITH THE MAKE OF PUMP USED.
9. A BACK UP HI LEVEL FLOAT IS TO BE INSTALLED IN THE EVENT OF FAILURE OF THE PRIMARY MeASURING EQUIPMENT.
10. IF PANEL AND GENERATOR ARE TO BE OUTSIDE OF A BUILDING, THE PANEL AND GENERATOR SHALL BE LOCATED IN A CHAIN-LINK FENCED COMPOUND WITH 3 STRANDS OF BARBED WIRE ALONG THE TOP OF THE FENCE, A PERSONNEL GATE, AND A VEHICLE GATE.
11. THE LIFT STATION AND VALVE VAULT SHALL BE PROTECTED BY BOLLARDS TO PREVENT DAMAGE TO THE LIDS OF THE STRUCTURE, AND PREVENT PARKING ON THE STRUCTURE.
12. PRESSURE LINE SHALL HAVE A CONTINUOUS TRACE WIRE.
   a. TRACE WIRE SHALL BE OF A TYPE DESIGNED FOR THIS USE. TRACE WIRE SHALL BE SECURED TO THE PIPE.
   b. SHALL BE MARKED WITH A UTILITY MARKERS. SEE SHEET BSD 24, 24A, 24B
   c. BI-DIRECTIONAL CLEAN-OUTS SHALL BE INSTALLED EVERY 800' OF STRAIGHT RUN AND AT TURNS IN PIPE. A CATHODIC PROTECTION TEST STATION/MARKER SHALL BE INSTALLED AT EACH CLEAN-OUT SEE SHEET BSD 25
   d. COMBINATION AIR/VACUUM RELEASE VALVES SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT EDITION OF ISPWC.
13. THE CITY RESERVES THE RIGHT TO REQUIRE A LARGER THAN SPECIFIED PUMP FOR GROWTH OUTSIDE OF THE DEVELOPMENT. THE DEVELOPER SHALL SUPPLY A COST SHEET FOR THE DESIGNED LIFT STATION, ANY ITEM THAT THE CITY WISHES TO SPECIFY OUTSIDE THE ABOVE REQUIREMENTS MAY BE PAID FOR BY THE CITY IN THE DIFFERENCE FROM THE COST SHEET AND WHAT THE CITY REQUESTS.

A SIGNED "LETTER OF ACCEPTANCE" FROM THE CITY WILL BE REQUIRED PRIOR TO ANY FINAL SURFACE RECONSTRUCTION (E.L.: PAVING, LANDSCAPING, ETC.).
Break Out, Install Rubber Gasket and Grout Smooth

SHADED AREA TO BE SEPARATELY INSTALLED THRUST BLOCK. NOTE: DROP MANHOLE PIPE FITTINGS TO BE CONNECTED IN PLACE BEFORE POURING CONCRETE THRUST BLOCK.

5'-10" 45° BEND

45° WYE

1/2 DIA.

6"

Sweep 90° WYE OR 45° WYE AND 45° BEND

Sweep 90° Bend

Var.

5'-10" 1/2 DIA.

PLASTIC PIPE

ECCENTRIC CONE

BARREL SECTION

PLASTIC

45° BEND

ASPHALT

SHADED AREA TO BE SEPARATELY INSTALLED THRUST BLOCK. NOTE: DROP MANHOLE PIPE FITTINGS TO BE CONNECTED IN PLACE BEFORE POURING CONCRETE THRUST BLOCK.
4" MIN

DEPTH AS NEEDED

2'-2"

4, 6, AND 8 GRADE RINGS

4'-0"

2'-2"

5"

Ø2'-2"

3" CONE

EXISTING PIPE

GRouted SMOOTH

48" X 3'-0" CONE

Rungs AS REQ'D

GROUT SMOOTH

TONGUE DOWN

4'-0"

4" MIN

8" MIN

4 SECTION

3" CONE

SECTIONS

1'-0"

1'-5"

3'-6"

4" MIN

5" 5" 5" 5" 5"

4'-0"

ECCENTRIC PRECAST REINFORCED CONCRETE CONE

DETAILS:

CITY OF BLACKFOOT

STANDARD MANHOLE

DETAILS

12/13/2019

BSD

22

27

NTS
UTILITY DECAL
BERNTSEN 17859WSP
WARNING SEWER PIPELINE 811
OR APPROVED EQUAL

UTILITY MARKER POST
BERNTSEN CRM3060-LL
60° FIBERGLASS CARSONITE
OR APPROVED EQUAL

PLACE UTILITY DECAL
17859WSP ON THE POST

MARKERS SHALL BE
LOCATED AT EACH
CLEANOUT AND AIR RELIEF
MANHOLE, EXCEPT WHERE
THE MH LIES IN THE
ROADWAY, THEN IT SHALL
BE PLACED AT THE ROW
EVEN WITH THE MH

GREEN CAP WITH PRESSURE
SEWER STICKER

BERSNTSEN
PRODUCT NUMBER
CTS07201C
OR APPROVED EQUAL

TRACER WIRE

GROUND LEVEL

43"

72"

UTILITY DECAL
BERNTSEN 17859WSP
WARNING SEWER PIPELINE 811
OR APPROVED EQUAL

UTILITY MARKER POST
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GREEN CAP WITH PRESSURE
SEWER STICKER

BERNTSEN
PRODUCT NUMBER
CTS07201C
OR APPROVED EQUAL

TRACER WIRE

GROUND LEVEL

43"

72"
UTILITY MARKER/LOCATOR W/ DECAL

MIDWAY BETWEEN CLEANOUT/AIR RELIEF

400' MAX

PRESSURE SEWER PIPE
800' MAX BETWEEN CLEANOUTS

CLEANOUT OR AIR RELIEF

UTILITY MARKER/LOCATOR W/ DECAL

CLEANOUT OR AIR RELIEF
12" minimum

45° ELBOWS

"Y" FITTING

PLUG VALVE

PRESSURE SERVICE MAIN

COMPACTED SUBGRADE

24" MANHOLE RING AND COVER CENTERED OVER CLEANOUTS

NOTE:
ALL PIPING 44" OR LARGER IN CLEAN OUT CHAMBER, EXCEPT AS NOTED, TO BE DUCTILE IRON CONNECTED WITH FLANGED JOINTS AND STAINLESS STEEL BOLTS, WASHERS & NUTS

FLOW

6" CONCRETE

6" FEMALE CAM LOCK FITTING WITH PLUG

TRACER WIRE ALONG OUTSIDE OF PIPE TO LOCATOR/MARKER

12" minimum

3' MIN
UNIMPROVED STREET INSTALLATION

NOTE:

1. VALVE LID SHALL SAY SEWER

IMPROVED STREET INSTALLATION

EXISTING GRADE

NOTE:  
1. FINAL RIM ELEVATION TO BE 1/8" TO 1/4" BELOW FINAL GRADE.
2. MORE STRINGENT INSTALLATION REQUIREMENTS MAY BE IMPOSED BY THE ENTITY HAVING JURISDICTION OF THE LOCATION OF THE VALVE BOX INSTALLATION.

DETAILS:

CITY OF BLACKFOOT

STANDARD DETAILS

VALVE BOX FOR PRESSURE SEWER

CITY OF BLACKFOOT

12/13/2019

BSD

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PAGE

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SCALE

NTS
8-3-9(A): ORDINANCE NO. 2128

THIS SECTION COVERS THE WORK OF INSTALLING NON-SHRINK BACKFILL MATERIALS IN SPECIFIC TRENCH CUTS LOCATED WITHIN THE CITY OF BLACKFOOT RIGHTS-OF-WAY. THE CITY OF BLACKFOOT MAINTAINS AN IWORQ'S PAVEMENT MANAGEMENT SYSTEM THAT GRADES ALL RIGHTS-OF-WAY ON A SCALE OF 1 TO 10 PASER RATING, WITH A 10 BEING A RIGHT-OF-WAY IN EXCELLENT CONDITION. THIS SECTION SHALL APPLY TO ALL TRENCH CUTS WITHIN RIGHTS-OF-WAY THAT ARE DESIGNATED AS 4 OR HIGHER. THE DESIGNATION IS AVAILABLE FROM THE CITY OF BLACKFOOT AT THE TIME OF OBTAINING A PERMIT FOR THE TRENCH CUT.

ALL REQUIREMENTS FOR EXCAVATION SHALL MEET WITH THE CITY OF BLACKFOOT SPECIFICATIONS WHEN WORKING WITHIN THE CITY'S RIGHT-OF-WAY.


THE NON-SHRINK BACKFILL MATERIAL SHALL BE ENCASEMENT CONCRETE WITH A MINIMUM CEMENT CONTENT OF 50 LBS. TO THE CUBIC YARD, MAXIMUM WATER TO CEMENT RATIO OF .80, A MAXIMUM SLUMP OF 10, AND A 0-10% AIR CONTENT.

ALL BACKFILLING MADE UNDER THIS SECTION SHALL BE SUPERVISED AT THE TIME OF BACKFILLING AND APPROVED BY A REPRESENTATIVE OF THE STREET DEPARTMENT OF THE CITY OF BLACKFOOT. THE PERMITTEE MUST SCHEDULE IN ADVANCE WITH THE STREET DEPARTMENT FOR A REPRESENTATIVE TO BE PRESENT AT THE TIME OF THE BACKFILL.
NOTES

A. TRENCH EXCAVATION PER SECTION-301
B. 4" FOR PIPES SMALLER THAN 30" AND 6" FOR PIPE 30"
C. BACKFILL AND COMPACTION PER SECTION-306
D. PARALLEL CUTS MUST REPAVE HALF THE ROAD WIDTH.

LEGEND

1. 12" (MIN) OF LOCAL CUT BACK
   REQUIREMENTS TYPICAL BOTH SIDES.
2. SURFACE REPAIR WIDTH, 1/2 THE STREET WIDTH.
3. EXISTING SURFACE.
4. EXISTING BASE.
5. TRENCH BACK SLOPE PER O.S.H.A. OR
   SUITABLE SHORING.
6. TRENCH BACKFILL PER ISPWC SECTION-306.
7. VERTICAL TRENCH WALLS SHORING PER
   O.S.H.A..
8. TYPE I PIPE BEDDING PER ISPWC
   SECTION-305
9. FOUNDATION STABILIZATION MAY VARY
   PER SOIL TYPE AND STABILITY (PER
   SECTION-304).
10. UNDISTURBED SOIL (TYP).
11. SURFACE REPAIR AND BASE PER
    SECTION-307 (SEE SD-303). 3" ASPHALT
    MINIMUM
12. UPPER COMPACTION ZONE.
13. LOWER COMPACTION ZONE.
14. DETECTION TAPE
NOTES:
A. USE THIS TRENCH TO PLACE CABLE, CONDUIT, OR PIPE 6" OR LESS.
B. COMPACT BACKFILL PER SECTION-308
C. CUT ALL ASPHALT IN A STRAIT LINE.
D. USE FLOWABLE FILL (CDF) PER BLACKFOOT CITY ORDINANCE

1. FINISH GRAD.
2. SURFACE REPAIRS PER SECTION-307, MINIMUM 2' WIDTH.
3. 12" MINIMUM INSIDE VEHICLE TRAVEL AREAS, D+3" OUTSIDE VEHICLE TRAVEL AREAS.
4. TYPE I OR TYPE III BEDDING FOR AREAS INSIDE THE VEHICLE TRAVEL AREA. TYPE I OR TYPE III BEDDING OR NATIVE NON-ORGANIC MATERIAL WITH MAXIMUM PARTICLE SIZE OF 3/4" OUTSIDE VEHICLE TRAVEL AREA.
5. PIPE OR CONDUIT.
6. 48"MAX. UNLESS OTHERWISE SPECIFIED. 30" MIN. INSIDE VEHICLE TRAVEL AREAS. 18" MIN. OUTSIDE VEHICLE TRAVEL AREAS
### BEDDING SYSTEM

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<tr>
<td>CLASS C-3 (CONCRETE ENCASEMENT)</td>
<td>TYPE IV</td>
<td>TYPE IV</td>
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**NOTE:**
1. REFER TO SECTION-305 FOR MATERIAL AND COMPACTION REQUIREMENTS.
1. STORM DRAINAGE RAINFALL VALUES AND RUN OFF COEFFICIENTS SHALL BE ESTABLISHED IN ACCORDANCE WITH THE CATALOG OF STORMWATER BEST MANAGEMENT PRACTICES FOR IDAHO CITIES AND COUNTIES.

2. ALL NEW DEVELOPMENTS, COMMERCIAL OR RESIDENTIAL, SHALL MAINTAIN AND TREAT ALL STORM WATER RUNOFF ONSITE. NO NEW CONNECTIONS TO THE EXISTING STORM WATER SYSTEM WILL BE ALLOWED.

3. ALL STORM WATER SHALL BE CONVEYED IN A CITY OF BLACKFOOT APPROVED CURB AND GUTTER WITH SURFACE FLOW LENGTHS NO LONGER THAN 400 FEET (400') BEFORE ENTERING INTO A CATCH BASIN, THEN PIPED TO AN APPROVED STORM WATER TREATMENT.

4. ALL CATCH BASINS SHALL BE DESIGNED ACCORDING TO THE MOST CURRENT VERSION OF THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPWC). CATCH BASINS SHALL BE CONNECTED DIRECTLY TO A MANHOLE ON THE MAIN TRUNK LINE. NO CONNECTIONS ARE ALLOWED DIRECTLY TO ANY STORM WATER PIPING. CATCH BASINS MUST BE SIZED TO ACCEPT THE 100-YEAR/1 HOUR EVENT FLOW RATE.

5. ALL STORM WATER MAIN PIPING SHALL BE NO SMALLER THAN 12” DIAMETER PIPE OR SUCH LARGER SIZE AS MAY BE NEEDED TO PROVIDE FOR STORM DRAINAGE RUN OFF. ALL STORM WATER PIPING WILL BE PLACED IN A CITY RIGHT OF WAY. CATCH BASIN PIPING SHALL BE NO SMALLER THAN 8” DIA.

6. ALL MANHOLES SHALL BE SIZED AND INSTALLED ACCORDING TO THE MOST CURRENT VERSION OF ISPWC. NO MANHOLE MAY BE SMALLER THAN 48 INCHES IN DIAMETER.

7. ALL STORM WATER MANHOLE COVERS AND RINGS SHALL BE AN EJ ERGO ASSEMBLY 24 INCH DIAMETER PRODUCT NUMBER 001040031L01 HINGED LID WITH CITY OF BLACKFOOT STORM PRINTED ON LID, SEE PRODUCT CUT SHEET.
   a. THE SEWER MANHOLE COVER SHALL BE INSTALLED SO THAT THE HINGE IS ON THE DOWNSTREAM SIDE OF THE MANHOLE. WHEN THE LID IS OPEN IT WILL BE TO THE DOWNSTREAM SIDE OF THE MANHOLE ALSO.
   b. MANHOLES COVERS SHALL BE INSTALLED TO GRADE IN ACCORDANCE WITH ISPWC.

8. STORM WATER RETENTION FACILITIES SHALL BE ENGINEERED AND SIZED TO INFILTRATE/DRAIN THE 100-YEAR/1 HOUR EVENT. APPROVED RETENTION/DRAINAGE FACILITIES ARE INFILTRATION SYSTEMS, RETENTION/DRAINAGE PONDS, OR DRY WELLS AS PER STANDARD DRAWINGS.

9. THE PEAK FLOW RATE AND MAXIMUM WATER SURFACE ELEVATIONS MUST BE CALCULATED FOR THE 100-YEAR/1 HOUR EVENT.

10. PRIOR TO CONSTRUCTION OF STORM WATER FACILITIES;
   a. THE STORM WATER FACILITIES MUST BE DESIGNED BY AN ENGINEER.
   b. THE DESIGNS MUST BE APPROVED BY THE PUBLIC WORKS DEPARTMENT FOR THE CITY OF BLACKFOOT.
11. ACCEPTANCE OF THE STORM WATER FACILITIES BY THE CITY OF BLACKFOOT WILL BE BASED ON THE FOLLOWING CRITERIA;
   a. BEDDING AND BACKFILLING OF TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ISPWC, UNLESS OTHERWISE
      SPECIFIED IN WRITING BY THE CITY PUBLIC WORKS DEPARTMENT.
   b. PERFORM ALL TESTING IN THE PRESENCE OF AN ENGINEER, PUBLIC WORKS DIRECTOR, OR OTHER AGENT AS APPROVED BY THE
      CITY.
   c. TESTING PER CURRENT ISPWC SPECIFICATIONS.
   d. PIPE - LEAK TEST PER ISPWC
      I. AIR PRESSURE TEST 24 INCHES AND SMALLER - SECTION 502
      II. HYDROSTATIC EXFILTRATION FOR PIPES LARGER THAN 24 INCHES - SECTION 502
   1. LOW PRESSURE AIR TESTING PER UNI-BELL SPECIFICATION UNI-B-6-98 MAY BE USED UPON APPROVAL OF THE ENGINEER
   E. MANHOLE  PER ISPWC -
      I. HYDROSTATIC - SECTION 502
      II. VACUUM - SECTION 502
   F. PIPE CLEANING - PRIOR TO DEFLECTION TESTING AND CCTV INSPECTION CLEAN THE PIPELINE WITH A HYDRO CLEANER
   G. DEFLECTION TESTING - MANDRELS MUST BE A DIAMETER OF AT LEAST 95% OF ACTUAL INSIDE DIAMETER OF THE PIPE. THE CITY MAY
      ACCEPT A LASER PROFILE OF THE PIPELINE IN LIEU OF A MANDREL TEST.
   H. CCTV INSPECTION OF SEWER LINE PER ISPWC. MAY BE PERFORMED BY THE CITY (AT COST PER CURRENT FEE STRUCTURE) OR AN
      APPROVED CONTRACTOR. IF COMPLETED BY OTHER THAN THE CITY, A PRINTED REPORT OF THE INSPECTION ALONG WITH A DIGITAL COPY OF
      THE INSPECTION MUST BE SUBMITTED TO THE CITY FOR REVIEW.
      i. FINAL TESTING: PERFORM FINAL TESTING AFTER BACKFILLING AND COMPACTION AND FOLLOWING INSTALLATION OF OTHER UTILITIES,
         BUT PRIOR TO SURFACE RESTORATION.
      j. ON-SITE RUNOFF STORAGE FACILITIES MUST BE INSPECTED PRIOR TO FINAL SURFACE RESTORATION.
12. A SIGNED “LETTER OF ACCEPTANCE” FROM THE CITY PUBLIC WORKS DEPARTMENT WILL BE REQUIRED PRIOR TO FINAL SURFACE
    RECONSTRUCTION (I.E.: PAVING, LANDSCAPING, ETC.).
13. AFTER SURFACE RESTORATION AND COMPLETION OF PROJECT, A STAMPED “AS-BUILT” DRAWING WILL BE SUBMITTED TO THE CITY IN
    BOTH PRINTED AND DIGITAL FORM.
CITY OF BLACKFOOT
STORM SEWER LID

DETIALS:
DATE: 12/13/2019
SHEET: BSD 30
PAGE: 40
SCALE: NTS

PRODUCT NUMBER: 001040031L01

CITY OF BLACKFOOT
STANDARD DETAILS
STORM SEWER LID
DETAILS

EJ COMPANY
ERGO ASSEMBLY

1 1/2" FLAT FACE GOTHIC (TYP)

STAINLESS STEEL CAMLOCK

MPIC MULTI-TOOL PICKBAR

SAFETY LOCK @ 90°

FULLY OPENED @ 120°

STAINLESS STEEL

26 15/16" DIA

1 23/32"

4"

26 7/8" DIA.

1 8/16"

T GASKET

24" DIA.

34" DIA.

CITY OF BLACKFOOT

STORM
NOTES:
1. INLETS AND CATCH BASINS MAY BE EITHER PRECAST OR CAST-IN-PLACE. PRECAST UNITS SHALL MEET THE REQUIREMENTS OF ASTM C 913. (PRIOR APPROVAL OF SHOP DRAWINGS WILL BE REQUIRED ON MODIFIED UNITS).
2. A 1" SIDE DRAFT IS ALLOWED FOR FORM REMOVAL.
3. CAST-IN-PLACE INLETS AND CATCH BASINS SHALL CONFORM TO ISPWC SECTION-703 CAST-IN-PLACE CONCRETE.
4. THE GRADE LINE OF THE TOP INSIDE OF ANY PIPE SHALL ENTER AT A POINT NO LOWER THAN THE TOP INSIDE OF THE OUTLET PIPE.
5. PIPES CAN ENTER OR LEAVE THE BOX IN ANY DIRECTION. ALL CONNECTIONS AND BROKEN AREAS SHALL BE GROUTED SMOOTH.
7. ALL METAL REINFORCEMENT USED SHALL BE NO. 4 BARS. THE METAL REINFORCEMENT SHALL BE SMOOTH CUT TO ACCOMMODATE PIPES.
8. GRAY IRON CAST TO THE DIMENSIONS GIVEN FOR THE STEEL GRATES MAY BE USED. THE CASTINGS SHALL CONFORM TO AASHTO M306 CLASS 35B GRAY IRON CASTINGS.
9. INLET/CATCH BASIN GRATES MAY EITHER BE RESISTANCE WELDED OR ARC WELDED. IN EITHER CASE THE GRATE SHALL BE TRUE AND FLUSH.
10. A 30" ROUND BARREL SECTION IS ALSO ALLOWED AS AN ALTERNATIVE OPTION TO THE RECTANGLE BOX.
(9) 3" X 3 3/8"
BEARING BARS
(OUTER BARS INCLUDED)

CROSS BARS:
3/8" DIA. X 1'-4 3/8"
OR
RECTANGULAR BAR
OF EQUIVALENT AREA
(NOTE: CROSS BARS
NOTCHED THOUGH
BEARING BARS)

(WEIGHT APPROXIMATELY 88 LBS SEE NOTES 8 AND 9.)
24" (600 mm) HDPE ACCESS PIPE REQUIRED. USE FACTORY PRE-FABRICATED END CAPS.

SC-740 ENDCAP

2 LAYERS OF AASHTO M288 CLASS 1 WOVEN GEOTEXTILE OR EQUAL, BETWEEN FOUNDATION STONE AND CHAMBERS SC-740: 5'-6" [1.7 m] WIDE STRIP

NYOLPLAST 12" [300 mm] INLINE DRAIN BODY W/ 12" [300 mm] SOLID HINGED COVER AND FRAME (SEE NYOLPLAST DWG# 7003-110-044 FOR PAVED APPLICATIONS / SEE DWG# 7003-110-045 FOR UNPAVED APPLICATIONS)

SC-740 CHAMBER

3/4 - 2 INCH [19 mm - 51 mm] CLEAN CRUSHED ANGULAR STONE

AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE

4" [100 mm] SCH 40 SCREW-IN CAP

CONCRETE COLLAR

PAVEMENT

4" [100 mm] SCH 40 PVC COUPLING

CORE 4.5" [114 mm] Ø HOLE IN CHAMBER (4.5" HOLE SAW REQ'D)

NOTES:
1. INSPECTION PORT MUST BE CONNECTED THROUGH KNOCK-OUT LOCATED AT CENTER OF CHAMBER.
   ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED.
2. IT MUST BE APPROVED BY THE CITY.

GENERAL NOTES:
1. STORMTECH SYSTEM MAY BE SUBSTITUTED WITH AN APPROVED OR EQUAL.
2. IT MUST BE APPROVED BY THE CITY.
STANDARD CATCH BASIN

60" MANHOLE

CULTEC 410 FILTER (OR EQUAL)

FABRIC TO SEPARATE TOPSOIL FROM WASHED STONE

5' SIDEWALK

FINISH GRADE

NATURAL GRANULAR MATERIAL

STORM TECH SC-740 CHAMBER INFILTERATOR

1"-2" WASHED BROKEN STONE

6" BROKEN STONE

4'-4"  6" TYP
LEGEND:
1. CONCRETE COLLAR IN PAVED STREET SECTION PER ISPWC SD-616.
2. GRADE RINGS GROUTED WATER TIGHT IN PLACE, NOT TO EXCEED 21" FROM FINISHED SURFACE TO TOP OF CONE.
3. PRECAST MONOLITHIC ECCENTRIC CONE SECTION (REBAR NOT SHOWN).
4. RAMNEK OR APPROVED GASKET AT ALL JOINTS.
5. PROPERLY ALIGN ALL INTERIOR JOINTS.
6. PRECAST CONCRETE MANHOLE BARREL SECTION (REBAR NOT SHOWN).
7. PRECAST GASKETED HUB RING OR GASKETED COLLAR.
8. SURFACE TO MATCH FLUSH WITH EXISTING SURFACING (AS SHOWN).
9. FRAME TO BE GROUTED TO GRADE RINGS FRAME TO BE GROUTED TO GRADE RINGS.
10. FRAME AND COVER PER BSD-30.
11. MANHOLE STEPS (SEE NOTE G).

NOTES:
A. OPTIONAL PREFABRICATED MANHOLE BASE WITH APPROVED PIPE CONNECTIONS MAY BE USED WITH ENGINEERS APPROVAL, SEE SD-501A.
B. PLACE VERTICAL WALL ON UPSTREAM SIDE OF MANHOLE, ROTATED 45°.
C. FOR INLET PIPE DIAMETER GREATER THAN 24" SEE ISPWC SD-613 OR SD-614.
D. MANHOLE FRAME AND COVER:
   1. REFER TO BSD-30.
   2. FRAME AND COVER SHALL BE FLUSH WITH SLOPE OF PAVEMENT.
   3. ERGO ASSEMBLY PRODUCT NUMBER 001040031L01.
E. WHERE PVC PIPE IS UTILIZED, INSTALL A RUBBER RING OR GASKET COLLAR WHERE THE PIPE IS IN CONTACT WITH MANHOLE BASE AND/OR MANHOLE CHANNEL, IN ORDER TO ENSURE A WATERTIGHT SEAL.
F. EITHER BASE ON ISPWC SD-501 OR SD-501A MAY BE USED WITH EITHER MANHOLE DESIGN.
G. VERIFY WITH CITY OF BLACKFOOT REGARDING PREFERENCE ON INSTALLATION OF MANHOLE STEPS PRIOR TO ORDERING MATERIALS OR INSTALLATION.
BUILDING SETBACK REQUIREMENTS:
CORNER & CUL-DE-SAC LOTS

- ALL SETBACKS SHOWN ARE MINIMUMS, UNLESS OTHERWISE NOTED.

- ACCESSORY BUILDING SETBACKS MAY BE REDUCED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE AND IF THE BUILDING DOES NOT ENCROACH INTO A PUBLIC UTILITY EASEMENT. SETBACKS MAY BE REDUCED DOWN TO 5' WITH THE PROPER VACATION OF ALL THE APPLICABLE UTILITIES. THE 7.5' SETBACK APPLIES ONLY TO ACCESSORY BUILDINGS 20' HIGH OR LESS. ANY ACCESSORY BUILDING HIGHER THAN 20' MUST ADHERE TO SETBACK REQUIREMENTS OF THE DWELLING.
CITY OF BLACKFOOT

SECTION 4A-206:

(A) VISIBILITY AT INTERSECTIONS: NO STRUCTURES SHALL BE ALLOWED WITHIN THE TRIANGLE FORMED BY MEASURING 30 FEET ALONG EACH LOT LINE, BEGINNING AT THEIR INTERSECTION AND CLOSING SUCH TRIANGLE WITH A STRAIGHT LINE, PROVIDED:

1. TREES ARE ALLOWED WITHIN SUCH TRIANGLE. IF ALL BRANCHES ARE TRIMMED FROM CURB LEVEL TO AT LEAST 7 FEET ABOVE CURB LEVEL.
2. SHRUBS, HEDGES, FLOWERS ARE ALLOWED WITHIN SUCH TRIANGLE, NOT TO EXCEED 3 FEET ABOVE CURB LEVEL.
3. FENCES, WALLS AND ALL OTHER SIGHT-OBSTRUCTING STRUCTURES NOT TO EXCEED 3 FEET ABOVE CURB LEVEL ARE ALLOWED WITHIN SUCH TRIANGLE;

(B) VISIBILITY AT ALLEYS AND DRIVEWAYS: NO FENCES, WALL, HEDGES OR ANY OTHER SIGHT-OBSTRUCTING OBJECTS SHALL BE ALLOWED WITHIN THE TRIANGLE FORMED BY MEASURING 15 FEET ALONG THE ALLEY OR DRIVEWAY AND ALONG THE LOT LINE FORM THE INTERSECTION OF SAID LINES, AND CLOSING SAID TRIANGLE WITH A STRAIGHT LINE; EXCEPT FOR TREES AS PROVIDED IN SUBSECTION (a)1 OF THIS SECTION; SHRUBS, HEDGES AND FLOWERS AS PROVIDED IN SUBSECTION (A)2 OF THIS SECTION; AND STRUCTURES AS PROVIDED IN SUBSECTION (A)3 OF THIS SECTION.

FIRE HYDRANTS

THREE (3) FEE OF ACCESS SHALL BE MAINTAINED AROUND FIRE HYDRANTS.

CALL DIGNLINE 811