CITY OF BLACKFOOT STANDARD DRAWINGS
AND SUPPLEMENTARY SPECIFICATIONS
BLACKFOOT, IDAHO
DECEMBER 13, 2019

INDEX TO PLAN SHEETS

- BSD 1: ARTERIAL STREET TYPICAL SECTION
- BSD 2: COLLECTOR STREET TYPICAL SECTION
- BSD 3: RESIDENTIAL STREET TYPICAL SECTION
- BSD 4: MAILBOX IN RESERVE STRIP DETAILS
- BSD 5: UTILITY PLACEMENT
- BSD 6: SIDEWALK DETAILS
- BSD 7: 6" VERTICAL CURB AND GUTTER DETAILS
- BSD 8: VALLEY GUTTER DETAILS
- BSD 9: CURB TERMINAL DETAILS
- BSD 10: CURB CUT DETAILS
- BSD 11: DRIVEWAY APPROACH DETAILS
- BSD 12: CURB RAMP DETAILS
- BSD 13: CURB RAMP WITH NO LANDING WATER STANDARDS
- BSD 14: 1" WATER METER DETAILS
- BSD 15: 1 1/2" WATER METER DETAILS
- BSD 16: 2" WATER METER DETAILS
- BSD 17: FIRE HYDRANT DETAILS
- BSD 18: WATER MAIN VALVE DETAILS SANITARY SEWER STANDARDS
- BSD 19: LIFT STATION DETAILS
- BSD 20: LIFT STATION CONTROL DETAILS
- BSD 21: DROP MANHOLE DETAILS
- BSD 22: STANDARD MANHOLE DETAILS
- BSD 23: SANITARY SEWER LID DETAILS
- BSD 24: PRESSURE SEWER LOCATOR
- BSD 25: PRESSURE SEWER CLEANOUT
- BSD 26: VALVE BOX FOR PRESSURE SEWER UTILITY TRENCH BACKFILL NOTES
- BSD 27: TYPICAL TRENCH DETAILS
- BSD 28: UTILITY TRENCH DETAILS
- BSD 29: PIPE BEDDING DETAILS
- BSD 30: STORM SEWER STANDARDS
- BSD 31: STORM SEWER LID DETAILS
- BSD 32: CATCH BASIN DETAILS
- BSD 33: GRATE DETAILS
- BSD 34: INFILTRATOR DETAILS #1
- BSD 35: INFILTRATOR DETAILS #2
- BSD 36: 60" DIA CATCH MANHOLE DETAILS

THE GREAT SEAL OF CITY OF BLACKFOOT
BINGHAM COUNTY, IDAHO
CITY OF BLACKFOOT

STANDARD DETAILS

ARTERIAL STREET

TYPICAL SECTION

PROJECT NAME AND ADDRESS

DISCRION

DATE

12/13/2019

SHEET

BSD

NTS
RESERVE 6" VERTICAL CURB AND GUTTER

S = 2% MAX

10' RESERVE

5' CONCRETE SIDEWALK

NO TREES

5' CONCRETE SIDEWALK

10' RESERVE

6" VERTICAL CURB AND GUTTER

R = 40'

0.33' OF 3/4" CRUSHED AGG BASE

0.33' OF 3/4" CRUSHED AGG BASE

0.35 OF 2" HMA SUPERPAVE PAVEMENT

0.5 OF 3/4" 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

PROJECT NAME AND ADDRESS

CITY OF BLACKFOOT

STANDARD DETAILS

COLLECTOR TYPICAL STREET SECTION

CITY OF BLACKFOOT

DETAILS:

12/13/2019

BSD 2

SCALE NTS
5' CONCRETE SIDEWALK
7' RESERVE
6" VERTICAL CURB AND GUTTER

60' RIGHT OF WAY
32' ASPHALT

5' CONCRETE SIDEWALK
7' RESERVE
6" VERTICAL CURB AND GUTTER

5' CHIP SEAL
WITHIN 12 MONTHS
1' OF GRANULAR SUBBASE
COMPACTED SUBGRADE

0.25' OF 3/8" HMA SUPERPAVE PAVEMENT
0.33' OF 3/4" CRUSHED AGG BASE
0.33' OF 3/4" CRUSHED AGG BASE UNDER CURB

CITY OF BLACKFOOT
STANDARD DETAILS
RESIDENTIAL STREET
TYPICAL SECTION

PROJECT NAME AND ADDRESS
CITY OF BLACKFOOT
STANDARD DETAILS
RESIDENTIAL STREET
TYPICAL SECTION

DISCRITION

DETAILS:
DATE 12/13/2019
SHEET BSD
SCALE NTS

PROJECT NAME AND ADDRESS
CITY OF BLACKFOOT
STANDARD DETAILS
RESIDENTIAL STREET
TYPICAL SECTION

DISCRITION

DETAILS:
DATE 12/13/2019
SHEET BSD
SCALE NTS
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:

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. 2/3" TRANSVERSE PREFORMED BITUMINOUS AT THE TERMINUS POINTS AT CURVE AND WHERE SIDEWALK IS PLACED BETWEEN TWO PERMANENT FOUNDATIONS OR ADJACENT TO A STRUCTURE, PLACE 2/3" 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 3/8" 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.

F. BACKFILL AS PER SECTION-706 ISPWC SPECIFICATIONS.

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.

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.

R = \frac{1}{2}\text{ in.}

6" OF \frac{3}{4}\text{ in.} MINUS CRUSHED AGGREGATE FOR BASE
5'-0" TRANSITION SECTION

INSTALL PREFORMED EXPANSION JOINT MATERIAL AT CURB TERMINUS

FLOW LINE

4" OF 3/4" MINUS GRAVEL BASE MATERIAL

1" BATTER

PROJECT NAME AND ADDRESS
CITY OF BLACKFOOT
STANDARD DETAILS
CURB TERMINAL DETAILS

CITY OF BLACKFOOT
12/13/2019
BSD 9
NTS
TOP OOF CONCRETE SIDEWALK TO BE 3/4" ABOVE BACK OF CURB

R=3" (SEE NOTE A)

NOTES:
A. GRADE AND ALIGNMENT TO BE ESTABLISHED OR APPROVED BY THE ENGINEER.
B. BASE: 4-INCH COMPACTED DEPTH OF 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. 3/4" PREFORMED EXPANSION JOINT MATERIAL (AASHTO M 213) AT TERMINAL POINTS OF RADII.
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 SIDEWALKS IN AREAS THAT DO NOT HAVE ADEQUATE SPACE FOR LANDINGS REQUIRED TO MEET A.D.A.
B. THROAT OF RAMP WILL BE 1.75% ± 025% 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.
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 to the back of the utility easement. 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 B41-444-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).

12. Water stub outs are to be marked with a 2x4 at valve location, rising 36” above grade and painted blue.

13. All galvanized iron pipe and fittings shall be domestic.

14. All water main and auxiliary valve boxes shall have a concrete collar at grade level.

15. Meter settings will be built using rigid materials, no poly pipe allowed inside meter box.

16. Red fire hydrant to be Mueller, Clow, or Waterous brands with Kochek (Model SZM4045-2 STORZ ADAPTER OR APPROVED EQUAL.

17. 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.

18. 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.

   d. A signed “Letter of Acceptance” from the City will be required prior to final surface reconstruction (i.e.: paving, landscaping, etc.)
WATER DEPARTMENT 1" SERVICE LINE SPECS.

1. 1" CORP STOP MUELLER B-25008N OR FORD F10004-Q-NL. C.C. X CTS COMPRESSION
   (DUCTILE MAINS MAY BE DIRECT TAPPED OR SADDLE; C-900 OR HOPE MAINS MUST HAVE APPROPRIATE SADDLE.
   USING CTS POLY REQUIRES THE USE FORD F10004-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. 2 - CTS INSERTS IF USING CTS POLY
4. 1" CURB STOP VALVE MUELLER H-10291 + H15429N, B-25127N OR FORD B41-444-Q-NL.
5. 5' BURY 94-E BUFFALO STYLE ADJUSTABLE VALVE BOX (NO RISING STEM).
6. 1" X 8" DOMESTIC GALVANIZED NIPPLE.
7. 2- 1" DOMESTIC GALVANIZED 90° ELBOW
8. 2- 1" DOMESTIC GALVANIZED METER LEGS
9. 2- 1" BENT METER CONNECTOR MUELLER H-14210 OR FORD L31-44 NL
10. 1- 1" SENUS IPERL METIER (NO EQUAL)
11. 1- SENUS MS20M RADIO (NO EQUAL)
12. 1- 20"X48" METER BOX (MAY BE ADS PLASTIC TYPE OR 16 GAUGE GALVANIZED)
13. 1- 20" METER LID (STANDARD TYLER OR MUELLER, OR IF NEEDED A HEAVY DUTY FLAT LID FOR TRAFFIC. METER
    LID MUST HAVE 1 1/4" HOLE DRILLED AND ALL RAISED LETTERING GROUND DOWN SO PIT LID ADAPTER WILL SIT
    FLUSH).
14. 2-(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 DEVIATIONS MUST BE APPROVED BY THE WATER SUPERINTENDENT PRIOR TO INSTALLATION.
TRACE WIRE SHALL BE 12AWG DIRECT BURY WIRE.
WATER DEPARTMENT 1 ½" SERVICE LINE SPECS.

1. 1 - 1 ½" 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 F10004-TW-Q-NL OR EQUIVALENT).

2. 1 ½" K-TYPE COPPER TUBING OR 1 ½" CTS SIZE POLY WITH TRACE WIRE (THIS SHOULD BE 1 SOLID PIECE FORMING GOOSENECK
   AND SERVICE LINE).

3. 2 - 1 ½" CTS POLY STIFFENER (IF USING CTS POLY).

4. 1 - 1 ½" 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 - 1 ½" X 8" DOMESTIC GALVANIZED NIPPLE.

8. 2 - 1 ½" DOMESTIC GALVANIZED 90° ELBOW.

9. 2 - 1 ½X30" DOMESTIC GALVANIZED METER LEGS

10. 2 - 1 ½" DOMESTIC GALVANIZED 90° STREET ELBOW.

11. 1 - 1 ½" BRASS METER FLANGE KIT WITH GASKET AND BOLTS.

12. 1 - 1 ½" SENSUS OMNI R2 METER (NO EQUAL).

13. 1 - SENSUS MS20M RADIO (NO EQUAL).

14. 1 - 24"X48" METER BOX (MAY BE ADS PLASTIC TYPE OR 16 GAUGE GALVANIZED).

15. 1 - 24" METER LID (THIS SHOULD BE A HEAVY DUTY FLAT LID. METER LID MUST HAVE 1 ¾" HOLE DRILLED AND ALL RISED
    LETTERING GROUND DOWN SO PIT LID ADAPTER WILL SIT FLUSH).

16. 2 - (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 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. X CTS COMPRESSION (ALL MAIN TYPES MUST HAVE APPROPRIATE SADDLE. USING CTS 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. 2 - 2" DOMESTIC GALVANIZED 90° ELBOW

9. 2 - 2"X30" DOMESTIC GALVANIZED METER LEGS

10. 2 - 2" DOMESTIC GALVANIZED 90° STREET ELBOW

11. 1 - 2" SENSUS OMNI R2 METER (NO EQUAL)

12. 1 - SENSUS M520M RADIO (NO EQUAL)

13. 1 - SENSUS M520M RADIO (NO EQUAL)

14. 1 - 30"X48" METER BOX (MAY BE ADS PLASTIC TYPE OR 16 GAUGE GALVANIZED)

15. 1 - 30" METER LID (THIS SHOULD BE A HEAVY DUTY FLAT LID. METER LID MUST HAVE 1 1/2" HOLE DRILLED AND ALL RAISED LETTERING GROUND DOWN SO PIT LID ADAPTER WILL SIT FLUSH).

16. 2 - (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 DEVIATIONS MUST BE APPROVED BY THE WATER SUPERINTENDENT PRIOR TO INSTALLATION.

TRACE WIRE SHALL BE 12AWG DIRECT BURY WIRE.

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.
   a. ALL CITY OWNED SEWER LINES MUST BE PLACED IN THE CITY RIGHT OF WAY. NO CITY SEWER LINES MAY BE RUN THROUGH PRIVATE PROPERTY, EVEN WITH AN EASEMENT.

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.

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.

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. NOTIFY THE CITY WASTEWATER DEPT. @ (208) 785-8616 AT LEAST TEN WORKING DAYS PRIOR TO FINAL SURFACE RECONSTRUCTION TO ALLOW FOR CCTV INSPECTION TO BE DONE, REVIEWED, AND REPAIRS TO BE DONE IF NECESSARY.

v. ANY REPAIRS WILL NEED TO BE RE-INSPECTED AFTER THE REPAIR IS COMPLETED.

vi. THE COST FOR PIPE CLEANING AND CCTV INSPECTION OF THE LINES WILL BE BILLED TO THE OWNER AT APPROVED CITY OF BLACKFOOT BILLING RATES.

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. IN ADDITION, AN ELECTRONIC FILE OF AS-BUILTS SUITABLE FOR IMPORT INTO THE CITY'S GIS. THE STANDARDS OF WHICH ARE LOCATED ELSEWHERE WITHIN THIS DOCUMENT.

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 STAINLESS 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
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.
   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.
   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 (I.E.: PAVING, LANDSCAPING, ETC.).

PROJECT NAME AND ADDRESS
CITY OF BLACKFOOT
STANDARD DETAILS
LIFT STATION NOTES

CITY OF BLACKFOOT

<table>
<thead>
<tr>
<th>DATE</th>
<th>SHEET</th>
<th>SCALE</th>
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<tbody>
<tr>
<td>12/13/2019</td>
<td></td>
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</table>
Break Out, Install Rubber Gasket and Grout Smooth

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

2. SWEEP 90° WYE OR 45° WYE AND 45° BEND

3. SWEEP 90° BEND

4. 45° WYE

5. 45° BEND

6. 1/2 DIA.

7. 5'-10"

8. Var.

9. ASPHALT

10. ECCENTRIC CONE

11. BARREL SECTION

12. PLASTIC PIPE

13. PLASTIC

14. PROJECT NAME AND ADDRESS

15. CITY OF BLACKFOOT

16. STANDARD DETAILS

17. DROP MANHOLE DETAILS

18. CITY OF BLACKFOOT

19. DATE: 12/13/2019

20. SHEET: BSD 21
CITY OF BLACKFOOT
STAINLESS STEEL CAMLOCK
MPIC MULTI-TOOL PICKBAR

1 1/2" FLAT FACE GOTHIC (TYP)

STAINLESS STEEL CAMLOCK

SAFETY LOCK @ 90°
FULLY OPENED @ 120°

PROJECT NAME AND ADDRESS
CITY OF BLACKFOOT
SANITARY SEWER LID
DETAILS

DISCRIPTION
CITY OF BLACKFOOT
STANDARD DETAILS
SANITARY SEWER LID
DETAILS

ERGO ASSEMBLY
PRODUCT NUMBER:
00104102L02

DETAILS

CITY OF BLACKFOOT
SANITARY SEWER LID
DETAILS

ERGO ASSEMBLY
PRODUCT NUMBER:
00104102L02

DETAILS

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PRODUCT NUMBER:
00104102L02

DETAILS

CITY OF BLACKFOOT
SANITARY SEWER LID
DETAILS

ERGO ASSEMBLY
PRODUCT NUMBER:
00104102L02

DETAILS
BERNSTEN
PRODUCT NUMBER
CTS07201C
OR EQUAL

GREEN CAP
WITH PRESSURE
SEWER STICKER

TRACER WIRE

GROUND LEVEL

CITY OF BLACKFOOT

PROJECT NAME AND ADDRESS
CITY OF BLACKFOOT
STANDARD DETAILS
PRESSURE SEWER LOCATOR

DISCRIPTION

DATE  SHEET
12/13/2019  BSD
SCALE  NTS
24
COMPACTED SUBGRADE

45° ELBOWS

PRESSURE SERVICE LINE

PRESSURE SERVICE MAIN

CONCRETE

MECHANICAL PLUG

"Y" FITTING

FLOW

TRACER WIRE

12" minimum

48" min

6" CONCRETE

6" CONCRETE

PROJECT NAME AND ADDRESS
CITY OF BLACKFOOT
STANDARD DETAILS
PRESSURE SEWER CLEANOUT

CITY OF BLACKFOOT

12/13/2019
BSD
25

DATE SHEET SCALE NTS
UNIMPROVED STREET INSTALLATION

EXISTING GRADE

NOTE:
1. VALVE LID SHALL SAY SEWER

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.

TRACE WIRE

PAVEMENT AS SPECIFIED BY THE CITY OF BLACKFOOT. NO LESS THAN 2”.

CAST IRON SLIDING TYPE VALVE BOX. RICH SERIES 920, TYLER NO. 6855 OR APPROVED EQUAL.

TYPE 1A
TRENCH BACKFILL

RAISE TOP SECTION AND/OR INSTALL RISERS AS NECESSARY. TYLER OR APPROVED EQUAL.

NEW GRADE

PREVIOUS GRADE

NOTE:
1. VALVE LID SHALL SAY SEWER

PROJECT NAME AND ADDRESS
CITY OF BLACKFOOT

STANDARD DETAILS

VALVE BOX FOR PRESSURE SEWER

DISCRIPTION

DETAILS:

CITY OF BLACKFOOT

12/13/2019

BSD 26

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.

PROJECT NAME AND ADDRESS
CITY OF BLACKFOOT
STANDARD DETAILS
TYPICAL TRENCH DETAILS

DISCRITION DETAILS:
DATE  SHEET
12/13/2019  BSD
SCALE NTS 27
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 STRAIGHT LINE.
D. USE FLOWABLE FILL (CDF) PER BLACKFOOT CITY ORDINANCE

LEGEND
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

<table>
<thead>
<tr>
<th>Bedding System</th>
<th>Bedding Materials</th>
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</thead>
<tbody>
<tr>
<td><strong>LOWER BEDDING ZONE</strong></td>
<td><strong>UPPER BEDDING ZONE</strong></td>
</tr>
<tr>
<td>CLASS A-1</td>
<td>TYPE I</td>
</tr>
<tr>
<td>CLASS A-2</td>
<td>TYPE I</td>
</tr>
<tr>
<td>CLASS B-1</td>
<td>TYPE II</td>
</tr>
<tr>
<td>CLASS B-2</td>
<td>TYPE III</td>
</tr>
<tr>
<td>CLASS C-1 (Concrete Cap)</td>
<td>TYPE I</td>
</tr>
<tr>
<td>CLASS C-2 (Concrete Cradle)</td>
<td>TYPE IV</td>
</tr>
<tr>
<td>CLASS C-3 (Concrete Encasement)</td>
<td>TYPE IV</td>
</tr>
</tbody>
</table>

*6" for pipe 30" diameter of larger

**Note:** Refer to Section-305 for material and compaction requirements.
1. Storm Drainage Rainfall Values and Runoff 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 piping shall be no smaller than 12” diameter pipe or such larger size as may be needed to provide for storm drainage runoff. All storm water piping will be placed in a city right of way.

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.
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   b. The designs must be approved by the public works department for the City of Blackfoot.
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.
(9) 3" X 3\(\frac{3}{4}\)" BEARING BARS
(OUTER BARS INCLUDED)

CROSS BARS:
\(\frac{3}{8}\)" DIA. X 1'-4 \(\frac{7}{8}\)" OR
RECTANGULAR BAR
OF EQUIVALENT AREA
(NOTE: CROSS BARS
NOTCHED THOUGH BEARING BARS)

(WEIGHT APPROXIMATELY 88 LBS SEE NOTES 8 AND 9.)
SC-740 ENDCAP

60" DIA ISPWC SD-611 MANHOLE

24" (600 mm) HDPE ACCESS PIPE REQUIRED. USE FACTORY PRE-FABRICATED END CAPS.

8"

4" [100 mm] SCHED 40 PVC COUPLING

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

AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE

24" (600 mm) HDPE ACCESS PIPE REQUIRED. USE FACTORY PRE-FABRICATED END CAPS.

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

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)

CONCRETE COLLAR PAVEMENT

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

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

COVER ENTIRE ROW WITH AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE OR EQUAL SC-740: 5'-6" [1.7 m] WIDE STRIP

COVER ENTIRE ROW WITH AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE OR EQUAL SC-740: 8' [2.4 m] WIDE STRIP

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COVER ENTIRE ROW WITH AASHTO M288 CLASS 2 NON-WOVEN GEOTEX
EXTEND PIPE (1" TO 6" MAX) INSIDE MANHOLE

PIPE FROM INLETS AND/OR TEE IN MAIN LINE.

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 ENGINEER'S APPROVAL, SEE SD-501 A.
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.