The Heavy Duty Lid thickness varies by installation type:

a.) 9" (in) for all new installations
b.) 6" (in) for existing boxes with no roadway overlay
c.) Such that it is flush with the surface of the new overlay, when a new overlay is specified

2. Minimum lid thickness shown. The diamond pattern shall be a minimum of 3/32" (in) thick.

3. Slip-resistant lids shall be identified with a permanent marking on the underside of the lid, indicating the type of surface treatment (see Contract Documents for details) and the year of manufacture. The marking shall use 1/8" (in) thick lines formed with a weld bead, and shall be placed prior to galvanizing.

4. For Standard Duty Lids, attach a 1/4-20 UNC x 1 1/4" (in) S. S. bolt in a 5/8" (in) diameter cored hole in the ductile iron lid gusset, as a ground stud. All ground studs shall include (3) S. S. nuts and (2) S. S. flat washers. See Standard Plan J-90.50 for grounding and bonding details.

5. The bonding jumper between the lid and frame shall be #8 AWG (min.) x 4' (ft) tinned braided copper.

6. System identification letters shall use 1/8" (in) wide lines. Cover marking for steel lids shall be formed by casting or with a mild steel weld bead. Cover marking for ductile iron lids shall be recessed. The bonding jumper between the lid and frame shall be #8 AWG (min.) x 4' (ft) tinned braided copper. See COVER MARKING DETAIL and Standard Specification section 9-29.2(4) for additional details. Ductile iron lids shall also provide a minimum 1 1/2" (in) wide x 3 1/2" (in) thick, flat area for lifting purposes.

7. Cement concrete shall be Class 4000.

8. Plastic plugs shall be put into the lid inserts after fabrication and the lid installation.

9. Conduit Capacity = 40 inches (sum total of all conduit diameters).

10. This drawing depicts a typical Pull Box assembly. Reinforcing not shown. Each manufacturer's Pull Box assembly will vary. Refer to the approved manufacturer's shop drawings for all dimensions and the actual arrangement.

11. The lid is an assembly consisting of the metal lid and frame, reinforcing steel, brass ground inserts, and concrete.

12. #3 reinforcing bar shall be capable of being bent out of the way and restored, to allow for conduit installation.
OPEN BOTTOM PULL BOX ASSEMBLY

HEAVY DUTY LID

1/8-20 UNC × 1.115'-0' MIN. LENGTH
THREADED BRASS GROUND INSERT
WITH STEEL LEAD GROUND ROD
BONDED TO FRAME AND
REINFORCING STEEL

ROUGHENED SURFACE REQUIRED
PRIOR TO CASTING BOTTOM / WALL
CONCRETE

STEEL REINFORCING
SYMMETRICAL ABOUT CENTERLINE

7.53" (TYP.)
9" BOTH ENDS
(TYP. OF 4 PLACES)

GROUND STUD - THREAD INTO PREDRILLED
HOLE IN FRAME FLANGE, DRILL AND TAP
1/2" (IN) - 13 (SEE NOTE 4)

CORED HOLE - DO NOT
DRILL OR TAP - DO NOT
DRILL INTO OR THROUGH
GUSSETS

1/2" (IN) - 13
HOLE IN FRAME FLANGE, DRILL AND TAP

BRIDLE RING

SEE NOTE 6

SPLICED #3 REINFORCING
BAR (TYP.)

SEE NOTE 12

FACTORY CAST BLOCK OUT
WITH ROUGHENED EDGES

#3 REINFORCING
BAR (TYP.)

SEE NOTE 12

#3 REINFORCING
BAR (TYP.)

STAINLESS STEEL (S.S.)
TYPE 304 OR TYPE 316
ASTM F593 OR A193,
BOLTS, NUTS AND WASHERS ~

Ductile Iron Lid

SEE NOTE 4

Cover Marking Detail

1 1/2" (IN) DIAM BRIDLE RING ~
S S 1/4" (IN) DIAM WIRE SIZE
(FABRICATE IF NOT AVAILABLE
COMMERCially)

BOLTS, NUTS AND WASHERS ~
ASTM F593 OR A193,
TYPE 304 OR TYPE 316
STAINLESS STEEL (S.S.)

Steel Reinforcing
Symmetrical About Centerline

1/2" (TYP.)
1/4" CLEAR
ALL AROUND

SEE NOTE 8

BRIDLE RING DETAIL

LOGO DETAIL

9" DIAMETER

1/4" CLEAR (TYP.)
1" MIN.
2" MAX.
(TYP.)

SECTION C

PULL BOX

COVER MARKING DETAIL

STANDARD PLAN J-90.10-03

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

DRAWN BY: LISAKY FORED

SEE PULL BOX SHEET 1, FOR DIMENSIONS NOT SHOWN

NEELOR, MATTHEW

APPROVED FOR PUBLICATION

APPROVED

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WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

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