### Notes

1. The Heavy Duty Lid thickness varies by installation type:
   - a. 9" (in) for all new installations
   - b. 8.5" (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 × 1" (in) S. S. ground stud, coated with anti-seize compound. For Heavy Duty Lids, install a 1/2-13 UNC × 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-00.59 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 markings for steel lids shall be formed by casting or with a mild steel weld bead. Cover markings for ductile iron lids shall be recessed. 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" high x 3/16" (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 = 60 inches (sum total of all conduit diameters).

10. This drawing depicts a typical assembly. Reinforcing not shown. Each manufacturer's 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(s) 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.

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**Standard Plan J-90.20-03**

- **Cable Vault**
  - **Section A**
    - **Heavy Duty Lid**
    - **Top**
    - **Isometric Cutaway**
  - **Section B**
    - **Cable Vault**
    - **View C**

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**Washington State Department of Transportation**

**Standard Specification**

**Approved for Publication**

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