

Structures: General Requirements

1. Purpose

This specification contains structure requirements for splice boxes, pullboxes, and manholes.

2. General

1. All construction work is subject to inspection and testing. If the splice box, pull box or manhole does not meet all requirements or exhibits poor workmanship; it shall be rejected by the NVE plant and/or field inspector.

NOTE: All references to Clark County (C.C.) pertain to "Uniform Standards Specification for Public Works, Construction Off – Site Improvements" – Clark County Standard Specifications and ANSI standards requirements (latest edition).

2. All structures must be designed for H-20-44 loading. The top pad section for the RS-97 manhole shall be designed for 5,000 lb static load with a 30% impact load. The design drawings and calculations for boxes and top lid sections shall be signed and sealed by a registered professional engineer in the State of Nevada.

Prior to approval, these drawings and calculations shall be provided to the NV Energy Regional Standards Department:

NV Energy
Distribution Standards Department
P.O. Box 98910, M/S19
Las Vegas, Nevada 89151-0001
Phone: (702)402-6541
Fax: (702)402-6575

3. The seam between pad, middle section and bottom section of the manholes shall be sealed with a suitable mastic material.
4. All splice boxes, pull boxes and manholes shall meet the specification for Precast Concrete Structures (RS-G2) unless otherwise stated in this specification.

3. Steel Reinforcement

1. All steel reinforcement shall conform to C.C. Section 505 "Reinforcing Steel", ASTM615 and the RS-G2 specifications.
2. The reinforcement shall be furnished in the full lengths and sizes. Splicing of rebar's will not be permitted unless specified on the job drawing or specification.
3. Before the reinforcement is placed into the pouring form, surfaces of the rebar shall be cleaned of all rust, loose mill scale, dirt, grease and any other foreign substances.
4. Reinforcement shall be tied with wire three times in any rebar length. Welding of reinforcement is not permitted. Reinforcements during the manufacturing process shall be accurately placed and secured into position on distance chairs (to prevent shifting) and covered with an equal distance of concrete.

4. Concrete

1. All concrete must conform to C.C. Section 501 "Portland Cement Concrete", C.C. Section 502 "Concrete Structures" and C.C. Section 702 "Concrete Curing Materials and Admixtures" and the RS-G2 specification.

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2. Concrete structures shall attain a compressive strength of 3,000 psi prior to shipment and installation. Any structure not meeting this requirement shall be rejected by NVE.

5. Finish

1. The walls shall be straight, parallel to each other and perpendicular to the bottom, and shall be free of depressions, bumps and other irregularities.
2. The top surface of the RS-97 pad shall be smooth, true, even and level. The finish shall be free of air cavities larger than .25" wide and .25" deep, free of projections beyond surfaces and free of depressions, bumps and other irregularities. The maximum deviation allowed is .0625" per 3' measured with straight edge in any direction. The top and side edges shall have a smooth .5" bevel or radius.
3. The manufacturer's logo and manufacturing date shall be embossed in the bottom of all structures and in the top of the RS-97 according to RS-G5. Other markings shall conform to RS-G2.
4. The top pad section of the RS-97 shall be free of chips. Cracks or splits may not exceed .032". Cracks exceeding .008" in width shall be repaired with epoxy injection. All other concrete structures shall conform to the RS-G2.
5. All conduit terminators, ground wire conduits, pulling eyes, unistruts, insert nuts etc. shall be free of concrete.
6. Splice boxes, pull boxes and manholes shall meet the basic dimensional and tolerance requirements per RS-80 to RS-97, as applicable.

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