

DESIGN REQUIREMENTS

TOLERANCES:
 a = +1/2", -1/2"
 b = 0", -1"
 c = 0", -1/16"

APPROVED BOXES	
MANUFACTURER	PULLBOXES
Jensen Precast	J-RS-82
Rockway Precast	R-RS-82

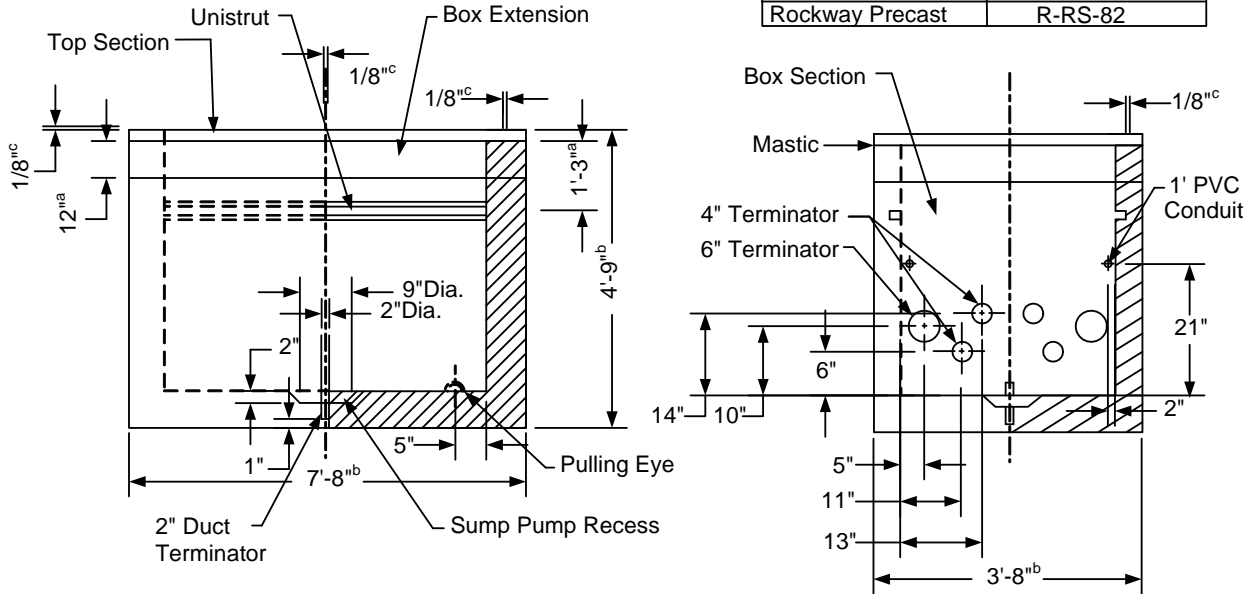


Figure 1. RS-82A Pullbox (Torsion-Assisted Lid) for General Use Applications

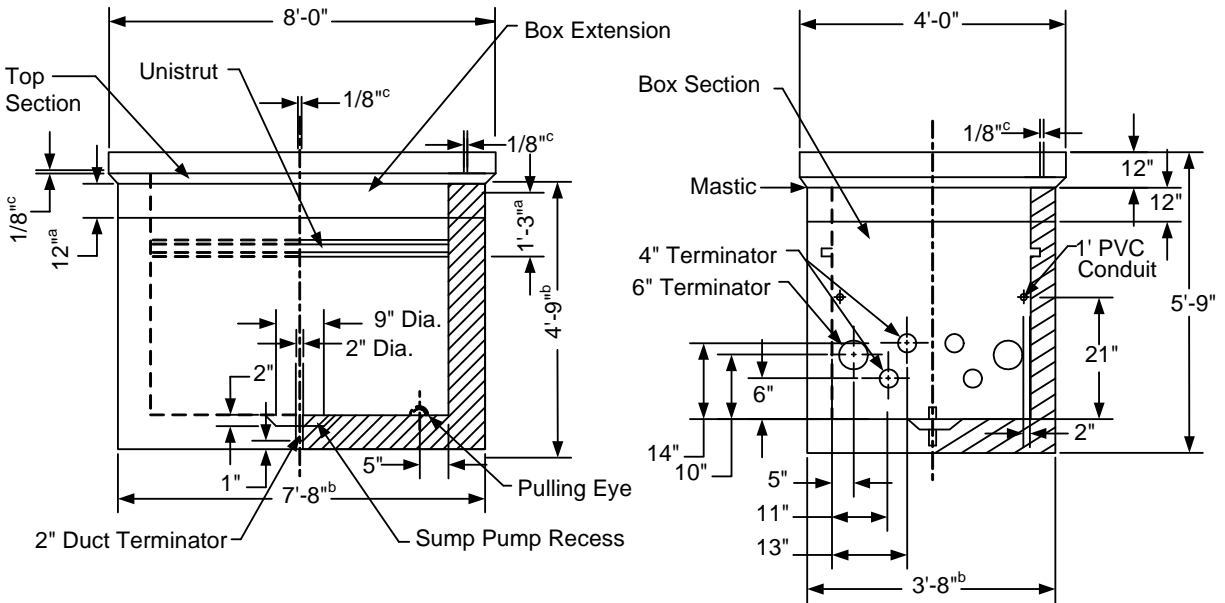


Figure 2. RS-82B Pullbox (Three Piece Lid) for Special Applications

	Electric Service Requirements			RS-82
	Pull Box: 30" x 84" x 48"			
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1. TOP SECTION (FIGURE 1, TORSION ASSISTED LID)

1. "ELE" in 1" letters, centered, bead welded or impressed into the top of one lid section. NOTE: "NVE COMM" shall be used instead of "ELE" on all NVE communications lids.
2. Two 5/8" slotted holes with two captive 1/2" – 13 UNC 304 stainless steel penta-head bolts attached to a latching mechanism and two angle brackets (see Figure 3), which shall be welded continuously to the side of the frame under the slotted holes.
3. Both lid sections level to the top of the frame.
4. A 1" diameter hole (for a typical lifting hook), in covering lid section, with a permanent internal safety cover.
5. Two stainless steel (filled with grease) or brass bearing hinges for each lid section.
6. A stainless steel safety pin and chain lanyard shall be installed with each hinge, and provision shall be made to secure each pin when not in use (see Figures 4 and 5 below). McMaster – Carr Cat. No. 92730A120 and Cat. No. 98416A011, or equivalent shall be supplied.



Figure 3




Figure 4



Figure 5

7. Manufacturer shall provide provision(s) to lock each lid in the 90 degree open position.
8. Manufacturer shall provide a maximum 1/8" horizontal and vertical gap around lid with a debris shield welded on the back side of the lid (see Figure 6).
9. Manufacturer shall provide anchoring provision(s) at both ends of the frame.
10. The gap between the precast structure and the lid shall be sealed with mastic or similar material approved by NVE (see Figure 1).
11. Two (2) 1/2 inch hexagon torsion bars are to be used for each lid. The material shall be 4140 Annealed or 5160 ASQ. Bars to be heat treated to R/C 42-44 and straightened and then cold galvanized or electroplated to prevent corrosion. Design is to allow for easy replacement of torsion bars. Material and heat treating certifications shall be provided on request.
12. Maximum 35 lb. pulling force required to open each lid section.
13. The open angle (by torsion bars) not to exceed 15 degrees between the lid and the frame.
14. An identification tag with the cover manufacturer name, model number and year of manufacture shall be installed on the inside frame.
15. Every twentieth top section assembled shall be tested by opening and closing the lid 25 times.

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16. Four (4) captive ½” bolts shall be attached to the frame one in each corner of lid not to interfere with safety latch, for adjusting the cover to grade variations. Bolt length shall be sized to limit adjustment to no more than 3” (see Figure 7).

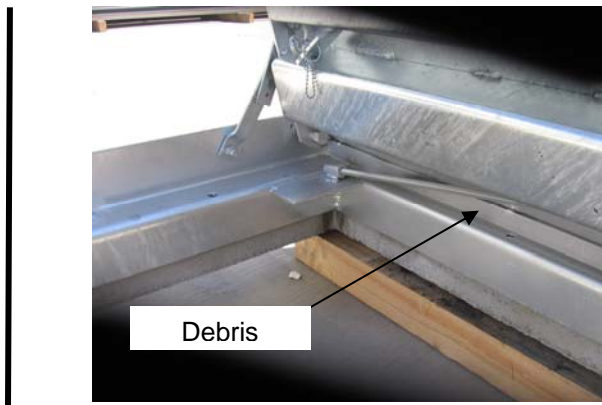



Figure 6



Figure 7.

2. TOP SECTION (FIGURE 2, THREE PIECE LID)

1. The lid shall have:
 - A. “ELE” in 1” letters, centered, bead welded or impressed into the top of one lid section.
 - B. Three pieces of 5/16” steel diamond plate.
 - C. A 1” diameter hole (for typical lifting hook) in each plate with a permanent internal safety cover.
 - D. Lid sections level to the top of the frame.
 - E. A maximum 1/8” horizontal and vertical gap around lids.
 - F. A brass I.D. plate with dimensions of 2.5” diameter x 0.25” thick, which shall be installed into the top of one diamond plate in a specially built concave area.
2. The top section shall have:
 - A. Eight I –beams (type W4x13#/ft.)
 - B. Four ½”-13 UNC stainless steel penta head hold down bolts per plate.
 - C. The I beams held in place by ¼”x2”x2”-1/4” long angle irons.
 - D. A 5”x3”x1/4” edge frame connected to rebar’s.
 - E. The unistrut nut brackets welded on three sides to the vertical side of the frame below top level of I beams.
 - F. A 1-1/2”x1-1/2”x 3/8” angle iron welded into the top edge frame along the entire length of each 36” wall.
 - G. Anchoring provision(s) at both ends of the frame.
 - H. The frame bolted to the precast extension and the gap sealed with mastic or similar material approved by NVE.
3. All parts must meet dimensional tolerance requirements in Figure 9. NOTE: The three piece lid is permitted for applications with High Voltage Metering Enclosure (RPM-407) or with the approval of supervisor, T&D Standards.

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3. BOX EXTENSION


1. 30" (W) X 84" (L) inside dimensions with tolerances of ± 1 ".

4. BOX SELECTION

1. Two 4" and two 6" diameter PVC conduit terminators through each end wall.
2. A 1" diameter PVC conduit through each end wall.
3. Two steel pulling eyes in the floor.
4. A 9" diameter X 2" deep sump pump recess with 2" diameter duct terminator in the middle of the floor. Per T & D Standards: Bow Co. Industries Inc. Part# T2000 or equivalent.
5. Two hot dipped galvanized steel unistruts (P3200HGx84") located on opposite walls.
6. 30" (W) X 84" (L) inside dimensions with tolerances of ± 1 ".

5. ENTIRE STRUCTURE

1. All exposed steel (except torsion bars) shall be hot dip galvanized after fabrication.
2. Shall meet RS-G2 and RS-G4.
NOTE: For heavy frequency traffic areas (e.g. streets, roads, etc.), use the RS-83 box.
3. For areas subject to vehicular traffic, vehicular protection barriers per RS-6 shall protect the RS-82 box.

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INSTALLATION REQUIREMENTS

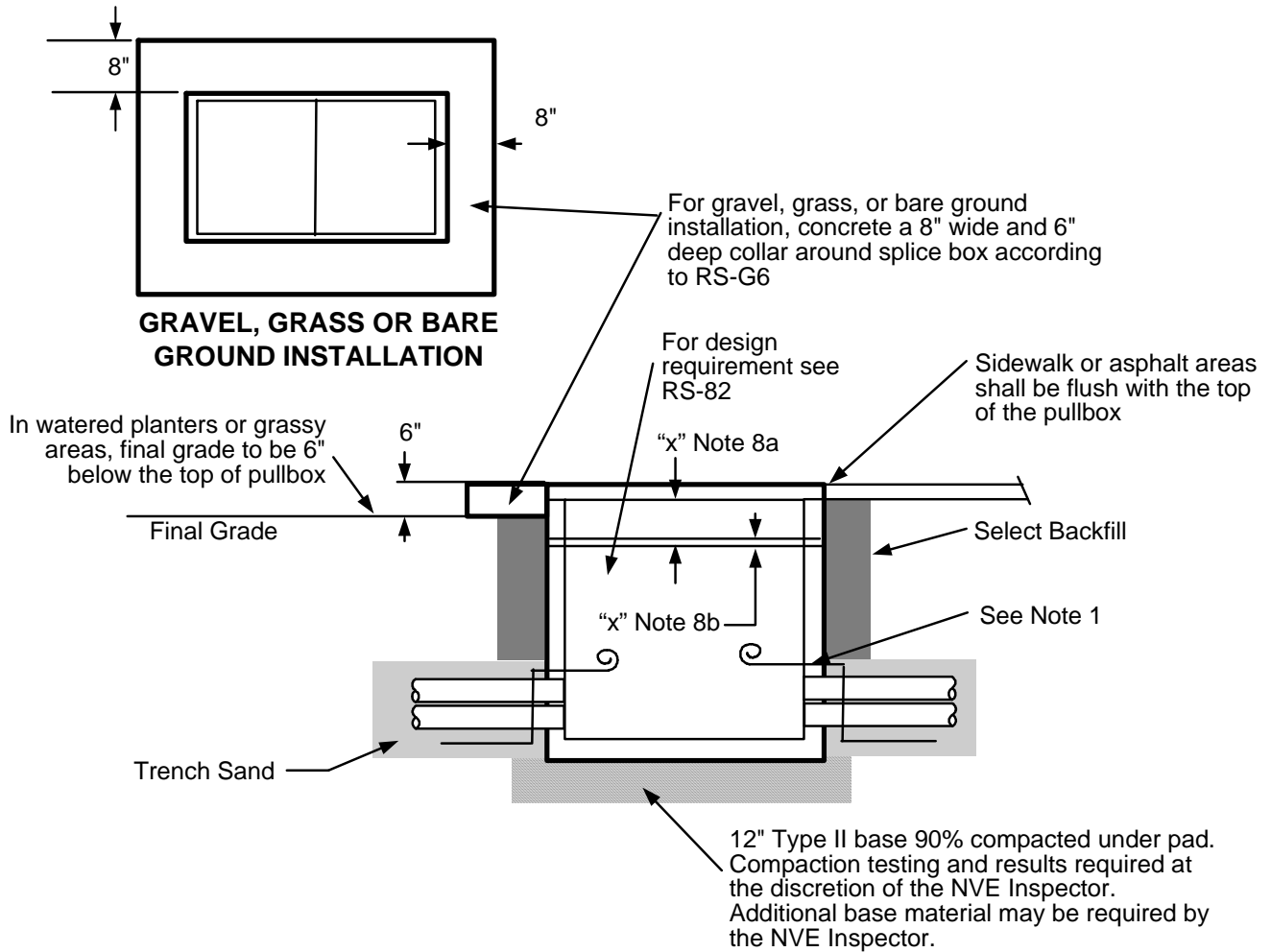



Figure 8. RS-82 Installation Requirements

NOTES:

1. Ground wires shall be installed through a 1" PVC conduit in the structures end walls. Grounding by customer shall consist of the following:
 - A. 2-50' lengths of #2 stranded bare copper wire in the bottom of the conduit trench in opposite directions.
 - B. An additional 5' of the ground wire will be left in the box.
2. This box can handle up to 3 primary cables including 3-4 way modules (see UJ-101 or 201 for installation).
3. 2" conduit(s) shall be installed utilizing knockouts on the property or field side of the RS-82 box.
4. If the final grade is unknown, it's preferable to make the top of the pull box too low, rather than too high.
5. If the designer specifies additional conduit openings, the contractor shall core drill the holes as required.
6. The bottom surface of the box shall be level.

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7. If the ground water level is at least 3' below the bottom of the splice box, the 2" diameter knockout in the sump pump recess shall be removed.
8. Two ½" spring nuts shall be installed by NVE for each module.
9. NVE lineman shall stamp (impress) the UGM Identification Number into the brass I.D. plate.
10. All new installations to be set to final grade. Grade changes prior to cable installation will require the box to be raised or lowered. If any final grade adjustment is needed after the cable is pulled, take the actions listed in Table 1.

Table 1. Adjustment Requirements

Adjustment	Action
-6" to +5"	NVE contractor shall exchange existing 12" extension with 6" to 17" high extension ordered from the original manufacturer.
+6 to +12"	NVE contractor may order an additional 6" to 12" high extension from original manufacturer.
Below -6" & above 12"	Any extension shorter than 6" or exceeding 12" in height shall be subject to T&D Standards department approval.

11. This box may be installed in sidewalks or in delivery alleys behind commercial developments.
12. There shall be a minimum 6' clearance from RS-82 box to the centerline of a fire hydrant. For heavy frequency traffic areas (e.g. streets, roads, etc.), use the RS-83 box. For other areas subject to vehicular traffic, vehicle protection barriers per RS-6 shall protect the RS-82 box.
13. Retaining wall required when grade from the bottom of pad rises or lowers more than 1' in 5' horizontally or when required by developer as perimeter wall.
14. Conduits for new construction shall be installed in terminators nearest the property line whenever possible; future conduit stubouts shall be installed in terminators nearest the street whenever possible.

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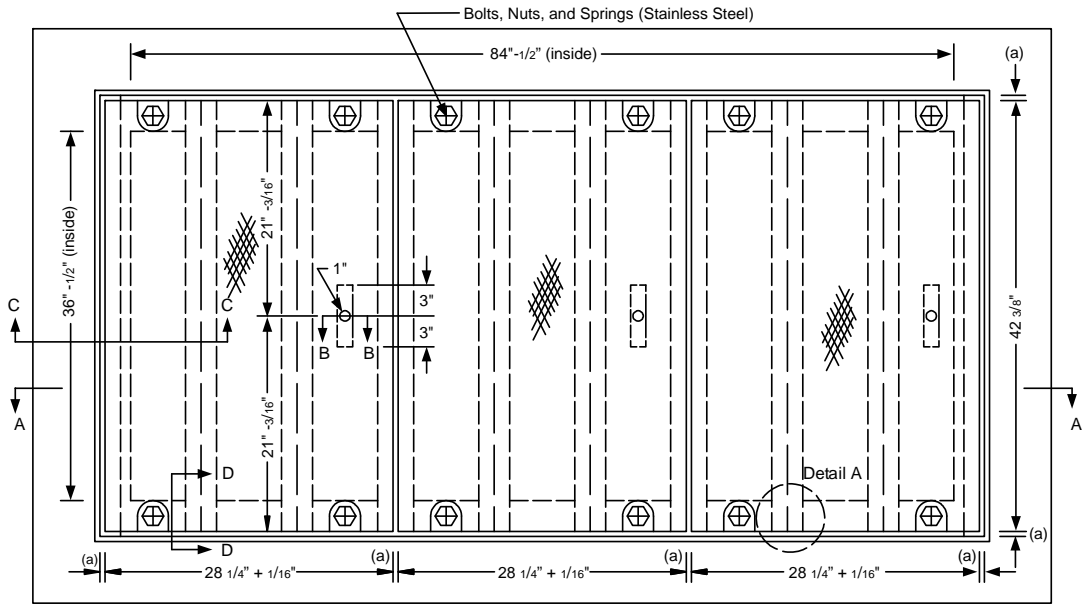


Figure 8. TOP SECTION RS-82B (Three Piece Lid)

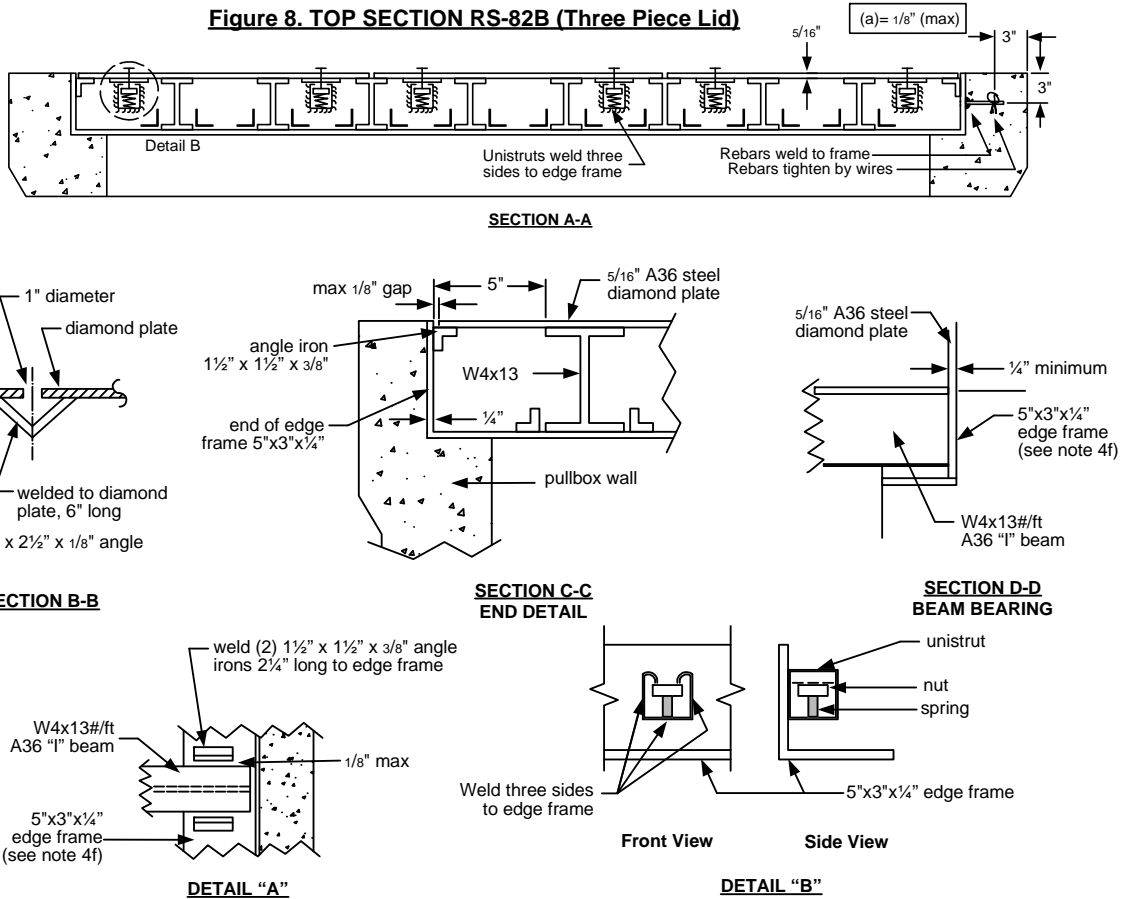




Figure 9.

				Electric Service Requirements		RS-82
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