

**SECTION 33 41 22
PRECAST CONCRETE DRY WELL**

PART 1 GENERAL

1.01 REFERENCE STANDARDS

- A. ASTM A74 - Standard Specification for Cast Iron Soil Pipe and Fittings; 2021.
- B. ASTM D448 - Standard Classification for Sizes of Aggregate for Road and Bridge Construction; 2012 (Reapproved 2022).

1.02 SECTION INCLUDES

- A. Requirements for the fabrication and installation of Precast Concrete Dry Wells.

1.03 REFERENCE STANDARDS

- A. ASTM 913 - Standard Specification for Precast Concrete Water and Wastewater Structures.
- B. [ASTM D448](#) - Standard Classification for Sizes of Aggregate for Road and Bridge Construction; 2012.

1.04 SUBMITTALS

- A. See Section 01 33 00 – Submittal Procedures, for submittal procedures.
- B. Product Data: Provide catalog cuts and/or data sheets.
- C. Shop Drawings: Indicate elevations, sections, details, frames, covers and grates.

PART 2 PRODUCTS

2.01 PRECAST, REINFORCED, PERFORATED CONCRETE RINGS - INCLUDE THE FOLLOWING:

- A. Floor: Pre-cast or poured-in-place reinforced concrete circular footing, min. 10 inches thick.
- B. Cover: Liftoff-type concrete cover with cast-in lift rings.
- C. Frame and Grate shall be cast iron. The frame shall be set firmly on the masonry or concrete in a full bed of stiff mortar at the required elevation.
- D. Pipes shall be of cast iron of size shown on the drawings. Cast iron pipe shall be in accordance with ASTM A74. Pipe lengths shall not exceed twenty (20) feet. Joints for cast iron pipe shall be “push-on-joints”.
- E. Wall Thickness: 4 inches minimum with 1-inch diameter or 1-by-3-inch maximum slotted perforations arranged in rows parallel to axis of ring.
 - 1. Total Free Area of Perforations: Approximately 15 percent of ring interior surface.
 - 2. Ring Construction: Designed to be self-aligning.
- F. Filtering Material: ASTM D448, Size No. 24, 3/4- to 2-1/2-inch washed, crushed stone or gravel.
- G. Filter Fabric: Hydraway 300 by Hydraway Drainage, 8250 Bunkum Road, Caseyville, Il 62232, phone 618.987.4422 or equal product.
- H. Dry Wells shall be handled and installed according to the manufacturer’s written instructions and specifications, including rigging (when required).

2.02 MANUFACTURERS

- A. Harris Precast, 140 Old Northport Road, PO Box 740, East Northport, NY 11731, phone 631.269.5711
- B. An equal product – for Substitutions: See Section 01 25 00 – Substitution Procedures.

PART 3 EXECUTION

3.01 DRY WELL INSTALLATION- ALL PLUMBING FOR THIS WORK SHALL BE PERFORMED UNDER THE SUPERVISION OF LICENSED PLUMBER AND MEET ALL APPLICABLE CURRENT NYC PLUMBING CODES.

- A. Excavate hole to diameter of at least 18 inches greater than outside of dry well. Do not extend excavation into ground-water table.
- B. Install precast, concrete-ring dry wells according to the following:
 - 1. Assemble rings to depth indicated.
 - 2. Install rings to height where top of ring will be as indicated (on drawings) below finished grade.
 - 3. Backfill bottom of inside of rings with filtering material to level at least 12 inches above bottom.
 - 4. Extend effluent inlet pipe 12 inches into rings and terminate into side of tee fitting.
 - 5. Backfill around outside of rings with filtering material to top level of rings.
 - 6. Install cover over top of rings.
- C. Drain lines shall be installed in straight lines and on uniform rates of grade between points where changes in alignment or grade are shown. Interior of pipe shall be cleaned of foreign matter before lowering into trench. Joints for Cast Iron Pipe shall be push-on-joints. Necessary precautions shall be taken to prevent sagging, cracking and to assure tight joints.
- D. Cast Iron Pipe connections shall be laid on a six (6) inch thick compacted layer of sand. The subgrade must be prepared to the proper grade so that the Cast Iron Pipe may be placed on the sand base accurately to line and grade in agreement with the plans. Sand shall also be placed around the pipe to a depth of one-half (1/2) the outer diameter of the pipe and for the full width of the trench.
- E. The Plumber shall connect pipe to existing yard drain inlet or catch basin or additional drywell at an invert elevation to ensure proper flow.
- F. After the installed piping has been tested and inspected, the Contractor shall backfill the excavation in twelve (12) inch layers of approved material, tamped or puddled compactly in place, so as to secure a stable surface. Under locations for pavements and other surfacing, backfill material shall be compacted thoroughly in layers not exceeding six (6) inches. Care must be taken in backfilling not to disturb the pipe. Rock shall not be used for backfill for a depth of two (2) feet over the top of pipe, nor closer than 18 inches below finished grade.
- G. The Contractor shall adjust frames and covers of existing drain grates and other flush surface structures (to remain) in the construction area to the new finished grades. Walls of these structures shall be cut or extended as required. Extensions shall be of brick and mortar, the same thickness as the existing wall. Inside and outside of extension shall be parged with 1:3 cement mortar ½" thick. Frames of all adjusted structures shall be set on a full bed of mortar. The Contractor shall properly align the frames and covers. He/she shall provide all safety and protective barricades around open structures.
- H. The Contractor shall repair in kind all walkways, paved areas, fencing, curbs or lawn areas disturbed during excavation for drain inlets, catch basins and drain pipes.

END OF SECTION 33 41 22