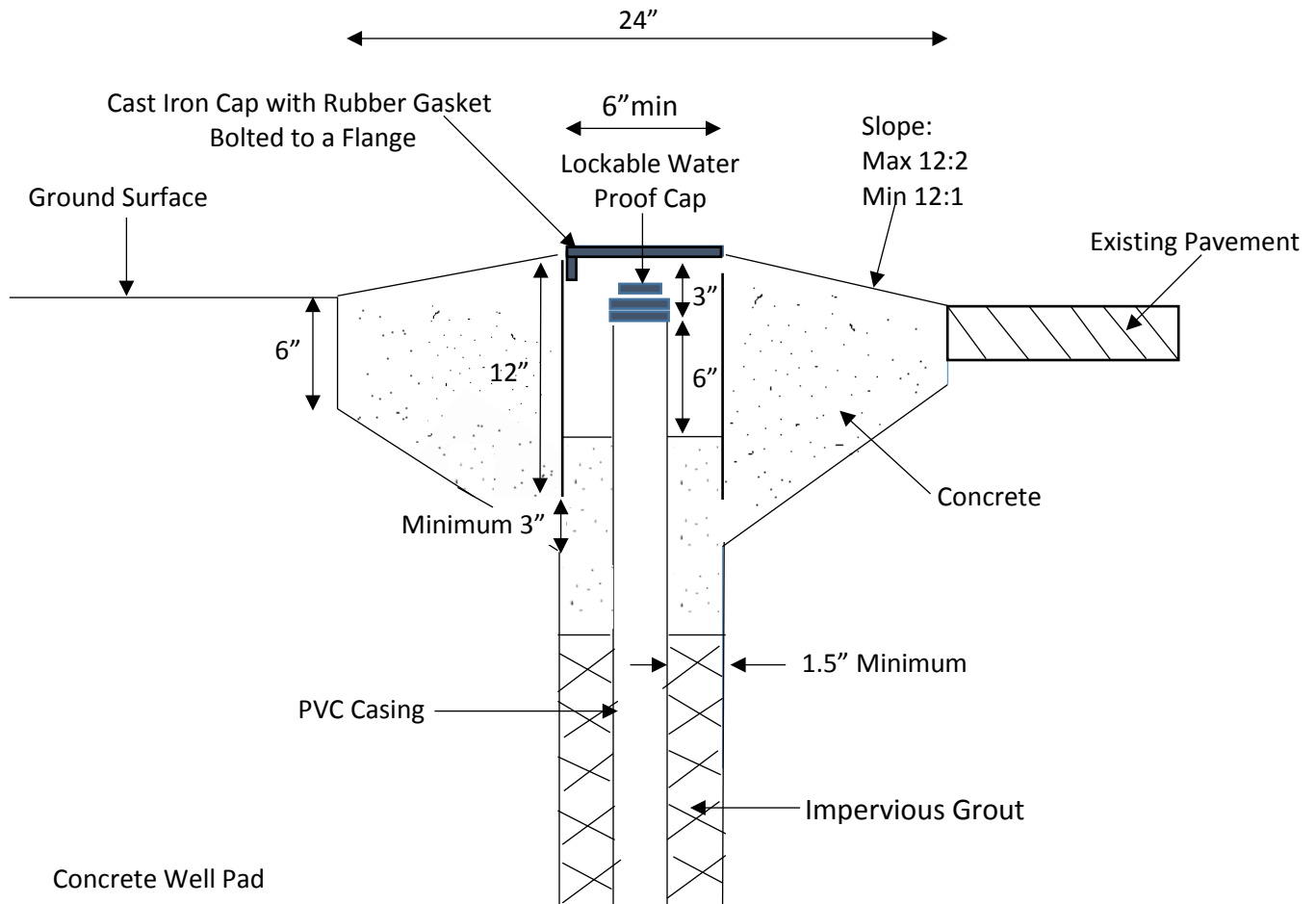


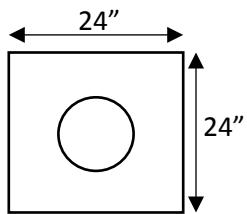
KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT

FLUSH-MOUNT WELL CONSTRUCTION DETAIL

(Not to Scale)

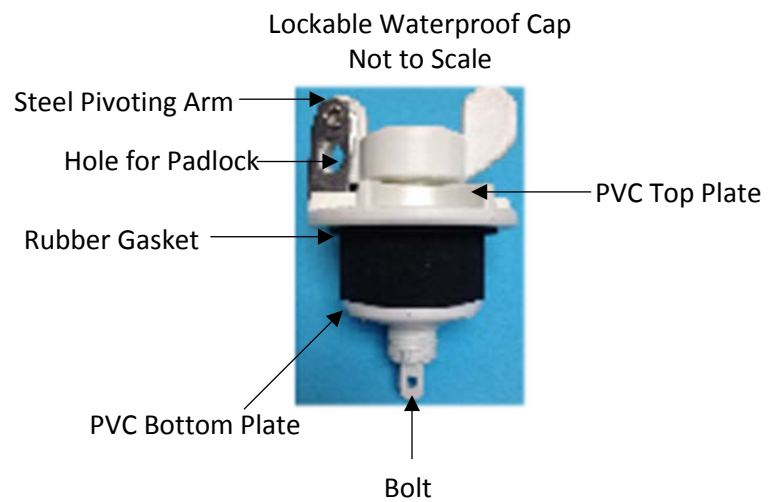


Concrete Well Pad



Top View – Not to Scale

Casing Diameter	2" or less	4"
Vault Diameter	6" min	8" min
Concrete Pad	24" x 24"	24" x 24"



MONITORING WELL DESIGN ADDITIONAL INSTRUCTIONS

At-Grade or Flush-Mount Monitoring Well Surface Completion:

K.A.R. 28-30-6(s) requires each monitoring well to be an above-grade surface completion, unless the monitoring well is to be located in a roadway, sidewalk, driveway, parking lot, or other heavily trafficked area that requires an at-grade surface completion. The following requirements shall be met for each at-grade surface completion:

- (1) The location, latitude and longitude coordinates, and a unique well number shall be shown for each monitoring well on a scaled map. The scaled map and coordinates for each well shall be submitted to the department with the water well record (WWC-5 Form) provided by the department; and
- (2) The construction method for each monitoring well shall meet the requirements of the department's procedure document entitled "Flush-Mount Well Construction Detail."

If the location conditions of K.A.R. 28-30-6(s) are not met, then a waiver for variance must be requested. The procedures for requesting a waiver of this regulation are outlined in **Procedure # WWP-5** and include the following:

1. Submit the waiver request in writing at least 30-days in advance to Pamela Chaffee at address below.
2. Obtain pre-approval from the local city, county, groundwater management district and/or local environmental protection program where the waiver is requested. Provide documentation with the request.
3. The request for variance must contain the following information:
 - a. Name and license number of the Kansas water well contractor installing the well(s);
 - b. Facility or site name, street address, city and county;
 - c. Well location description(s) defining the 2.5-acre quarter fraction, section, township, and range;
 - d. Well owner's name and address;
 - e. Detailed explanation of why a waiver is needed;
 - f. Drawing or map showing the proposed well location(s) and pertinent surrounding features;
 - g. Number of wells to be covered by the waiver request;
 - h. Descriptions, specifications, and/or graphic displays of the watertight manhole cover, well vault, and watertight lockable well cap to be used in the well's completion;
 - i. Graphic display of the proposed well, such as the attached example, with concrete encasing and sloping away from the manhole cover;
 - j. A statement that at least 3-inches of concrete shall be installed below the bottom of the well vault skirt(s) and approved grout shall extend to the top of the bentonite seal – two to three feet above the well's screened interval.
4. Wait for approval of the waiver request before completing the monitoring well(s).
5. If granted, the location, latitude and longitude coordinates and associated horizontal datum, and a unique well number for each flush-mount monitoring well shall be shown on a scaled map and submitted to KDHE with the WWC-5 Form for the first well authorized by the waiver.

A waiver of variance applies only to the wells and information contained in the written request. A verbal request for a waiver on additional wells in the same area or site may be approved by the KDHE-BOW-GWTS.

Monitoring Well Grouting Requirements:

K.A.R. 28-30-6(b) requires that constructed or reconstructed wells be sealed by grouting the annular space between the casing and the well bore from ground level (or from below a pitless well adaptor or unit) to at least 20 feet or to at least five feet into the first clay or shale layer, whichever is greater. K.A.R. 28-30-6(c) specifies that if groundwater is encountered at a depth less than the minimum grouting requirement, the grouting requirement may be modified to meet local conditions if approved by the department.

If modifications to the grouting requirements are necessary solely because of shallow groundwater, which is the target of the well, a waiver of the regulations is not needed; however, the grouting modifications must be indicated accordingly on the WWC-5 Form. Where grouting modifications are required for reasons other than shallow groundwater, a waiver for variance must be obtained following the procedure outlined in **Procedure # WWP-3**.

Submit requests for variance waivers and direct any questions on well design regulations to:

Pamela Chaffee
Kansas Department of Health & Environment
Bureau of Water – Geology & Well Technology Section
1000 S.W. Jackson Street, Suite #420
Topeka, Kansas 66612-1367
Phone: (785) 296-3565