DRAINAGE NOTES:
1. Provide perimeter drain if water table can rise above floor level.
2. Perimeter drain pipe and gravel/geotextile filter is to be routed around all sides of the tank and drain freely to a surface water outlet or other subsurface drainage outlet.
3. Perimeter drain pipe and fittings must be perforated, corrugated polyethylene (CPT) meeting ASTM specifications listed below:

<table>
<thead>
<tr>
<th>CPT</th>
<th>ASTM F405, F667</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual Wall CPT</td>
<td>ASTM F2306, F2648, F405, F667</td>
</tr>
</tbody>
</table>

4. Drain fill will consist of sand, gravel or concrete aggregate mixture with a maximum size of 3" and not more than 5% passing a #200 sieve. Qualifying IDOT gradations for drain fill include:
   CA-1, CA-3, CA-5, CA-7, CA-8, CA-11,
   CA-12, CA-13, CA-14, CA-15, CA-16, CA-18

5. Geotextile (non-woven, needle punched) minimum criteria:
   - Grab tensile strength (lb) ASTM D 4632___________202
   - Elongation at failure (%) ASTM D 4632___________50
   - Tear strength (lb) ASTM D 4533___________79
   - Puncture strength (lb) ASTM D 6241___________433
   - Ultraviolet light [% retained strength] ASTM D 4355___________%50
   - Apparent opening size (AOS) ASTM D 4751_________max 0.22 mm (US sieve size 70)
   - Permeability sec^-1 ASTM D 4491_________min 0.70

6. Overlap any geotextile splice a minimum of 18 inches.
7. Encase all drain fill with geotextile.

CONSTRUCTION JOINT NOTES:
1. A construction joint must be prepared when the concrete pour is not continuous, typically between the floor and wall.
2. Prepare all surfaces that will be in contact with new concrete as per note 5.
3. Let concrete cure at least 12 hours prior to steel tying and form construction for the next pour.
4. New concrete must not be placed until the hardened concrete has cured at least 12 hours.
5. Construction joints must be prepared using one of the following two methods:
   - Method 1 - Water-Air or Sandblasting: Clean the joint surface of all unsatisfactory concrete, laitance, coatings, stains, and debris by sandblasting or high-pressure air-water cutting, or both. Sandblasting can be used after the concrete has gained sufficient strength to resist excessive cutting, and high-pressure air-water cutting can be used as soon as the concrete has hardened sufficiently to prevent the jet from displacing the coarse aggregates. The surface of the concrete in place must be cut to expose clean, sound aggregate, but not so deep as to undercut the edges of larger particles of the aggregate. Cut the surface to at least 1/4" depth. Thoroughly wash the surface to remove all material after cutting.
   - Method 2 - Mechanical: Clean the joint surface of all unsatisfactory concrete, laitance, coatings, stains, and debris by washing and rubbing with a wire brush, wire broom, or other means approved by the engineer to expose coarse aggregate without displacing it. The surface must be roughened to at least 1/4" depth.
6. All construction joints must be wetted and standing water removed immediately before new concrete is placed.
7. New concrete must be sufficiently vibrated to ensure good contact into the prepared joint.
8. Keyways or steel plates cannot be substituted for the construction joint methods above.
SECTION @ DOWEL CENTERLINE
FLOOR SLAB CONTRACTION JOINT
Scale: 1" = 1'-0"

Note: Dowel sleeve for contraction joints may be manufactured plastic sleeve, PVC sleeve, grease, or any other means to prevent a bond between half of the dowel and the concrete. Place a Dowel Sleeve on one end of each dowel.

PLAN
FLOOR SLAB CONTRACTION JOINT 30' C.C. SPACING
Scale: 3/4" = 1'-0"

SIDE VIEW
WALL CONTRACTION JOINT 30' C.C. SPACING
Not to Scale

TOP VIEW
WALL CONTRACTION JOINT
Scale: 3/4" = 1'-0"