**TRENCH DRAIN GENERAL NOTES**

1. TRENCH DRAIN MAY BE USED TO COLLECT ROADWAY RUNOFF IN AREAS WHERE LONG SECTIONS OF TRENCH DRAIN ARE REQUIRED. THE DISCHARGE Pipe SHOULD NOT EXCEED 4.5 CFS. THE DISCHARGE SHALL BE CALCULATED USING THE RATIONAL METHOD AS DESCRIBED IN CHAPTER 4 OF THE DRAINAGE DESIGN MANUAL.

2. WHERE TRENCH DRAIN IS CONNECTED TO A CATCH BASIN AT THE LOW POINT OF THE PROFILE GRADE, THE OUTLET PIPE SHALL CONSIST OF 12-INCH PVC PIPE AT A SLOPE OF AT LEAST 2.0%. IN ORDER TO MAINTAIN MINIMUM COVER, THE TRENCH SHALL BE 36 INCHES DEEP AT THE OUTLET.

3. PVC PIPE SHALL MEET THE REQUIREMENTS OF ASTM F949.

4. THE GENERAL INSTALLATION PROCEDURE FOR CAST-IN-PLACE TRENCH DRAINS SHALL BE AS FOLLOWS:

   1. SET REINFORCING STEEL.
   2. FORM AND POUR TRENCH DRAIN BASE.
   3. SET FORMS FOR TRENCH DRAIN WALLS.
   4. SET TRENCH GRATES AND FRAMES INTO PLACE ON THE FORMS. GRATES MUST BE BoltED TO THE FRAMES. INSERT SHORT SECTIONS OF #3 REBAR AS NEEDED INTO THE TRENCH WALLS.
   5. POUR TRENCH DRAIN WALLS.
   6. SET TRENCH GRATES AND FRAMES INTO PLACE ON THE FORMS. GRATES MUST BE BOLTED TO THE FRAMES. INSERT SHORT SECTIONS OF #3 REBAR AS NEEDED INTO THE TRENCH WALLS.
   7. THE FRAME LUGS.

5. PRECAST TRENCH DRAIN SECTIONS MAY BE USED WITH THE APPROVAL OF THE ENGINEER.

6. PAYMENT FOR TRENCH DRAINS WILL BE MADE UNDER ITEM NUMBER 611-05.01, TRENCH DRAIN PER LINEAR FOOT.

7. TRENCH DRAIN MAY BE USED TO COLLECT ROADWAY RUNOFF IN AREAS WHERE LONG SECTIONS OF TRENCH DRAIN ARE REQUIRED. THE DISCHARGE Pipe SHOULD NOT EXCEED 4.5 CFS. THE DISCHARGE SHALL BE CALCULATED USING THE RATIONAL METHOD AS DESCRIBED IN CHAPTER 4 OF THE DRAINAGE DESIGN MANUAL.

8. PVC PIPE SHALL MEET THE REQUIREMENTS OF ASTM F949.

9. THE GENERAL INSTALLATION PROCEDURE FOR CAST-IN-PLACE TRENCH DRAINS SHALL BE AS FOLLOWS:

   1. SET REINFORCING STEEL.
   2. FORM AND POUR TRENCH DRAIN BASE.
   3. SET FORMS FOR TRENCH DRAIN WALLS.
   4. SET TRENCH GRATES AND FRAMES INTO PLACE ON THE FORMS. GRATES MUST BE BOLTED TO THE FRAMES. INSERT SHORT SECTIONS OF #3 REBAR AS NEEDED INTO THE TRENCH WALLS.
   5. POUR TRENCH DRAIN WALLS.
   6. SET TRENCH GRATES AND FRAMES INTO PLACE ON THE FORMS. GRATES MUST BE BOLTED TO THE FRAMES. INSERT SHORT SECTIONS OF #3 REBAR AS NEEDED INTO THE TRENCH WALLS.
   7. THE FRAME LUGS.

8. OTHER APPROVED TRENCH DRAIN SYSTEMS ON QUALIFIED PRODUCT LIST MAY BE USED WITH THE APPROVAL OF THE ENGINEER.

**TRENCH DRAIN LENGTHS**

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<thead>
<tr>
<th>DRAINAGE AREA (ACRES)</th>
<th>REQUIRED LENGTH (FEET)</th>
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* BASED ON 30 YEAR DESIGN STORM