

SECTION 338100 - PIPE BEDDING

PART 1 - GENERAL

- 1.1 Provide pipe bedding as specified herein or as required by actual field conditions encountered. Trenching and excavation required in connection with pipe bedding shall be performed in accordance with Section 312000 "Earth Moving".
- 1.2 Whenever the width of the trench at the top of the pipe, as specified in Section 338000 "Trenching and Backfilling", cannot be maintained for any reason whatsoever the Contractor shall immediately notify the A-E. The A-E will select the proper type of pipe bedding to be provided by the Contractor. Any and all changes to type of pipe bedding made necessary by the Contractor not being able to maintain the conditions specified shall be provided by the Contractor at his expense and without any change in the contract price.
- 1.3 It is the intention of these specifications that the trench conditions and type of pipe bedding provided be adequate to permit the pipe to safely support the loads to be imposed on the pipe. Earth backfill will be considered as weighing 125 pounds per cubic foot when used in computing the loads imposed on the pipe.
- 1.4 Unless otherwise indicated or specified otherwise, bedding for ductile iron pipe shall be Type I II, or III (depending on depth of pipe and/or soil conditions).
- 1.5 Bedding for all PVC water pipe shall be in accordance with the PVC pipe bedding Type II unless otherwise specified.
- 1.6 Stabilizer material shall be used for all pipe materials where required by trench conditions.
- 1.7 The Contractor shall be fully responsible for repairing any areas of settlement that occurs during the guarantee period.

PART 2 - DETAIL REQUIREMENTS

- 2.1 TYPE 3 BEDDING
 - A. For Type III bedding, the trench bottom is undercut a minimum of 6-inches below the pipe barrel grade and filled with a No. 67 stone to a depth 6-inches above the top of pipe.
 - B. The remaining backfill is placed in accordance with Section 312000 "Earth Moving".
 - C. For use with all PVC gravity sewer and DIP with 30' or more of cover, and when conditions of poor or saturated soil or rock are present, regardless of pipe material.

- D. Refer to Standard Drawing P-3 shown on the construction drawings.

2.2 TYPE 2 BEDDING

- A. For Type II bedding, the trench bottom is undercut a minimum of 6-inches below the pipe barrel grade and filled with a No. 67 stone to the springline (centerline) of the pipe. Approved backfill is then placed in 6-inch loose layers and compacted to 95 percent Standard Proctor Density to a depth 12-inches above the top of pipe.
- B. The remaining backfill is placed in accordance with Section 312000 "Earth Moving".
- C. For use with all PVC water pipe and DIP with 20' or more of cover, unless conditions of poor or saturated soil or rock are present.

2.3 TYPE 1 BEDDING

- A. Type I bedding shall be so the pipe bears uniformly upon undisturbed native earth. Hand excavation is required to shape the trench to conform to the pipe barrel and the pipe bells. The pipe bells are not to support the pipe. Clean backfill shall be placed and carefully and uniformly tamped by hand to a 95 percent Standard Proctor Density around the pipe and completely under the pipe haunches in uniform layers not exceeding 6-inches (loose) to a depth of 12-inches above the top of the pipe.
- B. The remaining backfill is placed in accordance with Section 312000 "Earth Moving".
- C. For use with all DIP pipe unless conditions of poor or saturated soil or rock are present.
- D. Refer to Standard Drawing P-1 shown on the construction drawings.

2.4 CONCRETE ENCASEMENT

- A. Concrete encasement shall be made of Class A 3000 psi concrete extending a minimum of 12-inches on all sides of the pipe. The Contractor shall submit for approval of the A-E his proposed method of supporting the pipe to maintain line and grade while the concrete encasement is being constructed. All concrete encasement not shown on the drawings placed without the prior order of the A-E shall be at the Contractor's expense.

PART 3 - PRODUCTS

3.1 STABILIZER MATERIAL

- A. The Contractor shall deliver and install, as directed, and as required, crushed stone stabilizer for trenches and excavations. The unit price stated in the Contractor's bid for this material shall include excavation and disposal of unsuitable materials, stabilizer, material costs, transportation and handling, and installation complete in place.

- B. Stabilizer material shall be either crusher run stone having a maximum size of 3” or other hard, durable material obtained from local sources and approved by the A-E.
- C. When trench conditions or the bottoms of excavations for structures are such as to require stabilization of the bed, the Contractor shall remove the unstable material in the excavation and replace it with stabilizer material. Before any of the specified quantity of stabilizer material is used, authority to use stabilizer material must be specifically obtained from the A-E in each instance before proceeding with the work. However, Contractor may at his expense use stabilizer material without the specific approval of the A-E.
- D. The actual amount of stabilizer material used in the work may be more or less than the amount specified. The unit price stated in the proposal shall be used for determining the proper payment to the Contractor for stabilizer material used in the work. The base bid will be adjusted to reflect the actual amount of stabilizer material authorized by the A-E. Weight tickets shall be submitted to the A-E for verification of quantities.

END OF SECTION 338100