

ITEM 120

EXCAVATION FOR CHANNELS AND OTHER DRAINAGE FACILITIES

NOTE: **This item is intended for use for constructing drainage facilities which will not be maintained by the Harris County Flood Control District. Facilities for Flood Control maintenance are governed by the applicable HCFCD standards.**

120.1 Description. This Item shall govern the required excavation for all channels, detention ponds, and other drainage facilities, channel changes and ditches as shown on the plans, the removal and proper stockpiling or disposal of all excavated materials; including strippings on the entire length of channel or drainage facility, in conformity with the required lines, grades and typical sections and in accordance with the specification requirements herein outlined. Stripping is unsuitable material. Excavation for roadways and roadside ditches are specifically excluded. Ditches shall include inlet and outlet ditches to structures, and all ditches outside the confines of the roadway slopes. The method of constructing embankment for channels and ditches shall be as outlined under the Item 132 "Embankment".

120.2 Construction Methods. All suitable materials removed from the excavation shall be used, insofar as practicable in the formation of embankments as required by the Item 132 "Embankment". Excavated material shall neither be permanently nor temporarily placed on the channel top of bank, nor will temporary shelves be cut into the channel side slopes, without the approval of the Engineer. All channel excavation utilized as embankment shall be placed in accordance with Item 132 "Embankment".

Unsuitable and/or excess excavation shall become the property of the Contractor and shall be disposed of by the Contractor outside of the limits of the right-of-way. The Contractor shall be responsible for disposal of all excavated material not used for backfill or grading berm areas. The disposal site shall not be an environmentally sensitive area, "Water of the United States", wetland or floodway. It is the responsibility of the Contractor to contact the proper authorities to determine land use classification and to obtain any necessary permits. Refer to Section 120.3 regarding Disposal Permits. However, if the disposal site is defined in the plans, then the County shall be responsible for ensuring that the appropriate Department of the Army permit has been obtained for the activity.

Cut-off channel meanders shall not be backfilled unless so indicated on the plans.

Any temporary construction access that crosses a channel will be constructed so as to allow a continuous flow at all times. The channel flow line will not be blocked or raised at any temporary construction

access. Temporary construction access across a channel shall require a permit. If a permit is not included in the contract, the Contractor is not entitled to construct such access without securing a required permit.

When the plans indicate the fill of a channel side slope, the earthen fill material shall be placed in layers not to exceed 8 inches and shall be benched or notched into existing slopes and compacted by suitable rolling equipment to 90 percent of Standard Proctor Density, per ASTM D698, "Laboratory Compaction Characteristics of Soil Using Standard Effort of 12,400 ft-lbf/ft³ (600 kN-m/m³)" at a moisture content of between optimum and plus 3 percent optimum.

The imported earthen fill material shall be free from roots, trash, silt and objectionable debris. Soils classified by ASTM D2487, "Classification of Soils for Engineering Purposes" as clayey sands (SC), sand clay mixtures, or inorganic clays (CL) with a plasticity index from 15 to 40 are approved as fill materials. Each layer shall be compacted to 90 percent of standard proctor density (ASTM D698), at a moisture content between optimum and 3 percent above optimum. Soils shall not be compacted at less than the optimum moisture content. The channel side slopes, in fill areas, shall be cut to the finished dimensions after completion of the fill process. The Contractor shall notify Harris County of the borrow site location so that the County shall have the option of conducting any soil tests on borrow material, before it is transported to the project site.

At the location of pipeline crossings, the Contractor shall suspend machine excavation at locations within 5 feet of any pipeline right-of-way, until a company representative is present to identify pipe location and to further direct excavation operations. The notification to the pipeline company of the Contractor's operations and the request for their representative's attendance shall be the responsibility of the Contractor. The Contractor shall not be reimbursed directly for any work or expenditure as a result of intersecting any pipeline operation. Any contingent costs therefore shall be anticipated in the preparation of the bid and included as distributed items of cost in the price for channel excavation.

At locations where lateral ditches or swales enter the channel, the Contractor shall perform grading as may be required to maintain the lateral ditches or swales within the easement area; as approved by the Engineer. The cost of all grading shall be considered incidental to the unit price bid and no extra payment will be made.

Prior to final inspection by the Engineer, the Contractor shall remove all sediment from the bottom of the channel and dispose of this material off site. The cost of sediment removal and grading shall be incidental to the unit price bid, and no extra payment will be made.

120.3 Disposal Permits. The Contractor shall provide copies of the disposal permits to the County and post all disposal location permits on the jobsite.

120.4 Measurement & Payment. The quantity of excavation for channels and other drainage facilities shall be paid for by the number of cubic yards of material computed by theoretical cross-sections, obtained from the drawings and natural ground lines using the method of average end areas. Field cross-sections will not be performed after construction has begun. Excavation in SWQ basins and created wetlands may be paid for per cubic yard or per acre as stipulated in the bid proposal and/or drawings.

After bidding, if the successful Contractor feels there is an error in the estimated quantities for excavation, as shown on the bid sheet, he/she shall provide at no expense to Harris County, sufficient documentation in the form of recoverable cross-sections and supporting computations. This documentation shall be provided prior to proceeding with any excavation work. No adjustments to the excavation quantities will be allowed once excavation work has begun.

If the documentation provided by the Contractor is deemed by Harris County to be insufficient, additional supporting information may be required, at no expense to Harris County.

If the documentation, provided by the Contractor, is deemed by Harris County to be correct and is representative of actual field conditions, then the derived quantities shall be the basis of payment for excavation.

The Contractor must submit all required documentation within 14 calendar days of the project start date, or within 14 calendar days of horizontal and vertical control being established in the field, whichever occurs last. Requests to evaluate the excavation quantities will not be considered after this time.

All work performed as required by this Item and measured as provided above, will be paid for at the unit price bid for excavation for channels and other drainage facilities which price shall be full compensation for preparation, trimming of slopes, storage and hauling of excavated material for other uses, disposal of surplus materials (wastage), any necessary hauling and the furnishing of all labor, tools, equipment and incidentals necessary to complete the work, as shown on the drawings.

There are line code(s), description(s), and unit(s) for this Item.

NOTE: This Item requires other Standard Specifications

Item 130 "Borrow"
Item 132 "Embankment"
Item 200 "Stripping"

END OF ITEM 120