

202 ROADWAY EXCAVATION

202.01 DESCRIPTION

This work shall consist of excavation for the roadways, alleys, parking areas, driveways, sidewalks, approaches, storm drain ditches, and stream channels to the lines and grades indicated in the contract documents. The work also includes the flattening and rounding of slopes, removal of slides, excavation for ditches and cutting of existing pavement and base to neat lines at the limits of proposed pavement construction.

It shall include excavating material in the sub grade (undercutting) and beneath embankment areas that are determined to be unsuitable by the Chief Engineer. The work shall also include the hauling and disposal of excavated material.

In the event that there is no item for Clearing and Grubbing included in the Schedule of Prices, all requirements of [201](#) shall be included as Excavation. All excavation will be classified as hereinafter described.

202.02 COMMON EXCAVATION

Common Excavation shall consist of the excavation and removal of all materials encountered exclusive of Hard Surface Pavement Excavation, Structural Excavation per [202.03](#) or excavation that is otherwise classified and paid for. When the contract documents include other classified excavation items, they shall be used as specified and paid for separately.

Common Excavation shall include undercutting to remove soft and/or unsuitable material that may be encountered in the sub grade or base course within the limits prescribed by the Chief Engineer. Also included is special or hand excavation, as necessary, over, around and under existing or new utility lines and appurtenances uncovered from such undercutting. The replacement material shall be furnished, placed and compacted as per Aggregate Base Course.

In the event that there is no item for Hard Surface Pavement Excavation included in the Schedule of Prices, all materials described in [202.03](#) shall be classified as Common Excavation.

Material from the excavation that meets the requirements of [203](#) may be used as specified therein.

202.03 HARD SURFACE PAVEMENT EXCAVATION

Hard Surface Pavement Excavation shall include the removal and disposal of all asphalt surface and binder courses from concrete base; the removal of bituminous pavement complete, including concrete, asphalt block, asphaltic concrete or cobble bases; all stone curbing and concrete curb and gutter; all plain and reinforced cement concrete pavements and bases, driveways, alleys, concrete copings, steps; concrete, brick and stone walls; concrete, brick, and asphalt block sidewalks not in replacement and/or repair areas; and any abandoned utilities encountered in the limits of the work, and similar materials. Where the construction of new roadways and/or sidewalks meet existing roadways and/or sidewalks, this item shall include trimming the existing roadways and/or sidewalks to a neat, clean, vertical face, and the top

surface for a minimum depth of 1 ½ inches shall be trimmed to a neat line with a power saw where practicable.

When asphalt surface and binder courses are separately removed from existing concrete bases, this removal shall be designated as Pavement Profiling (Milling) as per [Section 606](#).

The removal of bituminous (penetration) macadam, water-bound macadam, and old material roadway when removed and disposed of separately from base course shall be designated as Pavement Profiling (Milling) as per [Section 606](#) and shall include the disposal of all surplus material.

The removal of scaled and deteriorated Portland Cement Concrete and/or asphaltic concrete from existing pavements to the depth specified or as directed by the Engineer shall be designated as Pavement Profiling (Milling) as per [606](#) and shall include the disposal of all surplus material.

202.04 CONSTRUCTION REQUIREMENTS

The Contractor shall notify the Chief Engineer a sufficient length of time in advance of its intent to begin any excavation. The Contractor, as part of the field layout, shall prepare all cross-sections, elevations and measurements of the undisturbed ground needed to compute excavated quantities. Elevations shall be taken prior to the beginning of any roadway excavation. Quantities for excavation shall be computed using the average end area method and shall be provided to the Chief Engineer before payment for excavation will be made.

Excavation shall be cut accurately to grade and cross-section as required, within the limits designated. All earth slopes shall be finished to neat lines, with toe and top of slopes appropriately rounded. Work shall be done in proper sequence with all other operations involved.

Prior to the removal of existing roadways, paving, sidewalks, curbs, gutters and wheelchair ramps, the portion to be removed shall be saw cut for the full depth thereof as shown in the contract documents or as directed by the Engineer and shall include any base courses. The Contractor shall use tools, equipment, and methods that shall be approved by the Chief Engineer for cutting, breaking and trimming and the removal of materials shall be to a neat, clean line, with minimum damage to adjacent pavement, sidewalk and curbs that are to remain. Any excessive damage done at these locations shall be repaired and restored by the Contractor at no cost to the District.

In replacing existing pavements, the Contractor shall saw cut all pavement within 1 foot of the walls or roofs of public or District utility structures. Proper care shall be taken by the Contractor to protect these structures against damage and to maintain them in good condition.

All rocks, abandoned walls or piers and similar structures encountered within the area of the roadbed shall be removed to a depth of at least 1 foot below sub grade and backfilled with suitable material.

Excavated areas shall be properly drained at all times. Roadbed soil that is softened by water shall be corrected to the satisfaction of the Chief Engineer at the expense of the Contractor.

The use of explosives shall be by permit and only under conditions as directed by the Chief Engineer. When pre-splitting of rock slopes is specified in the contract documents, the pre-

splitting operation shall be carried out in such a manner as to produce a uniform plane of rupture in the rock to prevent subsequent blasting and excavation operations within the section affecting the back slope face. The initial pre-split shot shall not be longer than 100 feet and shall be used to establish the spacing of drill holes and the proper blasting charge to be used in the pre-splitting operation. The initial pre-split shot shall be excavated for inspection by the Chief Engineer prior to further pre-splitting operations. If the Chief Engineer approves the results, the pre-splitting may continue using the approved drilling and loading pattern. If the pre-splitting is found to be unsatisfactory, the Contractor shall make adjustments in the operation and repeat the inspection procedure used for the initial pre-split shot.

The pre-split holes shall be drilled on maximum 3-foot centers and to a maximum depth of 20 feet unless otherwise directed by the Chief Engineer. If the vertical depth to the plan grade is greater than 20 feet, the blasting shall be done in two or more lifts and the drill holes shall be set back a sufficient distance from the slope line to allow for a 1 foot offset for each succeeding line of drill holes.

No excavation shall be deposited or stockpiled at any time so as to endanger portions of the new or an existing structure, either by direct pressure or indirectly by overloading banks contiguous to the operation. Material, if stockpiled, shall be stored so as not to interfere with the established sequence of the construction or future work by others as determined by the Chief Engineer. If there is not sufficient area available for stockpiling within the limits of the project, the Contractor will be required to furnish its own area for stockpiling.

All excess and unsuitable material shall be removed from the limits of the work and be disposed of by the Contractor. The Contractor will be required to furnish its own disposal area.

202.05 MEASURE AND PAYMENT

The unit of measure for the various classes of Roadway Excavation will be the cubic yard. The number of cubic yards will be computed by the average end area method; however, at locations where end area measurements cannot be taken that will produce the requisite accuracy. The Chief Engineer may substitute other methods to determine the correct quantities.

Cross sections will be taken of the undisturbed ground. Any materials removed or excavated before these measurements have been taken will not be included in the number of cubic yards measured. Unless it is ordered by the Chief Engineer, material excavated below specified elevations will not be measured. If so ordered, such additional cross-sections as are necessary will be taken.

Any excavation beyond specified limits will not be measured.

The cross-sectional area measured shall not include water or other liquid, but shall include mud, muck or similar semisolid material that has not been disturbed by the Contractor and that cannot be drained away.

The number of cubic yards of Roadway Excavation removed will be paid for at the contract unit price per cubic yard, which payment will include the excavation of all material, all grading, draining cut areas, undercutting soft and unstable areas in the roadbed and/or embankment, the removal and disposal of all material, and all labor, materials, tools, equipment and incidentals necessary to complete the work as specified herein. Pre-splitting will not be measured but the cost will be incidental to the cost of excavation.