

PART I – GENERAL

WORK SPECIFIED HEREIN

All labor, materials, equipment and services necessary to complete the structure excavation, backfilling, compacting and related items as indicated or specified.

SUBSTITUTIONS

In accordance with Section 01600.

SUBMITTALS

Unless otherwise notes, the contractor shall prepare all shop drawings, product literature, etc. only as required to properly coordinate and construct the project.

Review submittals by the Professional of Record is limited to specific shop drawings as called for in the Project Manual.

Shop drawings for review by the Professional of Record are not required for this section.

QUALITY ASSURANCE

Provide testing as specified herein (unless previously documented in geotechnical report by site developer).

Provide 5 field density tests of under-slab fill at locations directed.

Provide 5 field density tests of backfill at locations and elevations directed.

See Section 01400 for provisions covering payment for testing.

PART II – PRODUCTS

UNDER-SLAB FILL

As per geotechnical report (see Section 02150).

BACKFILL MATERIAL

Backfill material shall consist of the material excavated from the site (provided it is free of debris or vegetation) or shall be selected material as specified herein for under-slab fill per the geotechnical report criteria.

Backfill around pipes and conduits shall be clean sand (100% passing a #8 sieve) unless the local utility companies specify a different backfill. The utility company backfill shall govern if there are differences in backfill materials.

PART III – EXECUTION

PREPARATION

Identify all lines, elevations, and grades necessary to construct building subgrades as shown in the plans and specifications.

Protect benchmarks, property corners, monuments or other reference points.

Locate and identify all site utilities that have previously been installed and may be in danger of damage by grading operations.

Locate and identify all existing utilities that are to remain and protect them from damage.

EXCAVATION

Excavate building areas to line and grade as shown in the plans and specifications being careful not to overexcavate beyond the elevation needed for building subgrades.

Perform excavation using capable, well maintained equipment and methods acceptable to the Owner and the project document requirements.

Excavations for foundations and footings shall have clean vertical walls, all corners squared up. Keep entire excavation free from any loose material. Excavation shall conform to dimensions and elevations indicated with allowances for erection of forms, shoring, waterproofing, and inspection of footings.

Material to be excavated shall be non-classified and shall include all earth or other materials encountered in excavating. The Contract Sum is understood to cover the removal of all such materials to the depth and extent indicated or specified. The use of explosives will not be permitted.

The Drawings show predetermined elevations or depths for bottoms of footings. If additional depth of excavation should be necessary, the Contractor will be paid for the work in accordance with the provisions of the General Conditions.

Shore and brace excavations if necessary to prevent cave-ins. Remove shoring before backfilling is completed, but not until permanent supports are in place.

If excavation, through error or carelessness, is carried beyond depth indicated, backfilling will not be permitted except under floor slabs. Increase foundation depth as required and place backfill below floor slabs (material as herein specified) without extra compensation.

Remove all excess excavated material from the grounds and legally dispose of same.

UNDER-SLAB FILL PLACEMENT

Place under-slab fill to the thickness and grade indicated, smooth and even, free of voids. Compact to specified density. Grade to a tolerance of 1/4" in 10 feet.

BACKFILL

After completion of the foundations, walls and other construction, and removal of forms, clean the excavations of trash and debris.

Place the backfill symmetrically against each side of the walls to prevent eccentric loading. Place backfill in horizontal 6" layers with the proper moisture content for the required degree of compaction.

SECTION 02200: STRUCTURE EXCAVATION AND BACKFILLING

Backfill pipe and conduit trenches in a manner to prevent disturbance to the pipes or conduits. Fill under and around pipes thoroughly to a point approximately 12" above the top of the pipe and compact. Backfill remainder of trench in 6" layers and compact.

Building area subgrade pad shall be that portion of site directly beneath and 10 feet beyond the building and appurtenances.

The building area subgrade pad shall be prepared in strict accordance with the geotechnical report criteria.

Backfill materials used in preparation of the building pad shall be place in lifts or layers not to exceed 6 inches loose and compacted per the geotechnical report criteria.

COMPACTION

Compaction of under-slab fill and backfill shall be in horizontal lifts not exceeding 6" in thickness. Compact in accordance with requirements of geotechnical report.

Maintain optimum moisture content of fill materials to attain required compaction density.

MAINTENANCE OF SUBGRADE

Finished subgrades shall be verified to ensure proper elevation and conditions for construction above subgrade.

Protect subgrade from excessive wheel loading during construction, including concrete trucks and dump trucks.

Remove areas of finished subgrade found to have insufficient compaction density to depth necessary and replace in a manner that will comply with compaction requirements by use of material equal to or better than best subgrade material on site. Surface of subgrade after compaction shall be hard, uniform, smooth, stable and true to grade and cross sections.

END OF SECTION