

## **PART III – CSU FACILITIES PLANNING, DESIGN AND CONSTRUCTION STANDARDS**

### **DIVISION 31 – EARTHWORK**

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Please also refer to “Part IV – REGULATORY REQUIREMENTS” for additional requirements.

Housing and Dining Facilities (HDS) has adopted amendments for all HDS facilities. Confirm applicable standards with Project Representative on a per Project basis. Refer to HDS amendments here – <https://housing.colostate.edu/about/construction/>.

### **DIVISION 31 – EARTHWORK**

#### **31 10 00 – SITE CLEARING**

##### **A. Erosion Control:**

1. For Contractor erosion control responsibilities, refer to Division 01 – General Requirements and Part IV – Regulatory Requirements.
2. For Temporary Facilities and Controls, refer to Division 01 – General Requirements.
3. For Sanitary Sewage and Storm Drainage Utilities, refer to Division 33 – Utilities.
4. Pre–and post–construction video inspection of Storm Sewer Systems shall be required for all projects that disturbs soil within a 50–yard radius of a storm sewer.
  - a. Post–construction video evidence shall demonstrate that zero additional debris was introduced into the System.
  - b. The Contractor shall be responsible for abatement of any debris washed into the System during the term of the Agreement.

##### **B. Site Protection:**

1. Trees:
  - a. For Temporary Tree and Plant Protection requirements, refer to Division 01 – General Requirements.
2. Turf:
  - a. No equipment or materials shall be parked or stored on existing turf areas without prior approval from FM.
    - i. If parking occurs on landscaped areas, the Contractor shall be responsible for repairing soil compaction, repair of Irrigation Systems and replacement of sod or other damaged plant material.
  - b. If the construction site directs pedestrian, bicycle, or vehicle traffic through turf areas, the Contractor shall be responsible for protecting these turf areas and repairing soil compaction, repair of Irrigation Systems, and replacement of sod or other damaged plant material.
  - c. Turf Mats may be available through FM Outdoor Services for temporary use if needed.
3. For Landscape and Irrigation System Damage, refer to Division 32 – Exterior Improvements.

##### **C. Topsoil:**

1. Topsoil is a valuable commodity. Topsoil shall be stripped to a depth of approximately 6–8" from all areas to be graded, excavated or filled.
  - a. Topsoil shall be separately stockpiled for replacement around the building at the completion of the job or otherwise disposed as directed by the Project Representative.
  - b. The condition of the topsoil shall be evaluated by the FM Outdoor Services through the Project Representative prior to reuse.

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#### D. Subsoil:

1. Subsoil designated for export to other locations on Colorado State University (CSU) property shall be cleaned by the Contractor of any trash, pipe and concrete, and rocks over approximately 4" in diameter.

#### E. Trash Removal:

1. The Contractor shall be responsible for removal of all trash, sand, gravel, road base, concrete, asphalt paving, pipe, cable, trench insulation, plant material, etc. during construction and at Closeout.

#### F. Hazardous Waste Removal:

1. Removal of hazardous waste is the responsibility of the Contractor.
2. Plans and procedures for removal of hazardous waste shall conform to applicable codes and be submitted to the Project Representative for approval by CSU Environmental Health Services (EHS) prior to removal of such materials.

### **31 20 00 – EARTHWORK**

#### A. Excavations:

1. Excavations deeper than 4'-0" shall be shored or shelved per OSHA Standards.
2. Any open excavation shall be fenced or barricaded.
  - a. Any open excavation on a hard surface (sidewalk or street) left overnight shall be fenced or barricaded and shall include flashing lights.
3. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, contact the Project Representative immediately for direction.
  - a. Collaborate with the Project Representative in keeping respective services and facilities in operation.
  - b. Damaged utilities must be repaired to the satisfaction of the Project Representative.

#### B. Backfilling:

1. Excavations shall be backfilled as promptly as work permits, but not until completion of inspection, testing, approval, and GPS location recording of underground utilities.
  - a. For information on acceptable bedding material for utilities, refer to Division 33 – Utilities.
2. Concrete tailings and other construction debris are not permitted in trenches.

**END OF DIVISION**