

SECTION 31 23 18 - ROCK REMOVAL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes excavation and removal of rock within the limits of grading and excavations using mechanical methods.
- B. Related Sections:
 - 1. Section 31 22 00 – Grading
 - 2. Section 31 23 00 – Excavation and Fill

1.2 DEFINITIONS

- A. "Rock" (for general excavation specified in Section 31 22 00): Material that cannot be excavated with a single-tooth ripper mounted on a crawler tractor having a minimum draw bar pull rated at not less than 56,000 pounds, and occupying an original volume of at least one cubic yard.
- B. "Rock" (for trench and structural footing excavations specified in Section 31 23 00): Material that cannot be excavated with a backhoe having a bucket curling force rated at not less than 25,700 pounds, and occupying an original volume of at least 1/2 cubic yard.

1.3 QUALITY ASSURANCE

- A. Work shall be performed by qualified personnel in conformance with applicable local, state and federal regulations.

1.4 PROJECT CONDITIONS

- A. Rock excavation shall be accomplished using mechanical methods unless otherwise approved by the Engineer.
- B. The Contractor is solely responsible for excavation slope stability. Excavation work shall be in compliance with OSHA regulations.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 FIELD QUALITY CONTROL

- A. Field inspection will be performed by the Engineer.
- B. Provide for visual inspection of rock surface and cavities formed by removed rock.

3.2 ROCK REMOVAL - MECHANICAL METHOD

- A. Excavate and remove rock by the mechanical method. Drill holes and utilize expansive tools to fracture rock and remove fractured layers to required depth.
- B. For general excavation, remove rock to six inches below final grade or as otherwise determined by the Engineer.
- C. For structure subgrade and trench excavations, remove rock to one foot below structure base and minimum six inches below pipe invert elevation and 24 inches wider than diameter of pipe or horizontal dimensions of structure, as applicable. Conform to the requirements of Section 31 23 00 for placement of suitable backfill material over the exposed rock surface.

3.3 DISPOSAL OF MATERIAL

- A. Removed rock shall be placed on-site in areas approved by the Engineer and Owner.

END OF SECTION