1.0 GENERAL

1.1 DEFINITIONS

.1 "Topsoil" is the soil material as described below.

.1 Earthwork materials with an organic content.

.2 The uppermost part of the soil, ordinarily moved in tillage, or its equivalent in uncultivated soils, and normally ranging in depth from 50 mm to 400 mm. For the Downtown Dike project, the topsoil depth has been assumed to be approximately 25 to 50 mm in thickness.

.2 "Subsoil" is the soil material identified as the weathered soil material found beneath the topsoil. The subsoil thickness is to be considered the layer of soil that is found to be excessively desiccated, weathered, oxidized and/or contains a noticeable fraction of organics. For the Downtown Dike project, a 75 to 100 mm subsoil thickness has been assumed.

1.2 REFERENCES

Provide Topsoil and Subsoil stripping in accordance with the following standards except where specified otherwise:

.1 Alberta Transportation

.1 Pre-Disturbance Assessment Procedures for Borrow Excavations for Road Construction.

1.3 PRE-DISTURBANCE ASSESSMENT BY THE OWNER AND THE CONTRACTOR

.1 The Owner or Engineer of Record are to complete a pre-disturbance assessment with the Contractor prior to commencing with topsoil and subsoil stripping at the Downtown Dike project location. This assessment is to define the areas of allowable disturbance, the controls that will be utilized to prevent disturbance beyond these limits and the thickness of the topsoil and subsoil deposits.

.2 The installation of controls at the identified disturbance limits, at the Downtown Dike project location, is to be the responsibility of the Contractor.

2.0 EXECUTION

2.1 PREPARATION

.1 Locate and protect utility lines, survey reference points, instrumentation, culverts, and all other existing facilities before commencing stripping operations.

.2 Abandoned irrigation lines may be encountered within the project development footprint during stripping. These abandoned irrigations lines are to be decommissioned and disposed of as identified in Section 02220 – Demolition, Salvage, and Removal.

.3 Specific utilities may require crossing agreements and further protection at specific crossing locations. The specific requirements and utility crossing protective measures are to be determined and implemented by the contractor with approval from the Utility Owner and Owner of the public or private lands which occupy the subject utility.

2.2 STRIPPING

.1 Do not strip any area without prior authorization from the Owner or Engineer of Record.

.2 Do not disturb grassed or natural areas and do not drive on areas outside of the established disturbance limits. Stay on temporary access and haul roads, and detours; and construction facilities/areas, lay down and parking areas.

.3 Strip Topsoil and Subsoil in an unfrozen condition.

.4 Strip Topsoil from the areas where Common Excavation and Fill Placement are required.

.5 Strip Topsoil from temporary access and haul roads; detours; construction facilities/areas; lay down areas; parking and site office areas; and stockpile areas including Topsoil stockpiles; and any other areas as required by the Owner.

.6 Within fill placement areas, strip Subsoil after the Topsoil has been removed.

.7 Strip Topsoil and Subsoil to the depths specified in the Contract Documents or as established by the Owner or Engineer of Record.

.8 Strip Topsoil and Subsoil separately to prevent mixing.

.9 Sequence, stagger, and conduct stripping and excavation operations so that undesirable materials do not become mixed with Topsoil or Subsoil.

.10 Any Topsoil or Subsoil materials that are found to be contaminated are to be stockpiled separately and are not to be mixed with uncontaminated Topsoil or Subsoil stockpiles.

.11 Use equipment with precise depth control when stripping shallow or variable depths of material, to limit over excavation.

.12 Suspend stripping operations during rain, snow, wet ground conditions, high winds, or other conditions that may result in contamination or loss of material.

.13 Drain surface water away from the stripped areas to prevent ponding and infiltration in fill placement areas.

2.3 STOCKPILING

.1 Stockpile Topsoil from Common Excavation, Structure Excavation, and fill placement areas adjacent to the stripped area and within the Site Disturbance Limits as authorized by the Owner.

.2 Stockpile Topsoil from temporary access and haul roads; detours; construction facilities/areas, lay down, parking, and site office areas, and stockpile areas except for Topsoil stockpiles, adjacent to the stripped area and within the Site Disturbance Limits as authorized by the Owner.

.3 Stockpile Subsoil from the Downtown Dike project location excavation areas adjacent to the stripped area and within the Site Disturbance Limits, or in the temporary construction laydown, as authorized by the Owner.

.4 Subsoil removed from the Downtown Dike project location should be assumed to be waste soil and is to be disposed of as specified within Section 02332 – Waste Fill Placement. Subsoils from the Downtown Dike location may also be used for surficial grading in areas above the Impervious Fill Zone 1A, outside of the dike footprint and where grade supported structures are not proposed to be installed.

.5 Separately stockpile Topsoil and Subsoil.

.6 Maintain a minimum separation of 3 m between stockpiles of differing materials.

.7 Provide erosion control measures as indicated in the ECO Plan in Section 01390 – ECO Plan to prevent soil loss from the Topsoil and Subsoil stockpiles due to wind or water erosion. Where Topsoil is to be stockpiled for periods exceeding 1 growing season, protect the stockpile from erosion by providing a cover crop or other measures as authorized by the Owner.

.8 Do not interfere with drainage courses with stockpiled material. Keep stockpiles a minimum distance of 15 m from a river, stream, lake, reservoir or other surface bodies of water.

.9 Do not stockpile material at slopes steeper than 3H:1V.

.10 Maintain stockpiles in a condition meeting the above requirements.

END OF SECTION