

4-in. bituminous concrete, placed in two layers (1-1/2 in. surface and 3 in. binder)

5-in. screened or crushed gravel

12-in. sand or gravel subbase course

Base and subbase course materials should conform to the following gradations:

Screened or Crushed Gravel -Maine DOT Standard Specification, Highways and Bridges; Section 703.06a, Type A.

Sand or Gravel Subbase -Maine DOT, Section 703.06b, Type D.

Type D aggregate should be modified to a maximum 4-in. size. Compacted structural fill may be substituted for the subbase course material, but the maximum particle size should be reduced to 4 in.

Subbase course material should be placed in a maximum 8-in. thick loose lift and compacted at approximately optimum water content to a dry density of at least 95 percent of maximum dry density as determined by ASTM D1557. Base course material should be placed in one lift and compacted with a minimum of two coverages with self-propelled vibratory compaction equipment.

In areas where the pavement subgrade consists of existing fill, unsuitable materials (topsoil and organics) should be removed and replaced with granular fill or structural fill. Subgrades should be proof-rolled with a large vibratory roller. Any soft spots should be excavated and replaced with granular fill or structural fill.

It should be noted that this pavement section will not prevent freezing of marine deposit silt and clay, existing fill or granular borrow subgrade soils, which are considered to be susceptible to frost action. As a result, pavement roughness due to non-uniform frost heaving may result. However, to eliminate such non-uniform frost heaving would require that an approximately 4-ft. thickness of granular subbase be used. It is common practice to tolerate seasonal movement to avoid the cost of the added thickness of subbase.

### **Earth Slopes**

Proposed earth slopes are shown on Figure 2. Design slopes are at 2 horizontal to 1 vertical (2:1). The maximum fill heights behind the store are on the order of 15 to 20 ft. An alternative to standard 2:1 slopes is to build the slopes at 1:1 or steeper using geotextile-reinforced earth slopes. This would reduce the amount of fill required for slope construction. We can provide additional design details for the reinforced soil slopes if needed.