SECTION 312323 - FILL

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fill under slabs on grade.
2. Fill under paving.

B. Related Requirements:

1. Section 312316 - Excavation: Backfilling of building foundations and utilities within building perimeter.

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

A. Structural Fill

1. Basis of Measurement: By cubic yard.
2. Basis of Payment: Includes supplying fill material, stockpiling, scarifying substrate surface, placing where required, and compacting.

1.3 SUBMITTALS

A. Materials Source: Submit name of imported materials suppliers.

B. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

C. Material Gradation.

D. Samples: Submit 40 lb. sample of each type of fill to testing laboratory.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Structural Fill: Material with a liquid limit of less than 20, a plasticity index less than or equal to 6, and no more than 12% of the particles should pass the number 200 sieve.

2.2 ACCESSORIES

A. Geotextile Fabric: MIRAFI RS380i woven geosynthetic or approved equal.

PART 3 - EXECUTION

3.1 PREPARATION

A. Scarify and recompact subgrade surface after over excavation to depth of 8 inches.

3.2 BACKFILLING

A. Backfill areas to contours and elevations.

B. Systematically backfill to allow maximum time for natural settlement.

C. Do not backfill over porous, wet, or frozen subgrade surfaces, and do not backfill with frozen materials.

D. Install geotextile fabric over subgrade according to manufacturer's instructions.

1. Lap ends and edges minimum 6 inches.
2. Anchor fabric to subgrade when required to prevent displacement until back fill is installed.

E. Maximum Compacted Depths:

1. Place material in continuous layers to following depths:

a. 6 inch compacted thickness if using mechanical roller compaction equipment.
b. 4 inch compacted thickness if using mechanical hand tamping equipment.

F. Use placement method that does not disturb or damage adjacent existing pavements and curbs indicated to remain.

G. Maintain +2% / -4% optimum moisture content of fill materials and compact to attain 95% standard proctor.

H. Remove surplus backfill materials from Site.

I. Leave fill material stockpile areas free of excess fill materials.

3.3 TOLERANCES

A. Top Surface of Backfilling under Paved Areas: Plus or minus 1 inch from required elevations.

3.4 FIELD QUALITY CONTROL

A. Testing:

1. Owner will provide material testing.

2. Laboratory Material Testing: Comply with ASTM D698 and ASTM D6938.
3. In-Place Compaction Testing:

    a. Density Tests: Comply with ASTM D6938.
    b. Moisture Tests: Comply with ASTM D6031/D6031M.

4. If tests indicate that Work does not meet specified requirements, remove Work, replace, compact, and retest.
5. Testing Frequency: One (1) test per 500 sf on final lift of back fill.
6. Ensure that industry standard compaction efforts are performed for each lift of back fill placed.

3.5 PROTECTION

A. Reshape and recompact fills subjected to vehicular traffic during construction.

END OF SECTION 312323