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APPENDIX E

CALCULATIONS FOR TABLE 13
AGGREGATE VALUES FOR VARIOUS DEVELOPMENTS

ASSUMPTIONS

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1) Storm and sanitary service in some trench (2 m x 1.5 m deep)

   - watermain (1 m x 0.5 m deep) - bedding sand only
   - hydro/telephone (0.6 m x 0.3 m deep) - bedding sand only.

   It is assumed that remainder of backfill for watermain and hydro/telephone trenches is native material.

2) Tributary areas include materials used for one-half of the road width along the full length of road construction.

   Lot width

   - Vancouver - 9 m (30 ft).
   - Fraser Valley - 18 m (60 ft).

3) Commercial

   - values based on average 20,000 ft^2 (1850 m^2) building with 136 m of road frontage.

4) Low Rise Multi-Family

   - Values based on average 12,000 ft^2 (1100 m^2) building with 110 m of road frontage.

5) Industrial and Institutional usage will be proportional to commercial consumption.

6) Values for highrise consumption are anticipated to be very small and have not been calculated.

2a

AGGREGATE CONSUMPTION FOR LOWRISE MULTIFAMILY CONSTRUCTION

Building Assumptions

- 2 storey wood frame
- concrete slab-on-grade
- only internal access roads considered
- road width of 6 m with standard municipal construction
- concrete curb and gutter included
- no sidewalks

UNIT CONVERSIONS

Foundations

Footings

0.45 m wide + 0.2 m high x 0.83 T.ags/m^3 of concrete x 1.8 T/m^3
= 0.13 Tonnes of aggregate per lineal metre

Walls

0.6 m high x 0.2 m wide x 0.83 x 1.8
= 0.18 Tonnes of Aggregate per lineal metre

Total foundation = 0.31 Tonnes per lineal metre

Floor Backfill - Sand

0.6 m deep x 1 m^2 x 1.7 T/M^3 = 1.1 Tonnes/m^2

Concrete Slab-on-Grade

0.125 m thick x 1 m^2 x 0.83 x 1.8 = 0.19 Tonnes/m^2

Driveway

Asphalt pavement

0.05 m thick x 0.95 T.ags/m^3 x 2.4 T/m^3 x /m^2 = 0.1 T/m^2

Base

0.20 m thick x 2.1 T/m^3 = 0.4 T/m^2

Drain Rock

Typical footprint and configuration of units

= 0.4 x 30 Tonnes (single family) - 12 Tonnes/unit.