



Golder Associates
CONSULTING GEOTECHNICAL ENGINEERS

E/77/1082

July 27, 1977

Buchan & Moore Ltd.
Development Consultants
95 Glengarry Crescent
West Vancouver, B.C.
V7S 1B4

ATTENTION: Mr. R. Buchan

Re: Hillside Subdivision -
Riverside Development Ltd.

Dear Sirs:

As requested Golder Brawner & Associates Ltd. have inspected the site of a proposed residential subdivision by Riverside Development Ltd. The purpose of this inspection was to evaluate the geotechnical considerations influencing site development and to comment on their effect on the proposed development. Conceptual development plans and a topographic plan of the proposed site were provided by Buchan & Moore Ltd.

The property is located east of the Seymour River at the junction of Treetops Lane and Chapman Way in the District of North Vancouver. The site is bounded to the east by the present residential development along Chapman Way and extends to the crest of the Seymour River valley which forms the boundary of the Blueridge residential area. The property is covered with dense second growth timber and underbrush. North and south of the site, the area has been cleared to the base of the valley slopes back of the Treetop Lane housing and along the Rivergrove Crescent, respectively.

Ground surface rises from the small stream, at about elevation 215, flowing along the east perimeter of the Chapman Way to an intermediate terrace level at about elevation 250. The terrace, some 70 to 110 ft. in width, is relatively flat, sloping gently from east to west at 6 to 12 degrees within the site area. This terrace extends north and south along the Seymour River Valley slopes and is visible within the cleared area to the north and the residential areas presently under construction along Rivergrove Crescent. The Seymour River valley slope forms the east boundary of the terrace and rises to about elevation 310. There is no evidence of instability within the upper and lower slopes which have similar slope angles, ranging from 27 to 33 degrees to the horizontal.

Based on available geological evidence together with the results of the site inspection, the terrace topography along the east valley slope consists of glacio-fluvial materials laid down by the Seymour River during the last glacial period. Sand and gravel containing cobble and boulder sizes are visible at the existing ground surface. At depth and adjacent to the upper slope, the subgrade soils tend to become finer, generally sandy in composition.

It was noted that minor ground water seepage or surface runoff flow is presently being directed along the proposed entrance road from the terrace level down to the small stream which parallels Chapman Way.

GEOTECHNICAL EVALUATION

Development of that portion of the site consisting of the terrace area is considered feasible. The slope across the terrace is relatively flat (6 to 12 degrees) and the soil conditions, below the surficial forest litter and debris are suitable for the foundation support of the proposed residential structures and the access roadways. Clearing and site grading may be carried out within the terrace area using normal good construction practices so as to not influence adjacent properties or the stability of the upper and lower slopes.

The existing vegetation cover should be left in place over the upper and lower slopes to minimize the possibility of erosion or surficial instability. If local and restricted areas are cleared on the slopes for access, services and the like, provision should be made for protection of these areas by means of retaining walls, surface drainage protection, revegetation or the installation of permanent surface protection measures such as asphalt paving or concrete lining.

During initial clearing and grading, a temporary drainage system using shallow ditching may be required to control and direct surface run-off to protected discharge channels to minimize the possibility of flow down the steeper slopes during periods of heavy rain.

SITE DEVELOPMENT

As indicated on the proposed development plan, Buchan & Moore Ltd., No. 112A the layout of the proposed 6 residential lots is such that the structures and service roadways are located within the terrace area, shown as the zone between the bottom of the primary slope and the top of the secondary slope. Construction of the roads and buildings shown on this plan may be carried out without clearing of the existing growth on the slopes or significant undercutting at the toe of the upper slopes. This restricted development area should not induce instability affecting adjacent areas.

Observation of the clearing and construction operations along River-grove Crescent located within similar topographic and soil conditions indicates that instability has not occurred in this area.

Location of the access roadway back of the crest secondary slope will facilitate the construction operations and installation of services and should further minimize the possibility of damage to the vegetation over the lower slopes.

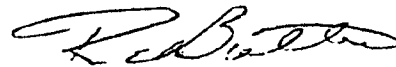
CONCLUSIONS

Considering the geotechnical aspects of the site, the proposed development is feasible. Provided that clearing and development activities are restricted to the terrace area as proposed and are carried out using normal good construction procedures, this development should not result in decreased stability or danger to adjacent properties.

We trust that the above information is sufficient for your immediate requirements.

Yours truly

GOLDER BRAUNER & ASSOCIATES LTD.



R. C. Butler, P. Eng.

RCB/rme

V77170

The District of North Vancouver,
355 West Queens Road,
NORTH VANCOUVER, B.C.

November 3th., 1977

att: The Mayor, and Members of Council

Re: " HILLSIDE COURT " - RIVERSIDE, NORTH VANCOUVER
(being the proposed development of Lot 7, ex. plan 15686, of
Lot 36, Block "I", D.L.850, Plan 14089)

On behalf of our clients, Riverside developments Ltd., we hereby submit our application for the re-zoning of their abovementioned property from R.S.1 to R.S.3.

As indicated on the attached plans, we propose the development of the small and relatively flat terrace of land east of, and above Chapman Way. This same physical feature extends north from the subject site to the east of Treetops Lane, being there under Municipal ownership, and R.S.3 zoning.

In the subdivision design for six lots, we have endeavoured to anticipate, and mitigate the concern of adjacent property owners on Chapman Way. Towards this end, the access road (cul-de-sac) has been held to as short a distance as possible in order to minimize the extent of road construction. Only two of the Chapman Way lots actually share a common boundary with the proposed road, the others being insulated from the proposed development by a "buffer" strip, to be left in the natural state. In a further effort, the design location of the actual blacktop has been offset to the east, for further "insulation".

In addition, we obtained an evaluation of the geotechnical considerations influencing the site development from Golder, Brawner & Associates Ltd., Soils Engineers, and we attach copies for your information. This report confirms the feasibility of our proposal, and commends the fact that the subdivision design has located all six building sites, and the service roadways, within the "terrace" area. I quote: " ... construction of the roads and buildings may be carried^{out} without clearing of the existing growth on the slopes"

must be

/cont.

-2-

We have also undertaken preliminary engineering design, and we include in our application material drawings and cross-sections which further confirm the feasibility of road and driveway grades.

From the overall Municipal viewpoint, two significant gains could result from the development of " Hillside Court ":

- (a) the easterly projection uphill of Chapman Way would also act as the key for the opening of the abovementioned Municipal R.S.3 zoning, and several prime lots could thereby be obtained
- (b) the balance of the subject property, comprising the main slope of the Seymour River Valley, and approximately 3.85 acres in area, is proposed to be dedicated as Park, Recreation, and Open Space - thereby linking the existing park areas to the north and south, and completing the extensive linear park in the Upper Riverside area.

We request your favourable consideration of our proposal.

Respectfully submitted,



RB/ir

Rob Buchan

Buchan & Moore Ltd.,
2590 Shelley Road,
NORTH VANCOUVER, B.C.

October 5th., 1977

att: Mr. Wayne C. Moore

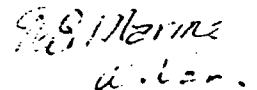
Dear Sirs: Re: " HILLSIDE COURT " - NORTH VANCOUVER
(being the proposed development of Lot 7,
ex. plans 15158 and 15686, of Lot 36,
Block "I", D.L.850, Plan 14089

This shall confirm our authority for you to act on our behalf
in the matter of the proposed "Hillside Court" development.

Yours truly,


Chris Nielsen

RIVERSIDE DEVELOPMENTS LTD.


G. G. Morris
a.l.s.