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Document Title(s) or transactions contained therein:

1. Site Inspection Report
2.
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GRANTOR(S) (Last name, first, then first name and initials)

1. Braun Interfec Corporation
2.
3.
4.

[ ] Additional Names on page _____ of document.

GRANTEE(S) (Last name, first, then first name and initials)

1. Alpine Quality Construction
2. River Short Plat
3.
4.

[ ] Additional Names on page _____ of document.

LEGAL DESCRIPTION (Abbreviated: i.e., Lot, Block, Plat or Section, Township, Range, Quarter/Quarter)

SE4 Section 25 T3N R7EWM

[ ] Complete legal on page _____ of document.

REFERENCE NUMBER(S) Of Documents assigned or released:

Vol 3 Pg 340 of Short Plats

[ ] Additional numbers on page _____ of document.

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ASSESSOR'S PROPERTY TAX PARCEL/ACCOUNT NUMBER

03-07-25-4-0-0400-00

[ ] Property Tax Parcel ID is not yet assigned.

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BRAUN INTERTEC

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Engineers and Scientists Serving the Built and Natural Environments

October 6, 1997
Updated August 17, 1998
Revised August 31, 1998

Project No. EAAX-97-158A
Report No. 09-107-3337

Mr. Terry Ryan
Alpine Quality Construction Services
16505 S.E. First Street
Vancouver, WA 98684

Dear Mr. Ryan:

Re: Preliminary Site Stability and Roadway Evaluation Report
River Short Plat, Baker Road, Stevenson, Washington

In 1997, Braun Intertec Corporation conducted a reconnaissance of the referenced site in order to prepare a preliminary site stability and roadway evaluation. Authorization for our 1997 services was provided by Mr. Terry Ryan, President of Alpine Quality Construction Services. This report represents a revision to the initial report dated October 6, 1997, based upon division of the property into short plats, modifications suggested by county official feedback, and recent site visits on July 28 and August 13, 1998. Please refer to previous reports (09-027-2760 dated February 20, 1997, and 09-107-3337 dated October 6, 1997).

Project Description

The short plat is a portion of an undeveloped parcel located to the immediate northeast of Baker Road and Kanaka Creek Road (Township 3 North, Range 7 East W.M., Southeast Quarter Section 25) as shown in the attached site location map, Figure 1.

Based upon our observations on August 13, 1998, an access road has been developed across the central portion of the site to provide access to the proposed Grand (River), View, and Meadow Short Plats. We anticipate that additional development of the referenced site will include two acre residential lots on the site.

Purpose and Scope

The purpose of our evaluation was to visually assess the surface soil conditions at the site in order to preliminary evaluate the site stability and the proposed roadway location. In general, our scope of work included the following specific items.

- Site visit to observe surface conditions at the site and in the site vicinity to evaluate the site stability and proposed roadway location,
- Historical research including aerial photographs and USGS maps,
- Geological literature review, including the evaluation of available geologic hazards maps, and
- Preparation of this report.

Site Description

The site, an undeveloped wooded and low-lying brush covered parcel, was bounded to the north by woodland lots and to the south by Baker Road. The site was bounded to the east by the proposed View and Meadow Short Plats (a 25 acre parcel) and to the west by Kanaka Creek Road. The southwest portion of the site was bounded by a vacated county road (Baker Spur). A one acre developed residential parcel exists at the south central portion of the site.

Surface Features

At the time of the 1997 evaluation and during our recent visits, the site was moderately to densely wooded with the surface features somewhat obscured by thickets of low-lying brush.

The site topography generally consists of a south to southwest trending mild slope. Based upon our review of available USGS maps, the surface elevations within the north portion of the site were approximately 850 feet above sea level and approximately 700 feet above sea level within the southwest portion of the site.

Site Specific Stability Observations

We have noted surface drainage transecting the northwest quadrant of the site. Surface drainage flow direction was from the north to the west. The surface drainage intersected Kanaka Creek Road and flowed along a stormwater drainage ditch.

A small surface drainage was noted within the north central portion of the site. The drainage appeared to be to the south. A minor amount of debris was noted within a portion of this drainage.

In general, we did not encounter unusual surface water features such as filled depressions, deep creeks, disarranged drainage systems, etc. which may be indicative of previous landslide activities or slope instability.

During our site visit, with one exception as described below, we did not notice scarps, crevices and depressions, tension cracks in the ground surface, severely bent tree bottoms, tilted trees, irregular toes, exposed surfaces of ruptures without vegetation, presence of distinct fast growing vegetation, undrained depressions, etc. that are generally indicative of active and/or inactive landslides or slope instability.

Site Vicinity Observations

Our preliminary evaluation of the surrounding and adjacent properties to the north, south, and east did not indicate visual evidence of slope instability or landslide hazards. However, an examination of the developed residential parcels located adjacent to the south central portion of the site revealed the presence of a recent slope failure.

A moderately large (approximately 40 by 50 foot) scarp face was located within the northeast quadrant of the developed residential lot. The scarp appeared to abut the subject site. However, surveyed property corners were not located on the subject site. It is our understanding that the adjacent property owner has conducted engineering studies of the slope failure. In 1997, we recommended that remediation activities be conducted on the adjacent site to properly address future slope instability.

Based on observations in July, 1998, it was apparent that the adjacent property owner had performed some grading and remediation to address the subject slope. Based upon our July, 1998 observations and discussions with you and the adjacent property owner, we recommend:

- Several trees at the headscarp (top) be removed.
- The trench drain that has been constructed at the base of the slope should be evaluated. Its location should be confirmed and most importantly, the outlet (outfall) for downgradient drainage of the trench should be verified.

Proposed Roadway Evaluation

In 1997, Braun Intertec initially recommended that the proposed roadway be located approximately 30 feet north of the originally flagged roadway and that the roadway egress the site to the north of the stream drainage at Kanaka Creek Road. Based on our site visit of July 28, 1998, we issued a letter dated July 29, 1998, which detailed recommendations for development of the roadway. Based on recent (August 13, 1998) observations and discussions with you, a maximum grade of about 12% exists on a small portion of the roadway.

Soils and Geology

During our 1997 observations, we noted 5-foot to 6-foot high cut slopes along Baker Road, and the cleared face of a 50- foot to 60-foot tall steep slope situated just north of Baker Road upon the adjacent property to the east. Based on these observations, our knowledge of the site, and our evaluation of in-house data from other projects, in our opinion, the site is generally underlain by medium dense to dense or stiff mixtures of clays, silts, and fine grained sands, and some cobbles (SM/ML). The soils types were confirmed on August 13, 1998, during roadway grading and utility trench observations.

These soils are generally poorly drained. Based on our geologic literature review, we believe these soils extend to several tens of feet in depth. These soils generally represent completely weathered volcanoclastic rocks and conglomerates that were made of volcanic debris flow, mud flow, and fluvial reworking of volcanic deposits.

Groundwater

As mentioned earlier, we noted evidence of erosion from surface water run-off over the moderately steep cleared slope within the south central portion of the site just north of Baker Road. We noted minor surface drainage generally running from the northern elevated areas to the southern low lying area.

The presence of surface water run-off is an indication of a potential for perched groundwater conditions at the site. Based on our knowledge of the site, we believe the actual groundwater table is fairly deep. The perched groundwater may exist within upper 3 to 5 feet and flows laterally downwards towards the south.

Conclusions and Recommendations

Based on the results of our field work and engineering analysis, it is our opinion that the site is suitable for the proposed roadway and residential development provided the following general recommendations are incorporated into future design and construction activities at the site.

In 1997, we recommended that the proposed roadway be located within the north portion of the site and egress the project site to the north of the existing surface drainage. We also recommended that the proposed roadway be designed and constructed in accordance with applicable county and state rules and regulations. In the absence of other design criteria, we recommend that the roadway be designed based upon an assumed CBR value of 4 to 10. Based upon discussions with you in August 1998, we understand that a 12-inch thick gravel surface will be placed on the roadway. Additionally, you have indicated that filter fabric will be used as appropriate to separate the fine-grained subgrade soils from the gravel surface materials.

Initially, we recommended that the final roadway be evaluated. This evaluation has been completed and is addressed in our seperate letter to you dated August 31, 1998. The individual lots should be specifically evaluated by a geotechnical engineer after the proposed house construction plans are available. In general, the following issues must be addressed prior to the construction of the roadway and residential structures on individual lots at the site.

- Stability of any cut slopes and fill slopes to achieve finished floor grade;

- Retaining wall requirements and design, if needed;
- Foundation drains and surface drains;
- Subsurface exploration which may consist of test pits, soil borings, or inspection of the excavations for footings to prepare geotechnical recommendations for site preparation and foundation support.

These items may be verified based upon additional observations and testing at the time of construction.

General

This report should not be used for actual construction of structures on the site. We should be contacted to provide geotechnical recommendation once the construction and site development plans are finalized. The conclusions and recommendations presented in this report are subject to the following general conditions.

We understand that this report will be filed with Skamania County, Washington. This report is for the exclusive use of the addressee and their representative to use to design the proposed structure described herein and prepare construction documents. The data, analyses and recommendations may not be appropriate for other structures or purposes. We recommend that parties contemplating other structures or purposes contact us. In the absence of our written approval, we make no representation and assume no responsibility to other parties regarding this report.

Services performed by the geotechnical and materials engineer for this project have been conducted with that level of care and skill ordinarily exercised by members of the profession currently practicing in this area under similar budget and time restraints. No warranty, expressed or implied, is made.

We appreciate the opportunity to be of service at this time. Should you have any questions regarding the above or require further assistance, please do not hesitate to contact me at (503) 978-4703 or (800) 783-6985.

Sincerely,

William M. Weyrauch, PE
Vice President / Principal Engineer

wmw:pas

Attachments: Site Location Map - Figure 1
Lot Layout Plan - Figure 2

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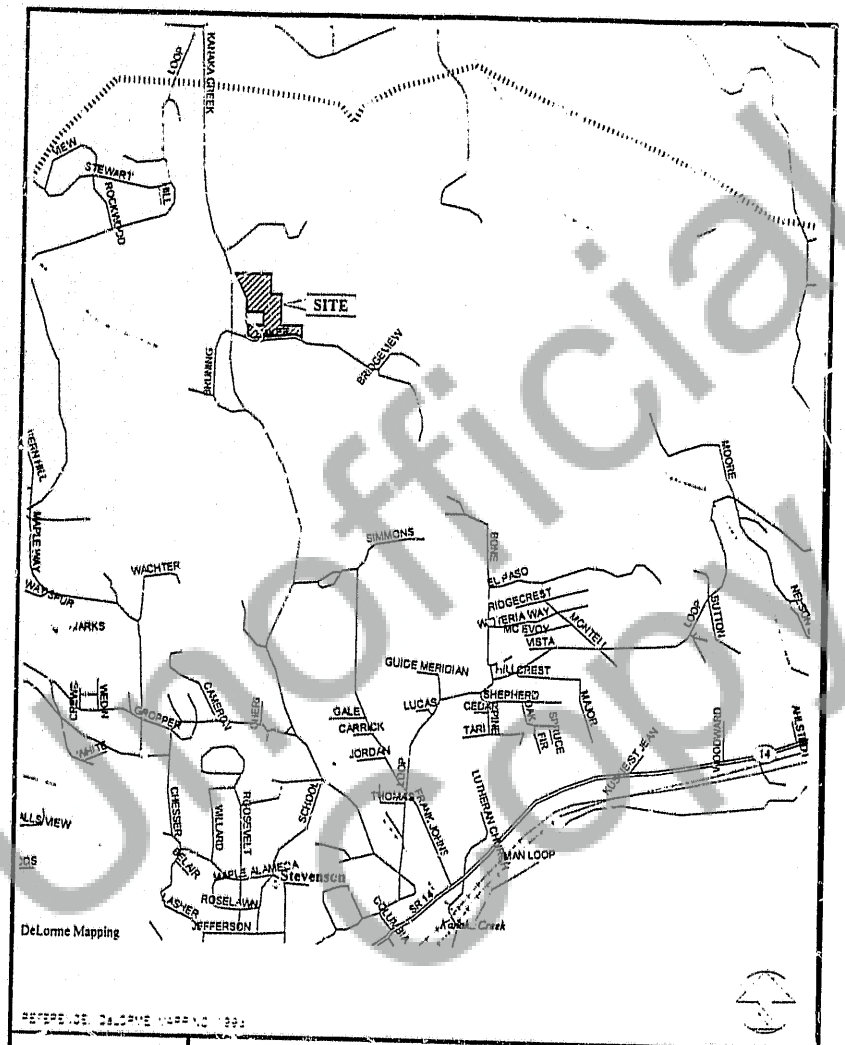

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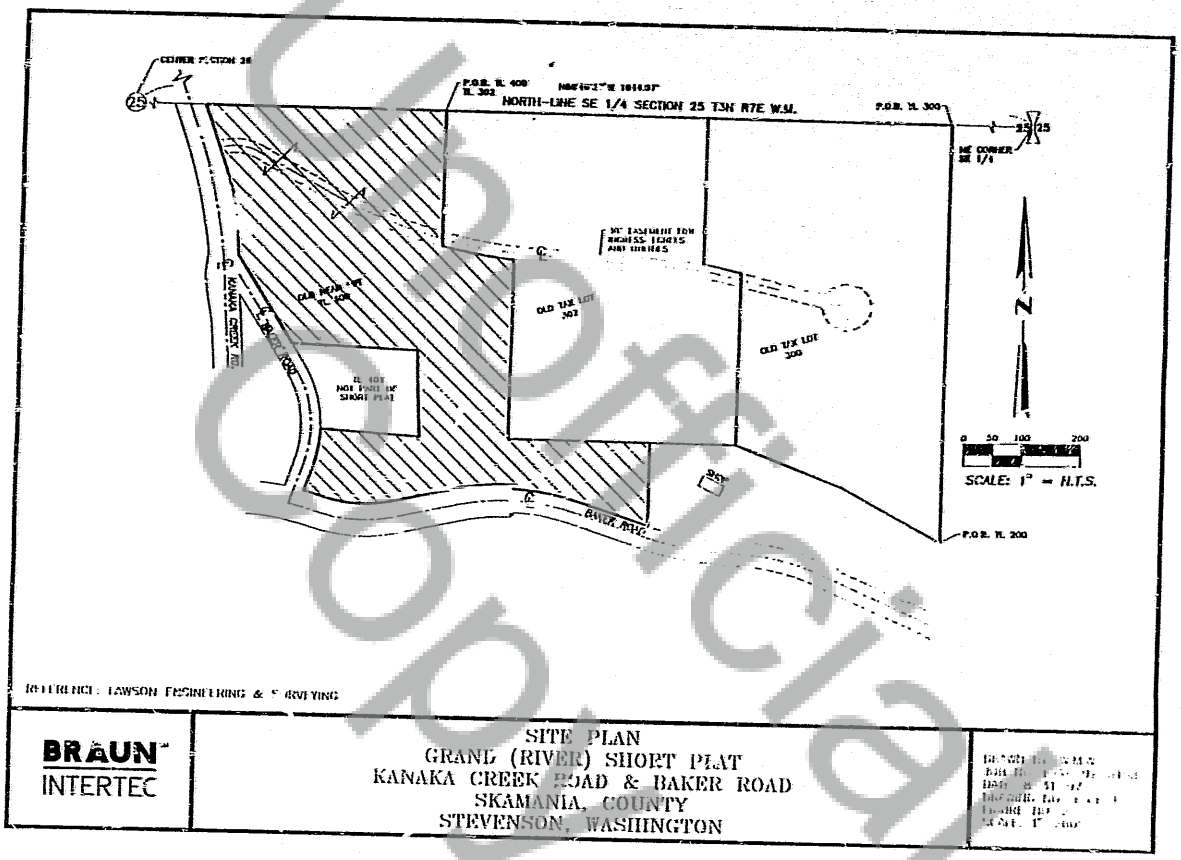
SITE LOCATION MAP
GRAND (RIVER) SHORT PLAT
KANAKA CREEK ROAD & BAKER ROAD
SKAMANIA, COUNTY
STEVENSON, WASHINGTON



REFERENCE: LAWSON ENGINEERING & SURVEYING

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SITE PLAN
GRAND (RIVER) SHORT PLAT
KANAKA CREEK ROAD & BAKER ROAD
SKAMANIA, COUNTY
STEVENSON, WASHINGTON

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