

## Yarrow Point Original Grade Guidelines

The Town of Yarrow Point requires that an “Original Grade” certification prepared by a licensed **surveyor or geotechnical engineer showing the grade** as established by YPMC 17.08.170 be included in the submittal of a building permit application.

### **17.08.170 Original grade.**

“Original grade” means the grade of undisturbed earth which existed at the time of incorporation of the Town of Yarrow Point, June 30, 1959. (Ord. 453 § 5.17. 1996)

Original Grade Certification is a drawing that shows the original grade (as defined by YPMC 17.08.170) contours of the site. The entire site must be included in the original grade drawing because the allowed building height at every point is related to the original grade at that point. This drawing must be prepared and stamped by a licensed surveyor or geotechnical engineer. A survey showing existing grade must also be provided.

Original grade (1959) may be established based on plat records, geotechnical information, building permit records, elevations at site features that pre-date incorporation such as the base of mature trees and walls or by other means. The drawing must note the basis for the original grade shown. The Town may have plats or surveys of the area available at Town Hall for information. King County also maintains a database of recorded surveys and plats that is available on the World Wide Web.

Once the information is collected, an original grade drawing can usually be created.

Attached are a couple of examples of original grade certifications. The methodology a surveyor or geotechnical engineer uses to prepare an original grade drawing will differ based on site location, and the surveyor or geotechnical engineer’s preferred approach to establish original grade. The Town does not require a specific methodology be followed.

The following examples show 2 methods used by licensed surveyors to establish original grade. Each example has been labeled by the number to correspond to the elements shown below.

#### Example 1:

1. Original grade contours shown on stamped drawing with legend to identify the contours. Existing grade contours are included on the original grade drawing in this example.
2. Stamped letter from surveyor outlining basis of original grade shown.

#### Example 2:

1. Original grade contours shown on stamped drawing. Existing grade contours were provided on a separate survey.
2. Surveyor’s note showing documents researched and used for basis of original grade.

Example 3 is from a geotechnical engineer.

Example 3:

1. Existing grade survey of site is shown.
2. Stamped letter verifying that in this case the existing grade is also the original grade. Letter outlines basis of the original grade.

This information is provided to show the documentation that is necessary for Original Grade certification. The examples are not meant to be the limit of acceptable documents but a guide to help the applicant understand what is necessary to show original grade as defined by the Town of Yarrow Point.

Suggestion:

The following example outlines a suggested method of depicting how proposed building height meets the height requirements of the Town.

Example 4:

1. Original grade shown as dark contours. A separate stamped letter outlining the method for determining original grade was also provided by the geotechnical engineer. (Not shown)
2. Architect overlaid proposed roof plan over the original grade contours and labeled the proposed height of each roof peak in order to show compliance with the Town's height requirement at all points along existing grade.

# Example 1

S.E. 1/4 of the S.W. 1/4 of :

ROOF ELEV. (TO NORTH) = 115.5'

TION:

IT ADDITION,  
ED IN VOLUME  
IG COUNTY,

COUNTY, WA.

-25-5 E.

ITION,

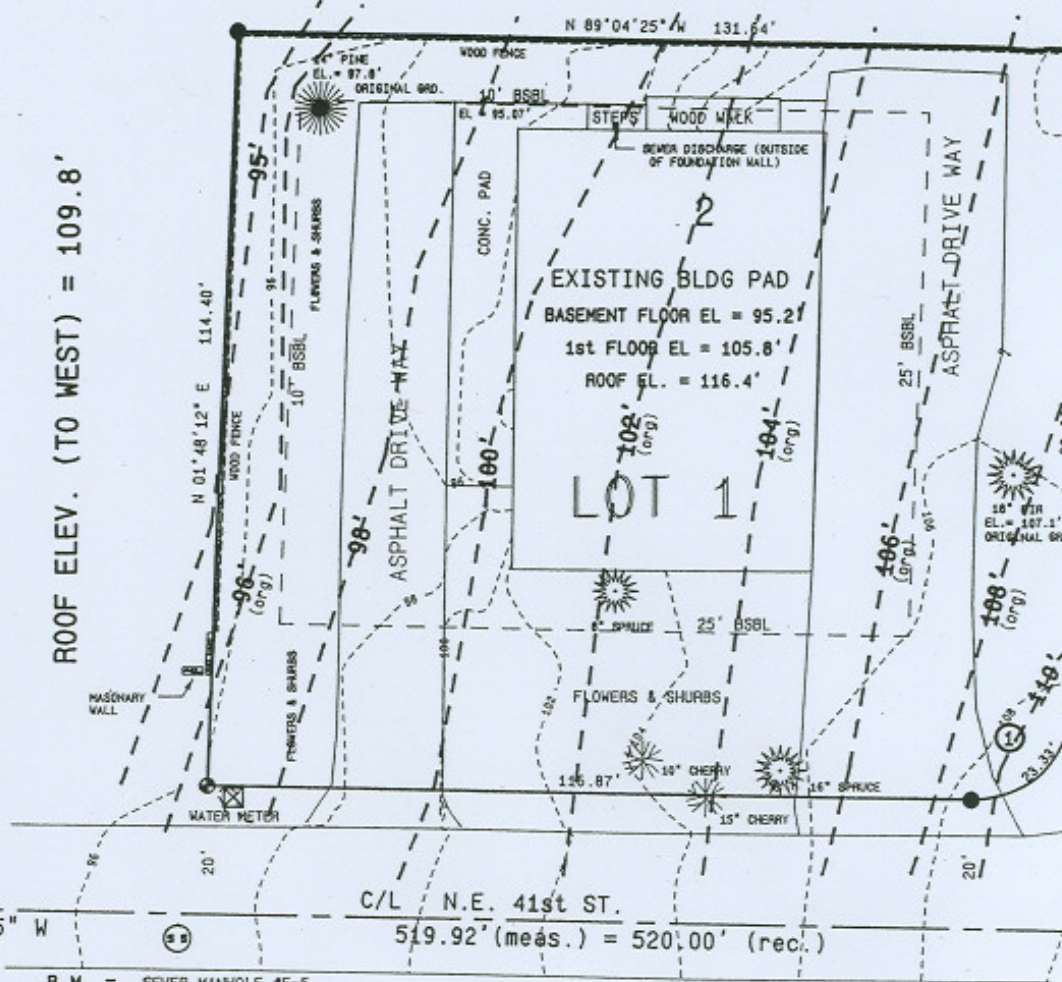
98906139005

H 1/2" BRASS

5 FOR THIS SURVEY  
ON THE OUTSIDE OF THE

FROM THE PRELIMINARY  
ITION AS APPROVED BY  
Y 27, 1961.

ROOF ELEV. (TO WEST) = 109.8'



B.M. = SEWER MANHOLE #E-5  
RIM EL. = 97.03'  
INV EL. = 89.67'



DATUM

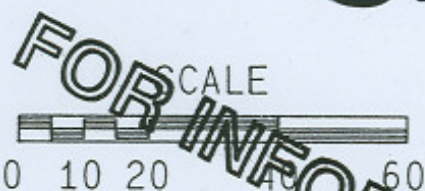
CITY OF BELLEVUE  
WATER UTILITY MAP, C-2  
B.M. = MANHOLE 03-130/#E-5  
RIM ELEV. = 97.03'

①

R = 15.00'  
C.A. = 89°07'23"  
L = 23.33'

①

ORIGINAL CONTOURS ARE SHOWN AS BOLD  
EXISTING CONTOURS ARE SHOWN AS FINE  
CONTOUR INTERVAL = 2'



**SURVEYOR'S CERTIFICATE**

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE SURVEY RECORDING ACT AT THE REQUEST OF

THIS 6th DAY OF JUNE 20 05  
*Michael D. Dahl* P.L.S. 18079  
REGISTERED LAND SURVEYOR



BASIS OF BEARING: PLAT  
SCALE: 1" = 20'  
DRAWN BY: MGD  
CHECKED BY: MGD  
DATE: 14 SEP 05  
JOB NO.: 05062  
FIELD BOOK NO.: LS 05062

FOR INFORMATION ONLY



# Example 1

November 16, 2005

Renton, WA. 98059

FOR INFORMATION ONLY

Huitt-Zollars  
814 E. Pike St.  
Seattle, WA. 98122-3893

Attn: Carl Stixrood

Re: Height Compliance at

Dear Sir,

Regarding original ground elevation determination at 9072 NE 41<sup>st</sup> St. in Yarrow Point, Washington, a site study by Michael & Associates was completed in June of this year to determine property boundaries, building set back lines, existing building footprint, and roof heights of adjoining properties to the West and the North, along with topographical data gathered to establish existing 2 foot contours.

The listed references on my survey drawing relate to boundary line controls only and do not contain any topographical information.

I based my elevation studies upon the sewer invert elevation of 89.67' and rim elevation of 97.03' at manhole 03-130/ #E-5 per City of Bellevue Water Utility Map, C-2 (this is the sewer manhole located in NE 41<sup>st</sup> St., opposite the S.W. property corner of this site and is the connection for the sanitary sewer on this project). There is a significant difference in datum's in this area and for that reason I elected to use what I considered to be the most critical for this project, the sewer, and convert all elevation data to this benchmark.

I requested and was supplied a copy of the preliminary plat application submitted by John Dodds, P.E./P.L.S. of Dodds Engineers for the Eastham's Yarrow Point Addition, by Yarrow Point town engineer, Allan Newbill.

That preliminary plat, based upon a benchmark elevation of 112.45' at the intersection of 92<sup>nd</sup> Ave NE and NE 40<sup>th</sup> St., shows rough 5 ft. contours, which indicate the general lay/slope of the land in November, 1960 and was approved by the City of Yarrow Point planning commission in February, 1961. I believe the benchmark cited in the preliminary plat application is the same as benchmark #309 for the City of Bellevue, which has a published elevation of 116.22' (a 3.8' difference).

②



A telephone conversation /inquiry in July, 2005 with Bruce Dodds, P.E. of Dodds Engineers (son of the late John Dodds) as to original notes, calculations, etc. for the Eastham's Plat yielded very little information. The firm no longer has any file data on that project. I discussed reconstruction of the original ground elevations and the differences in datum's with Bruce and his suggestion was to determine which of the trees on site were original trees, if any, and use the ground elevation at the base of those trees as original ground and proportion the contours between them.

This, I think is a very reasonable approach and I elected to follow his advice. I determined that there were (they have been removed) 3 original trees on this property based on species and size:

- An 18" fir tree at elevation 107.1', located 10' west of the east boundary and 40' north of the south boundary.
- A 16" spruce tree at elevation 105.3', located 43' west of the east boundary and 4' north of the south boundary.
- A 14"- 15" pine tree at elevation 97.8', located 13' east of the west boundary and 11.5' south of the north boundary.

Using this approach, there is a difference of approximately 6.0' between the City of Bellevue Utility District sewer datum and the original preliminary plat datum. I held the Utility District datum and converted the preliminary plat contours to it.

I proportioned the contour interval distances along the north and south boundary lines based on the original ground elevations at the base of the afore mentioned trees and held the contour relationship (shape/flow) relative to the original preliminary plat to the best of my ability. I also proportioned elevations on a line between the spruce tree and the pine tree to estimate a point of articulation, if any, along the contour lines. The west boundary is the exception, because of the pine tree base elevation, I paralleled the west boundary for approximately 50' southerly and then angled west to the proportioned mark I established along the south boundary.

Be advised, the 2' contour interval interpolation is basically a SWAG or best guess, as you are assuming the ground is running at a consistent and/or uniform slope and this may or may not have been the case (at this point in time, I doubt any one really knows for sure). At 5' intervals for the purpose of showing the general lay of the land, a considerable amount of variation could have existed between those established contours and had very little effect on the overall big picture.

Please call @ 425.271.1932 if you have any further questions and/or need additional clarification

Sincerely,



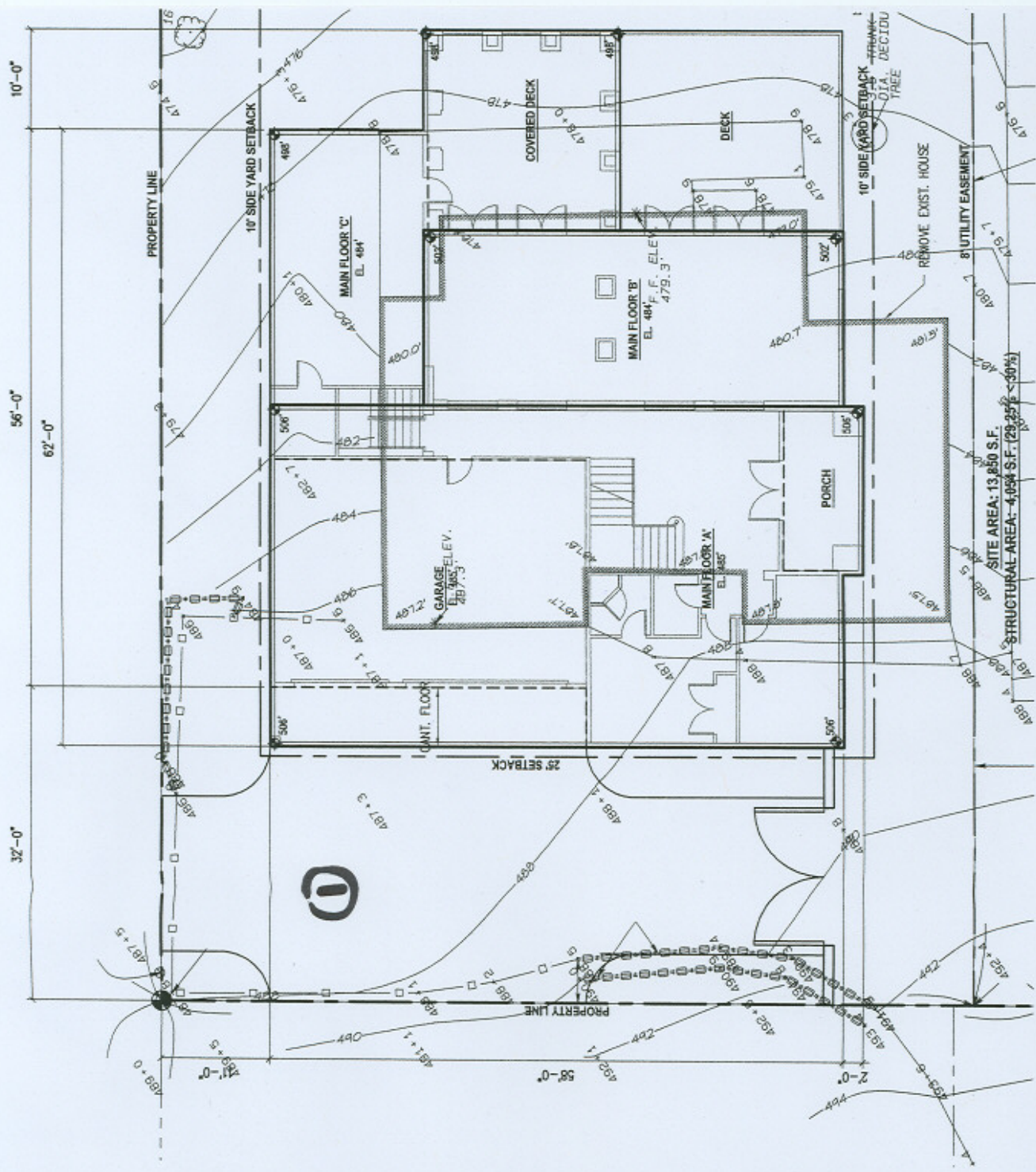
FOR INFORMATION ONLY







# Example 3







**Original Grade Assessment**

We understand the City of Yarrow Point recognizes an original grade as that of any developed parcel completed prior to incorporation in 1959. The subject residence was completed in 1926. Therefore, finish grade associated with the original 1926 development is considered original grade. Based on our observations and review of the referenced BLA #52 and Plat #31 documents, grading modifications likely occurred along the southern and eastern property boundaries. This activity was likely associated with cut rockeries constructed along the driveway access, and for purposes of establishing the newer residential building pad to the east. These modifications would have effectively resulted in a lowering of the original grade. To the extent that fills were placed as part of the rockery construction and modifications, a determination could not be made with certainty. However, based on our site observations and review of the referenced historical site plans, it appears the rockeries were constructed primarily along native cuts.

With respect to the interior portions of the subject property, the existing site grades depicted on the referenced topographic and boundary survey have not been modified, in our opinion. Based on our review of the referenced topographic survey and observations of the surrounding topographic and land features, in our opinion, these grades represent the original grades for the development portions of the subject property.

**LIMITATIONS**

The recommendations and conclusions provided in this original grade assessment are professional opinions consistent with the level of care and skill that is typical of other members in the profession currently practicing under similar conditions in this area. A warranty is not expressed or implied.



We trust this original grade assessment meets your current needs. If you have any questions, or if additional information is required, please call.

Sincerely,

**EARTH SOLUTIONS NW, LLC**

  
Scott S. Riegel  
Project Geologist



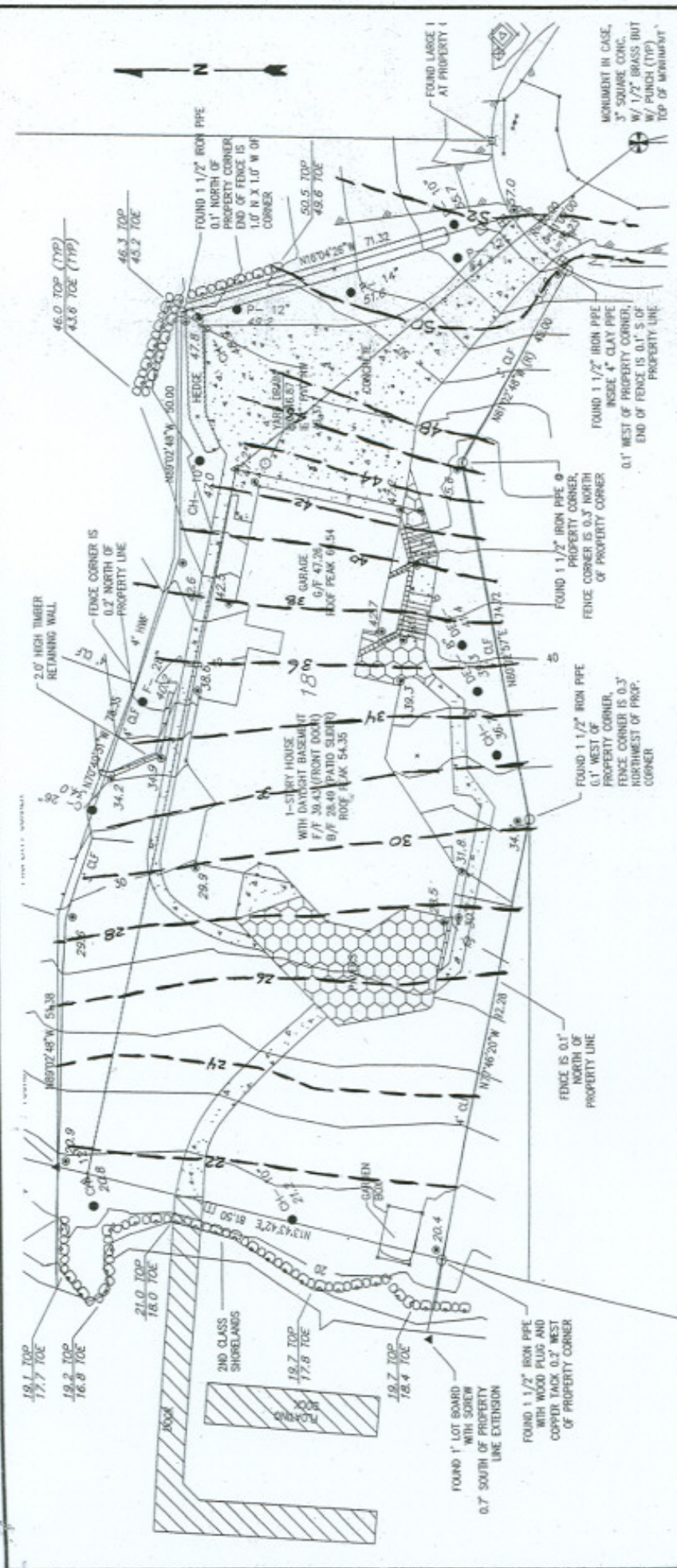
12/6/05

Raymond A. Coglas, P.E.  
Principal

EXPIRES 7/29/2006

Attachments:      Facsimile copies of:  
  
                                 Topo From Yarrow Bay Short Plat #31  
  
                                 Topo from Yarrow Bay File #52





Legend  
 ① - - - - - 1959/60 Topographic Contours (ft.)  
 Approx. Scale 1" = 20'

Example 4  
 Original Grade contours

**ABPB Consulting**  
 Geotechnical Consultants  
 Kirkland, Wash.

**1959/60 Topographic Grade Plan**  
 Wiesmann Residence  
 Yarrow Point, Wash.

Date: 4-06      Proj. No. 1140      Figure 1

Ref: Topographic Survey by Core Design, Inc.



Example 4  
 Roof plan overlaid  
 onto Original Grade  
 contours

