EXHIBIT J

W A V E B E A C H G R A S S N U R S E R Y
WILBUR E. TERNYIK, CONSULTANT & OWNER
Producers of Plant Materials for Sand Dune Stabilization
Collectors of Native Plants for Marsh Creation & Restoration
ONL #00008284 OLCL #10120
SAND EROSION CONTRACTOR
P.O. BOX 1190 - FLORENCE, OREGON 97439
(503) 997-2401

July 10, 1992

Florence City Planning Department
Laura Gillespie, Planning Director
P.O. Box 340
Florence, OR 97439

Re: Shelter Cove Subdivision Phase II

Dear Laura,

Recent events concerning site conditions related to river erosion and resulting in slope failure fronting the Siuslaw River prompted this letter. The necessary permits allowing us to rip rap the severe erosion areas have been turned down due to objections from LCDC. Since we are now well into the 92 construction season timing is critical if we are to move forward this year.

With this in mind I visited the site three more times to determine the impacts of this denial and find solutions to alleviating erosion hazards. The first trip on site was with Matt Burdett of Wobbe & Associates, to determine exact boundaries at the top of the erosion bluff on those lots affected. The second time was with Laura Gillespie and Don Hazen from the City Planning Department and Gene Wobbe. This was to examine conditions on Lots 37 and 38, relative to erosion impacts short and long term and vegetative cover on the east portions of these lots. The erosion slope caused by the toe of slope river erosion is steep and extends to the top of the bluff. It is composed of fine Yaquina sand that will continue to slide into the Siuslaw River Estuary. Photo I, vividly shows the extent of this erosion. All critical riparian vegetative habitat has been destroyed. This cannot be restored until the river erosion is stopped.

Exact locations of two erosion areas are shown on two maps enclosed. The most serious erosion is identified as Area "B" on the map Exhibit I. This is best described as an erosion cove between two existing sandstone points. The erosion is caused by river waves from the SW wind storms and boat traffic wakes. Increased erosion are in some part due to COE installation of pile dike structures and rock groins on the west side of the river. This attempt to stabilize the authorized navigation channel works well.

However, it also keeps the deep water channel against the Shelter Cove property. The rate of erosion at the toe of the slope in Area"B" is estimated at 2' per year. This results in the slope failure above. The rip rap permit denial insures that the erosion will continue unabated into the future.

The City of Florence then asked for a top of the bluff erosion rate figure using historic data. This information would then be used to establish safe setback lines on Lots 37 and 38. Mr. Wobbe then submitted a letter and map (Exhibat 2), showing this rate of erosion at the top of the sand bluff. As shown on the maps both lots are deep and there appears to be safe locations on both lots on the east one-third of each property. Exact location of setback lines will be set by the City of Florence. In addition Exhibit I also identifies another erosion Area "C" at the west edge of LOt 39. It is my opinion this erosion area is small and poses no major slope failure problems to Lot 39 at the time. Vegetative cover on this slope will be strenthened by planting and fertilization.

There also is consideration of denying an outfall permit to provide safe dispersal of stormwater run off. This possibility dictated a closer look at Phase II topography and vegetative cover. During our joint site visit two facts were established. 1. There are steep slopes where roads, driveways, and homes will be located. 2. That LCDC dune classification of, "Older Stabilized Dunes", is correct. The climax dune vegetation is dense making foot traffic crawling over or under the jungle. Under current conditions no wind or water erosion will take place. However, once construction activities start hard surface roads, driveways, and roofs will concentrate run off waters. This creates severe water erosion hazards due to underlying sand. If not contained severe erosion gullies will wash out roads, utilities, and undermine foundations. I have personally observed gullies develop over night 15' in width and 12' deep. Again, I strongly recommend that <u>all stormwater</u> be collected and tightlined to a safe dispersal area.

Two possible options for correcting this hazard are available.

<u>Option I</u> - Would be the collection of storm water tightlined to a small created marsh pond at the southend of Shoreline Drive. Draw backs to this option are possible loss of one lot. Even more serious problem, of the water seeping from the pond down through the sand to an impervious layer where it could super saturate a large area next to the river. This would result in a massive slough into the river. This threat is real and has occurred at other locations on the lower river. This in turn would only add to lower river sedimentation currently destroying esturine values. As Dr. Byrne of OSU stated in an early OCCDC meeting in Tillamook, "All Oregon estuaries are slowly dying due to uncontrolled sedimentation."

<u>Option II</u> - The preferred approach would be to collect all storm water and tightline it to a river level outfall. The dispersal would be located on the sandstone shelf at the river level. It is my understanding that Oregon's DEQ has no problems with this approach. This method along with temporary and permanent vegetation restoration plans on file with the City of Florence, is the best method of avoiding potential serious erosion problems on this landform.

Please feel free to contact me if there are further problems.

Sincerely,

Wilbur E. Ternyik
Wetlands,Beaches and Dune Consultant

cc: Jim Hurst
Bill Kloss
Branch Engineering

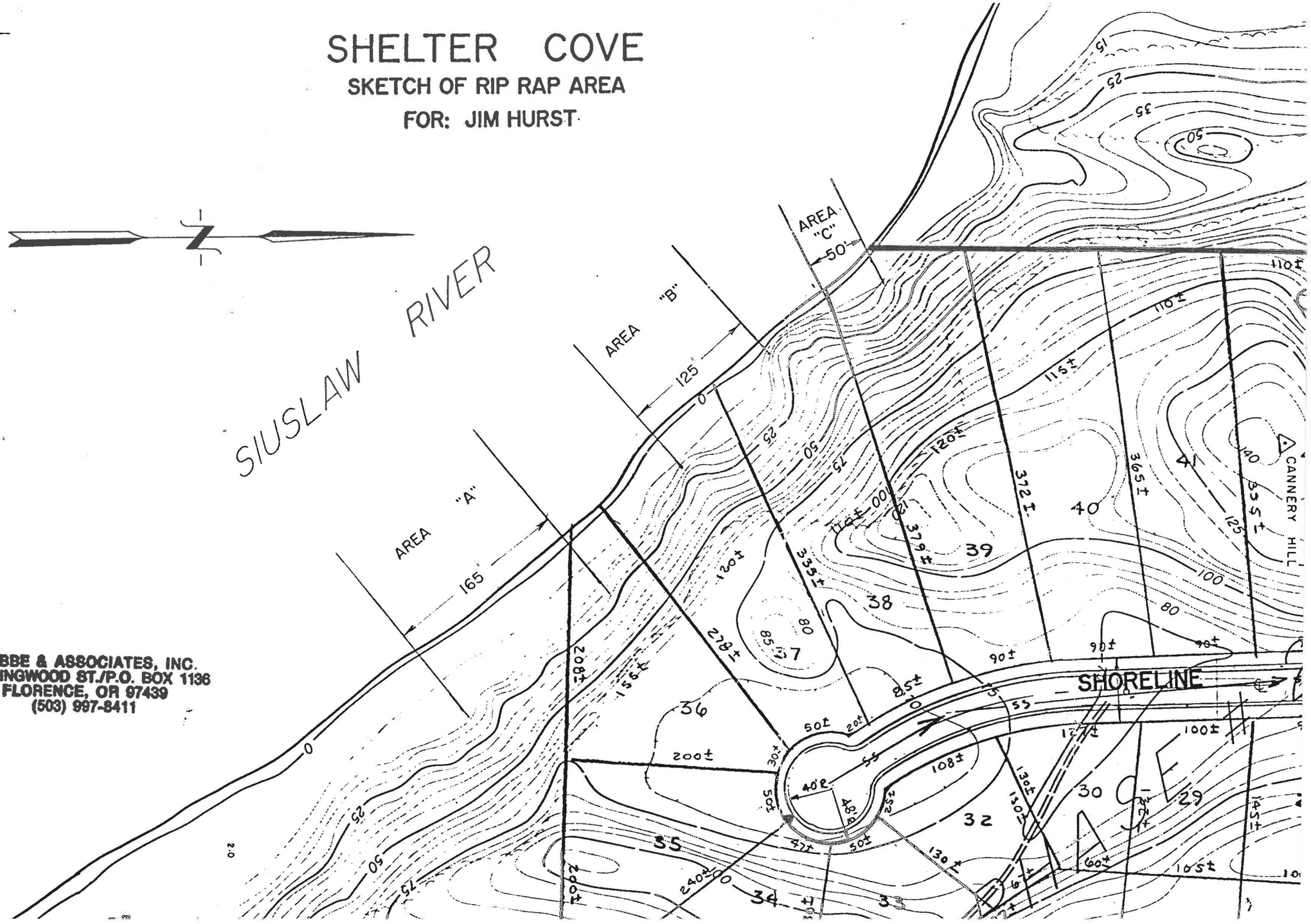
Photo 1 - by Wilbur E. Ternyik - 6/92
Location - Jim Hurst's Shelter Cove Subdivision, Siuslaw River, Florence, Oregon.
Gene Wobbe and Don Hazen standing in middle of upper portion of slide area, on Lots 37 and 38.
Note - Progressive nature of slope failure and shrubs sliding down the slope, into the river.
Restoration of riparian vegetation is impossible until river toe of slope is stablized.

EXHIBIT I

SHELTER COVE

SKETCH OF RIP RAP AREA

FOR: JIM HURST



WOBBE & ASSOCIATES, INC.
510 KINGWOOD ST./P.O. BOX 1136
FLORENCE, OR 97439
(503) 997-8411

EXHIBIT 2

WOBBE & ASSOCIATES, INC.

P.O. Box 1136
510 Kingwood Street
Florence, OR 97439

Phone (503) 997-8411

June 30, 1992

Wilbur Ternyik
P.O. Box 1190
Florence, OR 97439

RE: Shelter Cove Subdivision Phase II for Jim Hurst - Florence, Lane County, Oregon.

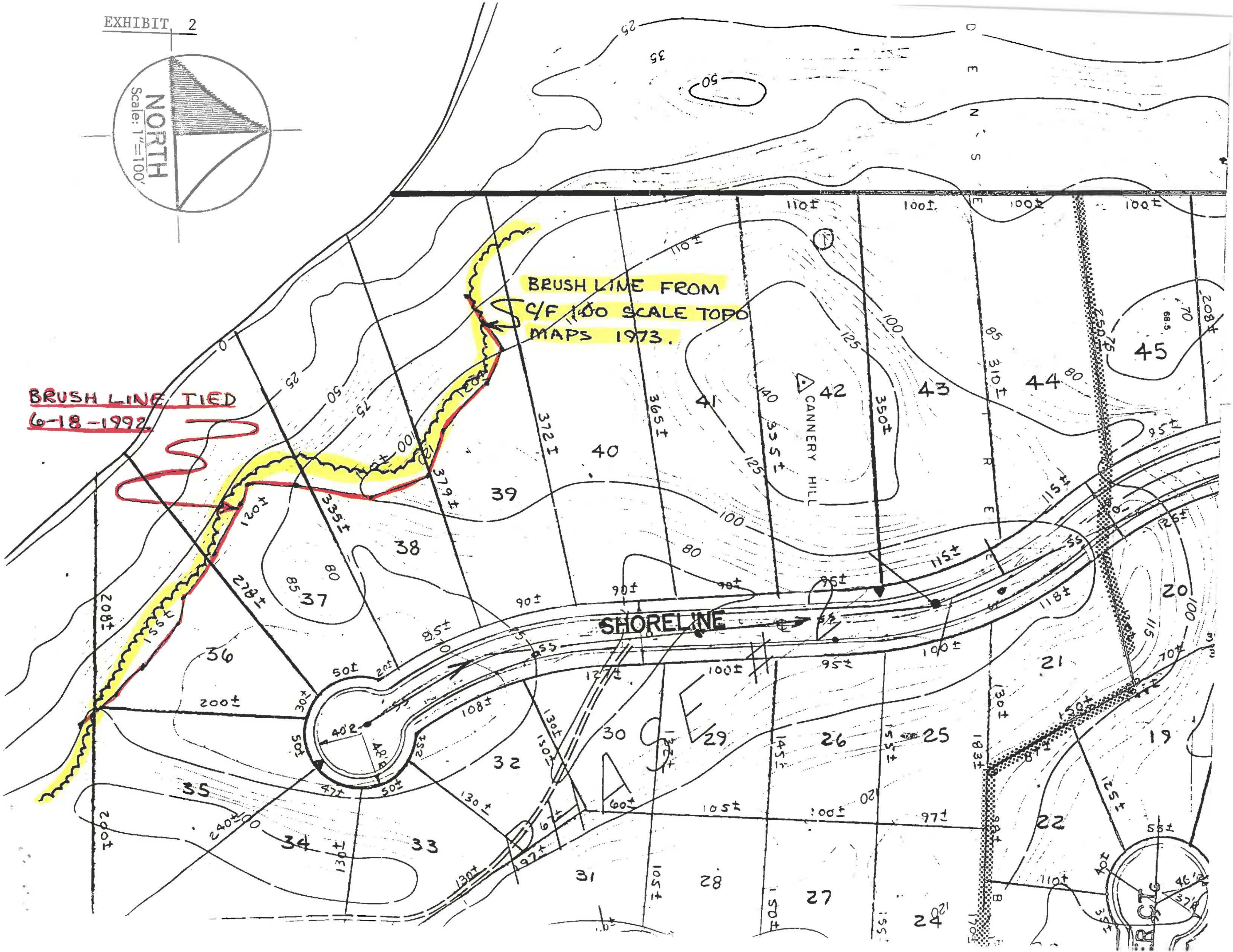
I have estimated the amount of erosion along the top of the bank along the Siuslaw River adjacent to Shelter Cove Subdivision Phase II in the vicinity of Lots 36 - 39 as shown on the enclosed map. Based on a City of Florence topographic map dated 1975 and survey ties to the top of the bank in 1992, I estimate 5 to 25 feet of erosion from the top of the bank in this area between 1975 and 1992. The erosion in this area appears to average less than 1 foot per year.

Sincerely,

Eugene M. Wobbe

Eugene M. Wobbe P.L.S.

EXHIBIT 2


NORTH
Scale: 1"=100'
BRUSH LINE TIED
6-18-1992
BRUSH LINE FROM
C/F 100 SCALE TOPO
MAPS 1973.
SHORELINE
CANNERY HILL