ADDENDUM
Dated July 22, 2005

TO:

BIOLOGICAL ASSESSMENT
Bridgehaven Community Club Dredging Project
Army Corps of Engineers Reference # 2000-1-00825
Dated November 26, 2004

For:

Bridgehaven Community Club
151 North Beach Drive
Port Ludlow, WA 98365

Prepared by:

Marine Surveys & Assessments
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Port Townsend, WA 98368
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Project Description:

As mentioned in the response by Marine Surveys and Assessments (dated June 17, 2005) to the MFR, dated May 11, 2005, dredge spoils for this project were originally proposed to be deposited on the northern spit, which is north of the channel to be dredged. However, this site was not chosen for two reasons:

A. The previous owner of the northern spit did not agree to dredge spoil placement on the northern spit. A detailed discussion of various dredge spoil placement locations was contained in the BA Addendum, dated June 19, 2003. The land has been sold recently and Mr. Dan Jones of the Bridgehaven Community Club is attempting to contact the current owners about the possibility of dredge spoil placement on the northern spit.

B. Robert Burkle (WDFW) strongly recommended that some spoils be placed south of the channel. His reasons for placement of dredge spoils at that location are presented in the attached letter to Jim Johannessen of Coastal Geologic Services, Inc. Detailed specifications for dredge spoil placement as approved by WDFW are presented in the HPA (Appendix C of the BA, dated November 26, 2004.

As mentioned above, the land and northern spit are now owned by new owners, Everett O'Neil, 31109 Baltic Lane NE, Poulsbo, WA 98370. They have been contacted by Dan Jones from the Bridgehaven Community Club and have agreed to have all of the dredge spoils (7,000 cubic yards) deposited in the upper intertidal area along the northern spit.

The details for the dredge spoils deposition on the northern spit are seen in Attachment 1 below.

Effects of the Action
Indirect Effects:

As discussed on page 12 ***(Littoral Drift)*** of the BA dated November 26, 2004, the interruption of net shore-drift sediment by the entrance channel has caused the north spit to erode dramatically, threatening the large marsh and intertidal vegetation area west of the northern spit, as well as forage fish spawning habitat on the northern spit. By placing the dredge spoils to the south of the channel, as discussed in the response to the MFR, dated May 11, 2005, this gradual erosion of the northern spit would continue, resulting in the continual loss of sand lance spawning habitat on the northern spit and the degradation of the backwater area behind the spit.

As mentioned above, the new owners have recently agreed to the placement of dredge spoils on the northern spit. This change will result in the rebuilding of the northern spit, rather than its erosion. This will, in turn, result in reversing the loss of sand lance spawning habitat and will improve the backwater area behind the spit used by juvenile salmonids.

Revision of the Determination of Effect: (pages 13 and 14 of the BA dated November 26, 2005.)

The original **Determination of Effect** (seen below) was based on the impacts to sand lance spawning habitat by placement of the spoils to the south of the channel.

1. ***Puget Sound chinook*** - "May affect, likely to adversely affect" Puget Sound chinook.

2. ***Hood Canal summer-run chum*** - "May affect, likely to adversely affect" Hood Canal summer-run chum.

3. ***Bull trout*** - "May affect, likely to adversely affect" bull trout.

However, by placing the spoils on the northern spit to the north of the channel, these impacts will be reversed and will result in the rebuilding of sand lance spawning habitat on the northern spit, rather than its loss. Therefore, Marine Surveys and Assessments will change the **Determination of Effect** to the following:

1. ***Puget Sound chinook*** - "May affect, not likely to adversely affect" Puget Sound chinook.

2. ***Hood Canal summer-run chum*** - "May affect, not likely to adversely affect" Hood Canal summer-run chum.

3. ***Bull trout*** - "May affect, not likely to adversely affect" bull trout.

Attachment 1

Bridgehaven North Island Beach Sediment Bypass, Coastal Geologic Services, July 20, 2005

As pointed out in the previous work for the Bridgehaven Community Club, net shore-drift (the long term result of littoral drift) is to the north along this portion of Hood Canal. The artificial marina channel and jetty interrupt this net shore-drift cell, bifurcating the original drift cell into 2 cells. The entrance channel south of the jetty is now the deposition area for sediment that is transported from the south.

The placement of dredge sediment back on the upper beach on the island to the north is the most environmentally responsible way of disposing of the sediment, in that it would have gone to the east without the marina channel. This is know as bypassing and is a common approach in other parts of the country. "North Island" is in need of more sediment at this time as it has been eroding at a significant rate in recent decades and would benefit from these dredge spoils. The dredged sediment should be distributed to make a more "natural" beach fairly quickly after placement. WDFW staff was pleased with the performance of a similar dredge sediment containment project on an intertidal beach down-drift of the Birch Bay Village Marina in Whatcom County (Brian Williams, WDFW, pers. com)

This beach sediment containment design will provide an environmentally beneficial alternative as compared to deepwater, uplands sediment disposal, or up-drift disposal (as previously proposed).

The beach sediment dewatering would be accomplished through the construction of a continuous containment berm composed of native beach gravel and sand. The gravel and sand would be pushed into a 3.5 ft high berm using native sediment entirely from within the placement area. The containment berm will have a (near) flat crest that is 3.0 ft wide and side slopes at 2:1 (horizontal:vertical). Dredge sediment will be pumped by hydraulic dredge to the containment area, starting to fill the northern end first and working south.

The containment berm would be constructed along the upper-middle beachface, at the +6 ft MLLW contour. The containment berm will extend to the west up to the +10 ft MLLW elevation on both north and south. The containment berm would be placed directly on the existing beach surface and the height of the berm would be 452 ft alongshore (see attached drawings). The lengths of the containment berm sections were calculated based on 7,000 cy of sediment to be contained (see cross section) using a spoils surface elevation the is 3.5 ft higher than the existing gently sloping beach.

The crest of the containment berm would be at + 9.5 ft MLLW at the lower end, which is similar to local MHHW. This should allow for construction of the berm with a "lifespan" of approximately several weeks, as long as the project is not completed in the late fall-early spring. The +9.5 ft MLLW crest elevation should also allow for gradual erosion of the face of the containment berm and gradual northward transport of dredged sediment during the fall. It sediment was only placed higher on the beach, it would have longer lasting effects Dredge sediment should provide some benefit to the beach to the north.

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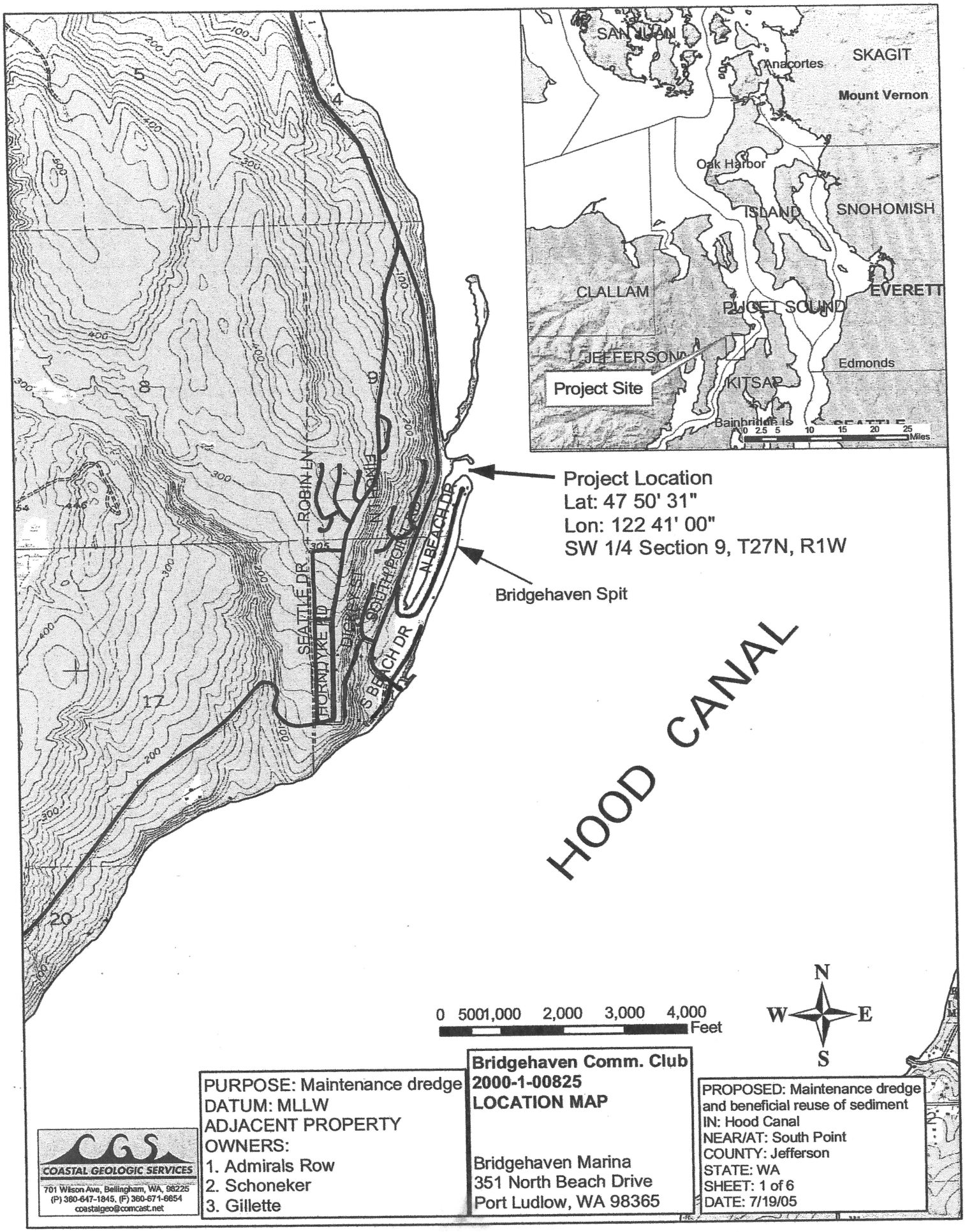

COASTAL GEOLOGIC SERVICES
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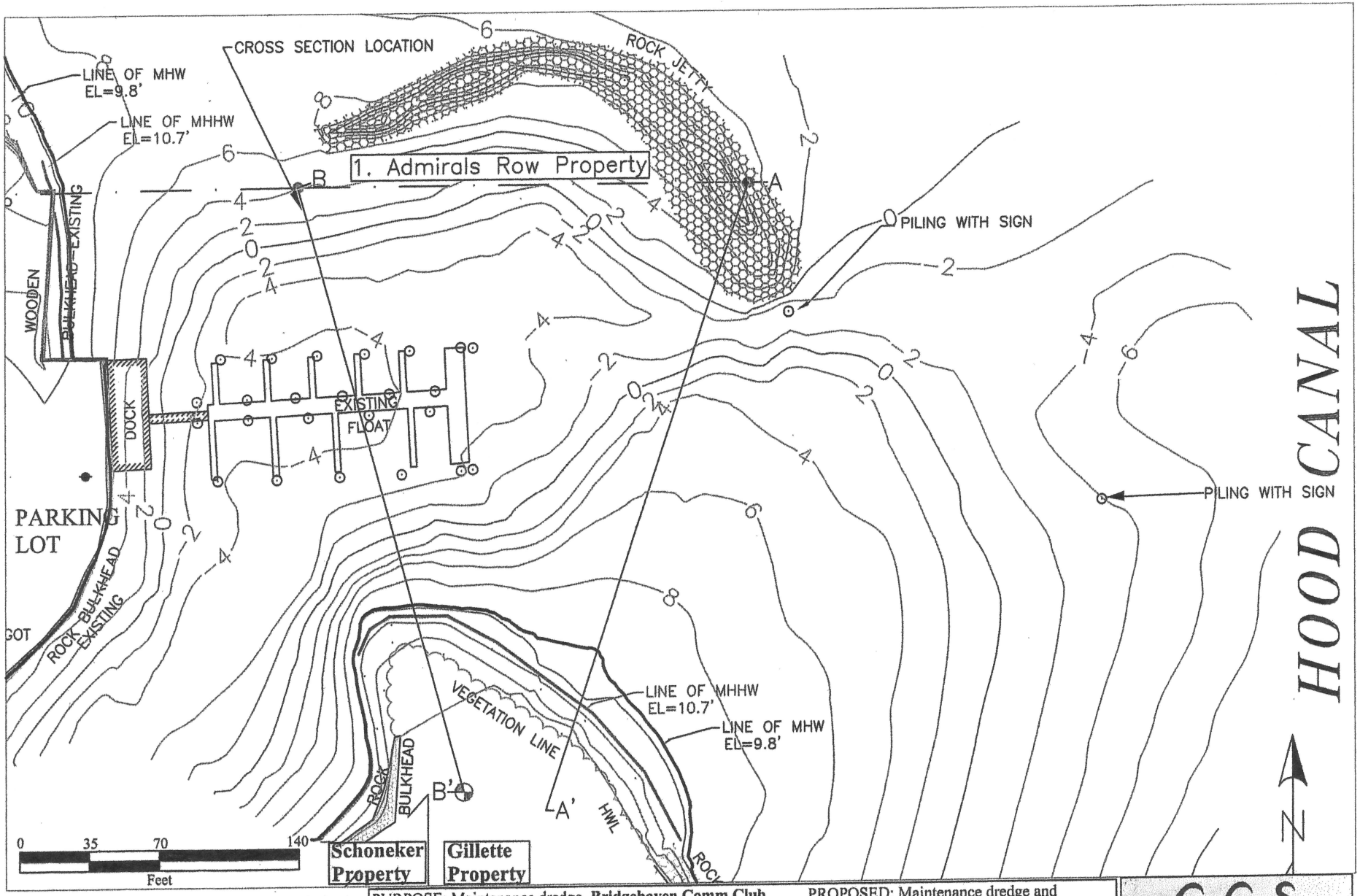
PURPOSE: Maintenance dredge
DATUM: MLLW
ADJACENT PROPERTY OWNERS:
1. Admirals Row
2. Schoneker
3. Gillette

Bridgehaven Comm. Club
2000-1-00825
LOCATION MAP

Bridgehaven Marina
351 North Beach Drive
Port Ludlow, WA 98365

PROPOSED: Maintenance dredge and beneficial reuse of sediment
IN: Hood Canal
NEAR/AT: South Point
COUNTY: Jefferson
STATE: WA
SHEET: 1 of 6
DATE: 7/19/05



Topography/bathymetry by: ADA Engineering LLC. Dredge volume calculations and eelgrass locations drawn by Coastal Geologic Services, Inc.
Drawn: 10/24/01; Revision 2: 10/20/03;
Revision 3: 11/30/04

Revised Proposed dredge contours over existing conditions and eelgrass areas.

PURPOSE: Maintenance dredge
DATUM: MLLW
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3. Gillette

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2000-1-00825
SITE PLAN - EXISTING COND.

Bridgehaven Marina
351 North Beach Drive
Port Ludlow, WA 98365

PROPOSED: Maintenance dredge and beneficial reuse of sediment
IN: Hood Canal
NEAR/AT: South Point
COUNTY: Jefferson
STATE: WA
SHEET: 2 of 6
DATE: 7/19/05

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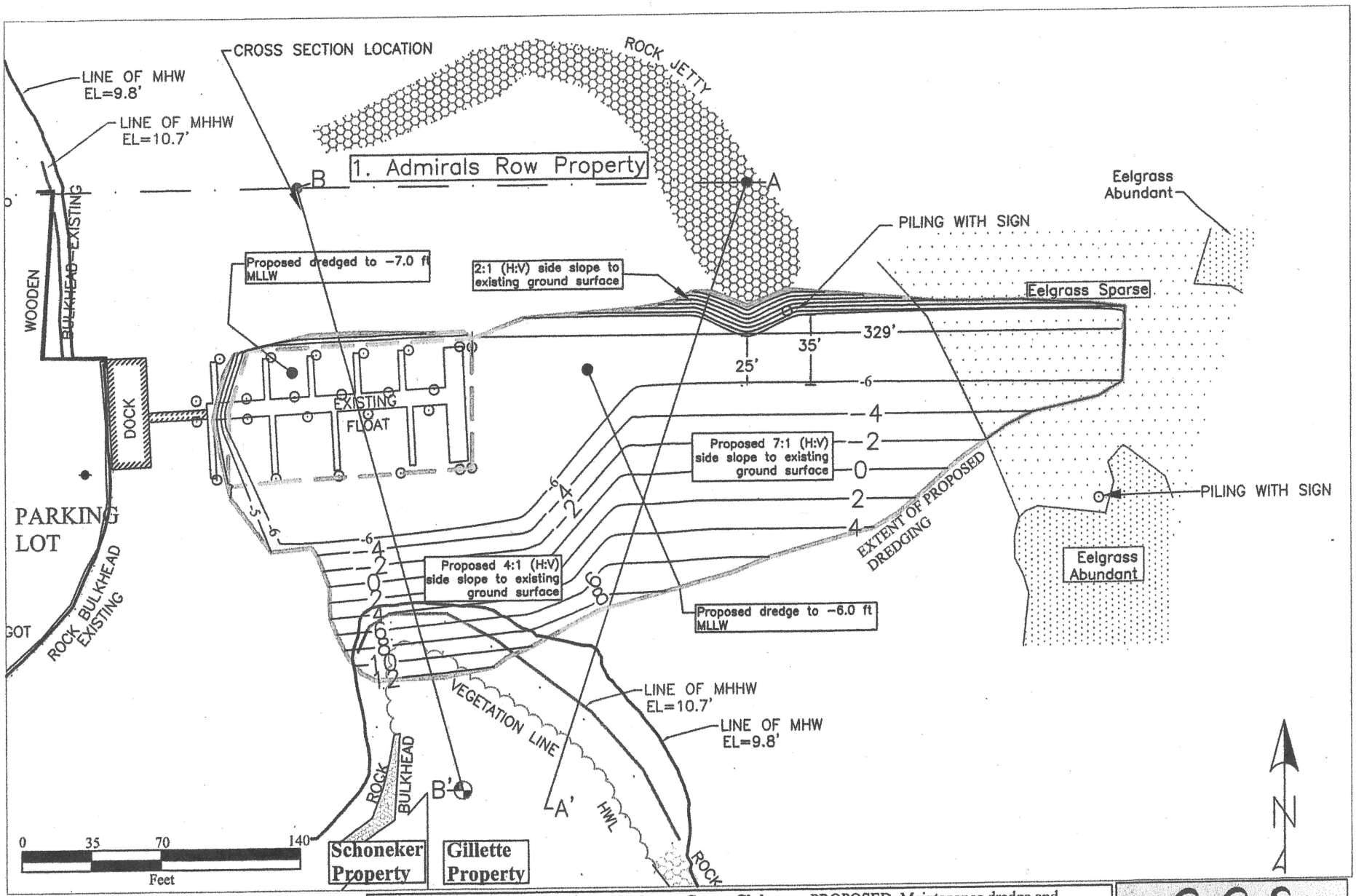

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Drawn: 10/24/01; Revision 2: 10/20/03;
Revision 3: 11/30/04.

Revised Proposed dredge contours over existing conditions and eelgrass areas.

Note: Dredge area is 54,718 sq. ft. plus additional 4,808 sq. ft. in sparse eelgrass.

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2000-1-00825
SITE PLAN - PROPOSED DREDGE

Bridgehaven Marina
351 North Beach Drive
Port Ludlow, WA 98365

PROPOSED: Maintenance dredge and beneficial reuse of sediment
IN: Hood Canal
NEAR/AT: South Point
COUNTY: Jefferson
STATE: WA
SHEET: 3 of 6
DATE: 7/19/05

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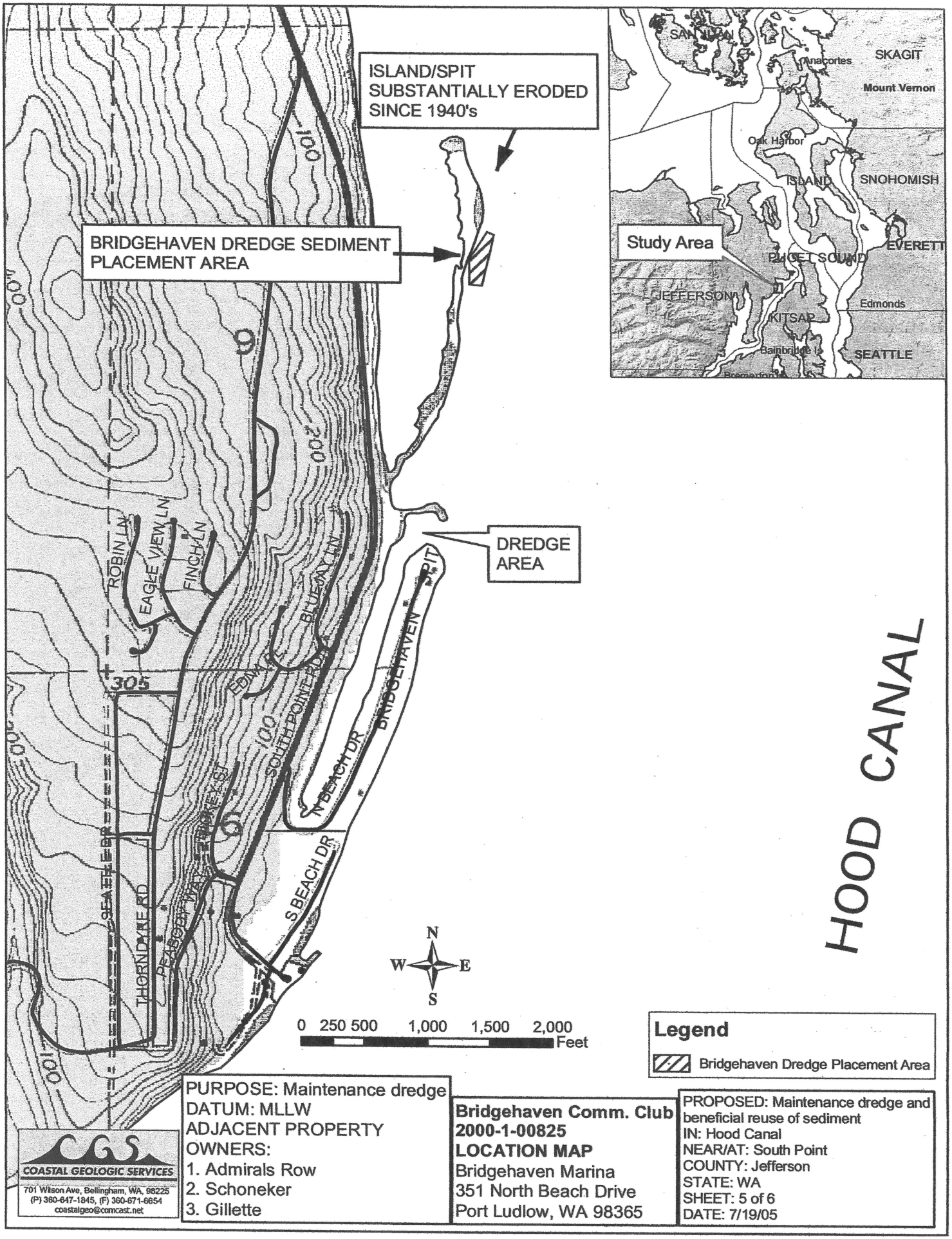

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PROPOSED: Maintenance dredge and beneficial reuse of sediment
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COUNTY: Jefferson
STATE: WA
SHEET: 5 of 6
DATE: 7/19/05

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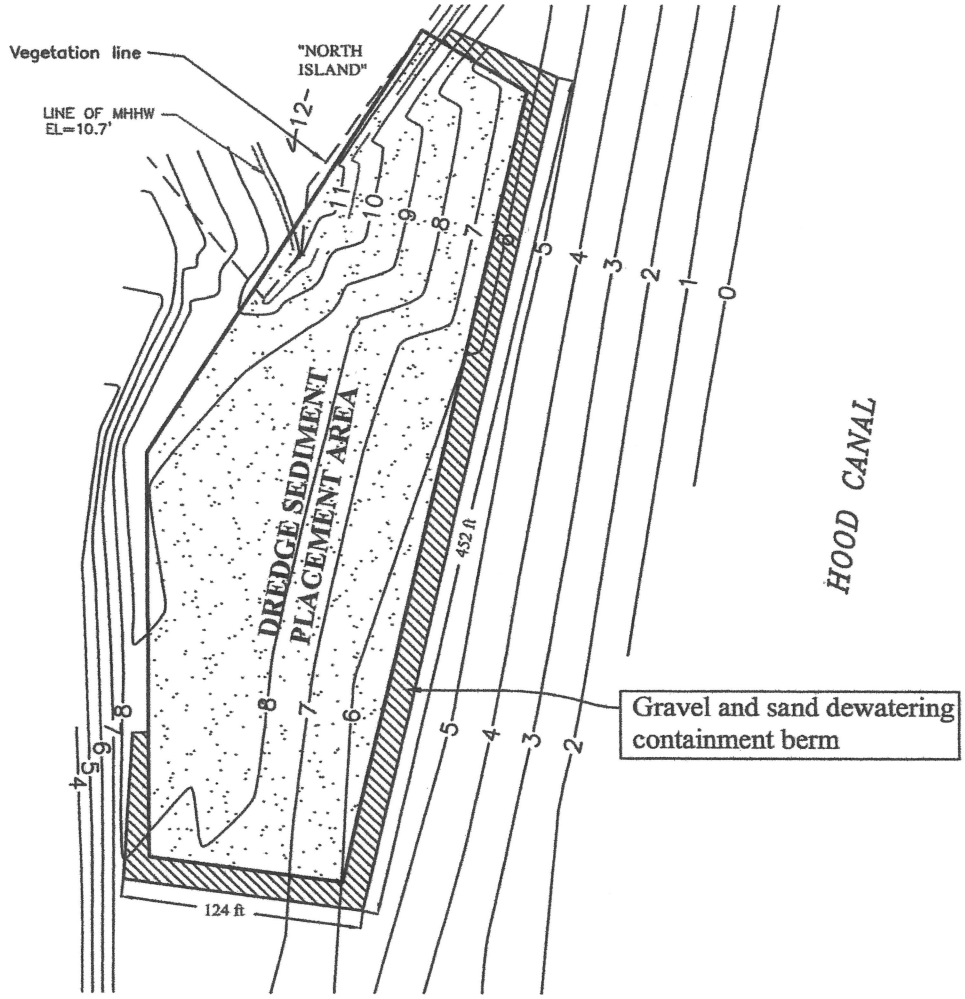

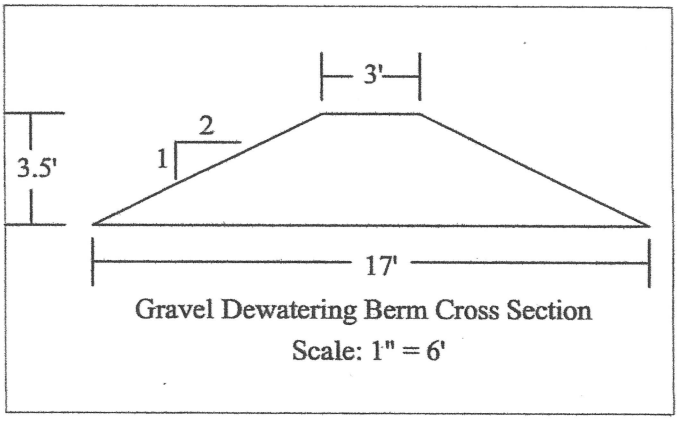

Gravel Dewatering Berm Cross Section
Scale: 1" = 6'

Scale: 1" = 100'

CGS COASTAL GEOLOGIC SERVICES
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