



Preliminary Eelgrass Macro Algae Habitat Survey
Snohomish Public Utilities District – Hat (Gedney) Island Power Cable
11 June 2023

LOCATION: Between the northeastern shore of Hat Island and Pigeon Creek Beach area of Everett, WA.

PURPOSE: To survey the area for replacement of a failing submarine power cable.

TIME: 9:30 AM

VISIBILITY: 15' ±

DEPTH CALCULATIONS: Depth contours (Bathymetric Survey) were provided by others.

BOTTOM TYPE: The channel is entirely mud/sand with 0-12" rock nearshore on both landing sites.

VEGETATION: Eelgrass (*Zostera marina*) was observed on the Hat Island landing of the proposed cable location starting approximately 50 feet above MLLW and extending offshore for a total of 150 feet, approximately. On the Everett landing there was no observed eelgrass or macroalgae. On the Hat Island landing there is generally no macroalgae, with the exception of small amounts of filamentous green algae growing on small rocks in the nearshore. The accompanying drawings indicate where vegetation was observed.

SURVEY PATTERN: A single transect was swam by a diver along the proposed route. The Hat Island landing was surveyed for 300' to a depth of approximately -30'. The Everett landing was surveyed for 800' to a depth of approximately -30'. Observations were made every twenty feet, with the diver noting any observed vegetation within their visible range to either side. Additionally, a TOPCON HiPer VR GNSS rover receiver was used to map the boundaries of the eelgrass on the Hat Island landing of the proposed route.

Survey methods for this project are in accordance with the WDFW Eelgrass/Eelgrass Habitat Interim Survey Guidelines revised in June 2008 and WAC 220-660-35, and follow the Preliminary Survey and Tier 1 survey methods outlined in Components of a Complete Eelgrass Delineation Report developed by the Army Corps of Engineers (ACOE) dated January 9, 2018. Eelgrass Delineation Method B was employed to determine the location of the edge of the eelgrass bed. A single linear transect was used to assess vegetation at the project site, as the power cable has a narrow, linear impact zone. The deviation from the survey guidelines was approved by the WDFW Area Habitat Biologist prior to conducting the eelgrass/macroalgae survey.

VERTEBRATE and INVERTEBRATE SPECIES: None noted.



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FORAGE FISH HABITAT: There is WDFW documented sand lance spawning habitat located on the beach at the proposed Hat Island cable landfall. No documented forage fish spawning habitat is present at the Everett landfall, however, there are sand lance and surf smelt spawning habitats documented approximately 3500' to the southwest.

Any questions regarding this survey should be addressed to:

JEN-JAY DIVING, INC.

HAT ISLAND LANDFALL
17D E Marine View Dr
TPN: 00466300003001



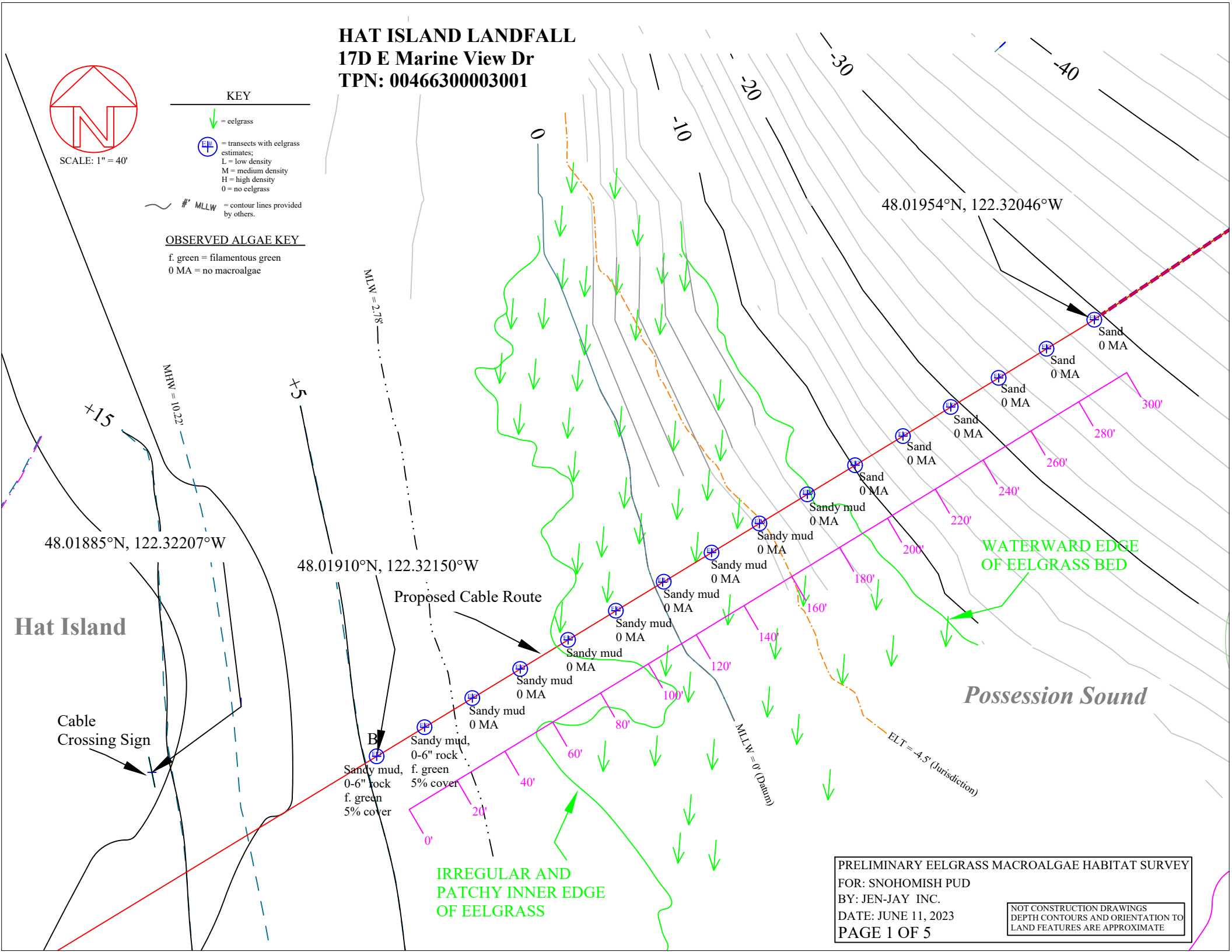
SCALE: 1" = 40'

KEY

- = eelgrass
- = transects with eelgrass estimates; L = low density M = medium density H = high density 0 = no eelgrass
- #' MLLW = contour lines provided by others.

OBSERVED ALGAE KEY

- f. green = filamentous green
- 0 MA = no macroalgae



48.01954°N, 122.32046°W

48.01885°N, 122.32207°W

48.01910°N, 122.32150°W

Hat Island

Possession Sound

Proposed Cable Route

Cable Crossing Sign

Sandy mud, 0-6" rock f. green 5% cover

IRREGULAR AND PATCHY INNER EDGE OF EELGRASS

WATERWARD EDGE OF EELGRASS BED

PRELIMINARY EELGRASS MACROALGAE HABITAT SURVEY
 FOR: SNOHOMISH PUD
 BY: JEN-JAY INC.
 DATE: JUNE 11, 2023
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NOT CONSTRUCTION DRAWINGS
 DEPTH CONTOURS AND ORIENTATION TO
 LAND FEATURES ARE APPROXIMATE

EVERETT LANDFALL OVERVIEW

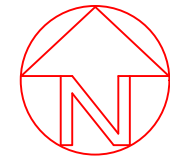
2890 Terminal Ave
TPN: 29042500400200

47.97164°N, 122.23372°W

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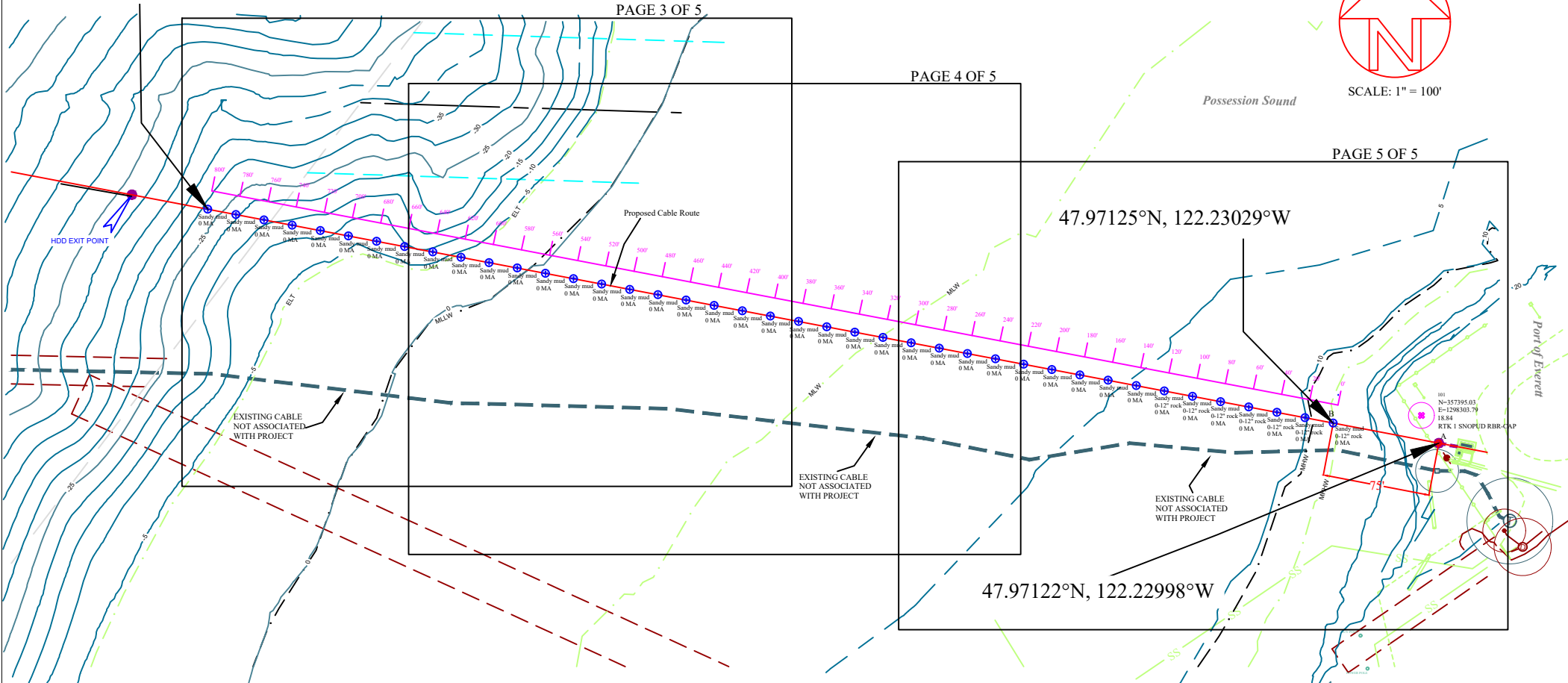


SCALE: 1" = 100'

Possession Sound

47.97125°N, 122.23029°W

47.97122°N, 122.22998°W



KEY

OBSERVED ALGAE KEY

↓ = eelgrass

0 MA = no macro algae

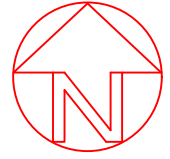
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PRELIMINARY EELGRASS MACROALGAE HABITAT SURVEY
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EVERETT LANDFALL



SCALE: 1" = 40'

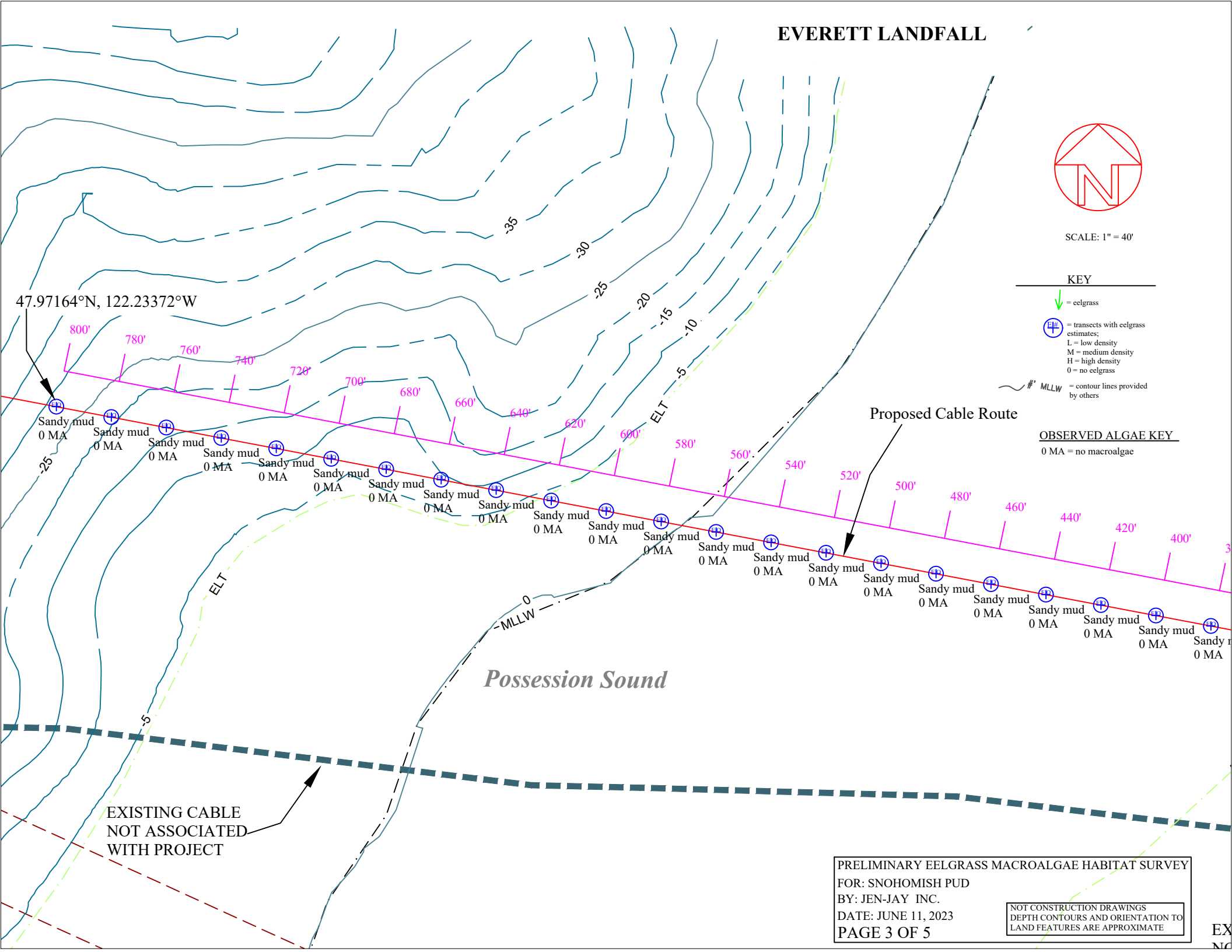
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Proposed Cable Route

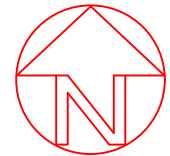
Possession Sound

EXISTING CABLE NOT ASSOCIATED WITH PROJECT

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EVERETT LANDFALL



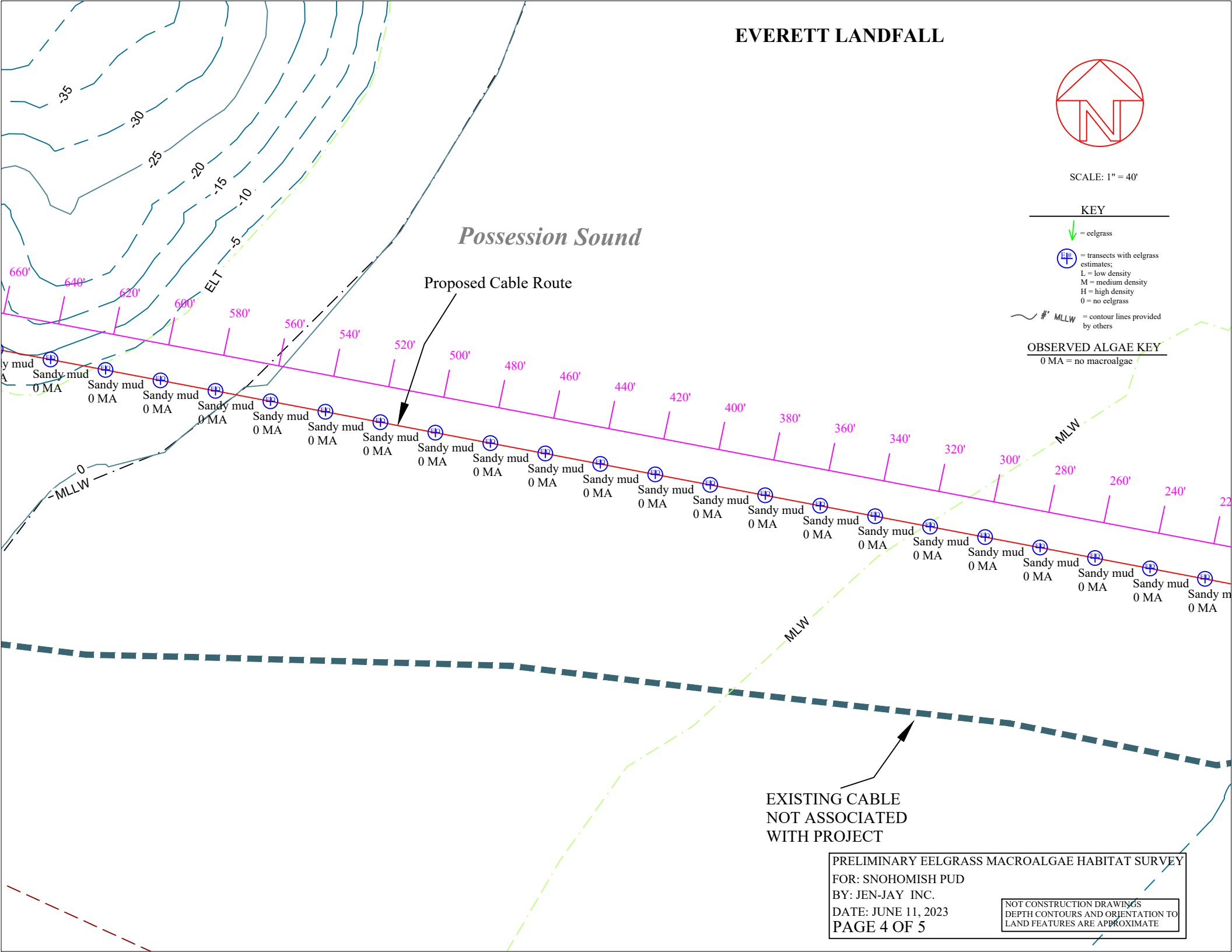
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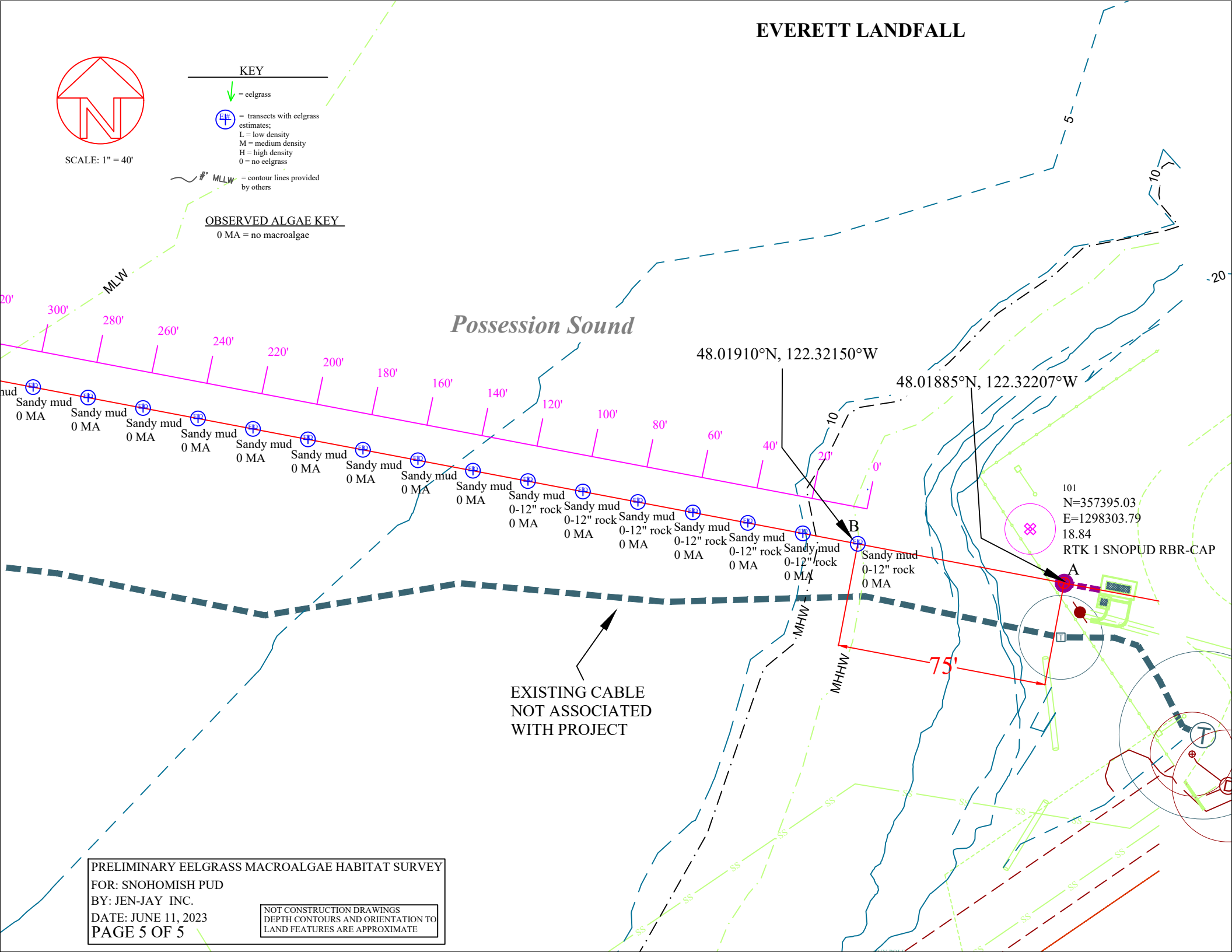
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Possession Sound

48.01910°N, 122.32150°W

48.01885°N, 122.32207°W

101
N=357395.03
E=1298303.79
18.84
RTK 1 SNOFUD RBR-CAP

EXISTING CABLE
NOT ASSOCIATED
WITH PROJECT

PRELIMINARY EELGRASS MACROALGAE HABITAT SURVEY
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