



PORT BAY MAINTENANCE OPTIONS

HEALTHY PORT FUTURES

NOVEMBER 25TH , 2019

Healthy
Port
Futures



Great Lakes
Protection Fund

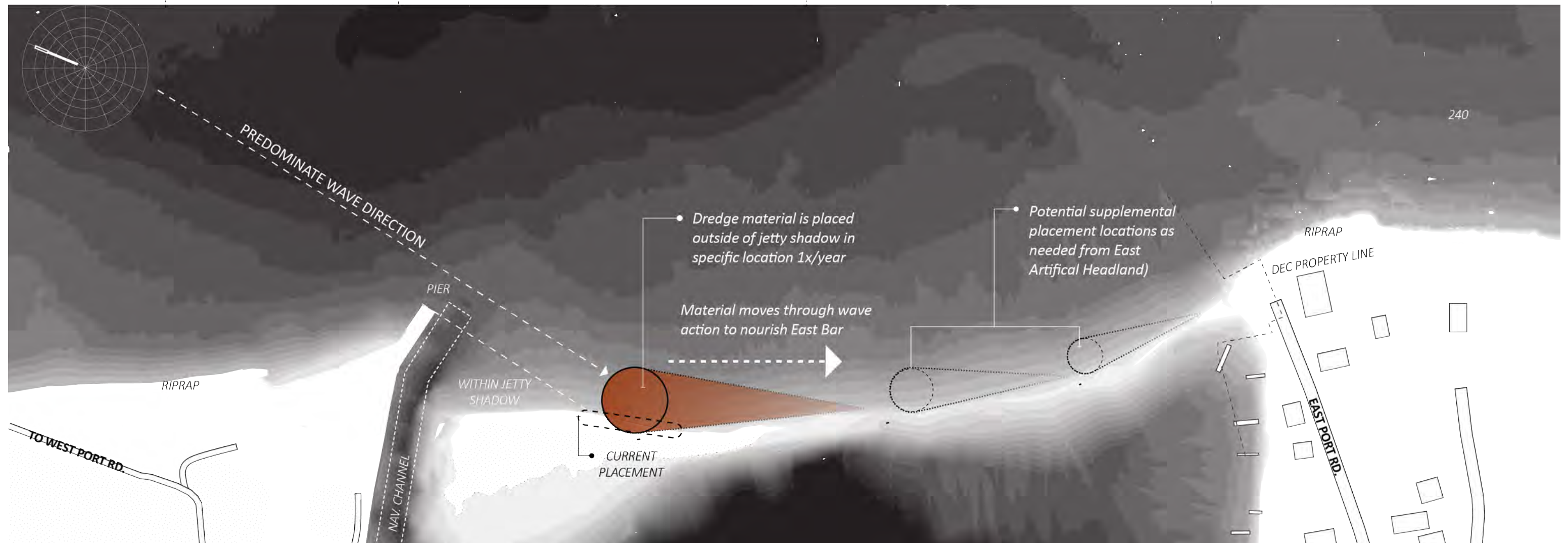
AGENDA

- 1. PORT BAY OBJECTIVES**
- 2. COMMUNITY OUTREACH STRATEGY**
- 3. DREDGE PLACEMENT OPTIONS**
- 4. MONITORING**
- 5. PERMITTING**

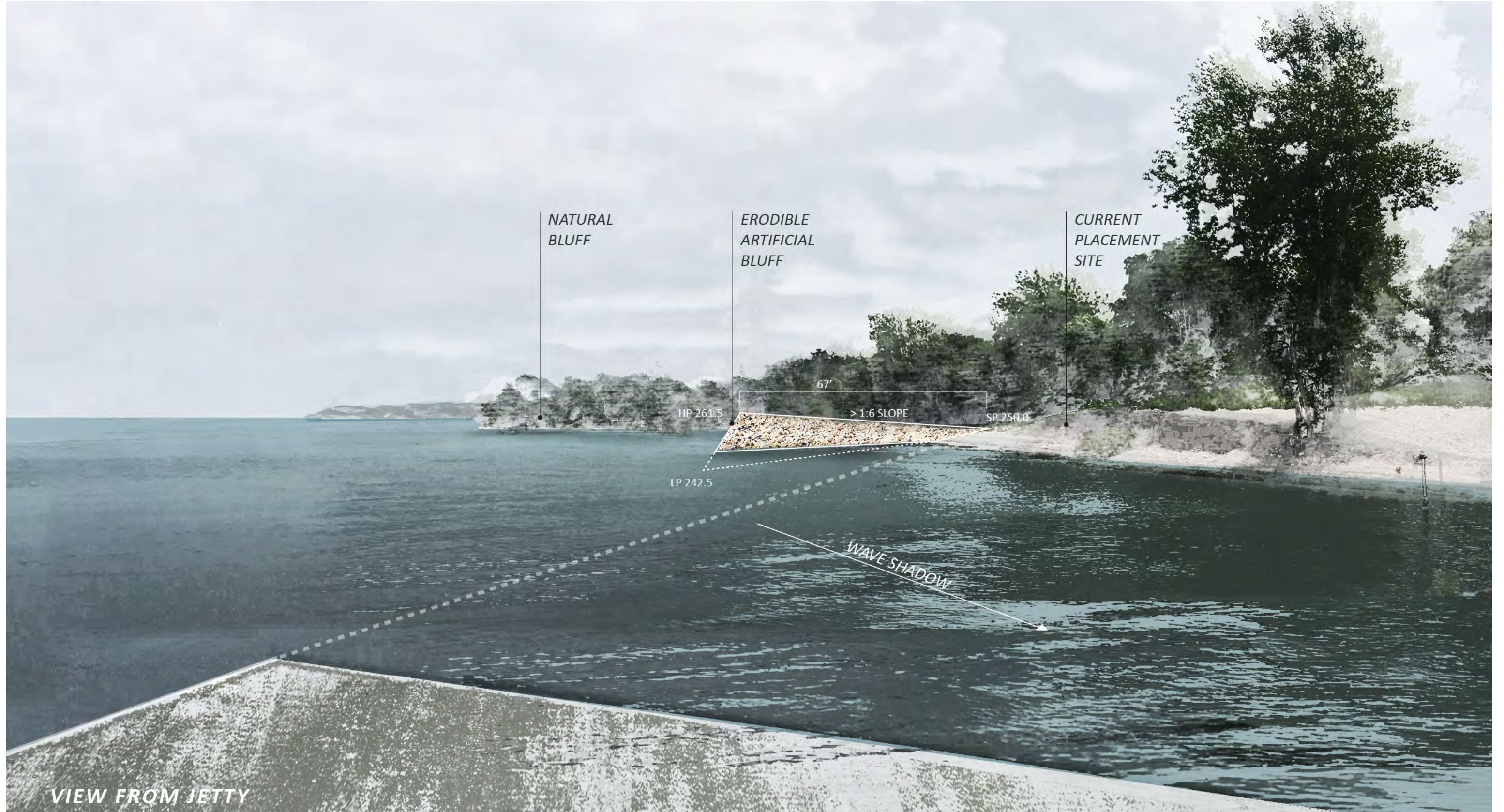
1 | CONCEPT

Place the material in one specific place, and utilize the wave energy to move and spread the majority of the material westward to nourish the bar.

- works within existing maintenance dredging parameters
- uses waves to do much of the work of placement
- less disruptive than mechanical placement for beach nourishment

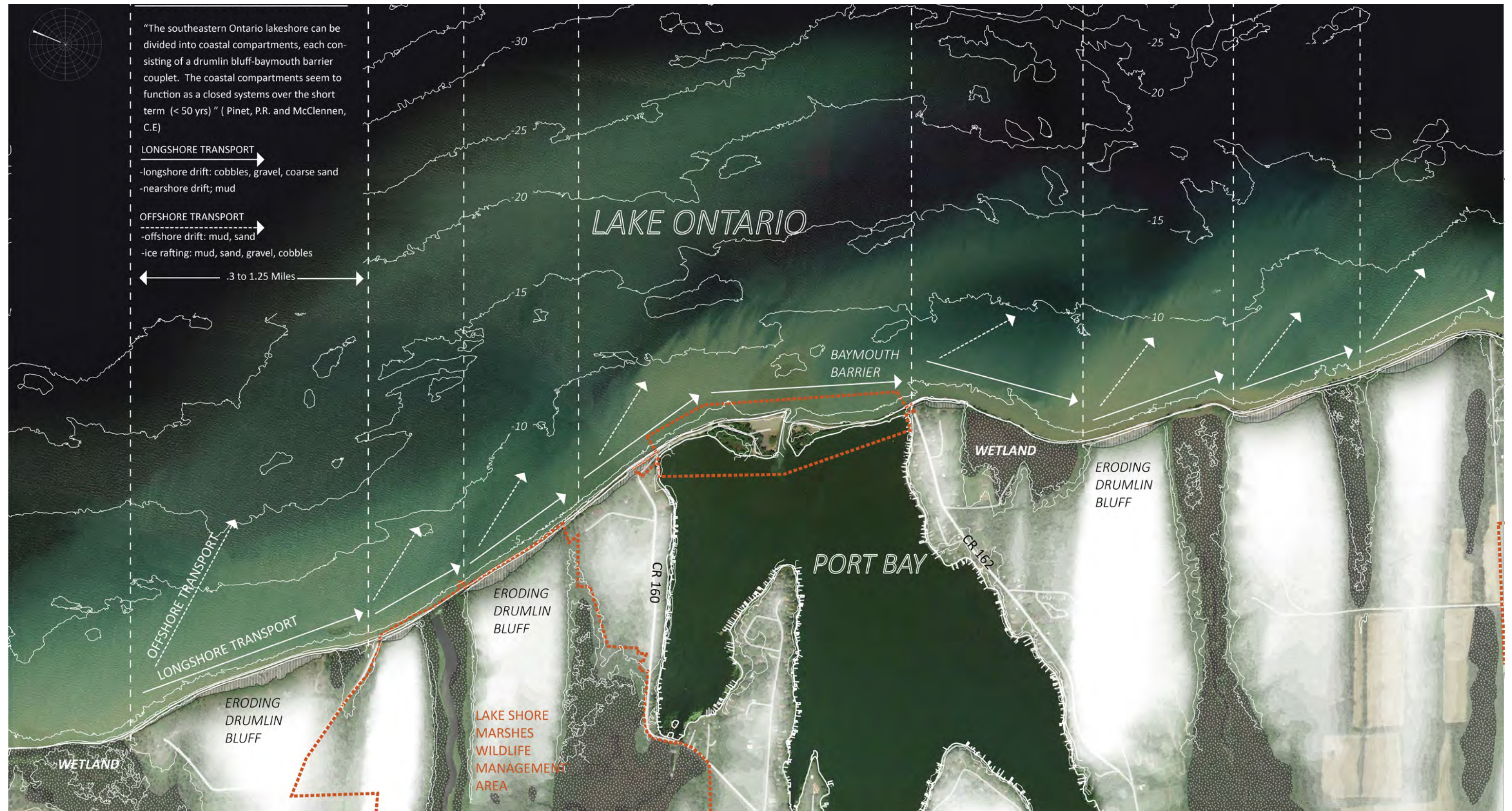


1 | CONCEPT



1 | CONTEXT

Southwestern shore of Lake Ontario is categorized by drumlin bluff- barrier bars compartments.



1 | PRECEDENT

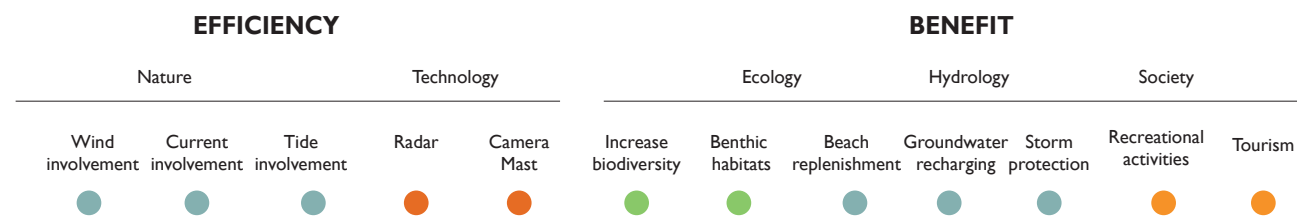
Sand Motor is an experiment in management of a dynamic coastline in which sand is placed and moved over time by waves and currents.

Sand Motor

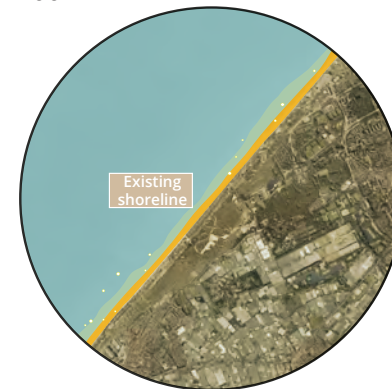
Hauge, Netherlands
Rijkswaterstaat and the provincial authority of Zuid-Holland

Date: 2011
Size: 128 hectares
Sediment Type: Sand
Environment: Delfland Coast
Sediment Amount: 2-5 million m³

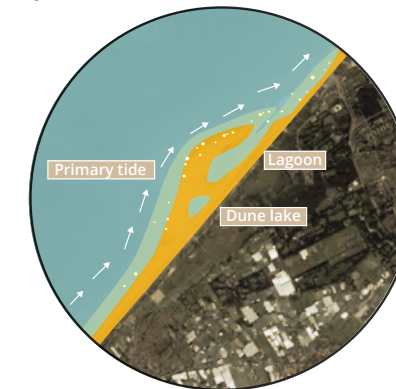
The sand motor (also Sand engine) is an experiment in the management of dynamic coastline. The first one was run off South Holland in the Netherlands. A sandcastle-shaped peninsula was created by humans; the surface is about 1 km². It is expected that this sand is then moved over the years by the action of waves, wind and currents along the coast. This method is expected to be more cost effective and also helps nature by reducing the repeated disruption caused by replenishment.



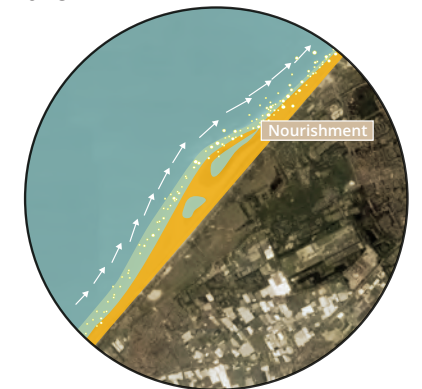
Pre-Disposal
2004



Sediment Placement
2011



Developing Process
2018



3km



2 | ENGAGEMENT

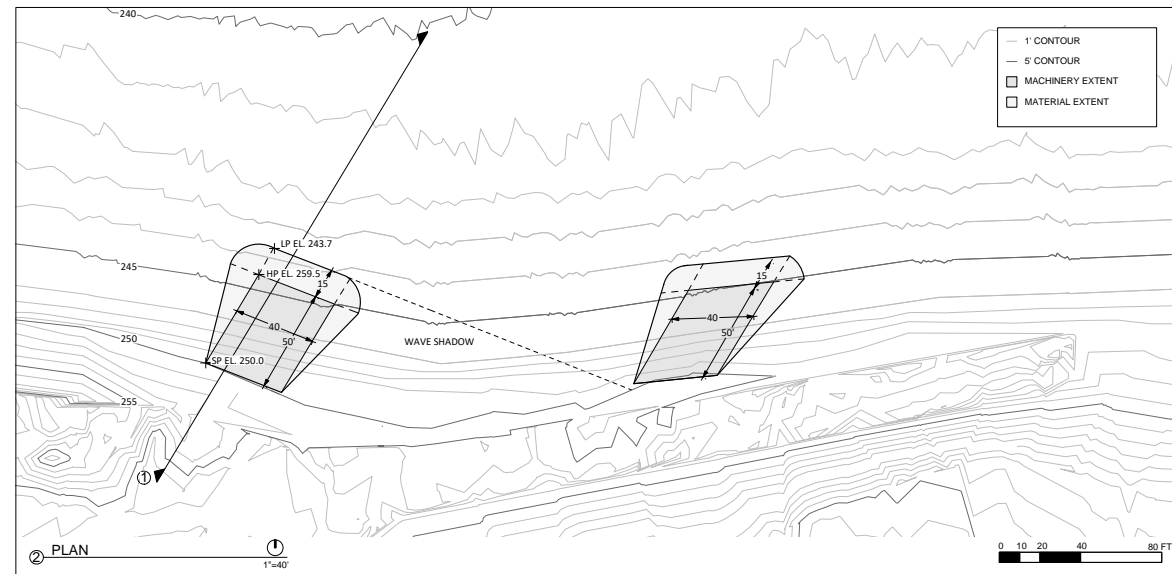
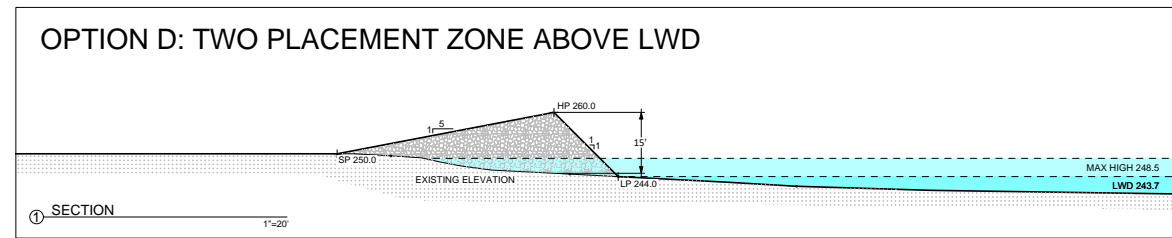
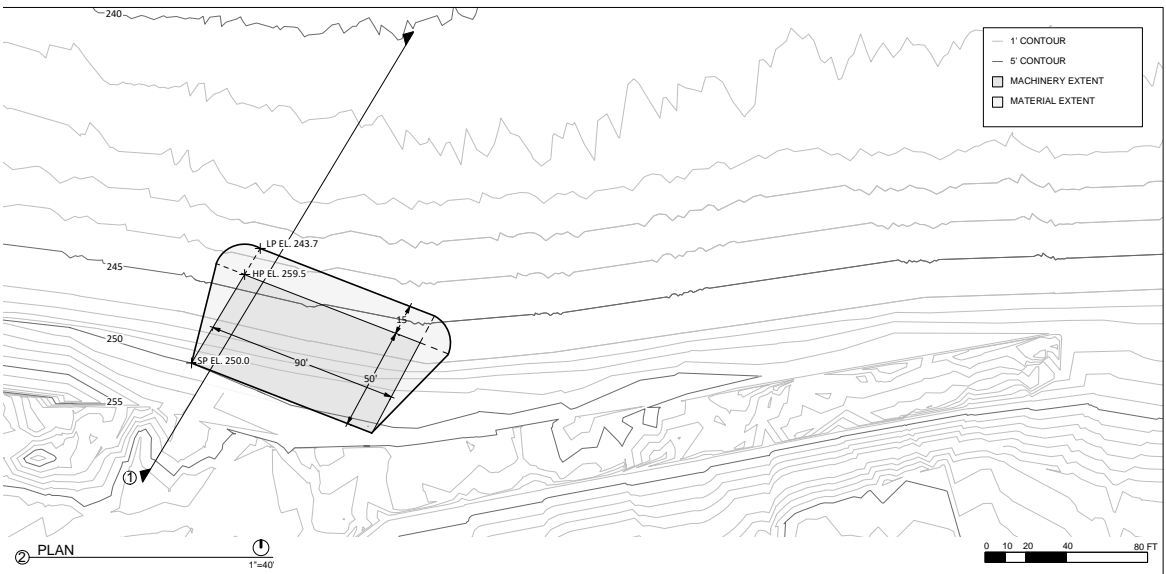
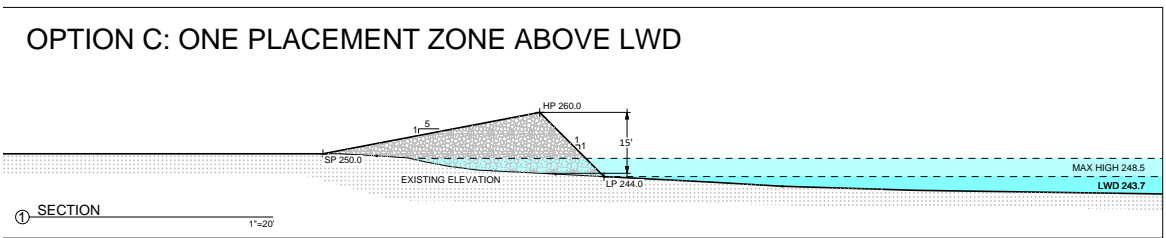
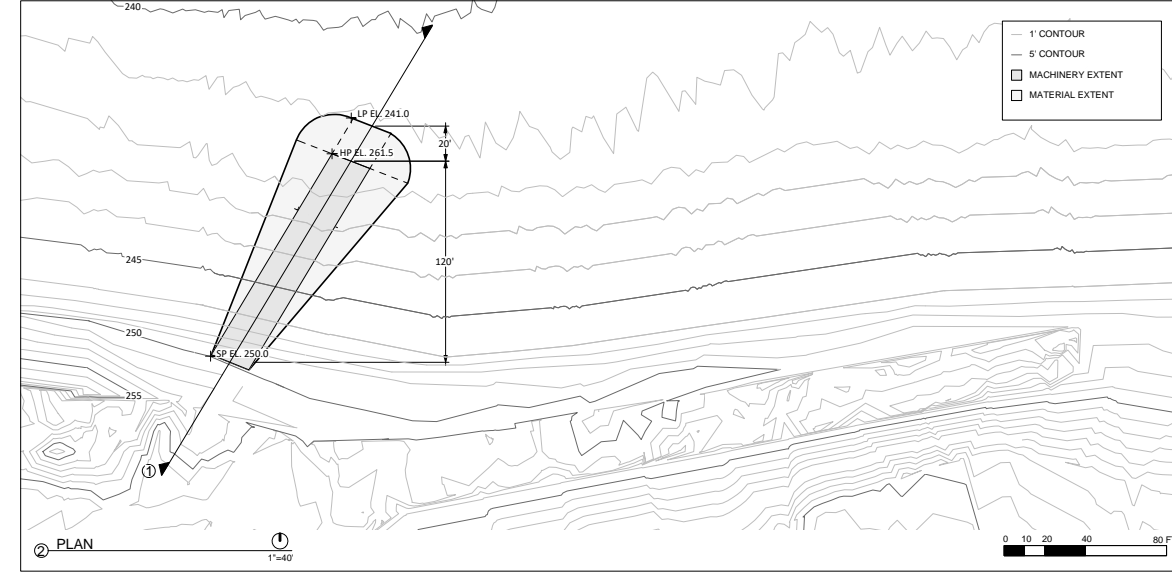
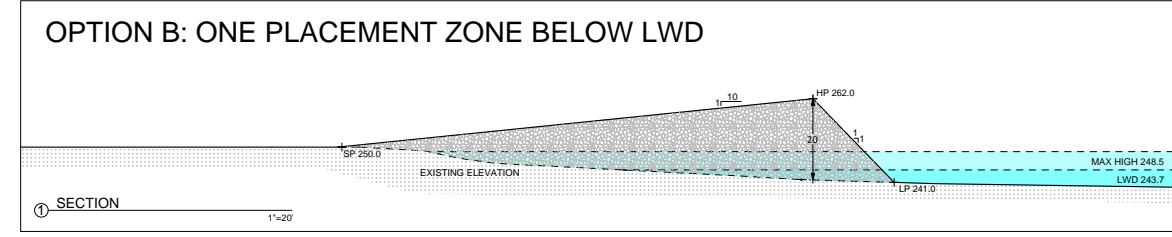
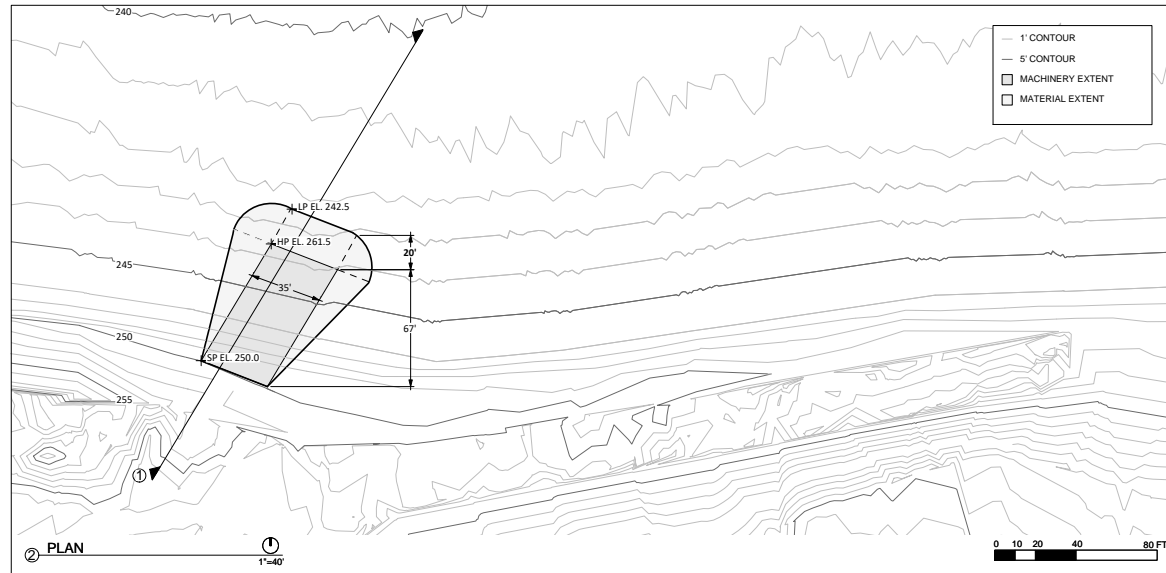
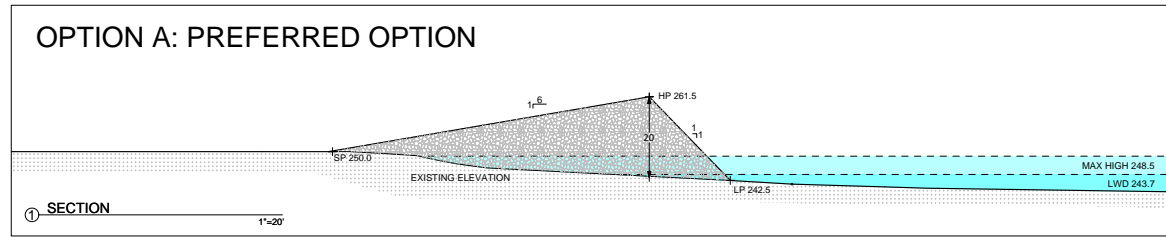
QUESTIONS:

- What role can HPF play in supporting the outreach?
- What kind of drawings/ materials do you think would help?

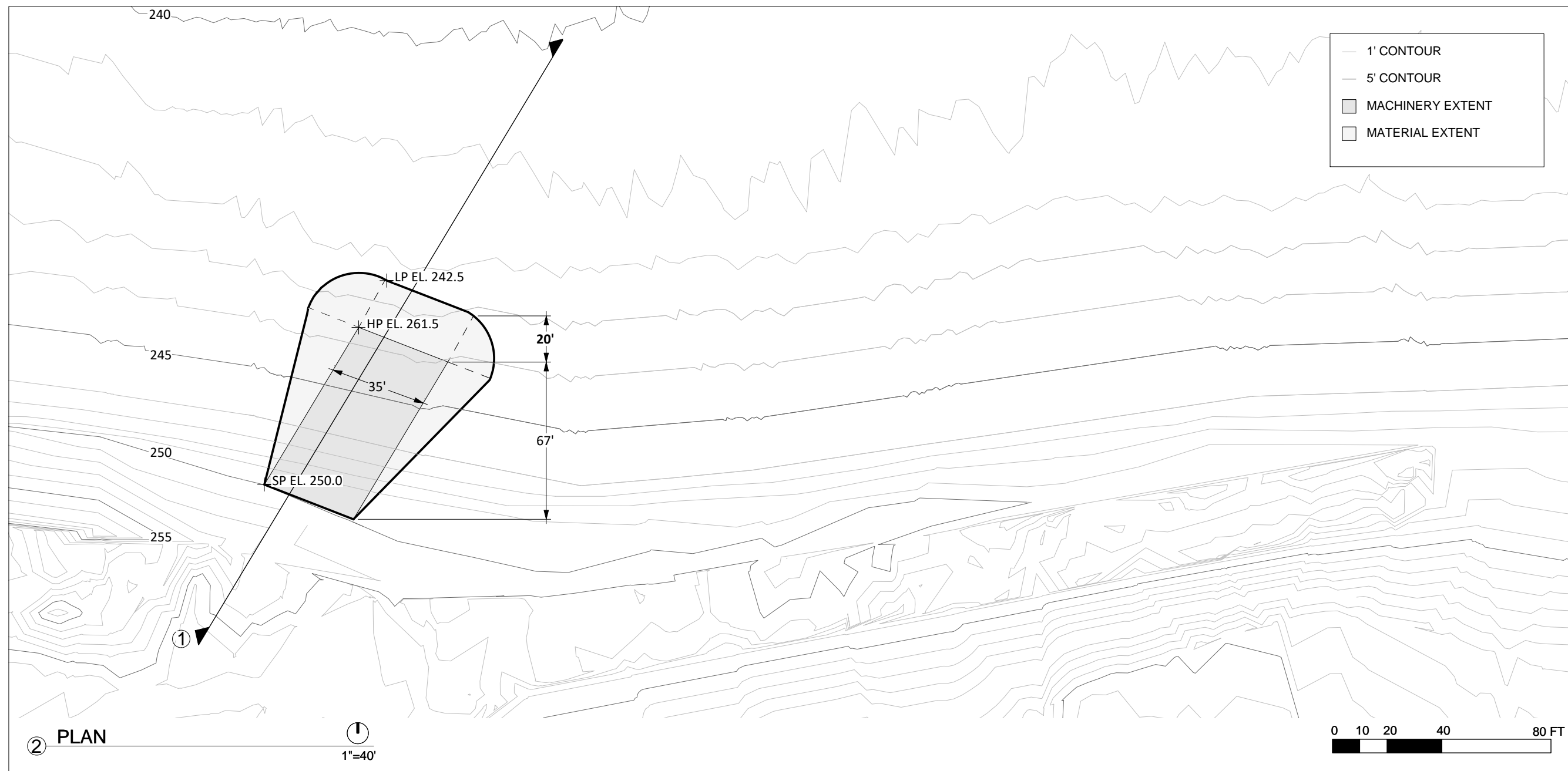
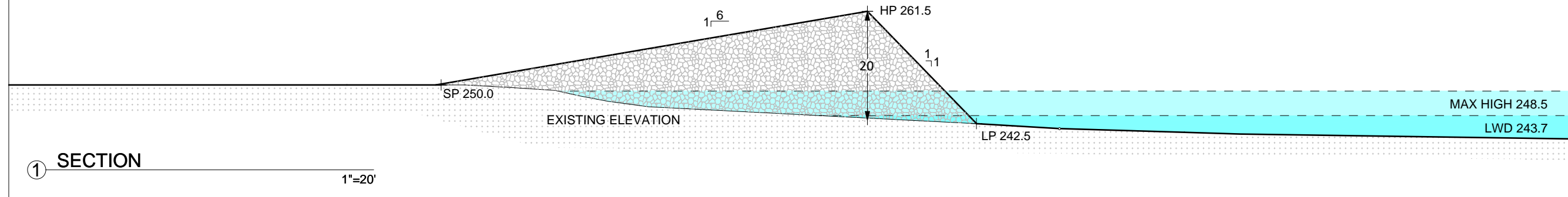
This is critical as we understand that PBIA ultimately will be the permit applicant and so in addition to a public comment period we will need them to fully buy in.

3 | MAINTENANCE OPTIONS

Design to optimize placement of 2000 cy of material



OPTION A: PREFERRED OPTION

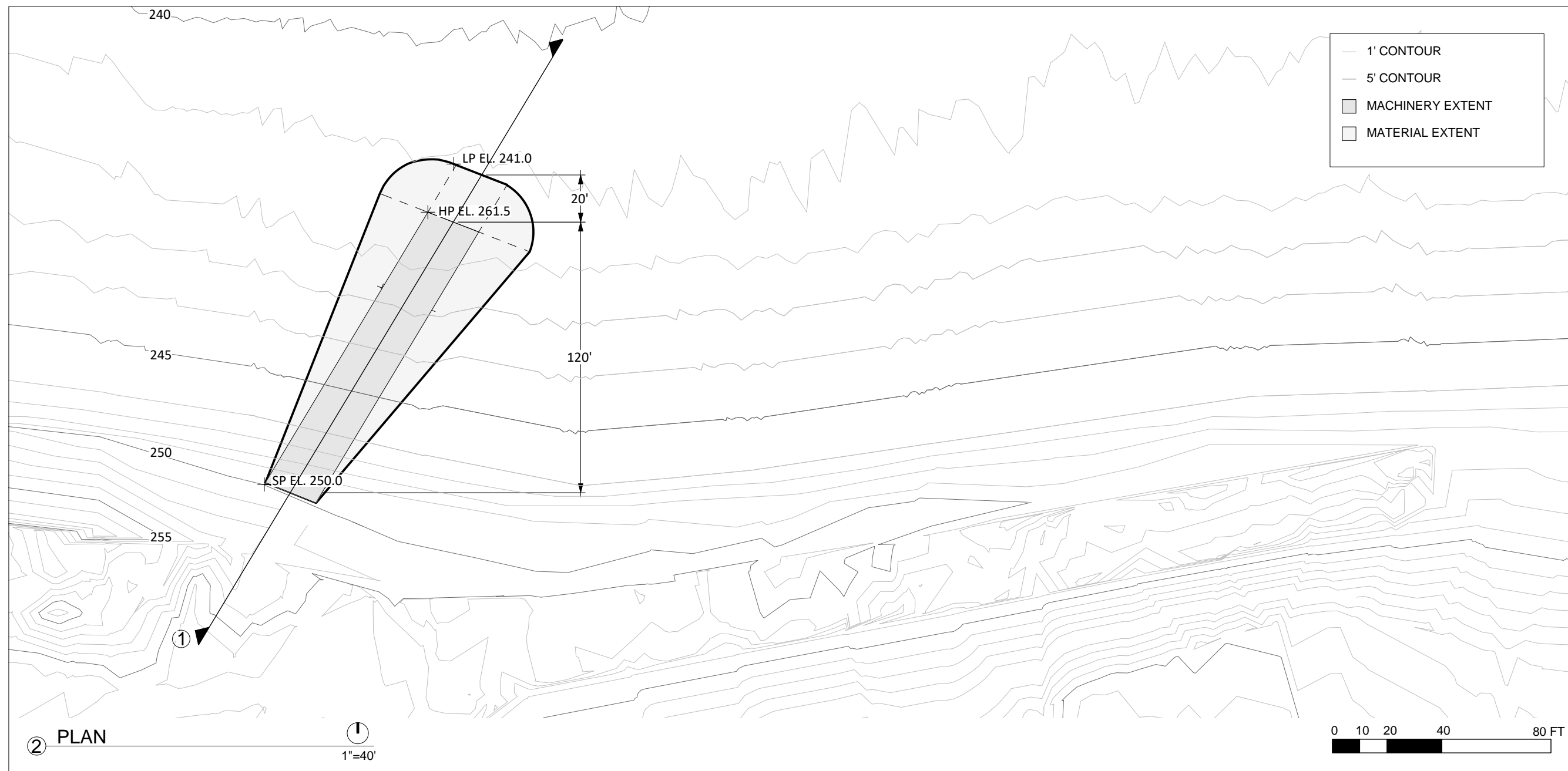
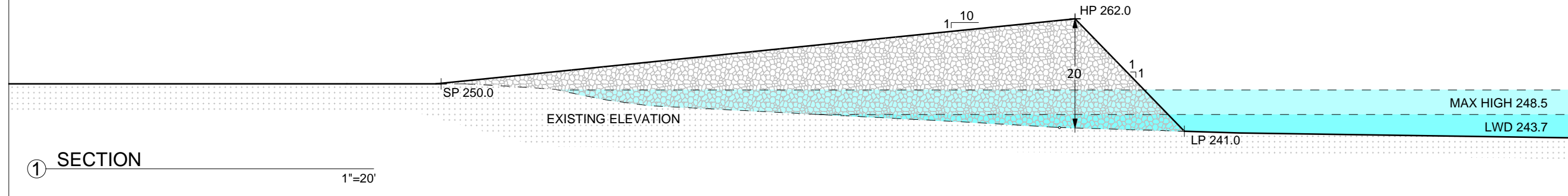


DATE :
10/29/2019

SCALE :
VARIES

SHEET :
PLAN +
SECTION A

OPTION B: ONE PLACEMENT ZONE BELOW LWD

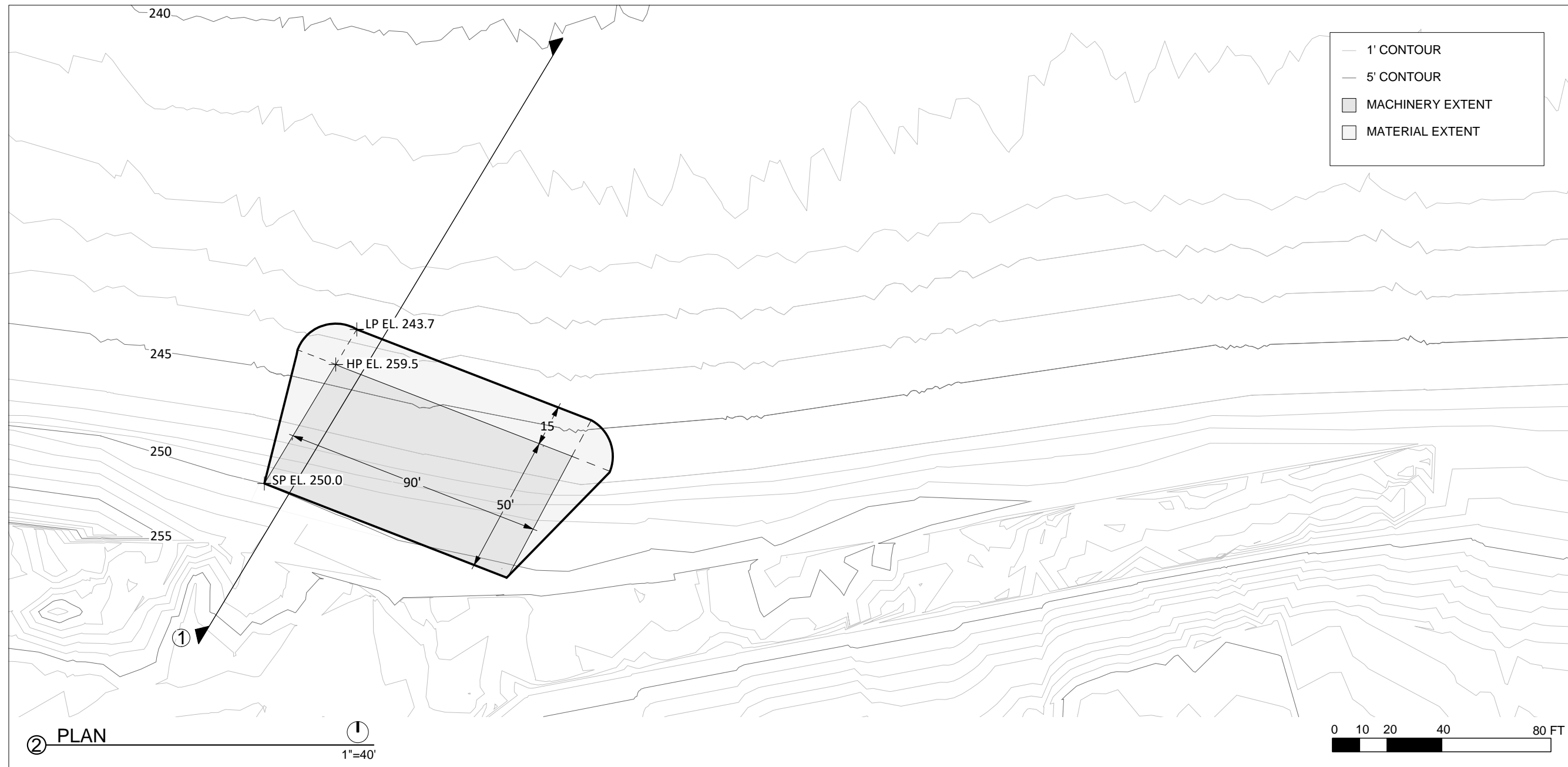
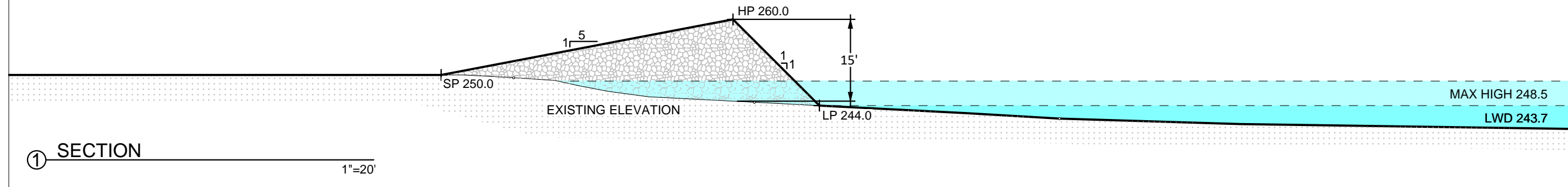


DATE :
10/29/2019

SCALE :
VARIES

SHEET :
PLAN +
SECTION B

OPTION C: ONE PLACEMENT ZONE ABOVE LWD

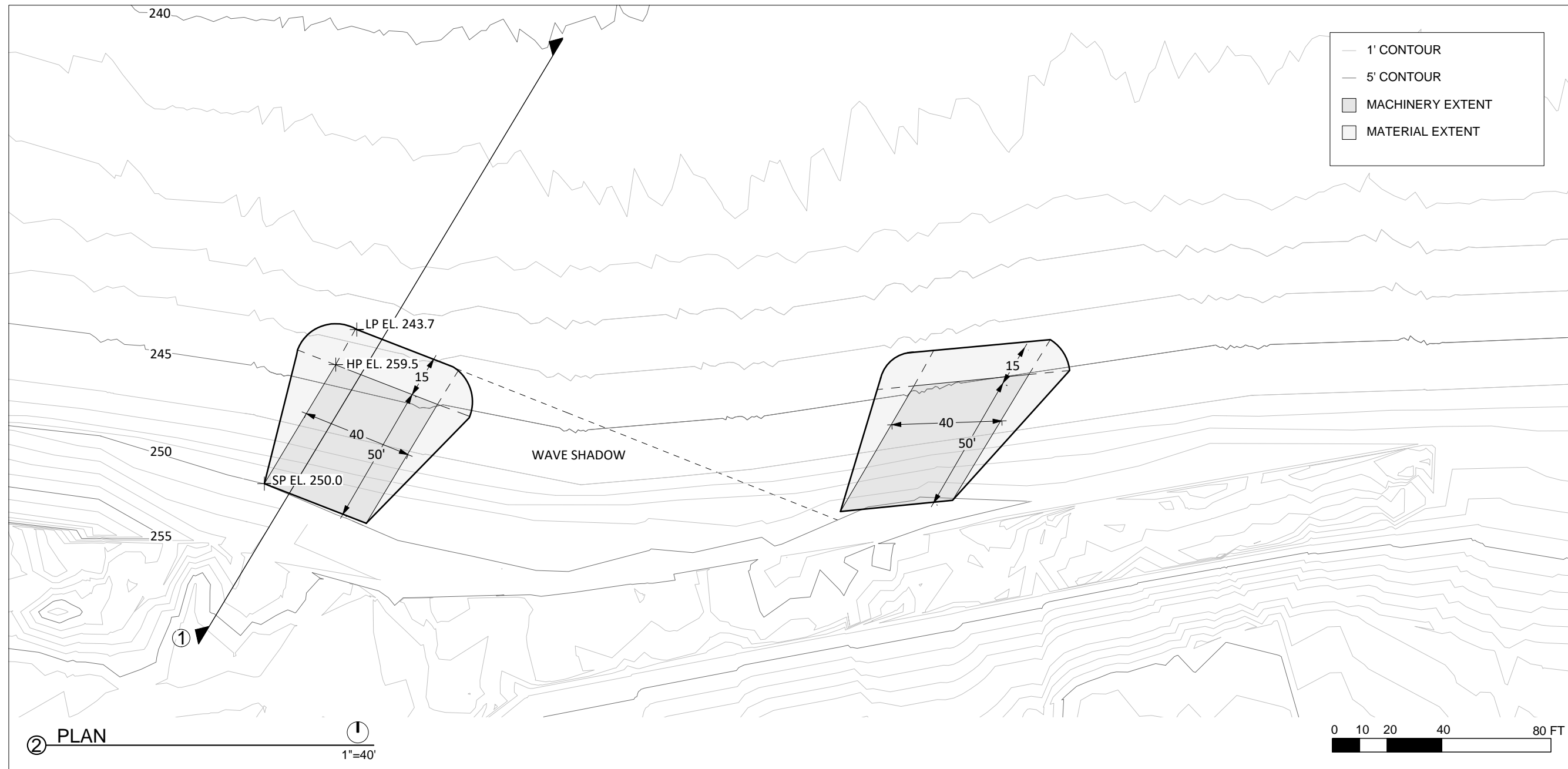
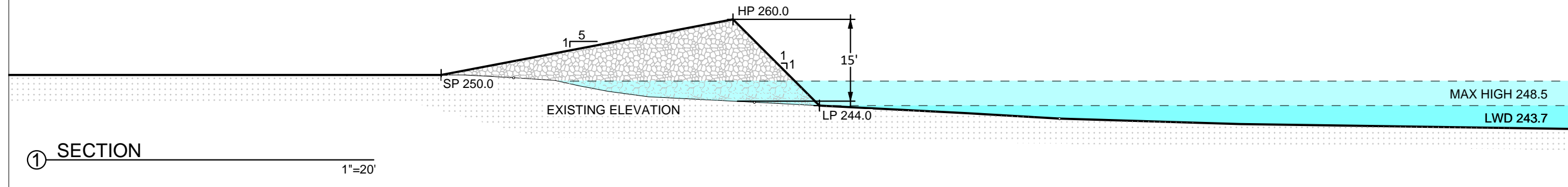


DATE :
10/29/2019

SCALE :
VARIES

SHEET :
PLAN +
SECTION C

OPTION D: TWO PLACEMENT ZONE ABOVE LWD

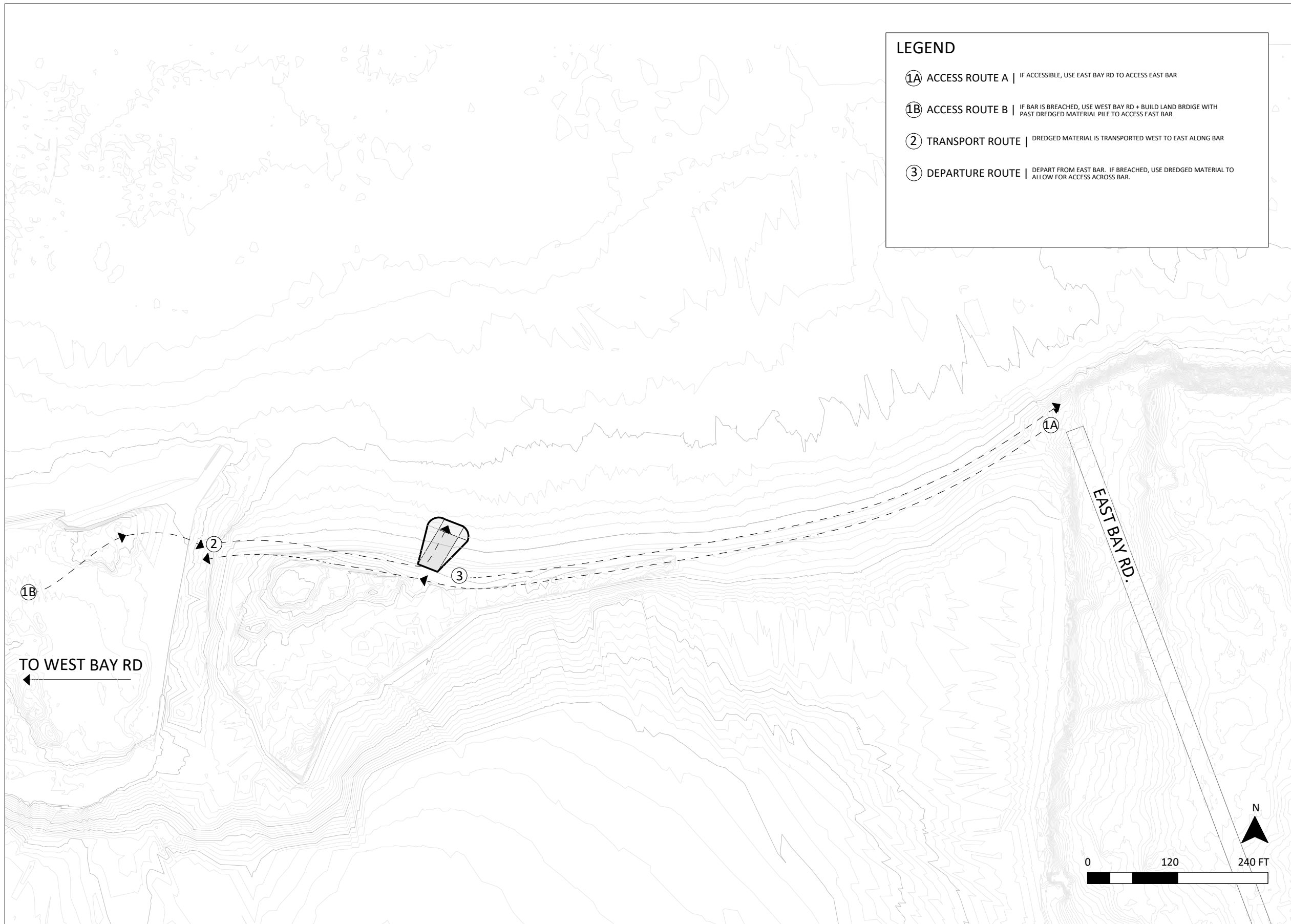


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10/29/2019

SCALE :
VARIES

SHEET :
PLAN +
SECTION D

ACCESS PLAN

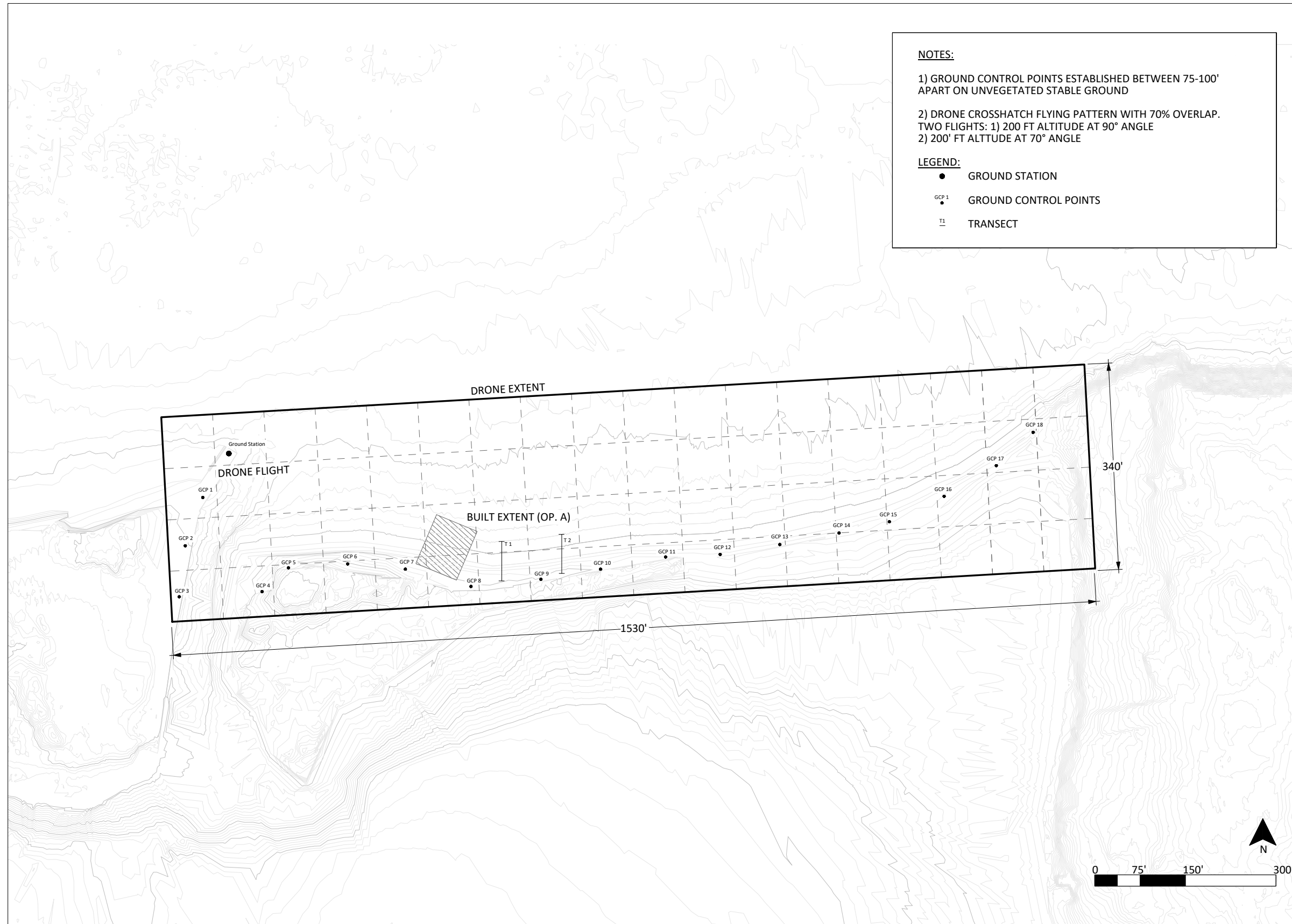


DATE :
11/24/2019

SCALE :
1"=120'

SHEET :
ACCESS PLAN

4 | MONITORING



DATE :
10/29/2019

SCALE :
1"=120'

SHEET :
SURVEY
PLAN

5 | PERMITTING

QUESTIONS:

- Are there any key dates or products that we can identify, beyond the presentation to PBIA and addressing any concerns they may have, in line with the goal of permitting this by April 1, 2020?
- Given that this is an adaptive approach and much will be learned through monitoring, what is the most basic document that can be permitted in order to maintain flexibility within clear intentions for the future?