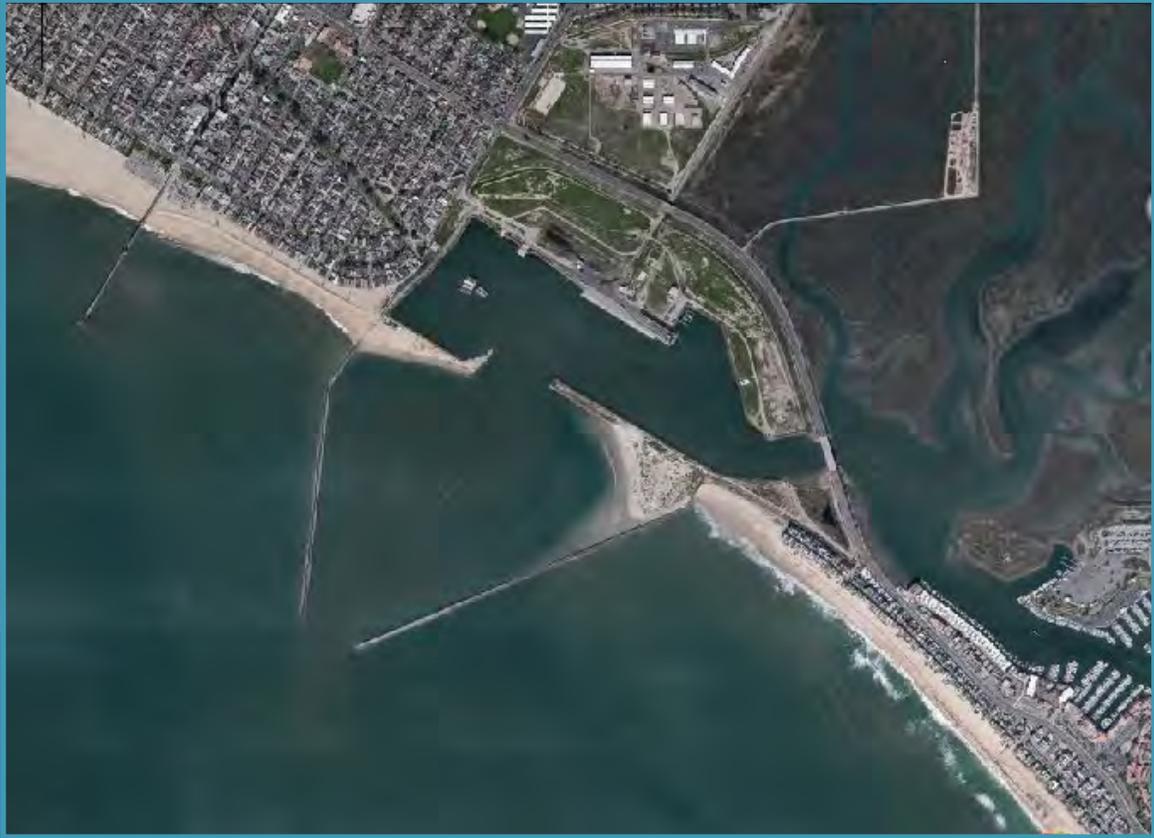
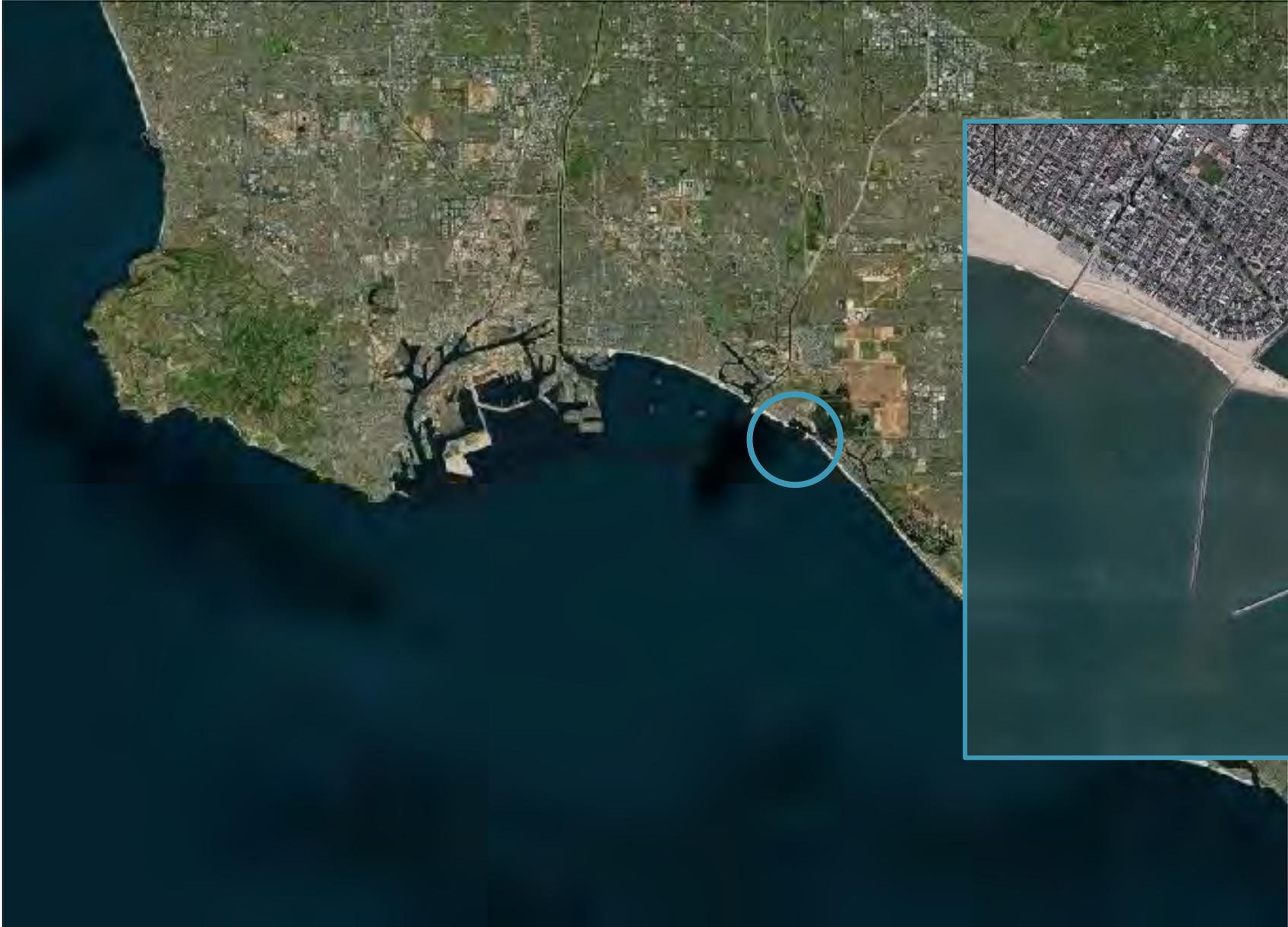




NAVWPNSTA SEAL BEACH

P-224 Causeway,
Boat Channel, &
Turning Basin;
P-226 Ammunition
Pier

Project Location

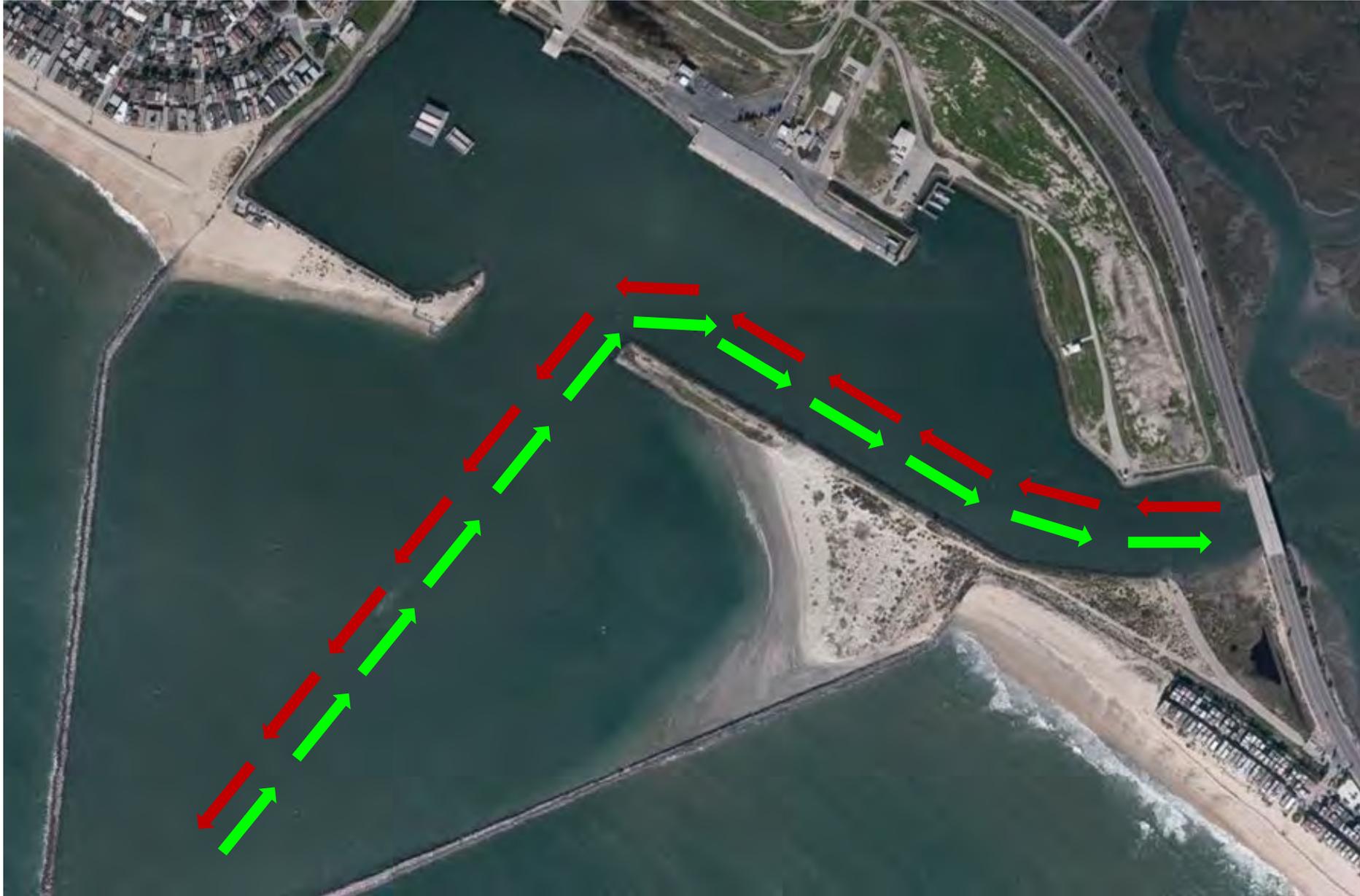


Project History



- Commissioned 1944 during WWII
- Existing pier constructed to accept 1940's era vessels
- No longer able to support operational mission readiness
- Original construction did not anticipate residential land development within explosive arc

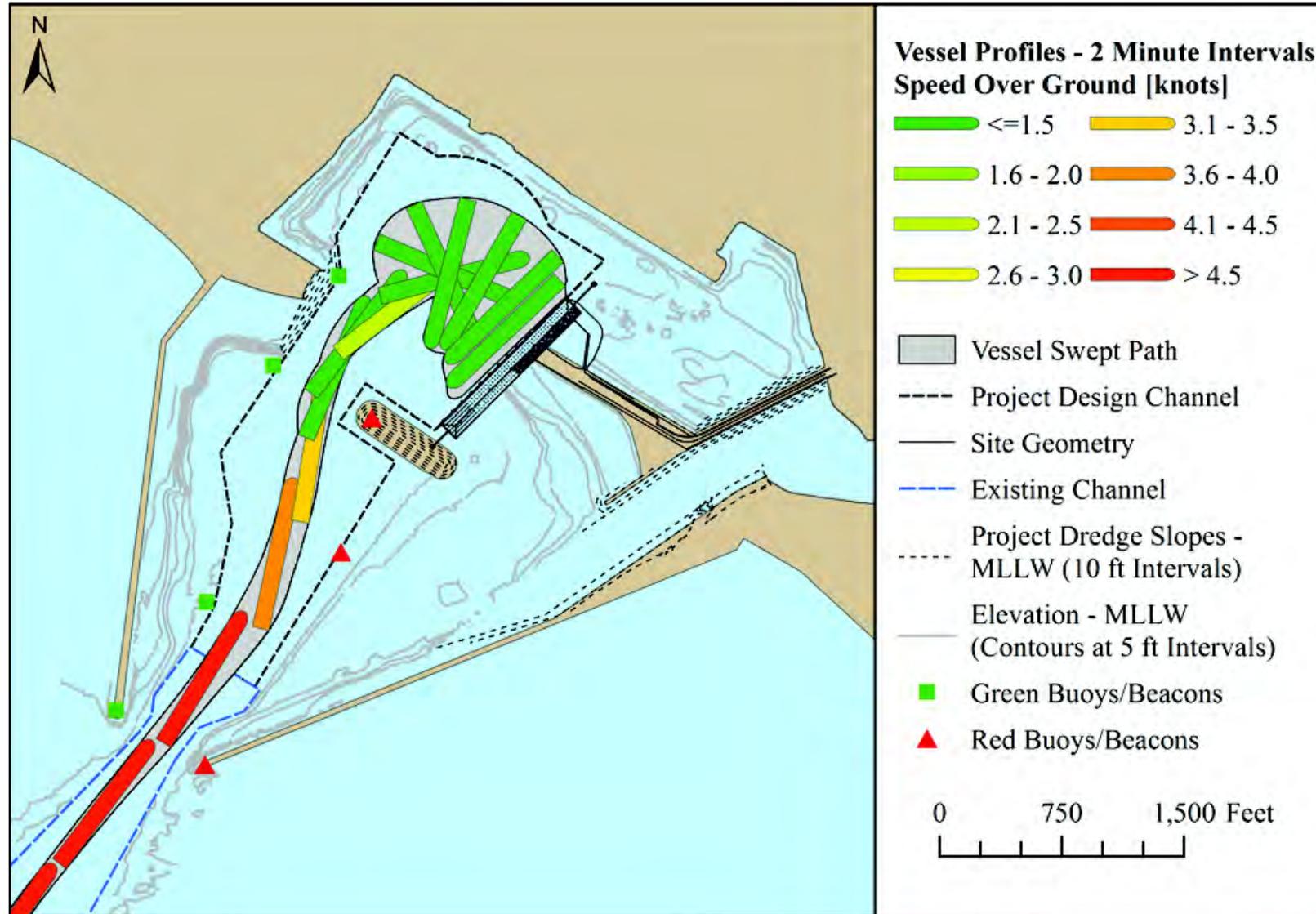
Original Traffic – Public Boaters



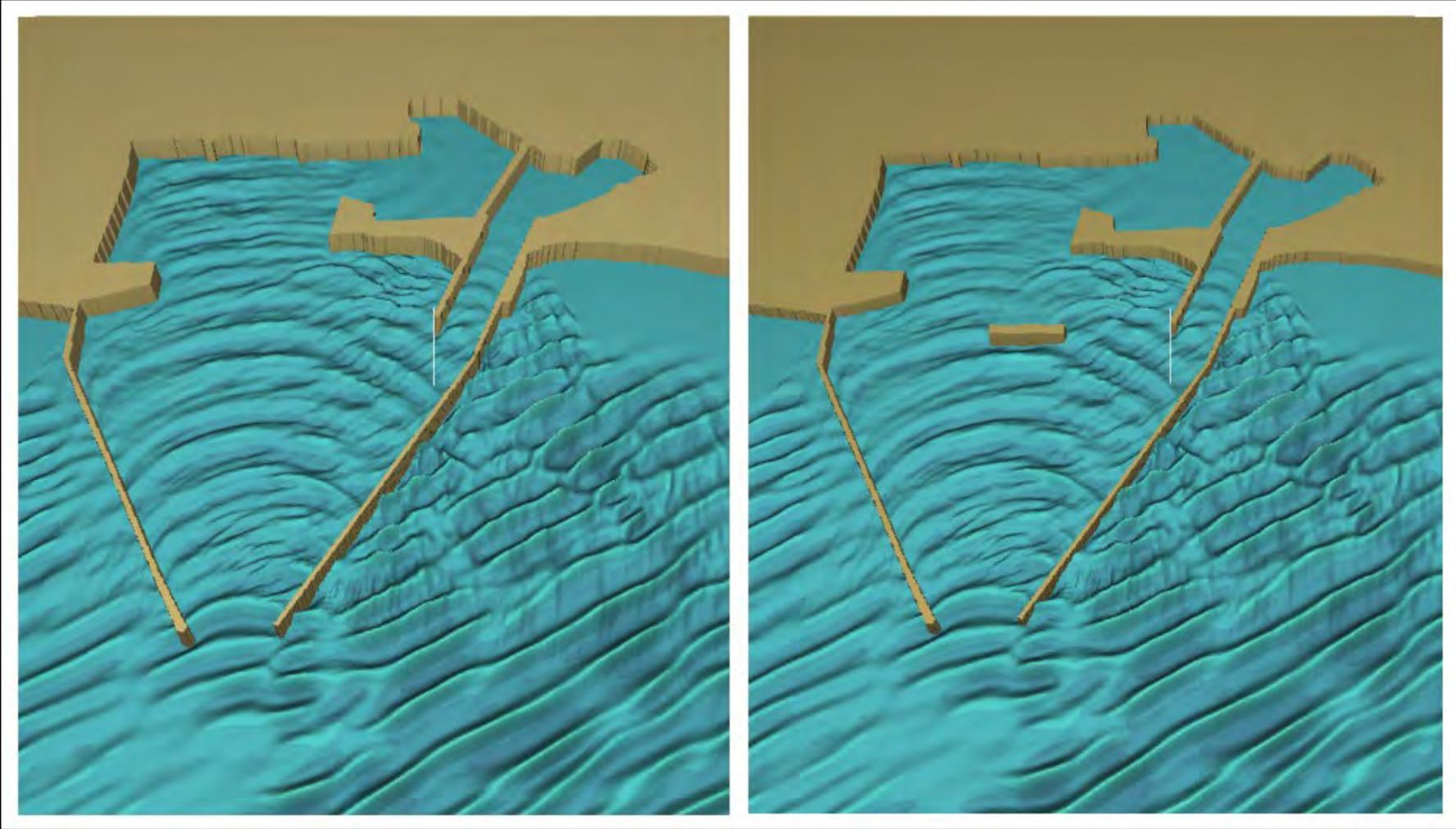
Original Traffic – Naval Vessels



Navigation Simulation

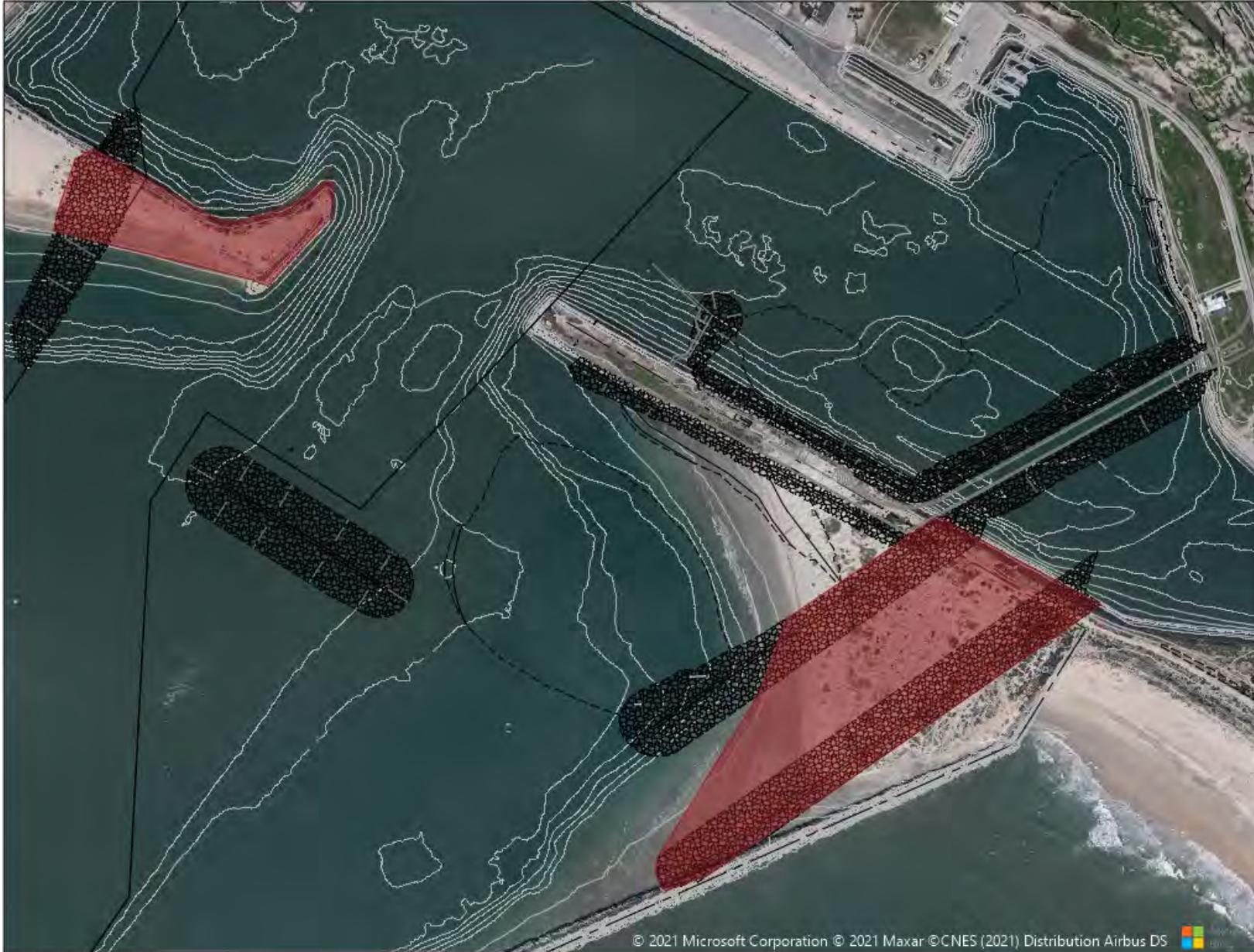


Anaheim Bay Wave Patterns

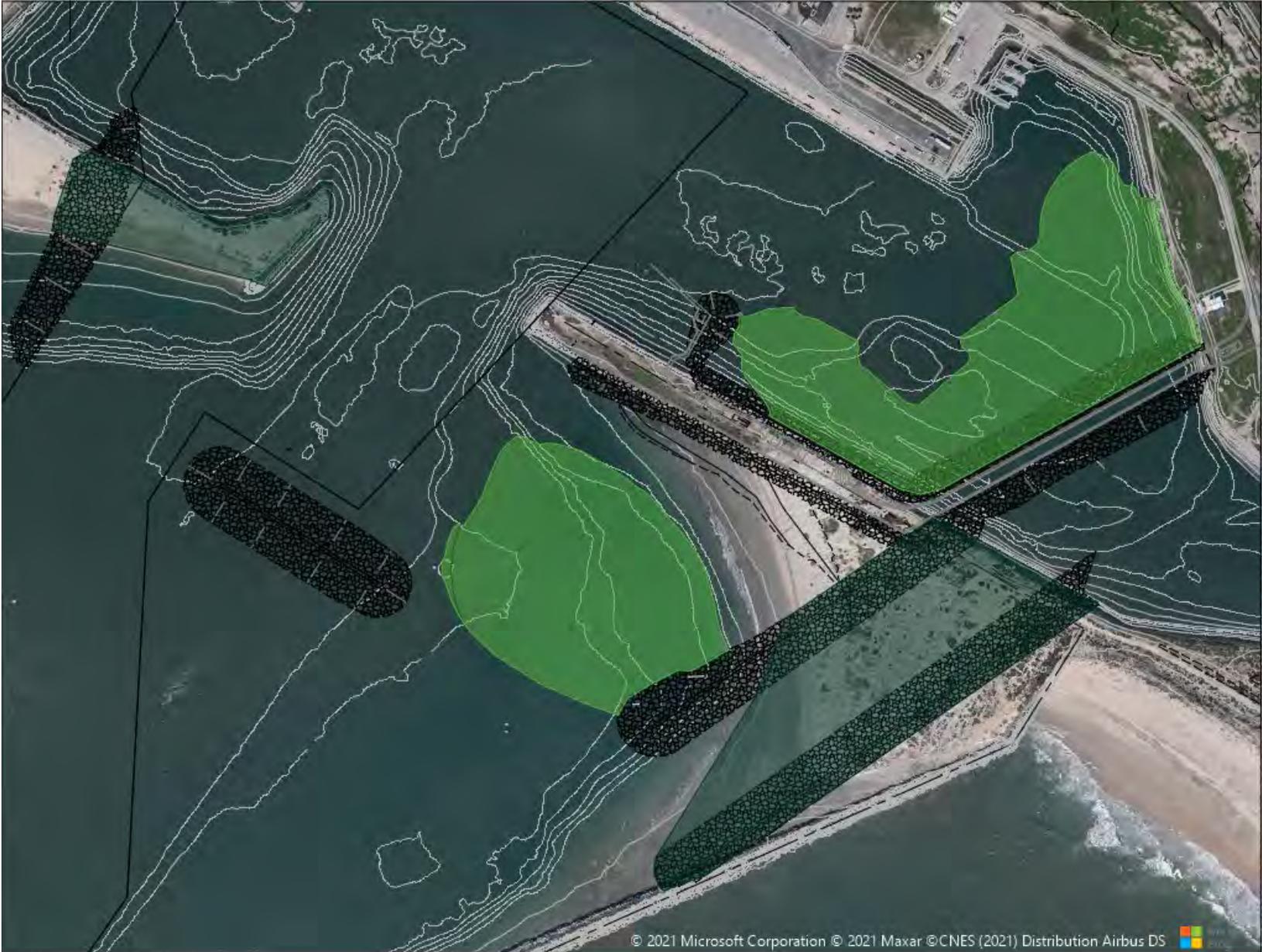


FY19 CAUSEWAY, BOAT CHANNEL, & TURNING BASIN; FY20 AMMUNITION PIER - NAVWPNSTA SEAL BEACH

Beach Loss



Habitat Gain



Project Elements

- Dredging
- Beneficial Use of Dredged Material
- Ship Navigation, Berthing, and Mooring
- Coastal Structures
- Buildings, Utilities, and Electrical
- Small Craft Navigation
- Wave Modeling
- Ecosystem Restoration
- Estuarine Water Quality and Circulation



Project Elements



Dredging

- 1.33M CY distributed over 19 dredge areas
- 12 placement areas
 - 4 final placement areas
 - 8 interim placement areas
- Clamshell: -39 ft MLLW + 2 ft OVD
- Hydraulic: -20 ft MLLW + 1 ft OVD
- Material Character:
 - Medium fine sand/silty sand
 - Increased quantity of salvage rock
 - Increased quantity of concrete debris



Material Management Plan

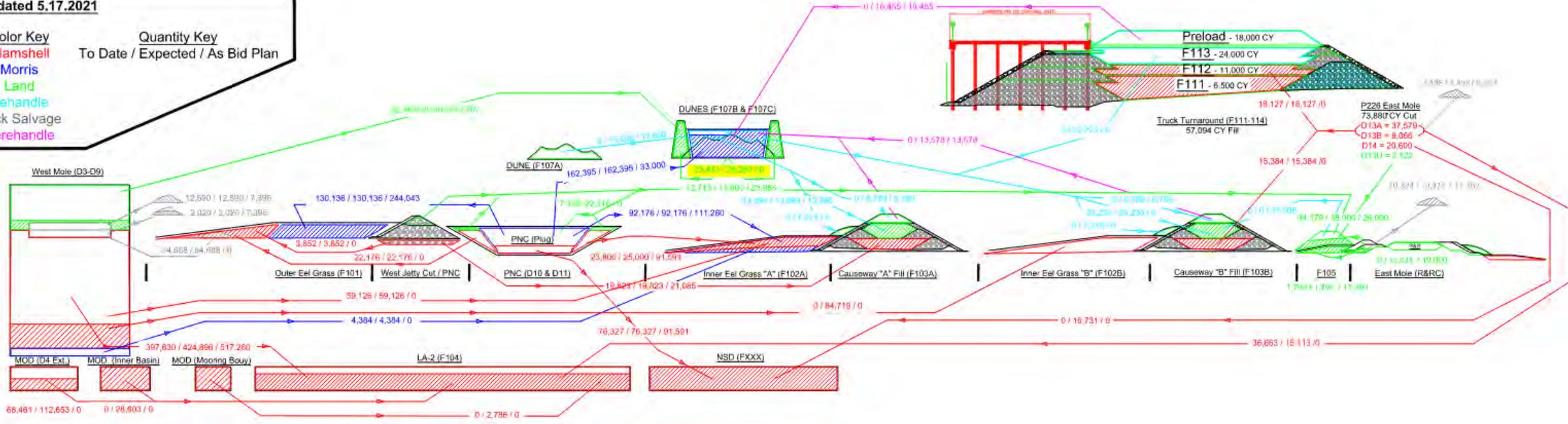
Updated 5.17.2021

Color Key

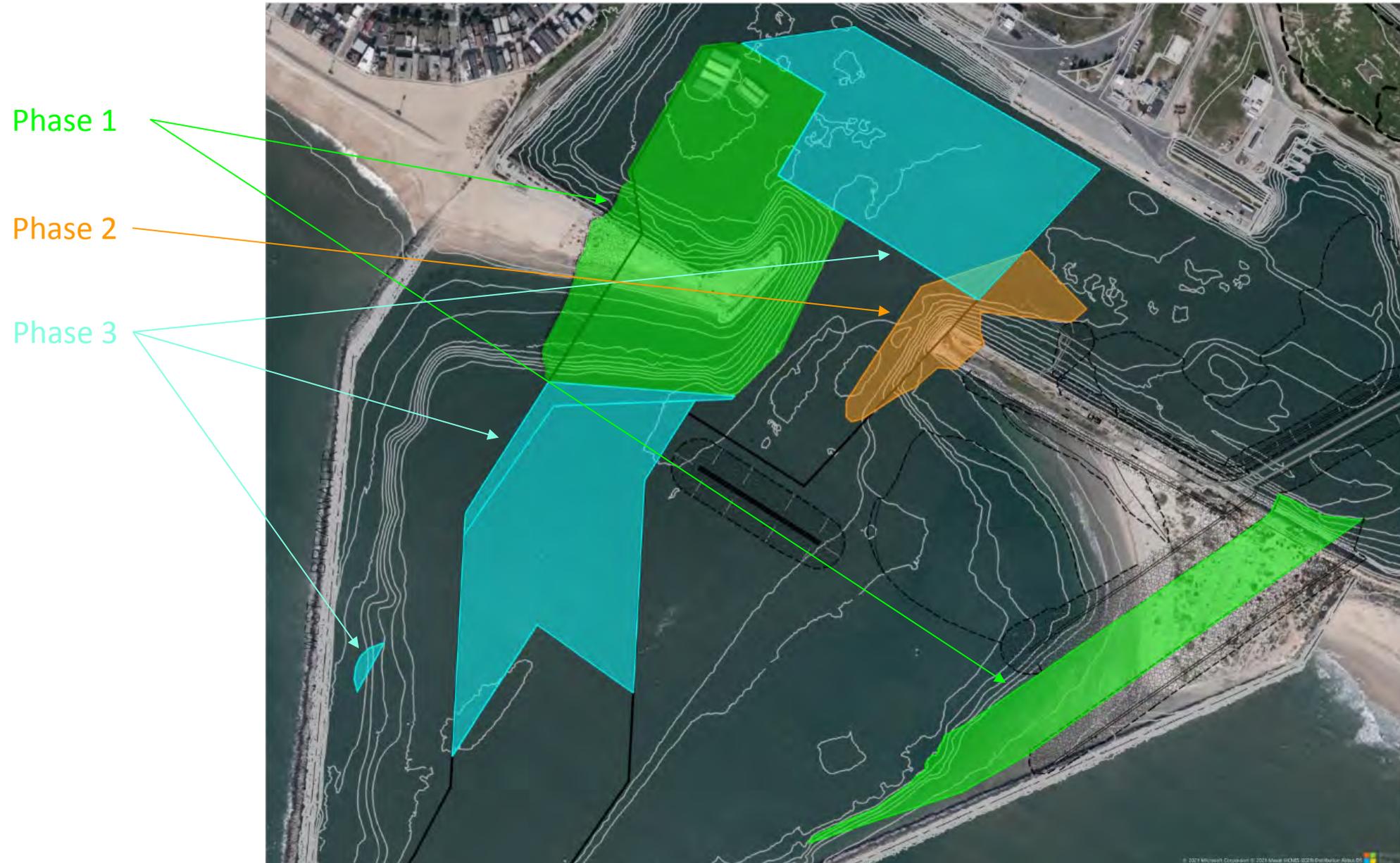
- Clamshell
- Morris
- Land
- Rehandle
- Rock Salvage
- Rerehandle

Quantity Key

To Date / Expected / As Bid Plan



Project Elements



Causeway & PNC



Causeway & PNC



Completed Causeway & PNC



Additional Work



Grading at Causeway



Truck Turnaround Fill

Additional Work



Buoy Removal



Railroad Tracks for Removal

Future Ammunition Pier





moffatt & nichol

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Thank you!