



March 21, 2022

Weymouth Conservation Commission
Attn: Mary Ellen Schloss
Town Hall, 75 Middle Street
Weymouth, MA 02189

Re: Notice of Intent Supplement
104 Kings Cove Beach Road
Weymouth, MA 02191
MassDEP File #081-1278

Dear Ms. Schloss,

This supplement has been prepared in response to the Notice of Intent (NOI) application filed by Mr. Gilvan Miranda for the property located at 104 Kings Cove Beach Road, Massachusetts (the “Study Area”). This supplement also responds to the Notice of Violation issued by the Weymouth Conservation Commission on November 5, 2021 regarding construction of a retaining wall within 100 feet of Coastal Beach and potential alteration to Coastal Beach. The retaining wall is actually a concrete footing for a proposed fence that has not yet been installed.

LE has evaluated the constructed wall, existing resource areas, and historic aerials to determine if any coastal resource areas were impacted, and if so, to the extent of alteration. This letter describes the existing conditions, wetland resource areas, constructed retaining wall, project impacts, and regulatory compliance for work within jurisdictional areas on the site. James Nabstedt, PLS prepared the Site Plan. Note that the plans will be stamped following discussion the Conservation Commission upon agreement of the final design and any required restoration.

1.0 EXISTING CONDITIONS

The Study Area is comprised of one parcel identified as Map 4, Block 55, Lot 38. The site contains a two-story single-family home with several decks, landscaping, and lawn areas. The Study Area is bound by partially undeveloped land and manicured lawn to the south, Kings Cove to the west and north, and Kings Cove Beach Road and several residential properties to the east.

A review of the current MassGIS data layer for the Massachusetts Natural Heritage Atlas (effective August 1, 2021) under the Natural Heritage and Endangered Species Program (NHESP) indicates that the Study Area is not located within Priority Habitat of Rare Species or within Estimated Habitat of Rare Wildlife. No Certified or Potential Vernal Pools under the jurisdiction of the Wetlands Protection Act Regulations (310 CMR 10.00 et seq.) or the Massachusetts Endangered Species Act (321 CMR 10.00 et seq.) occur within the Study Area.

The Study Area is not located within an Area of Critical Environmental Concern (ACEC), MassDEP Wellhead Protection Area, Outstanding Resource Water (ORW), or Watershed Protection Area.

2.0 ENVIRONMENTAL RESOURCE AREAS

A Professional Wetland Scientist (PWS) from Lucas Environmental, LLC (LE) conducted a site investigation on October 14, 2021 to determine if wetland resources were present at or near the Study Area. Please note that this effort is specific to wetland resources; it does not evaluate constraints related to local planning or zoning requirements, nor does it evaluate the potential for soil, air, or water contamination.

The wetland investigation was performed in accordance with the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131, § 40) and regulations (310 CMR 10.00 *et seq.*); Section 404 of the Clean Water Act (33 U.S.C. 1344); Massachusetts Department of Environmental Protection (MassDEP) publication “Delineating Bordering Vegetated Wetlands” under the Massachusetts Wetlands Protection Act (1995); the U.S. Army Corp of Engineers (USACE) Wetland Delineation Manual (1987), and the Northcentral and Northeast Regional Supplement (2012) and the Town of Weymouth Wetlands Protection Ordinance (Chapter 7, Section 301).

The site investigation was limited to wetland areas within 100 feet and perennial streams within 200 feet of the parcel boundaries (i.e., Study Area). Off-site areas were not delineated. The following data sources were examined prior to the site investigation:

- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps;
- United States Geological Survey Topographic Quadrangle;
- MassGIS MassDEP Wetland and Hydrography Datalayers;
- MassGIS Natural Heritage Atlas Datalayers; and
- United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS) Soil Survey.

Land Subject to Coastal Storm Flowage (LSCSF); Land Under the Ocean (LUO); Coastal Beach; Coastal Dune; Coastal Bank; Salt Marsh, and Land Containing Shellfish (LCS) are present on or near the site. The 100-Foot Buffer Zone associated with the Coastal Bank and Coastal Dune extend through the Study Area. Under the Massachusetts Wetlands Protection Act (WPA) and Ordinance, the wetland resource areas are regulated as follows. The Ordinance contains similar definitions to the WPA.

2.1 Land Subject to Coastal Storm Flowage – 310 CMR 10.04 WPA

Section 310 CMR 10.04 of the WPA defines LSCSF as *land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater*. According to the June 9, 2014 FEMA Flood Insurance Rate Map for Norfolk County, Map Number 25021C0227F, the entire Study Area is designated as Zone AE and Zone VE. Zone AE is classified as an area subject to the 1% annual chance flood (100-year flood), where base flood elevations have been determined – Elevation 12 NAVD88. Zone VE is defined as the coastal flood zone with velocity hazard (wave action) – Elevation 15 NAVD88. Therefore, the 100-year floodplain or LSCSF extends throughout the Study Area. There are currently no performance standards associated with this resource area under the WPA or Ordinance.

2.2 Land Under the Ocean – 310 CMR 10.25 WPA

Section 310 CMR 10.25 of the WPA defines LUO as the *land extending from the mean low water line seaward to the boundary of the municipality's jurisdiction and includes land under estuaries*. The Mean Low Water (MLW) line is located off-site and not shown on the Site Plan.

2.3 Coastal Beach – 310 CMR 10.27 WPA

Section 310 CMR 10.27 of the WPA defines Coastal Beach as *unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats. Coastal beaches extend from the mean low water line landward to the dune line, coastal bankline or the seaward edge of existing human-made structures, when these structures replace one of the above lines, whichever is closest to the ocean*. Tidal Flat is also defined under Section 310 CMR 10.25 as *any nearly level part of a coastal beach which usually extends from the mean low water line landward to the more steeply sloping face of the coastal beach or which may be separated from the beach by land under the ocean*.

The Coastal Beach extends the length of the project site from the MLW line to the existing riprap slope and Coastal Bank. Tidal flats occur within the portions of the area that are exposed during low tide. A 100-Foot Buffer Zone extends from the limit of Coastal Beach.

2.4 Coastal Dune – 310 CMR 10.28 WPA

Section 310 CMR 10.28 of the WPA defines Coastal Dune as *any natural hill, mound or ridge of sediment landward of a coastal beach deposited by wind action or storm overwash. Coastal dune also means sediment deposited by artificial means and serving the purpose of storm damage prevention or flood control*.

The limit of a Coastal Dune was delineated along the northern limit of the Study Area with pink survey flags numbered sequentially from WFA-1 to 5. The Dune extends further to the north along the adjacent property. During the site investigation, LE observed material being stored on the upper limit of the Coastal Dune on the adjacent property.

2.5 Coastal Bank – 310 CMR 10.30 WPA

Section 310 CMR 10.30 of the WPA defines Coastal Bank as *the seaward face or side of any elevated landform, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland*.

The landform behind the existing riprap slope/retaining wall is Coastal Bank. The retaining walls are engineered structures along the seaward face of the Coastal Bank landform. A 100-Foot Buffer Zone extends from the limit of Coastal Bank. The limit of Coastal Bank was determined by the surveyor and identified on the Site Plan.

2.6 Land Containing Shellfish – 310 CMR 10.34 WPA

Section 310 CMR 10.34 of the WPA defines LCS as *the land under the ocean, tidal flats, rocky intertidal shores, salt marshes and land under salt ponds when any such land contains shellfish*. Section 310 CMR 10.34 of the WPA defines shellfish as the following species: *Bay scallop (Argopecten irradians)*; *Blue mussel (Mytilus edulis)*; *Ocean quahog (Arctica islandica)*; *Oyster (Crassostrea virginica)*; *Quahog (Mercenaria merceneria)*; *Razor clam (Ensis directus)*; *Sea clam (Spisula solidissima)*; *Sea scallop (Placopecten magellanicus)*; *Soft shell clam (Mya arenaria)*.

A review of the MassGIS Shellfish Suitability Area datalayer indicates the Study Area has been mapped by the Massachusetts Division of Marine Fisheries (MA DMF) as shellfish habitat (MassGIS, 2011) for the Soft shell clam. Although a shellfish survey was not conducted on the site, based upon limited observations of the site and numerous shells consisting within the intertidal zone along the Coastal Beach, the site likely contains shellfish and likely meets the definition of LCS under the WPA. As such, the limit of LSC would extend throughout the Coastal Beach.

3.0 IMPACT ANALYSIS

LE conducted a field assessment on October 14, 2021 as noted above. In addition, LE overlaid the survey data from the Site Plan on existing aerial photography available from MassGIS, specifically, the following imagery:

1. 2021 Aerial Imagery
2. 2019 USGS Color Ortho Imagery
3. 2013-2014 USGS Color Orth Imagery
4. 2008-2009 Aerial Imagery (30cm)
5. 2005 Aerial Imagery
6. 2001 & 2003 Aerial Imagery (0.5m)
7. 1990's Aerial Imagery (0.5m)
8. 1994 Coastal Aerial Imagery

The imagery prior to and including 2008 was not very useful to discern features and is not further discussed. Figures 1, 2, and 3 show the Study Area on aerial imagery for 2021, 2019, and 2013, respectively. LE compared the imagery from 2013, 2019, and 2021 and prepared an impact assessment graphic (See Figure 4) to demonstrate the limit of impacted resource areas.

Based upon review of the imagery, there are apparent minor impacts to Coastal Beach, Coastal Dune, and Coastal Bank as identified in Table 3-1 on the following page.

TABLE 3-1 RESOURCE AREA IMPACT SUMMARY		
Resource Area	Impact (SF)	Impact (LF)
Coastal Beach	21	--
Coastal Dune	32	--
Coastal Bank	236	40

4.0 PROPOSED WORK

The alterations within Coastal Dune and Coastal Beach are not permissible and will require restoration. LE will prepare a restoration plan to address these areas following discussion with the Conservation Commission. Portions of the new concrete fence foundation are located upgradient of the Coastal Bank, and within 100 feet of the resource area. The portions constructed outside the impacted area within Buffer Zone are permissible and the Applicant seeks authorization under this NOI for it to remain. The impacted portions of the Coastal Bank require additional discussion with the Conservation Commission and may require restoration along with the Coastal Dune and Coastal Beach. Although impacts have occurred, they are de minimis as noted above and can be restored. This will require reworking the fence foundation upgradient of the restored Coastal Bank area, shown on Figure 4.

This section documents the projects compliance for work within Coastal Bank under 310 CMR 10.30 with the performance standards identified in *italics* and a response below in standard format. The new fence foundation is approximately eight inches deep and four inches above ground. A railing is proposed to be installed on the concrete foundation, consisting of aluminum, approximately three feet high, with four inches between each rail. The railing will be drilled and anchored to the concrete foundation, with a three-inch separation from the bottom rail. Floodwaters should be able to freely pass through the rail slots. The fencing is proposed to provide a safe environment for the owner's children in the existing back yard. Based upon the photographic image provided by the Conservation Commission, a large deck with railing existed to the top of Coastal Bank prior to the installation of the concrete fence foundation.

The existing and altered Coastal Bank on the site are not significant to storm damage prevention or flood control because it does not, nor did it, supply sediment to a Coastal Beaches, Coastal Dune, or Barrier Beach, therefore the performance standards under Section 310 CMR 10.30(3) through (5) of the WPA do not apply.

The Coastal Bank is significant to storm damage prevention or flood control because it is a vertical buffer to storm waters, therefore Sections 310 CMR 10.30(6) through (8) apply.

A portion of the proposed concrete fence foundation to remain is located within the limit of the presumptive historic high water mark and therefore tidelands jurisdiction, subject to Massachusetts



500A Washington Street, Quincy, MA 02169

General Law Chapter 91, the Waterways Licensing Program (See Figure 5). LE will work with the Applicant and MassDEP Chapter 91 Program to determine if a Chapter 91 Waterways License Application will be required for the project, following discussion with the Conservation Commission.

LE looks forward to discussing this further at the Public Hearing scheduled for April 29, 2022. Copies of revised plans and this report will be submitted to MassDEP following discussion with the Conservation Commission at the Public Hearing in order to incorporate any additional project revisions.

If you have any questions, please do not hesitate to contact me at 617.405.4140 or cml@lucasenviro.com. Thank you for your consideration in this matter.

Sincerely,

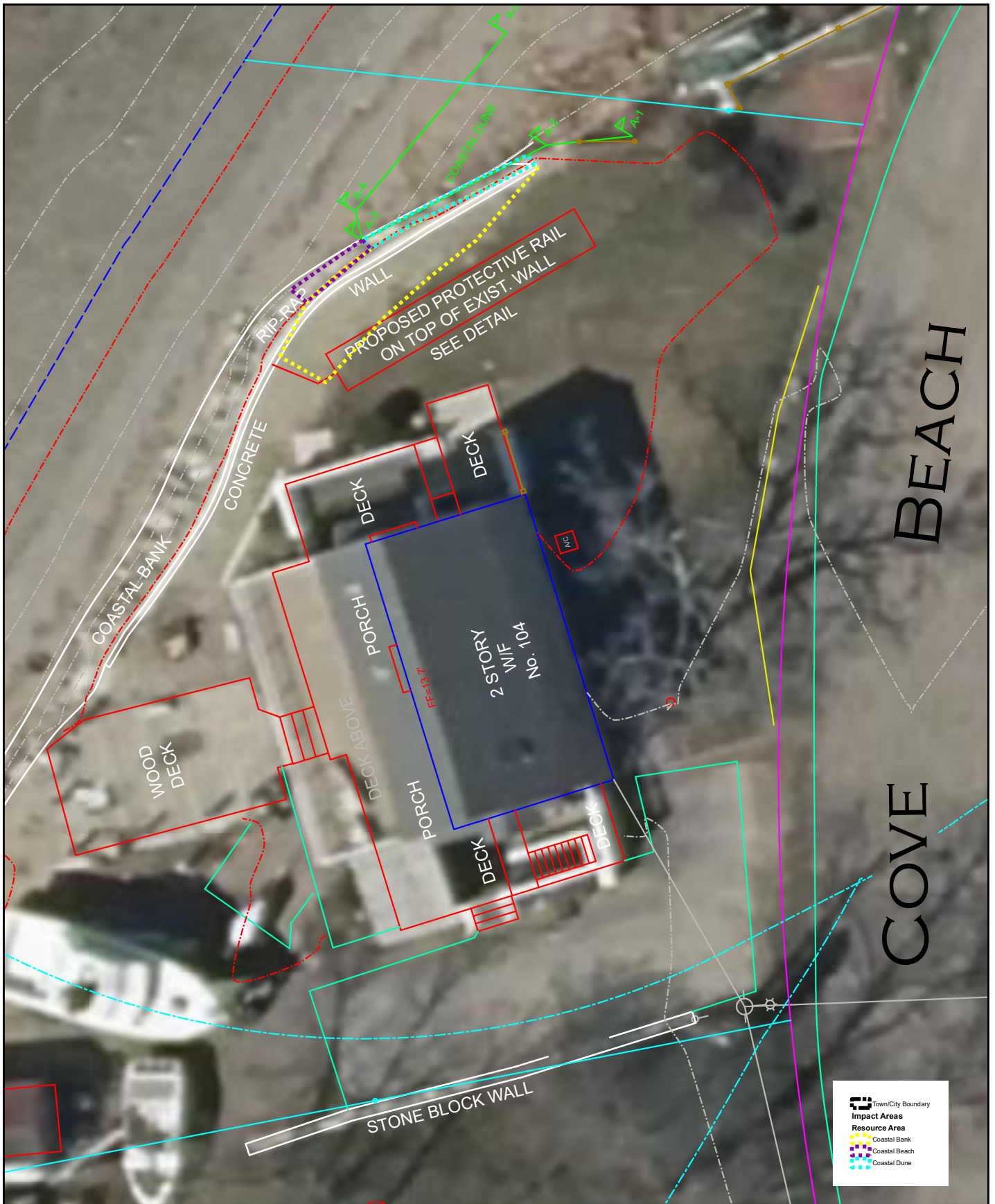
LUCAS ENVIRONMENTAL, LLC

A handwritten signature in blue ink that reads 'Christopher M. Lucas'.

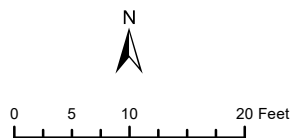
Christopher M. Lucas, PWS, CWS, RPSS
Environmental Consultant/Wetland & Soil Scientist

Enclosures: Figures 1 to 5
Photographic Documentation

cc: Gilvan Miranda, Owner & Applicant (electronic copy)



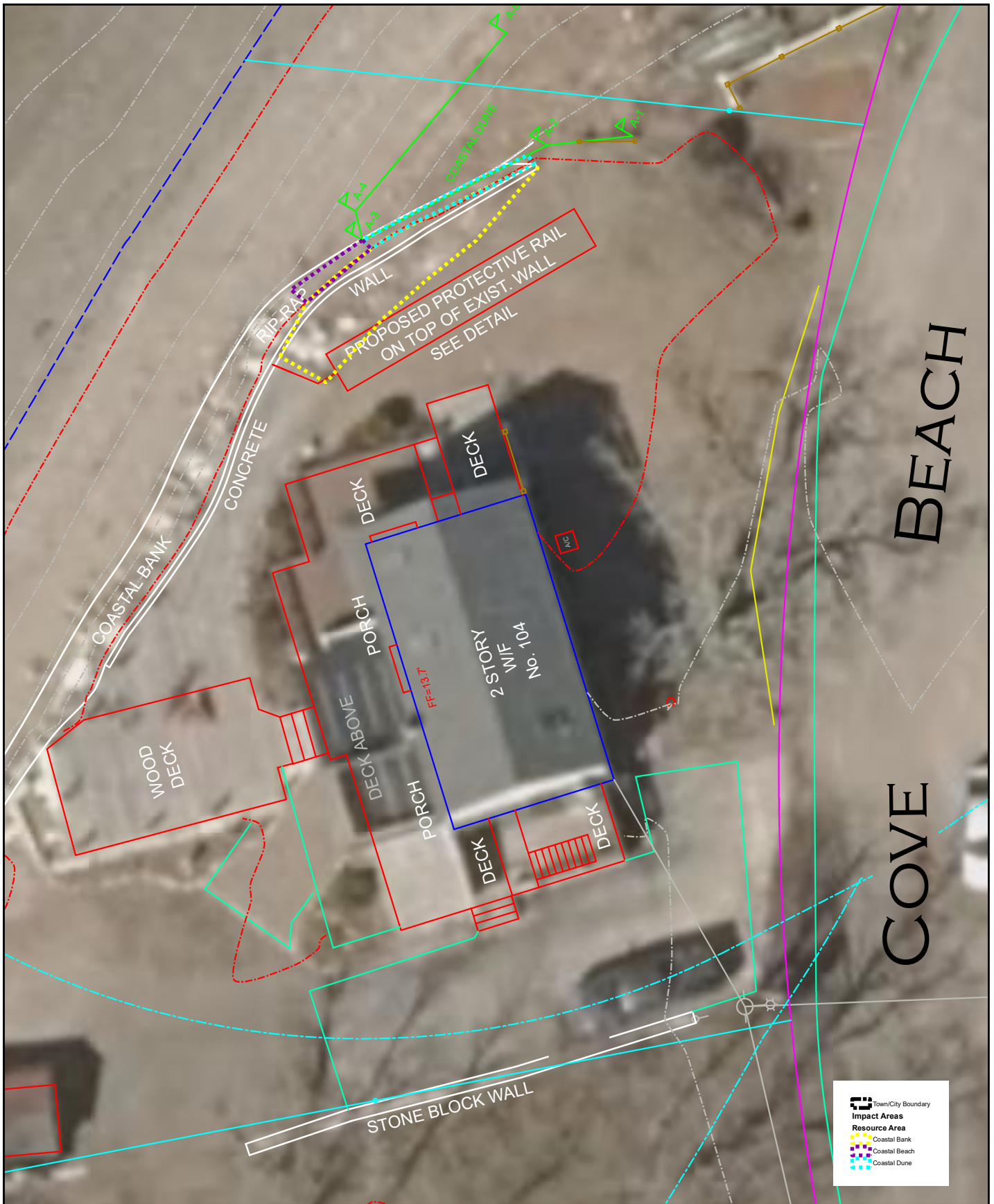
Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs; USGS Color Ortho Imagery - 15cm (2021)



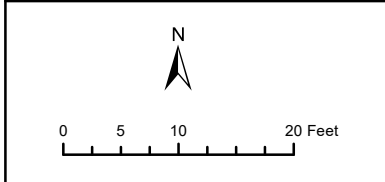
2021 Aerial Map
NOI Supplement
104 Kings Cove Beach Road
Weymouth, MA

FIGURE 1

LUCAS
 ENVIRONMENTAL, LLC



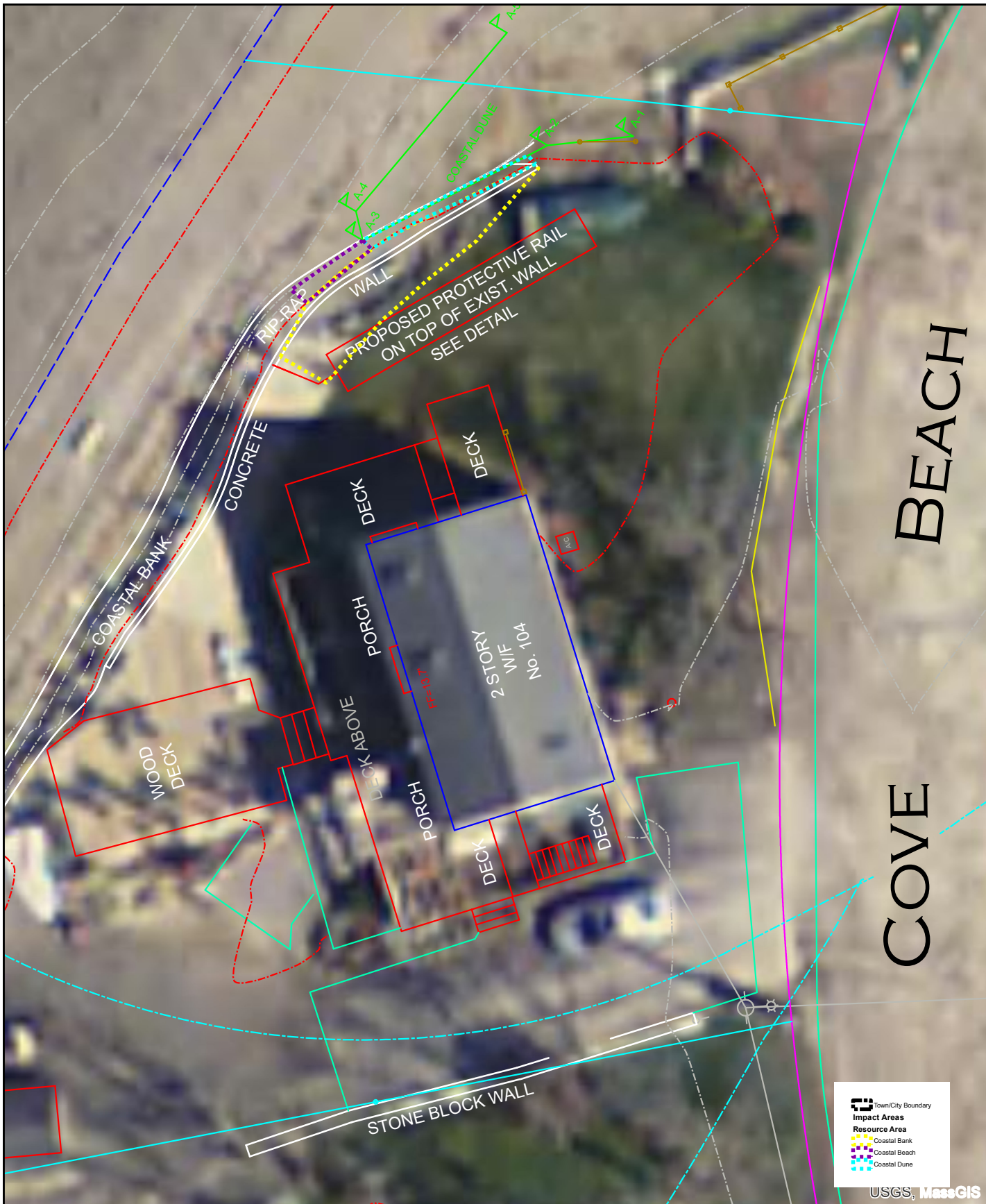
Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs; USGS Color Ortho Imagery - 15cm (2019)



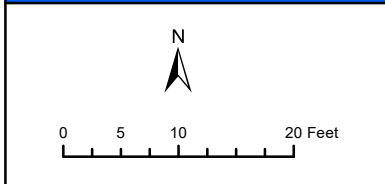
2019 Aerial Map
NOI Supplement
104 Kings Cove Beach Road
Weymouth, MA

FIGURE 2

LUCAS
 ENVIRONMENTAL, LLC



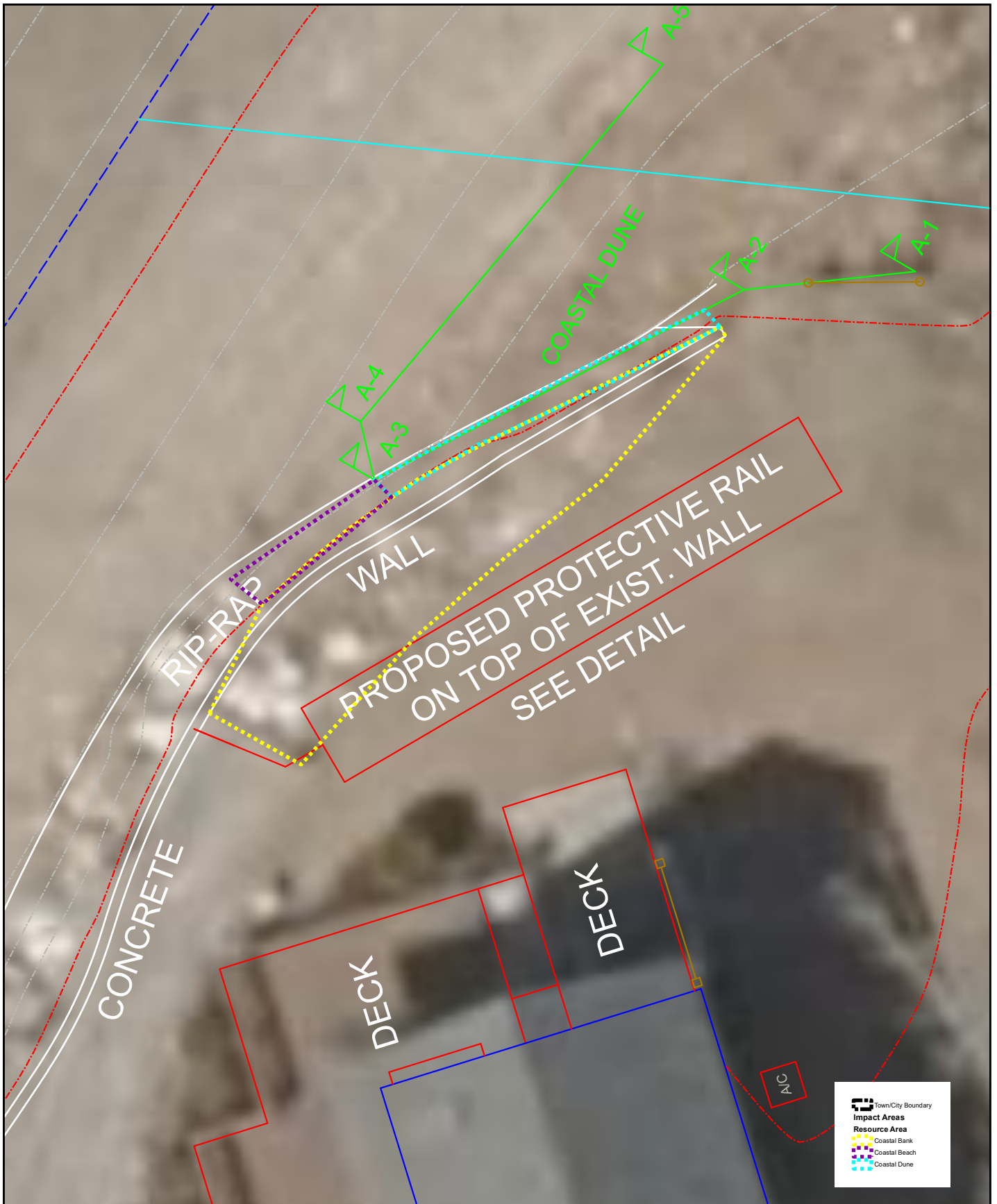
Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs; USGS Color Ortho Imagery - 30cm (2013)



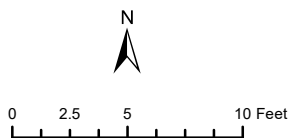
2013 Aerial Map
NOI Supplement
104 Kings Cove Beach Road
Weymouth, MA

FIGURE 3

LUCAS
 ENVIRONMENTAL, LLC



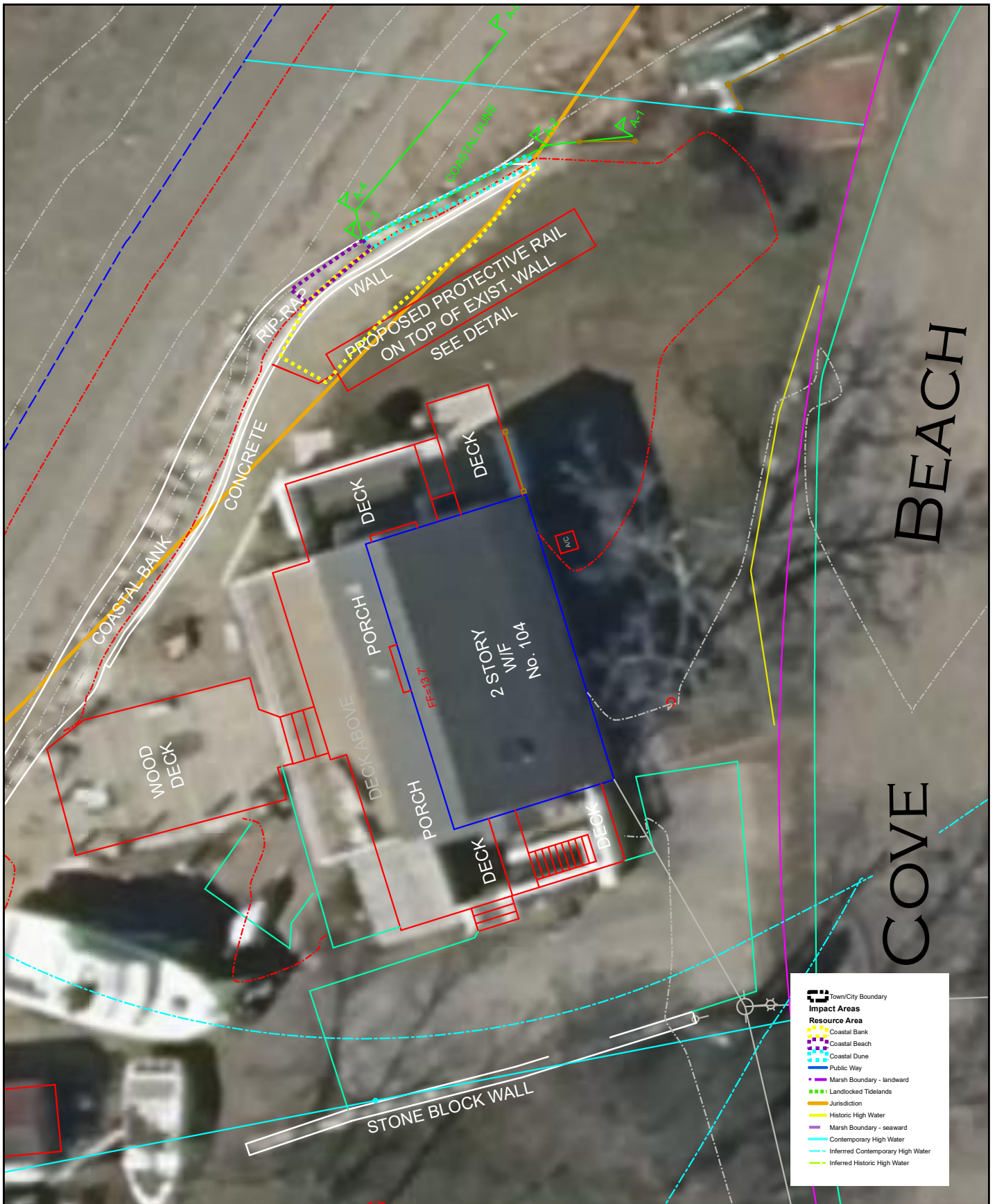
Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs; USGS Color Ortho Imagery - 15cm (2019)



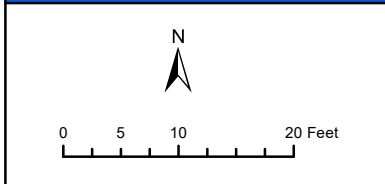
Impact Area Map
NOI Supplement
104 Kings Cove Beach Road
Weymouth, MA



FIGURE 4



Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs; USGS Color Ortho Imagery - 15cm (2021)



Tidelands Map
NOI Supplement
104 Kings Cove Beach Road
Weymouth, MA

FIGURE 5

LUCAS
 ENVIRONMENTAL, LLC



Photograph 1: View of the northern end of the concrete fence foundation, Coastal Dune, wooden fence, and lawn, facing north.



Photograph 2: View of the concrete fence foundation and lawn, facing south.



Photograph 3: View of the concrete fence foundation, Coastal Beach, Coastal Dune, and lawn, facing northeast.



Photograph 4: View of concrete fence foundation, riprap wall, Coastal Beach, and southern end of Coastal Dune, facing south.



Photograph 5: View of the resource areas prior to construction of fence foundation. Note pre-existing structure (deck) along Coastal Bank.