

**FINDING OF NO HISTORIC PROPERTIES AFFECTED  
FOR THE EQUINOR WIND US, LLC OCS-A 0520  
SITE ASSESSMENT PLAN  
ON THE OUTER CONTINENTAL SHELF  
OFFSHORE MASSACHUSETTS**

**JULY 26, 2021**

## **FINDING**

The Bureau of Ocean Energy Management (BOEM) has made a Finding of No Historic Properties Affected for this undertaking, pursuant to 36 CFR Part 800.4(d)(1). No historic properties have been identified within the area of potential effects (APE).

## **DOCUMENTATION IN SUPPORT OF THE FINDING**

### **1 Summary**

This document describes BOEM's compliance with Section 106 of the National Historic Preservation Act (NHPA) and documents the agency's finding of No Historic Properties Affected (Finding) under 36 CFR Part 800.4 (d)(1) for the undertaking of approving the Equinor Wind US, LLC (Equinor Wind) Site Assessment Plan (SAP) on the Outer Continental Shelf (OCS) offshore Massachusetts within the Lease Area OCS-A 0520. BOEM has prepared this documentation in support of the Finding following the standards outlined at 36 CFR 800.11(d) and as fulfillment of Stipulation I of the *Programmatic Agreement among BOEM; the State Historic Preservation Officers [SHPOs] of Massachusetts and Rhode Island; the Mashpee Wampanoag Tribe; the Narragansett Indian Tribe; the Wampanoag Tribe of Gay Head (Aquinnah); and the Advisory Council on Historic Preservation[ACHP]; Regarding the "Smart from the Start" Atlantic Wind Energy Initiative: Leasing and Site Assessment Activities offshore Massachusetts and Rhode Island*. This Finding and supporting documentation are being provided to signatories to the Programmatic Agreement (PA), as well as to the National Park Service (NPS), which is a consulting party to this undertaking. This Finding and supporting documentation will also be made available for public inspection by placement on BOEM's website at: <https://www.boem.gov/renewable-energy/state-activities/historic-preservation-activities-office-renewable-energy-programs>.

### **2 Federal Involvement**

The Energy Policy Act of 2005, Pub. L. No. 109-58, added Section 8(p)(1)(C) to the OCS Lands Act, which grants the Secretary of the Interior the authority to issue leases, easements, and rights-of-way on the OCS for the purpose of renewable energy development, including wind energy development. The Secretary delegated this authority to BOEM and on April 22, 2009, BOEM promulgated final regulations implementing this authority at 30 CFR part 585.

On February 6, 2012, BOEM published in the Federal Register a *Notice of Intent to Prepare an Environmental Assessment for Commercial Wind Lease Issuance and Site Characterization Activities on the Atlantic OCS Offshore Massachusetts* (77 FR 5830). On November 2, 2012, BOEM announced the availability of an environmental assessment (EA) for public review and comment (77 FR 66185). BOEM considered comments received from this notice and on June 18, 2014, made available a revised EA for the Wind Energy Area (WEA) offshore Massachusetts (79 FR 34781). As a result of the analysis in the revised EA, BOEM issued a Finding of No Significant Impact, which concluded that reasonably foreseeable environmental effects associated with commercial wind lease issuance and related site assessment activities would not significantly impact the environment. On December 13-14, 2018, BOEM held a competitive lease sale for WEAs offshore Massachusetts. Equinor Wind was the winner of Lease Area OCS-A 0520.

Equinor Wind has subsequently submitted a SAP describing the proposed installation, operation, maintenance, and decommissioning of one floating light detection and ranging (Floating LiDAR) buoy, two wave and meteorological and/or oceanographic (metocean) buoys, and two subsurface current meter moorings within their Lease Area OCS-A 0520 (Figure 1). BOEM has determined that the approval of a SAP constitutes an undertaking subject to Section 106 of the NHPA (54 U.S.C. 306108) and its implementing regulations (36 CFR Part 800). BOEM implemented a PA pursuant to 36 CFR 800.14(b) to fulfill its obligations under Section 106 for the undertakings of lease issuance and approval of site assessment activities on the OCS offshore Rhode Island and Massachusetts. BOEM executed the Massachusetts and Rhode Island PA on May 23, 2012, with the SHPOs of Massachusetts and Rhode Island, the ACHP, the Mashpee Wampanoag Tribe, The Narragansett Indian Tribe, and the Wampanoag Tribe of Gay Head (Aquinnah). See: <http://www.boem.gov/MA-RI-PA-Executed/>.

### **3 The Undertaking**

Equinor Wind proposes to install, operate, and decommission a total of five pieces of equipment: one Floating LiDAR buoy, two buoys measuring wave and metocean information (“metocean buoys”), and two subsurface current meter moorings within Lease Area OCS-A 0520, located approximately 32.8 kilometers (km; 20 miles [mi]) southwest of Nantucket, Massachusetts and spans approximately 521 km (52,128 hectares; Figure 1).

The custom-built Floating LiDAR device proposed utilizes a U-shaped mooring design to anchor the buoy to the ocean floor using chain and both polypropylene and wire rope. There are three attached vinyl floats resting underwater approximately 17 meters (m) above the seabed. The assemblage also includes trawl floats and an Amsteel rope dispenser with acoustic release. A primary and secondary anchor system is proposed with weights of approximately 2,000 kilograms (kg) and 300 kg, respectively (Figure 2).

The metocean buoys proposed would also utilize a U-shaped mooring design using chain, polypropylene and wire rope, trawl floats, and an Amsteel rope dispenser with acoustic release and rubber cord. A primary and secondary clump anchor weight system is proposed, each weighing 1200 kg and 300 kg respectively. Three underwater vinyl floats would also be attached to the mooring line, positioned approximately 17 m above the seafloor (Figure 3).

Using plastic clamps, the subsurface current meters would be attached to the subsurface portion of the mooring line for the metocean buoys at depths of 1.5 m, 19 m, and 29 m above the seafloor. The assemblage also includes chain, wire rope, and two Amsteel rope dispensers with acoustic release, shackles, and load rings connected to a clump weight anchor. The clump weight of approximately 450 kg would rest on the seabed within a total contact area of up to 2 m<sup>2</sup>. The subsurface mooring assembly for each current meter also includes a pendant buoy that would sit approximately 5 m below the sea surface (Figure 4).

### **3.1 Area of Potential Effects**

The APE for the approval of a SAP, as defined in the 2012 PA, is:

- The depth and breadth of the seabed potentially impacted by proposed seafloor/bottom-disturbing activities; and
- The viewshed from which lighted meteorological structures would be visible.

#### **3.1.1 Offshore APE**

With anchor chain sweep potential eliminated by the use of rubber cords, the total seafloor contact area for the Floating LiDAR buoy's moorings would be approximately 6.3 m<sup>2</sup>, inclusive of both clump weights and all chains/cords/ropes. For the two metocean buoys, each mooring would have a total seafloor surface contact area, inclusive of clump weights and all ropes, of approximately 5.8 m<sup>2</sup>. The mooring for each of the two subsurface current meters would rest on a total area of approximately 2 m<sup>2</sup>. To allow for flexibility in installation of the proposed equipment, the horizontal extent of the APE is defined as a 300 m by 300 m survey area for buoy stations S01, S02, S03, and S04, and a 300 m by 200 m survey area for buoy station S05. The vertical APE is less than 1 m for all proposed anchoring systems.

#### **3.1.2 Viewshed APE**

The proposed metocean equipment would not be visible from onshore locations based on a proposed height of approximately 3.5 m (11.5 feet [ft]) above the sea surface and the distance from shore (approximately 46.7 km; 29 miles/25 nautical miles); therefore, there is no onshore viewshed APE associated with the undertaking.

## **4 Consultation with Appropriate Parties and the Public**

BOEM initiated consultation for the development of the PA in 2011 and 2012 through letters of invitation, telephone calls, emails, meetings, webinars, and the circulation and discussion of the PA. This outreach and notification involved over 66 individuals and entities, including federally recognized tribes, local governments, SHPOs, state-recognized tribes, and the public (Table 1). Additionally, in June-July 2011, September 2011, and April-May 2012, BOEM conducted formal government-to-government consultation with the Mashpee Wampanoag Tribe, The Narragansett Indian Tribe, and the Wampanoag Tribe of Gay Head (Aquinnah), all of whom chose to consult with BOEM and participate in the development of the PA.

**Table 1. Entities Solicited for Information and Comments Regarding Historic Properties within the Rhode Island and Massachusetts Wind Energy Areas During Development of the Programmatic Agreement.**

<b>Local Governments</b>	<b>State and Federal Agencies</b>
Barnstable County	Advisory Council on Historic Preservation
Cape Cod Commission	Connecticut SHPO
City of Cranston	Massachusetts SHPO
City of East Providence	New York SHPO
City of New Bedford	Rhode Island SHPO
City of Pawtucket	
City of Providence	
City of Warwick	<b>Federally Recognized Tribes</b>
Dukes County Commission	Mashantucket (Western) Pequot Indian Tribe
Martha's Vineyard Commission	Mashpee Wampanoag Tribe
Nantucket Planning and Economic Development Commission	Mohegan Tribe of Indians of Connecticut
Nantucket Planning Board	Oneida Nation of New York
Town of Aquinnah	The Narragansett Indian Tribe
Town of Barrington	The Shinnecock Indian Nation
Town of Bristol	Wampanoag Tribe of Gay Head Aquinnah
Town of Charlestown	
Town of Chilmark	
Town of Dartmouth	
Town of East Greenwich	
Town of Edgartown	
Town of Gosnold	
Town of Jamestown	
Town of Little Compton	
Town of Middleton	
Town of Nantucket	
Town of Narragansett	
Town of New Shoreham	
Town of Oak Bluffs	
Town of Portsmouth	
Town of South Kingston	
Town of Tisbury	
Town of Tiverton	
Town of Warren	
Town of West Tisbury	
Town of Westerly	
Town of Westport	

BOEM completed Section 106 consultation prior to the issuance of commercial leases within the Rhode Island and Massachusetts WEAs as part of the development of the PA. On December 14, 2011, and February 21, 2012, BOEM held Section 106 consultation webinars to discuss the proposed undertakings and BOEM's intention to prepare a Programmatic Agreement. BOEM provided a draft of the PA to the consulting parties on March 26, 2012, and held another webinar on May 8, 2012 to review comments on the draft PA, discuss changes, and prepare a revised draft in preparation for signing. Information and comments provided by the parties as part of this consultation were also considered for the undertaking of SAP approval as reviewed in this Finding. This correspondence is provided as Appendices A through G.

As noted above, on February 6, 2012, BOEM published in the Federal Register a *Notice of Intent to Prepare an Environmental Assessment for Commercial Wind Lease Issuance and Site Characterization Activities on the Atlantic OCS Offshore Massachusetts* (77 FR 5830). On November 2, 2012, BOEM announced the availability of an EA for public review and comment. BOEM considered comments received, and on June 18, 2014, made available a revised EA for the WEA offshore Massachusetts. Both the Notice of Intent and the announcement of availability solicited comments and information regarding the identification of, and effects to, historic properties from leasing and site assessment activities for the purpose of obtaining public input for the Section 106 review (36 CFR 800.2(d)(3)).

Specific to Section 106 review, responses were received from the NPS and Massachusetts SHPO (Appendices H and I). The NPS requested that BOEM consider NPS resources and interests in regard to offshore renewable energy development and requested that BOEM keep NPS informed regarding future activities within the Massachusetts WEA. The Massachusetts SHPO requested that BOEM strongly encourage applicants to consult with its office early in the planning process, particularly with respect to survey plans for historic property identification surveys, and that BOEM continue to consult with the SHPO regarding future activities in the Massachusetts WEA.

## **5 Description of Steps Taken to Identify Historic Properties**

BOEM's renewable energy regulations require a lessee to provide the results of an archaeological resource identification survey with its SAP for the areas affected by the activities proposed in the plan (see 30 CFR 585.610(b)), which area is coextensive with the offshore APE. BOEM provides guidelines for acquiring this information and documenting the results of these activities. See *Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585* at: [http://www.boem.gov/Guidelines\\_for\\_Providing\\_Archaeological\\_and\\_Historic\\_Property\\_Information\\_Pursuant\\_to\\_30CFR585/](http://www.boem.gov/Guidelines_for_Providing_Archaeological_and_Historic_Property_Information_Pursuant_to_30CFR585/), which advise lessees to survey the entirety of the APE offshore. Additionally, BOEM requires lessees to provide the results of onshore historic property identification activities conducted in accordance with the standards and guidelines of the relevant SHPOs or Tribal Historic Preservation Officers, if on tribal lands.

BOEM has reviewed the Equinor Wind SAP and information provided in support of the plan, including a Marine Archaeological Resources Assessment, summarized below (AECOM 2021; Appendix J).

## 5.1 Marine Archeological Resources Assessment

The lessee conducted an archaeological identification survey covering the horizontal and vertical extent of the APE for each buoy station as described above, at a 30 m (98.4 ft) line spacing and utilizing a multibeam echosounder, side scan sonar, magnetometers in a gradiometer configuration, and sub-bottom profiler, consistent with BOEM's *Guidelines for Providing Archaeological and Historic Property Information Pursuant to 30 CFR Part 585*. A Qualified Marine Archaeologist conducted an analysis of the remote sensing data to identify features or anomalies with potential to represent submerged cultural resources. This analysis provided consideration of both historic period archaeological resources and submerged landforms with high potential of containing drowned pre-contact archaeological sites, including a paleolandscape reconstruction of the APE. No side scan sonar targets or magnetic anomalies were identified within the APE. The vertical extent of the APE for each buoy station surveyed consists of reworked modern Holocene marine sediments and no geomorphic features of archaeological potential were identified (AECOM 2021; 48).

## 6 The Basis for the Determination of No Historic Properties Affected

BOEM has considered information gathered during consultation with the appropriate parties and the public, and undertaken an independent technical review of the Marine Archaeological Resources Assessment provided in support of the Equinor Wind SAP (AECOM 2020). A good faith effort has been made to identify historic properties through this archaeological assessment and no historic properties have been identified within the APE.

Although effects to historic properties may occur from an unanticipated, post-review discovery during installation, operation, or decommissioning of the meteorological buoy, BOEM would require inclusion of the following as a condition of SAP approval to ensure that any unanticipated finds are reported and reviewed under the NHPA:

- No Impact without Approval. The lessee must not knowingly impact a potential historic property without the Lessor's prior approval.
- Post-Review Discovery. If, while conducting site assessment activities, the Lessee discovers a potential historic property, such as the presence of a shipwreck (e.g., a sonar image or visual confirmation of an iron, steel, or wooden hull; wooden timbers; anchors; concentrations of historic objects; piles of ballast rock) or pre-contact archaeological site (e.g., stone tools, pottery) within the project area, the lessee must:
  - Immediately halt seafloor/bottom-disturbing activities within the area of discovery;
  - Notify the Lessor within 24 hours of discovery;
  - Notify the Lessor in writing via report to the Lessor within 72 hours of its discovery;
  - Keep the location of the discovery confidential; take no action that may adversely affect the potential historic property until the Lessor has made an evaluation and instructs the applicant on how to proceed; and conduct any additional investigations as directed by the Lessor to determine if the property is eligible for listing in the National Register of Historic Places (NRHP) (30 CFR §585.802(b)). The Lessor would direct the Lessee to conduct such investigations if: (1) the site

has been affected by the Lessee's project activities; or (2) impacts to the site or to the APE cannot be avoided. If investigations indicate that the resource is potentially eligible for listing in the NRHP, the Lessor would instruct the Lessee as to how to protect the resource, or how to mitigate adverse effects to the site. If the Lessor incurs costs in protecting the resource, under Section 110(g) of the NHPA, the Lessor may charge the Lessee reasonable costs for carrying out preservation responsibilities under the OCS Lands Act (30 CFR 585.802(c & d)).

## 7 References

AECOM Technical Services, Inc.

2021 *Archaeological Assessment: Beacon Wind Site Characterization Report, Site Assessment Plan for Oceanographic Moorings, BOEM Renewable Energy Lease Number OCS-A 0520*. Prepared for Equinor Wind US, LLC.

## 8 Appendices

**Appendix A:** Letter initiating Government-to-Government consultation with Federally Recognized Tribes, example. Similar letters were sent to all Federally Recognized Tribes listed in Table 1 in June 2011.

**Appendix B:** Letter initiating Section 106 consultation for lease issuance, site characterization, and site assessment activities, example. Similar letters were sent to all entities listed in Table 1 in August and September 2011.

**Appendix C:** Initial responses from State Historic Preservation Offices, September 2011 (three exhibits).

**Appendix D:** Initial responses from Local Governments, October and November 2011 (three exhibits).

**Appendix E:** Letter inviting consultation on the development of a PA for Lease Issuance and Site Assessment Activities, January 2012, example. Similar letters were sent to all signatories.

**Appendix F:** Letter from Advisory Council on Historic Preservation accepting invitation to participate in the development of the PA, January 2012.

**Appendix G:** Letters from Massachusetts Historical Commission commenting during the development of the PA, March, April, and May 2012.

**Appendix H:** Letter from National Park Service in response to the Notice of Availability of the Massachusetts EA, November 30, 2012.

**Appendix I:** Letter from Massachusetts Historical Commission in response to the Notice of Availability of the Massachusetts EA, December 14, 2012.

**Appendix J:** Marine Archaeological Resources Assessment in support of the Equinor Wind US, LLC SAP.



# 9 Figures

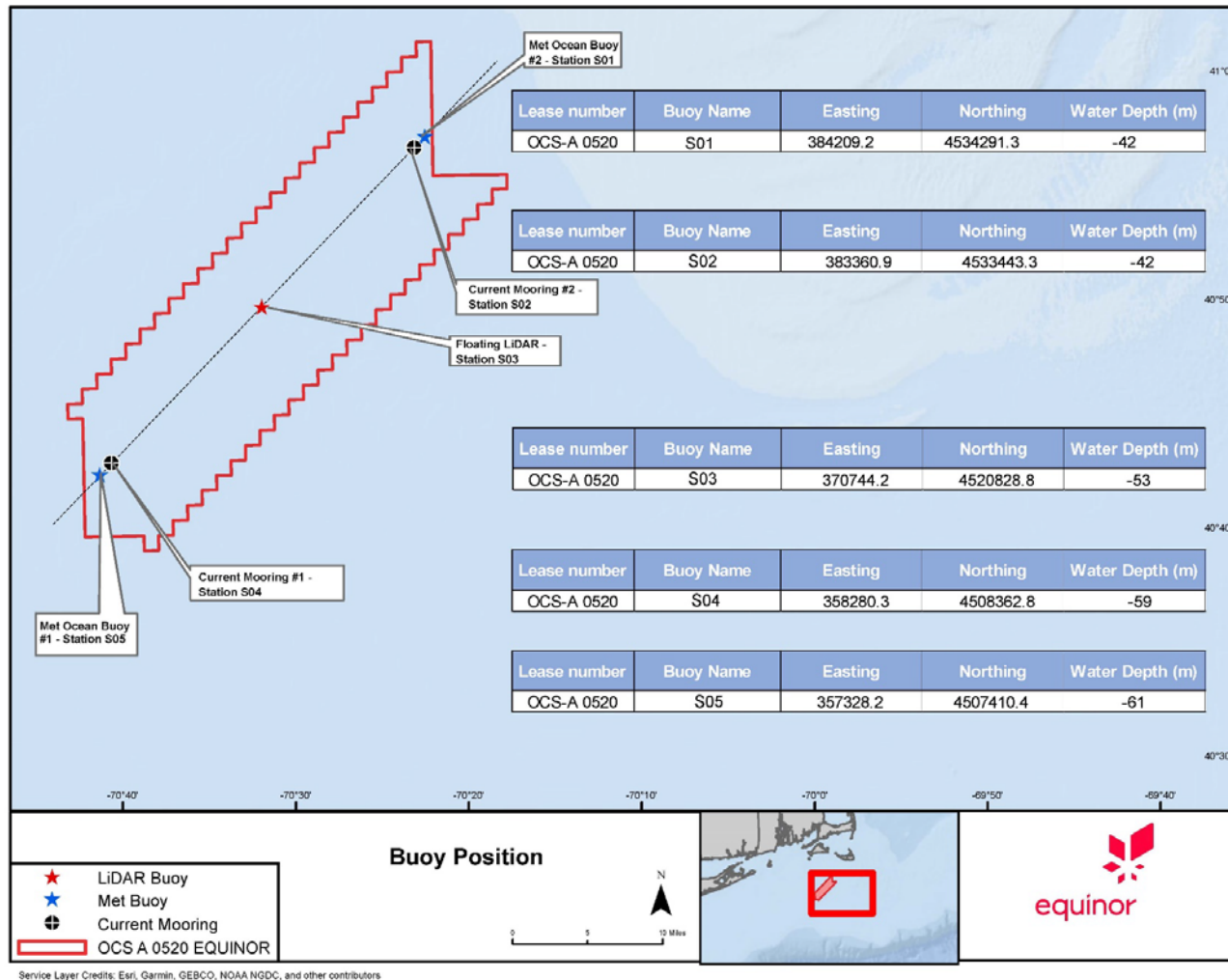


Figure 1: Buoy Type and Position Details Proposed for Lease Area OCS-A 0520 (AECOM 2020)

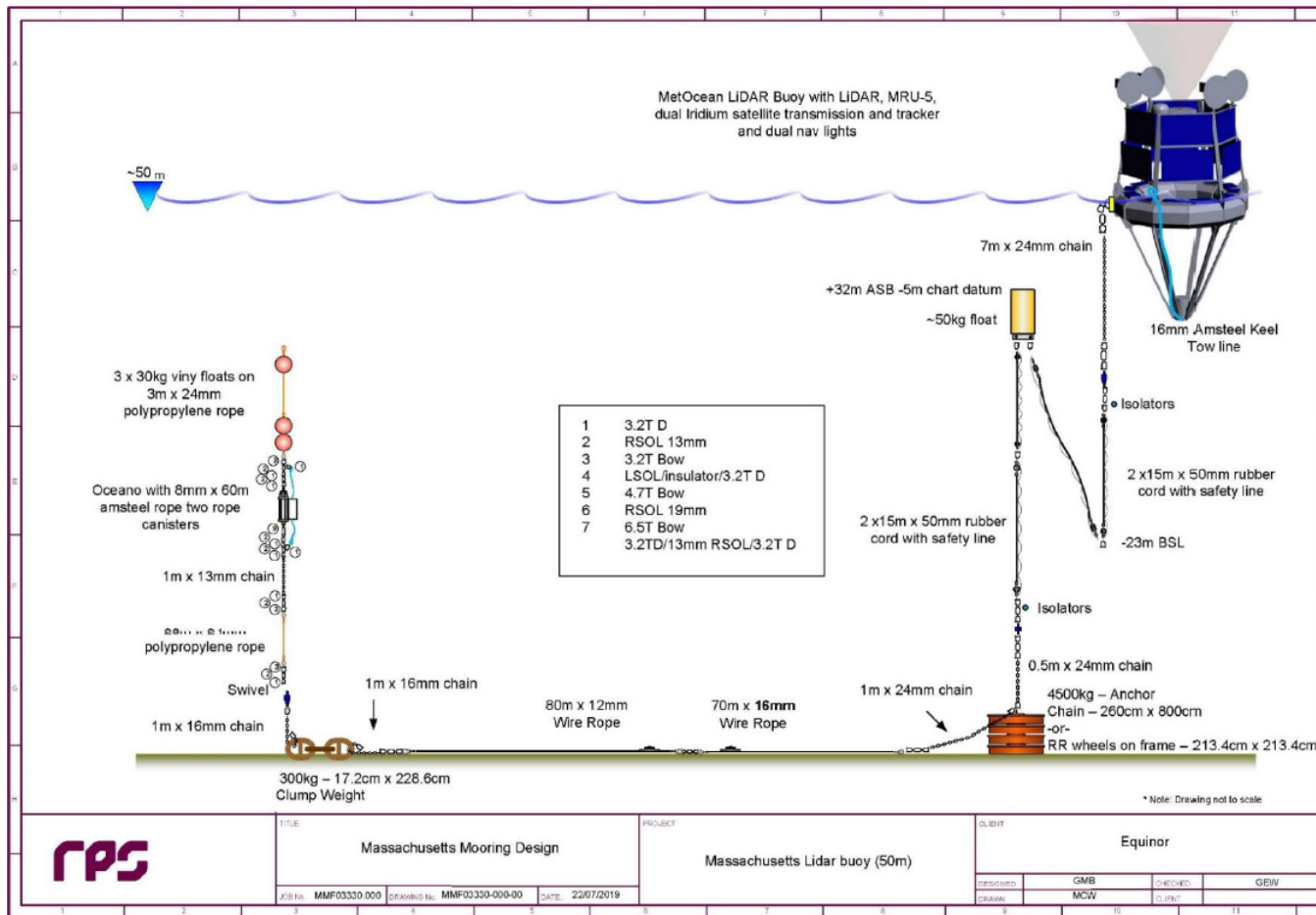


Figure2: Floating LiDAR Buoy Design (Empire Wind 0520 SAP, 2020)

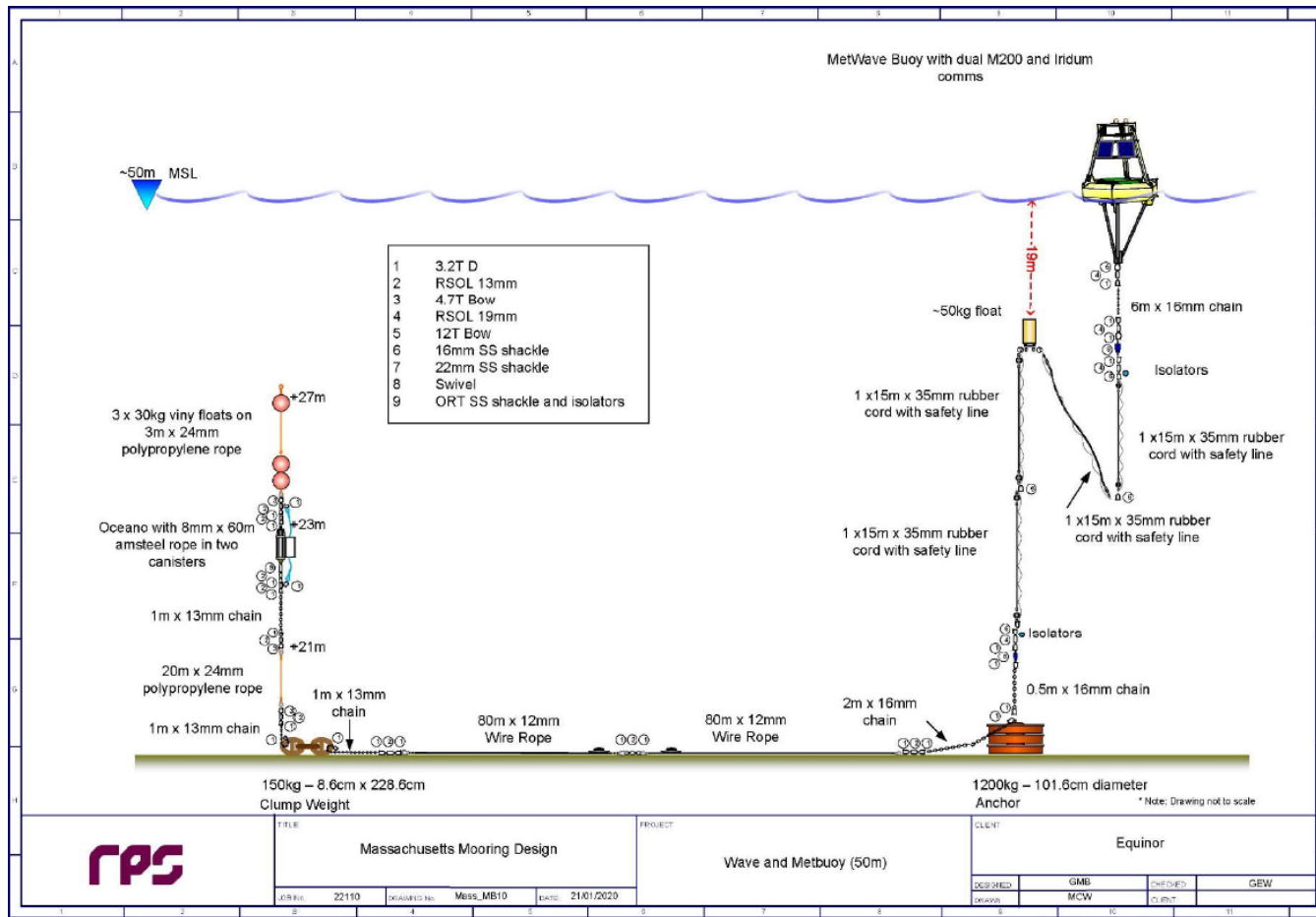


Figure3: Wave and Metocean Buoy Design (Empire Wind 0520 SAP, 2020)

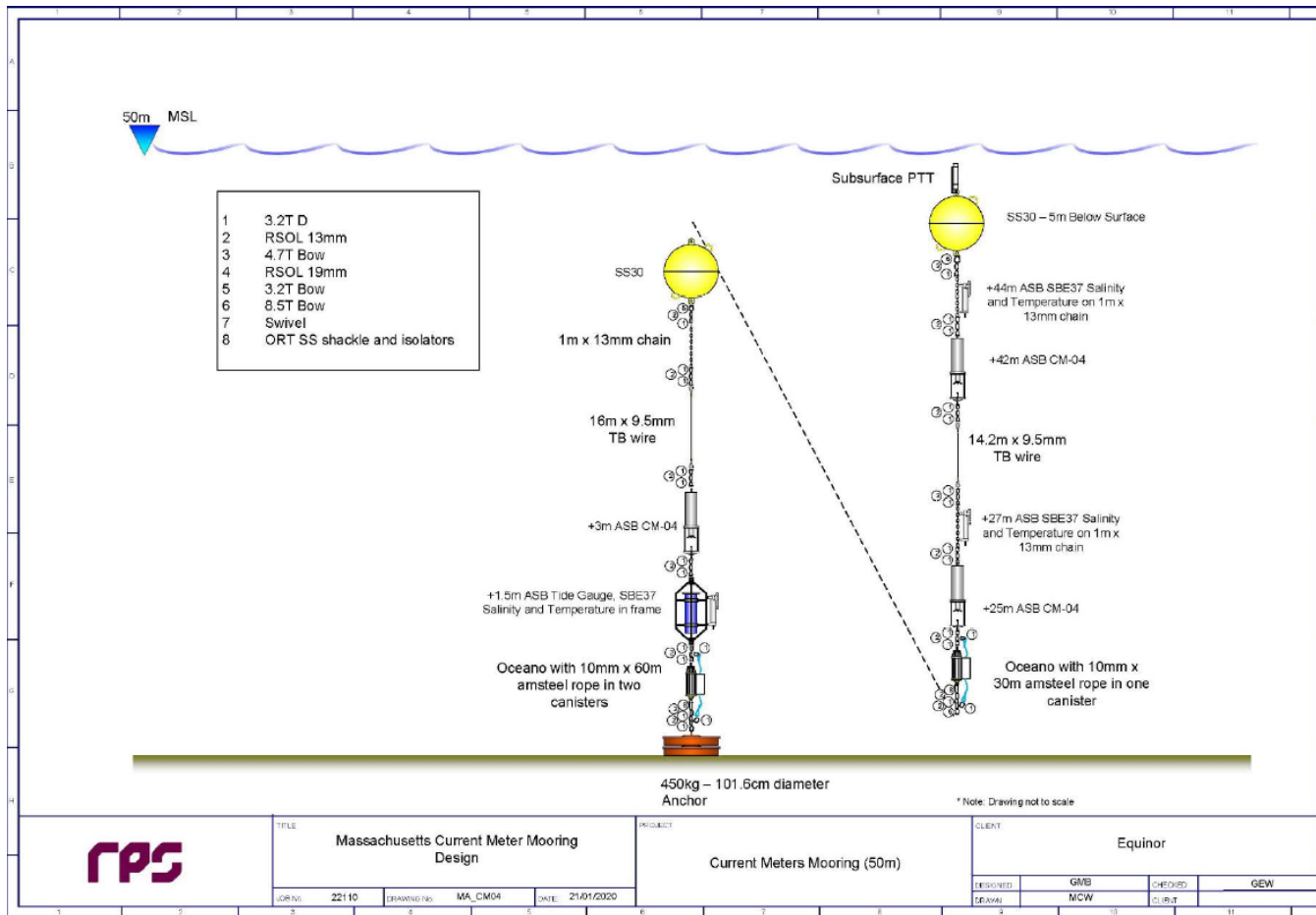


Figure 4: Subsurface Current Meter Design (Empire Wind 0520 SAP, 2020)