
PROJECT NARRATIVE

Submarine Cable Factory

Somerset, Massachusetts

PREPARED FOR

Prysmian
Group

Prysmian Cables and Systems USA, LLC
4 Tesseneer Road
Highland Heights, Kentucky 410763

PREPARED BY



1 Cedar Street
Suite 400
Providence, RI 02903
401.272.8100

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Project Narrative

In accordance with the Town of Somerset Zoning By-Law dated February 18, 2021, Section 6.10 Planned Development, Prysmian Projects North America, LLC. (the "Proponent"), a subsidiary of the Prysmian Group, respectfully submits this Planned Development Project Narrative for the construction of a submarine cable manufacturing facility in Somerset, MA, (the "Project").

The Project consists of the development of a new state-of-the-art submarine cable manufacturing plant on a portion of the former Brayton Point Power Station site and an accessory use Docking Facility in the adjacent in-water area, in the Town of Somerset, Massachusetts. The Proponent is acquiring approximately 47 acres of the approximately 300-acre former power station site, zoned Industrial District and located at 1 Brayton Point Road, Assessors Map A2 (see Figure 1). Development of the Project will allow the Proponent to design, manufacture, and deliver submarine transmission cable to support offshore wind projects in the United States.

Project Description

The Project, as depicted in Figures 1 and 2, and the attached Site Plans, consists of the redevelopment of the 47-acre Project Site with a new submarine cable manufacturing facility. In addition, the Project will include a new Docking Facility in the adjacent in-water area. The final product that the Proponent manufactures and provides to its client is solely based on a water dependent use/operation.

This new Submarine Cable Manufacturing Facility includes:

- › A manufacturing building and office (the "Manufacturing/Office Building");
- › An approximately 600-foot-tall tower for application of cable insulation; this tower will connect with the manufacturing building (the "Manufacturing Tower");
- › A raw materials storage building (the "Raw Materials Storage Building");
- › Two cable testing laboratories (the "Prequalification and Test Lab" and the "Impulse and Routine Test Lab");
- › A cable storage building (the "Cable Storage Building");
- › A building for employees (the "Employee Support Facility");
- › A substation (the "Substation Support Building"); and
- › Two fixed cable storage buildings.

The new Docking Facility will consist of a new inshore platform, in-water cable-delivery system (i.e., a pier structure), outshore platform, and fixed dolphin structures. Both the inshore and outshore

platforms will contain a building. The Docking Facility will also include a newly dredged navigational channel to accommodate the cable-laying vessels.

As shown in Figure 1, the proposed development program is detailed in Table 1-1 below.

Table 1-1 Proposed Development Program

Use	Approximate Size	Approximate Height
Submarine Cable Manufacturing Facility		
Manufacturing/Office Building (A)	598,517	62'
Manufacturing Tower (B)	82' diameter	600'
Raw Material Storage Building (C)	42,070	30'
Prequalification and Type Test Lab (D)	17,227	90'
Impulse and Routine Test Lab (E)	8,747	69'
Cable Storage Building (F)	104,706	46'
Fixed Cable Storage Buildings (I)	19,532	46'
Employee Support Facility (G)	8,306	30'
Substation Support Building (H)	4,002	15'
Docking Facility¹ (J)		
Two pier buildings	1,280	NA
Total Building Area:	800,785 sf²	NA
Parking	206 Spaces	NA

Note: Refer to Figure 1 for the location for each project component identified by the assigned letter.

NA = Not Applicable

¹ The footprint of the inshore platform, pier, offshore platform, and fixed dolphin structures will be approximately 35,525 sf.

Submarine Cable Manufacturing Facility

Description of Project Components, Uses

The main factory building and largest of the proposed structures is the Manufacturing/Office Building. Within this building, all the machines and components needed to build up and create a high voltage subsea power cable will be housed. The building will contain a series of carousels, which are static or rotating structures used to store and handle cable.

The offices will occupy a portion of the main factory and will house support functions for the main factory; the Employee Support Facility, will be located adjacent to the Manufacturing/Office Building. This facility will include locker rooms and associated employee space.

The Manufacturing Tower, approximately 82 feet in diameter and 600 feet in height, will be connected to the Manufacturing/Office Building. The tower will be used for the process of sheathing the raw copper. It will include 24 elevated floors to support extruders, cooling tubes, and other equipment used in the cable production process. It is possible that a viewing area will be located at the top of the tower adjacent to the equipment.



The Raw Material Storage Building will be a storage facility for raw copper wire, other metals (such as aluminum wire), and plastic insulation pellets that will be used to create the high voltage subsea power cable.

Two separate test lab buildings will be incorporated into the Project Site: an Impulse and Routine Test Lab, where routine, short term mechanical, chemical, and electrical testing of samples of production cable will occur, and a Prequalification and Type Test Lab, where longer-term mechanical, thermal, and electrical testing for the qualification of new cable designs and their accessories will occur.

A Cable Storage Building will be located south of the Manufacturing/Office Building. This building will be where the finished high voltage subsea power cable is stored before it is transferred to the cable-laying vessel. The Cable Storage Building will have capacity for four rotating turntables for product storage. Fixed Cable Storage Buildings will also be located south of the Manufacturing/Office Building.

Site Access and Circulation

The Project will have access off of Brayton Point Road through a new improved 30' wide roadway. Access to the Project's 47-acre development parcel will be through a controlled multilane entrance with guard shack. Within the Project site, a 24' wide (minimum) ring road will run the perimeter of the facility, encircling the main factory and supporting buildings.

Delivery truck traffic will arrive and utilize a scale delivery operation to the Material Storage Building. Employees will enter and take an immediate left to a new parking facility located in the northern portion of the Project Site.

Pedestrian walkways and crossings will allow employees to safely access the buildings on the Project Site, and an internal employee path will be provided within the Project Site around the ring road.

Parking and Loading

The Project has proposed a total of 206 parking spaces to accommodate the 360 employees over the project's 3-work shifts. The maximum number of employees on the largest shift will be 131 employees. The manufacturing facility will only need two loading spaces located at the Material Storage Building based upon the facilities operation.

Current Somerset Zoning Bylaw parking requirements for Industry, requires 1 space per 1,000 SF of building space. Based upon the total building area the required number of parking and loading spaces would be over 800 spaces and are not necessary for this facility. The applicant is requesting a variance for the reduction in parking and loading requirements as required under the Somerset Zoning Bylaw Section 6.7 table of off-street and loading requirements.

Docking Facility

The Project will include a new accessory use Docking Facility, which will consist of a new inshore platform, in-water cable-delivery system (i.e., a pier structure), outshore platform and fixed dolphin structures. Together, these components, which will allow the finished high voltage subsea power cable to be transferred from the Project Site to the cable-laying vessel for delivery and installation,



will total approximately 35,525 square feet in area. Two structures of approximately 640 square feet each will occupy the inshore and outshore platforms.

Pier Structure

The pier will include a conveyor-type system of pullies to transport the cable along the pier from the landside spools onto the offshore cable-laying vessel moored offshore from the pier. The pier will consist of an inshore platform, long and slender pier/trestle, and an outshore platform. At each end of the pier (the inshore portion and the outshore portion), there will be a small structure of approximately 640 square feet. These structures will contain a relay building and transformer. Outward of the pier, fixed dolphin structures will be placed to provide access for mooring and to provide a berthing fender system. Access to the mooring and berthing fender system will be provided to each dolphin by aluminum gangways.

The pier and fixed dolphin structures will be steel pipe pile supported and driven to design depths.

The pier will be approximately 1,500 feet long and about 13 feet wide. The pile couples supporting the pier superstructure above will be spaced about 60 feet on center, and the deck superstructure will be set approximately 15 feet above the Mean Higher High-Water level, allowing recreational vessels like kayaks or other small crafts to pass underneath.

Project Operations

The Project will employ approximately 360 highly skilled workers across a range of activities, including cable manufacturing, testing, delivery, and management.

During typical operations (at full build), there will be three shifts, as follows: 6 AM to 2 PM; 2 PM to 10 PM; and 10 PM to 6 AM. It is expected that 90 manufacturing employees will work each shift, along with up to approximately 25 additional support employees for a total of 115 employees per shift. In addition, during the hours of 8 AM to 5 PM, there will be an additional 16 office employees at the Project Site, for a total of 360 employees. During periods when finished cable will be transferred to the cable-laying vessel, manufacturing staff will be reassigned from manufacturing to delivery.

It is expected that there will be approximately five vessel moorings each year. Prysmian vessels will be moored for the acceptance of cable for approximately 10 days for each cable delivery; the specific number of days depends on the length of cable to be loaded and other factors, such as weather.



Site Utility Infrastructure

Stormwater

A comprehensive Stormwater Management Report has been prepared (see Appendix A) to demonstrate compliance with the Massachusetts Stormwater Management Standards in accordance with the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00) and Water Quality Certification Regulations (314 CMR 9.00). This report also demonstrates compliance with the Town of Somerset, Stormwater Management Regulations, dated June 8, 2021 for stormwater design and mitigation.

The site design integrates a comprehensive stormwater management system that has been developed in accordance with the Massachusetts Stormwater Handbook. Because the Project is considered a land use with higher potential pollutant load and for compliance with the Somerset Stormwater Management Regulations, the proposed stormwater management system has been designed to treat 1.7" Water Quality Volume.

Low Impact Development techniques and stormwater Best Management Practices implemented into the site design include minimized disturbance to existing trees and vegetation. The project proposes the repurposing of three existing drainage outfalls on the Site to reduce impact to coastal resources. The majority of stormwater from the proposed impervious surfaces is captured in deep-sump and hooded catch basins, piped to a sediment forebay, and treated through a surface sand filter prior to discharge from the Site. In limited areas, a proprietary pretreatment unit and precast subsurface sand filter will be used to provide water quality treatment.

Sanitary Sewer

A proposed gravity sewer network has been designed to capture sanitary sewer from the facility buildings to a new proposed pump station located on the 47-acre Prysman property. A new sanitary force main will be installed from the private pump station through the primary access roadway to Brayton Point Road, where it will then travel along the shoulder of Brayton Point Road to a new sanitary manhole installed at the intersection of Brayton Point Road and O'Neill Road. The new gravity manhole will discharge the facility's sanitary sewer to the existing Town of Somerset sewer at this intersection.

The Project will generate an estimated sanitary sewer flow from the facility of 7,200 gallons per day, based upon the 360 employee sanitary waste. No processed water is used in the Prysman facility operation therefore the sanitary waste estimate is only for domestic waste.



Water

A proposed water distribution system has been designed for the project with a connection to the inactive 16" Somerset water main at the end of Brayton Point Road. The project will tie into the line with an 8" water main to a proposed hotbox and water meter pit (for Prysman's service only) and route through the emergency access roadway to the Prysman property.

Once into Prysman's property there will be a distribution of domestic water from the main line to service the individual buildings requiring domestic water. A connection from the Main line will be connected to a Fire Pump house and an above grade Water Tank to service a Fire Distribution network for the facility buildings fire protection needs and fire distribution loop for fire hydrants.

The following are the domestic and fire flow demands calculated for the project.

- Domestic Water Demand: 108 GPM (Based upon an estimated Fixture Count). 7,200 GPD (Based upon 360 employees @ 20 GPD/Employee)
- Fire Flow Demand: 640 GPM (Sprinkler System + Hose Stream) (6,000 GPM for 4 hours is required by the Fire Code based upon Building Type)
- Processed Water Demand: The facility does not use any processed water in their operation.

Electrical

The proposed facility electrical needs will be serviced by the existing National Grid infrastructure currently existing on the 300 acre Brayton Point property. An electric service is proposed to enter the Prysman parcel by the main gate entrance to a proposed substation and electrical infrastructure yard where it will be distributed to the individual facility buildings.

Site lighting is proposed along the perimeter ring road and around the facility areas. A lighting study has been prepared for the project and included within the Site Plans to demonstrate the project will have no nighttime light spillage to adjacent properties

Telecommunications

The project will be served by the existing Verizon telecommunications currently within Brayton Point Road.

Landscape Summary

Landscaping

The landscape design for the project includes native tree, shrub, grass, groundcover, and perennial plantings, as well as native seed mixes. The plants chosen are native coastal/salt tolerant species selected from the Massachusetts Office of Coastal Zone Management (CZM) Coastal Landscaping Plant list. Seed mixes include a native coastal salt tolerant grass seed mix for upland areas, and a restoration seed mix for moist sites, containing a selection of native grasses and wildflowers for the stormwater/sand filter basins. Shade trees are proposed where feasible to shade pavement and areas around proposed buildings. The landscape is designed to restore and to improve the habitat quality of degraded areas of the site and will provide areas of landscape mitigation in relation to altered areas of the Riverfront resource. The restored landscape will provide a visual improvement to the prominent coastal site, as well as providing a buffer and wildlife habitat. The native drought resistant planting will reduce maintenance costs and resource use over traditional landscaping.

Off-Site Improvements

Off-Site Access Roadways

The Project site will be accessed through a new primary access roadway from Brayton Point Road that will run through the former power plant site to the Prysmian main gate entrance. Roadway improvements will include, improved pavement surfaces, traffic striping and signage, and improvements to the existing stormwater systems as practicable. In addition to the new primary access, an emergency access driveway has been proposed to allow for access to the Prysmian loop roadway for first responders and emergency services if the primary access is not accessible.

Traffic Summary

Traffic Impact Assessment

A Traffic Impact Assessment (TIA) study has been prepared for the project. This analysis quantifies existing and projected future traffic conditions with and without the Project and identifies potential transportation improvements within the study area where applicable. The TIA study has been included in this submission as Appendix B.

In summary, the analysis presented in the TIA indicates that the existing transportation infrastructure around the Project Site will support the traffic impacts of the Project with the Transportation Mitigation proposed and the Transportation Demand Management measures as described in the report. The Project is projected to add minimal traffic volumes to the study area during the peak hours (7:00 AM to 8:00 AM and 4:00 PM to 5:00 PM) because the shift changes of the Project will occur during off-peak hours (6:00 AM, 2:00 PM, and 10:00 PM). The only traffic projected to be entering and exiting during the study area peak periods are the 16 office employees and occasionally one to two trucks. This will result in negligible impacts to traffic operations during the morning and evening peak hours of the study area intersections.

Project Schedule/Phasing

The Project will be built in three phases (see Table 1-2 and Figure 3). Construction of the second and third phases, which consists of an expansion of the manufacturing capacity at the Project Site, depends on market conditions and the demand for offshore cable manufacturing.

Table 1-2 Proposed Development Program by Phase

	Phase 1	Phase 2 Expansion	Phase 3 Expansion	Total at Full Build
Cable Manufacturing Facility (Land-Side)				
Manufacturing/Office Building	296,972	227,748	73,797	598,517
Raw Material Storage Building	42,070	-	-	42,070
Prequalification & Type Test Lab	-	17,227	-	17,227
Impulse & Routine Test Lab	4,439	4,308	-	8,747
Cable Storage Building	52,353	52,353	-	104,706
Fixed Cable Storage Buildings	-	19,532	-	19,532
Employee Support Facility	8,306	-	-	8,306
Substation Support Building	400	-	-	400
Docking Facility (Water-Side)				
Two buildings (one on each pier platform end) of Pier	1,280	-	-	1,280
Total Phase New Building Area (sf)	405,820	321,168	73,797	800,785
Total Building Area by Phase (sf)	405,820	726,988	800,785	
Total Parking (spaces)	206	-	-	206

Phase 1

Construction of the Project will begin in June 2023 and will continue for approximately 18 months, with operations beginning in the final quarter of 2024. During this time, construction will begin with site preparation and the development of the initial section of the main factory building, including the necessary equipment to produce the cable. The tower will be constructed using a high strength concrete in a slip formed process that will create the exterior shell and interior walls in one continuous motion. An initial section of the Cable Storage Building will be constructed and will include two rotating turntables for product storage. The raw materials warehouse will be built, and this first phase will also include the initial section of the impulse and routine test lab. The employee support facility and parking areas will also be developed as part of Phase 1.

During construction of Phase 1, the drawings and stranding lines, VCV line, lead and jacketing line, armoring line, conductor rotating platforms, degassing tanks, fixed platforms, and final rotating platforms will also be constructed.

Phase 1 will also include construction of the pier structure. This will begin with the commencement of the dredge activities, followed by construction of a temporary pier that will be used to support construction of the permanent pier. Construction of the permanent pier will consist of the inshore platform, pier, outshore platform, and lastly the construction of the fixed dolphin structures that are used for the berthing and mooring of the submarine cable-laying vessels.

The intent of the Project is to begin dredging activities in Q3 or Q4 of 2024.

Once construction of the Docking Facility is complete as part of Phase 1, no further construction activities will be required for the in-water areas except periodic maintenance dredging, which will be conducted on an as-needed basis.

It is expected that 80-100 construction jobs will be created during the development of Phase 1.

Phase 2

In the second phase, the Manufacturing/Office Building will be expanded to provide for additional wire drawing machines, degassing tanks, and cable storage. A second Cable Storage Building will be developed to accommodate two additional interior rotating platforms for cable storage, and two Fixed Cable Storage Buildings will be added to the Project Site. The Prequalification and Type Test Lab (e.g., high voltage testing building) will be added. Finally, this phase will include an expansion of the routine test lab building.

As noted above, the specific timeframe for construction of Phase 2 depends on market conditions; it is anticipated that the second phase will be constructed at most five years after commencement of Phase 1. Construction of Phase 2 is expected to have an overall duration of between 12 and 15 months and will be complete by some point in 2027.

Phase 3

The final phase will consist of a main factory expansion to include additional work-in-place storage areas for the main factory.

Construction of Phase 3 is expected to have an overall duration of approximately 6 months; Phase 3 is expected to be complete by some point in 2032.