

**BEFORE THE
NEW JERSEY BOARD OF PUBLIC UTILITIES**

**IN THE MATTER OF THE PETITION OF OCEAN WIND, LLC
PURSUANT TO N.J.S.A. 48:3-87.1(f) FOR A DETERMINATION
THAT EASEMENTS ACROSS GREEN ACRES-RESTRICTED
PROPERTIES AND CONSENTS NEEDED FOR CERTAIN
ENVIRONMENTAL PERMITS IN, AND WITH RESPECT TO, THE
CITY OF OCEAN CITY NEW JERSEY ARE REASONABLY
NECESSARY FOR THE CONSTRUCTION OR OPERATION OF
THE OCEAN WIND 1 QUALIFIED
OFFSHORE WIND PROJECT**

Direct Testimony

of

Jason Kalwa

**Re: Ocean Wind 1 Onshore Transmission
and Interconnection Related Facilities to be
Constructed and Installed in
The City of Ocean City, Cape May County, New Jersey**

Dated: February 2, 2022

1 **I. INTRODUCTION AND BACKGROUND**

2 **Q. Please state your name and business address.**

3 A. My name is Jason Kalwa. My business address is 80 Park Plaza, Newark, NJ
4 07101.

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by PSEG based in Newark, New Jersey as a Director – Projects
7 Onshore Technical. With the team of professionals reporting to me, I am
8 responsible for managing the scope, schedule, and budget for the construction of
9 the onshore transmission and interconnection related facilities associated with the
10 Ocean Wind 1 Project, as well as other non-Project related responsibilities for
11 PSEG.

12 **Q. Please describe your professional experience and educational background.**

13 A. I have been employed by PSEG since 2006 in various roles involving the
14 construction and maintenance of transmission facilities. My educational
15 background includes earning a Bachelor of Science degree in Computer
16 Engineering from the New Jersey Institute of Technology, and a Master of Business
17 Administration from Rutgers, The State University of New Jersey. My education,
18 experience and qualifications are fully set forth in Appendix A to my testimony.

19 **Q. Have you previously testified in Board of Public Utilities (“Board” or “BPU”)
20 proceedings?**

21 A. No, I have not.

22 **Q. What is the purpose of your testimony?**

1 A. I am testifying on behalf of the petitioner, Ocean Wind, LLC (“Ocean Wind”) in
2 support of its petition seeking a determination that certain easements across Green
3 Acres-restricted properties and municipal consents for New Jersey Department of
4 Environmental Protection (“NJDEP”) permits and any construction-related permit
5 or permits in the City of Ocean City, New Jersey (“Ocean City” or “City”) are
6 reasonably necessary for the construction or operation of the Ocean Wind 1
7 Qualified Offshore Wind Project (“Ocean Wind 1 Project,” the “Project,” or the
8 “Ocean Wind 1 QOWP.”). More specifically, my testimony will describe the
9 onshore export cable, onshore substation, and grid interconnection line, which
10 comprise the onshore transmission and interconnection-related facilities (the
11 “Facilities”) to be constructed near, in, and through Ocean City as part of the Ocean
12 Wind 1 Project. I will describe the development and construction of the Ocean
13 Wind 1 Project Facilities in and through Ocean City, including the street opening
14 permit necessary for such construction, and, where necessary, the engineering
15 specifications for, the methods to be deployed in, as well as the proposed
16 interconnection and operation of the Facilities along the Project Route, the selection
17 of which will be discussed and explained by witness Pilar Patterson in her direct
18 testimony filed in this proceeding as Exhibit OW-2.

19 **Q. Can you explain PSEG’s involvement in and with Ocean Wind 1 Project?**

20 A. Yes. PSEG Renewable Generation, LLC owns a 25% equity interest in Ocean Wind,
21 LLC, which is developing the Ocean Wind 1 Project. For the Ocean Wind 1 QOWP,
22 PSEG will use its substantial experience in constructing and operating transmission
23 infrastructure throughout New Jersey, to lead the development, permitting and

1 construction of the onshore portions of the Ocean Wind 1 Project's onshore
2 transmission and interconnection-related facilities, including the Facilities. PSEG is
3 a diversified energy company, with operations primarily in the Northeastern and
4 Mid-Atlantic regions of the United States.

5 **Q. Can you elaborate briefly on your specific role on the Ocean Wind 1 Project?**

6 A. Yes. As I indicated above, I am the onshore substations and export cables lead for
7 the Project. In that capacity, I manage the scope, schedule, and budget for the
8 Facilities. These responsibilities entail managing a team of professionals comprised
9 of Project Managers, Project Engineers, and Project Controls (cost and schedule)
10 staff that assist me in carrying out those responsibilities. More specifically, these
11 responsibilities include overseeing the ongoing engineering and construction of the
12 Facilities and providing support to our permitting groups who ensure that the
13 permits associated with my areas of responsibility and that are reasonably necessary
14 for the Project are timely obtained to allow for the commencement and completion
15 of construction and operation of, in this case, the Facilities, which are necessary for
16 the operation of the Project.

17 **II. OVERVIEW OF THE ONSHORE FACILITIES.**

18 **Q. Please generally describe the onshore Facilities required by the Ocean Wind 1**
19 **Project.**

20 A. Generally speaking, the Ocean Wind 1 Project, which is a 1,100 MW offshore wind
21 farm that will generate electricity for delivery to the PJM grid, will require electrical
22 facilities onshore to transmit the offshore wind farm's generation to an onshore
23 point of interconnection with the electrical grid. In the case of the Ocean Wind 1

1 Project, that will require electric transmission export cables (sometimes also
2 referred to as generator leads, comprised of an offshore undersea section and an
3 onshore underground section), that together will create a circuit that will transmit
4 electrical output from the offshore wind farm substation to the onshore substation,
5 and then from the onshore substation to the PJM grid connection point. The
6 undersea section of the export cables will come ashore in Ocean City, from which
7 point the onshore section of the export cables will run underground under public
8 streets and roads in Ocean City, as well as under and through other portions of
9 Ocean City for which easements will be required. In this case, the onshore export
10 cables will connect to a substation, comprised of switchgear and transformers,
11 which, in turn, will interconnect to the PJM grid.

12 **Q. What is meant by the PJM grid?**

13 A. PJM Interconnection, L.L.C. (“PJM”) is a regional transmission organization that
14 coordinates the movement of wholesale electricity, including the interconnection
15 of generators (such as the Ocean Wind 1 Project) to the electric grid, in all or parts
16 of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North
17 Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District
18 of Columbia. Since 2018, Ocean Wind has been engaged with PJM regarding the
19 interconnection requests for the Project.

20 **III. FACILITIES’ DETAIL**

21 **Q. Please provide a more detailed description of the components of the Facilities**
22 **mentioned in your general description, beginning with the cable.**

1 A. For purposes of the Project’s PJM grid connection through Ocean City, the
2 transmission export cables, or generator lead, will connect the wind farm’s offshore
3 substation to the Project’s onshore substation in Upper Township. From there, a
4 grid interconnection line, also sometimes referred to as a generator lead, will
5 connect the Project’s onshore substation to the onshore point of interconnection,
6 delivering the electricity from the offshore wind farm to the PJM grid. The onshore
7 section of the export cables is currently planned to be comprised of buried cable,
8 while the grid interconnection line, which only exists in Upper Township (and is
9 not at issue in this Petition), is comprised of both buried cable and overhead lines.
10 The overhead portion of the grid interconnection line is relatively short and located
11 directly adjacent to Atlantic City Electric’s B.L. England Substation in Upper
12 Township, New Jersey. All of the onshore export cable through Ocean City is
13 expected to be situated underground.

14 **Q. Will the cable be direct buried or installed in conduit?**

15 A. The onshore export cables construction is expected to be a configuration of duct
16 banks to help to ensure that the onshore cables and conduits are appropriately
17 situated within existing road right-of-ways as much as feasible and, to the extent
18 possible, to minimize disturbance using conventional construction activities
19 utilizing standard traffic management arrangements. At the planned landfall at 35th
20 St. in Ocean City and the crossing of Crook Horn Creek near Roosevelt Boulevard,
21 it is planned that the onshore export cables will also be underground in conduit (but
22 not in duct banks) using trenchless underground construction techniques. At these
23 two areas and as the cables traverse the properties near the onshore substation, the

1 cable is not planned to be within existing road right-of-ways, but is planned to be
2 underground.

3 **Q. Please describe the dimensions of the conduit/duct work.**

4 A. The onshore export cable duct bank, which is a reinforced concrete container that
5 will house the three conduits containing the export cables (one cable per conduit),
6 is expected to be about 4 feet wide and buried with a target burial depth of 3 feet.
7 Please see Appendix B for a representative cross section of the duct bank design.
8 Please note, however, that the design is not yet finalized but is expected to be
9 similar to what is shown. The grid interconnection duct bank may have additional
10 conduits as 6 cables may be needed for that circuit. The duct bank serves as a form
11 of further protection for the conduit and the cable contained within the conduit.
12 There will also be accessible splice vaults installed along the export cables route to
13 facilitate the splicing (or joining) of cable sections. The splice vaults will also be
14 buried underground with only the access lids (or manhole covers) visible from the
15 surface. At the Crook Horn Creek crossing near Roosevelt Boulevard, it is
16 anticipated that trenchless underground techniques will also be utilized for
17 installing and routing the onshore the export cables.

18 **Q. Please describe and explain the voltage and size of the cables to be utilized.**

19 A. The voltage of the onshore export cables is expected to be 275 kV with each of the
20 three terrestrial cables expected to be about 6 inches in diameter. The cable
21 themselves are insulated. The landfall export cable voltage is also expected to be
22 275 kV, with an overall diameter of about 15 inches since the landfall export cables
23 are bundled together as opposed to being separated as is the case for the onshore

1 export cables. The landfall export cables are also insulated and are designed for a
2 marine environment. The grid interconnection circuit is expected to be 138 kV and,
3 as discussed above, a portion of it is planned to be overhead with the remaining
4 portion expected to be underground. The overhead portion is expected to be about
5 100 feet long while the underground portion is about 1000 feet long. For the
6 underground portion, each of the potentially six terrestrial cables is expected to be
7 about 6 inches in diameter and these cables are also insulated. For the overhead
8 portion each of the wires is expected to be less than 3 inches in diameter per wire.

9 **Q. Please describe the substation.**

10 A. The onshore substation is planned as a 275 kV-138 kV substation comprised of
11 various pieces of equipment, all of which will be designed to provide the required
12 functionality to achieve local grid code compliance. I want to note that the onshore
13 substation is not located in Ocean City and is not part of this Petition; however, I
14 am providing details of the substation as part of the overall description of the
15 onshore cable route.

16 **Q. Please generally describe the equipment associated with the substation.**

17 A. The substation, which will transform the voltage of the electricity from the wind
18 farm's offshore substation to the voltage compatible with the grid interconnection
19 line to which it interconnects, will be comprised of various pieces of equipment
20 typically associated with any substation, such as transformers, circuit breakers, and
21 switchgear. The substation is also planned to include harmonic filters, reactors, and,
22 potentially, if necessary, a static synchronous compensator or "STATCOM," which
23 is used for voltage regulation.

1 **Q. Where will the onshore substation be situated?**

2 A. The onshore substation will be located in Upper Township, New Jersey. No permits
3 or approvals or consents are necessary from Ocean City with respect to the onshore
4 substation.

5 **Q. Please describe the point of interconnection and the purpose of it.**

6 A. The point of interconnection is at the existing Atlantic City Electric Company
7 (“ACE”) B.L. England substation, to which the Project’s new onshore substation,
8 to be located in Upper Township, New Jersey, will connect.

9 **Q. Has the Ocean Wind 1 Project procured any of these Facilities as of this time?**

10 **If so, please describe what has been procured. If not, please explain the**
11 **anticipated timeline, and process, for procuring the Facilities.**

12 A. Consistent with the Project planning timeline, contracts are expected to be executed
13 in early 2022 for the procurement of the Facilities I have described. This will
14 support the planned construction schedule.

15

16 **IV. CONSTRUCTION PLAN AND PERMITTING**

17 **Q. Please describe and explain the planned onshore route and/or location for the**
18 **Facilities.**

19 A. While Witness Patterson (in her direct testimony filed in this proceeding as Exhibit
20 OW-2) will discuss the route selection process, I will describe and explain the
21 selected route (referred to herein as the “Preferred Route”) vis-à-vis the Facilities
22 to be constructed, operated and maintained in support of the Ocean Wind 1 Project.
23 Please reference Appendix C, which shows the Preferred Route and the planned

1 approximate location of the Facilities – the exact locations will be finalized as the
2 design and construction progresses. The offshore export cables from the offshore
3 substation, which is connected to the wind farm is planned, as I mentioned earlier,
4 to come onshore at 35th St. in Ocean City and from there will be connected to the
5 onshore export cables from where public road rights-of-way (“ROW”) (in and
6 through Ocean City) will be mainly used to get to the onshore substation in Upper
7 Township, New Jersey. In those locations where the route of the export cables does
8 not utilize public ROW, then, as discussed in Ms. Patterson’s testimony, easement
9 rights and/or other consent rights will be obtained in and through which the export
10 cable route will proceed.

11 **Q. Please discuss the engineering design features of the onshore routing and**
12 **location of the Facilities.**

13 A. In Ocean City, the export cables are planned to be underground cables, operated at
14 275 kV, and is mostly expected to be in a concrete-encased duct bank. As indicated
15 above, at the Crook Horn Creek crossing and landfall, it is expected that the export
16 cables will be in conduit most likely using a trenchless technology for the
17 underground installation. The location is mainly expected to be within public
18 roadways except at the landfall and Crook Horn Creek, and as the cables traverse
19 near where the onshore substation is located.

20 **Q. How will the Facilities to be located within Ocean City be constructed and**
21 **installed?**

22 A. The export cable construction will follow typical utility construction techniques. The
23 duct bank portion will mostly involve creating a trench, installing the facilities, and

1 then back-filling and restoring the area (*e.g.*, paving). The duct bank installation will
2 be performed using conventional construction equipment (*e.g.*, hydraulic
3 excavators, dump trucks, etc.). As indicated earlier, the Crook Horn Creek crossing
4 and landfall is planned to utilize trenchless construction methods.

5 **Q. Who will manage the construction of the Facilities?**

6 A. My team and I are responsible for managing the construction of the Facilities on
7 behalf of the Project utilizing a variety resources including construction contractors.

8 **Q. Can you be more specific about the complement of contractors to be deployed?**

9 A. The plan is to use a variety of contractors that have experience in the construction
10 of electrical facilities, utilizing local union labor.

11 **Q. Please provide the anticipated time that will be needed to begin and complete
12 the construction and installation within Ocean City.**

13 A. The Project is anticipated to be complete with testing and energization,
14 approximately 2 years after the start of construction. The associated onshore export
15 cable installation is anticipated to be completed within that same time frame.

16 **Q. Does Ocean Wind know at what point in the projected timeline for completion
17 of the Project, will the construction and installation of the Facilities take place
18 within Ocean City?**

19 A. Yes. As indicated above, the Project is expected to take approximately 2 years to
20 complete with the associated construction within Ocean City being completed
21 within that time frame. Construction of the Project after all approvals and permits
22 are secured is anticipated to begin in 2023. Construction work with respect to the

1 onshore export cables is anticipated is anticipated to be in an approximate range of
2 from 1 to 2 years.

3 **Q Are the construction and installation methods you describe consistent with**
4 **applicable industry and other applicable standards? Please explain.**

5 A. Yes, the methods I describe and that will be utilized are consistent with typical
6 industry-wide underground transmission construction, and in New Jersey as well.

7 **Q. Will the streets and roads within Ocean City be disturbed by the construction**
8 **and installation of the Facilities? If so, how will they be restored after**
9 **construction is complete?**

10 A. Yes, to install the Facilities, a trench will need to be opened in the roadways for a
11 period of time for the duct-bank and splice vaults to be installed. The areas where
12 the trenchless techniques are planned (at the landing on 35th St. and Crook Horn
13 Creek), longer duration closures are expected, but will be temporary to facilitate
14 construction. After installation, the area will be restored (for instance, in roadways,
15 the area will be paved). In addition, temporary lane and road closures are expected
16 to facilitate and expedite safe and efficient construction of the Facilities.

17 **Q. Will the streets and roadways that are disturbed be restored? How and when**
18 **and to what standards?**

19 A. Yes, as indicated above, the affected area of the roadways in Ocean City will be
20 paved per standard specifications, which will be coordinated with Ocean City or
21 Cape May County as applicable.

22 **Q. Are there existing pipes, wires and cables in place under the streets and roads**
23 **of Ocean City?**

1 A. Yes. Gas, electric, water, sewer equipment and facilities are common beneath the
2 roads and streets of not only Ocean City but all municipalities in the State of New
3 Jersey.

4 **Q. Do those facilities include the use of conduit and/or duct banks?**

5 A. Yes.

6 **Q. Can there be conflicts between these various uses within the same roads and
7 streets and how are such conflicts managed or avoided?**

8 A. In general, such conflicts can occur but are generally managed or avoided through
9 cooperation and communication among the interested and affected parties.

10 **Q. Does the Project have a plan for addressing, managing and avoiding such
11 conflicts with respect to the Facilities to be located in Ocean City? If so, please
12 describe it.**

13 A. Yes, as the design progresses, as is typical with utility installations, investigations
14 will be performed where necessary to verify the location of existing facilities. The
15 Project will coordinate with the interested and affected parties to manage or avoid
16 such conflicts, and come up with plans to deal with potential conflicts that arise
17 during construction.

18 **Q. Aside from the permits and approvals discussed in witness Pilar Patterson's
19 direct testimony, are there any other permits required from Ocean City to
20 construct, install and operate the Facilities?**

21 A. Yes, for proposes of constructing and installing the onshore Facilities that will be
22 located within the local Ocean City roadways, a street opening permit from Ocean
23 City will be necessary.

1 **Q. Has the Project applied for such permit?**

2 A. Not as of yet. In general, the application of the actual street opening permit occurs
3 relatively closer in time to the commencement of construction, which in this case
4 with respect to the Facilities is expected to begin in 2023. However, the Project
5 has consulted with and engaged in discussions and meetings as detailed in the
6 testimony of Witness Madeline Urbish in her direct testimony filed in this
7 proceeding as Exhibit OW-3, so that Ocean City is aware that construction in the
8 public road ROW will be necessary for the Project.

9 **Q. Are you aware of any technical, safety, or operational impediment to the**
10 **installation of the Facilities in Ocean City?**

11 A. No. We do not expect there to be any public safety or other safety issues or concerns
12 or any technical or operational impediment, as construction of the Facilities involves
13 standard regularly deployed utility-type construction similar to what already exists
14 in Ocean City and throughout New Jersey. As is typical of such types of construction
15 projects, the Project has already generally consulted with, and discussed its
16 anticipated construction plans with Ocean City. The construction planning for the
17 Facilities takes into account Ocean City's general construction requirements,
18 including any fees. To the extent that Ocean City provides reasonable feedback
19 regarding the Project's plans for constructing the Facilities, such feedback will also
20 be taken into account. Construction plans for the Facilities are planned to be
21 completed well in advance of the actual planned time for commencing construction,
22 and the Project will submit plans or drawings to Ocean City as required.

23

24

1 **V. Operation and Maintenance of the Facilities.**

2 **Q. Please describe the operation and maintenance of the Facilities to be situated**
3 **within Ocean City.**

4 A. The operation and maintenance to the facilities within Ocean City is expected to
5 involve routine inspection of the facilities, which will involve, for example, workers
6 entering the splice vaults through the access lids that will be visible on the roadway.
7 This is typical of underground transmission maintenance in the industry and in New
8 Jersey.

9 **Q. Will the operation of the Facilities within Ocean City be obvious to the residents**
10 **of the City?**

11 A. No, the operation is expected to be similar to other underground utilities, in
12 particular, other underground electric facilities within Ocean City. The underground
13 configuration and operation of these Facilities is virtually invisible to local residents
14 and passers-by. Only during periods of repair or replacement might there be any
15 noticeable presence by inspectors, line workers, or other contractors.

16 **Q. What is the anticipated frequency of maintenance activities on or with respect**
17 **to the Facilities located within Ocean City?**

18 A. For routine maintenance, it is expected inspections may occur a few times per year.

19 **Q. On average, based on industry experience, what kinds of failures can be, and**
20 **with what frequency are failures, anticipated to the types of Facilities to be**
21 **located in Ocean City over the lifetime of the Project?**

22 A. Failures on the cables themselves are not anticipated, but can occur and are most
23 likely to occur at the splice points where cables are joined together. Failures can

1 also occur along the length of the cable. Overall, the risk of failures is expected to
2 be minimal over the lifetime of the Project.

3 **Q. What maintenance or repair work is likely to be required and how evident will**
4 **such work be to the residents of Ocean City?**

5 A. For cable repairs or where cable replacement may be required, most of the work is
6 likely to take place near the splice vaults where the cable can be accessed, repaired
7 and/or replaced as needed. In a scenario where the conduit may have been damaged,
8 a spot excavation and repair may be needed along the route. Therefore, the work
9 will likely be more localized to the area directly surrounding the splice vaults or
10 spot repair and, therefore, would not be expected to have wide spread impacts to
11 the residents of Ocean City.

12 **Q Does the Project require an interconnection agreement in order to interconnect**
13 **with the existing electric grid?**

14 A Yes, as I discuss above, the Facilities will be connected to a substation to be located
15 in Upper Township, New Jersey. That substation, in turn, will interconnect with the
16 ACE transmission system. Therefore, a PJM Interconnection Agreement involving
17 Ocean Wind, ACE and PJM is required.

18 **Q. What is the status of that Interconnection Agreement?**

19 A. It has been executed.

20 **Q. At what voltage will the Ocean Wind onshore facilities interconnect with ACE's**
21 **electric system?**

22 A. 138 kV.

23

1 **VI. CONCLUSION**

2 **Q. Can you please summarize your testimony?**

3 A. Yes. I have summarized or described the onshore transmission and interconnection
4 related Facilities associated with the Project. The Facilities through Ocean City will
5 be constructed, operated and maintained similar to other underground utility and
6 utility-like facilities in Ocean City and throughout New Jersey. Similar to other
7 types of underground electric transmission line facilities, the construction of the
8 Facilities will require a road opening permit from the Ocean City Engineering
9 Department for the construction of the portion of the onshore cable route within and
10 through the local Ocean City streets and roads.

11 **Q. Does this conclude your direct testimony?**

12 A. Yes, it does.

13

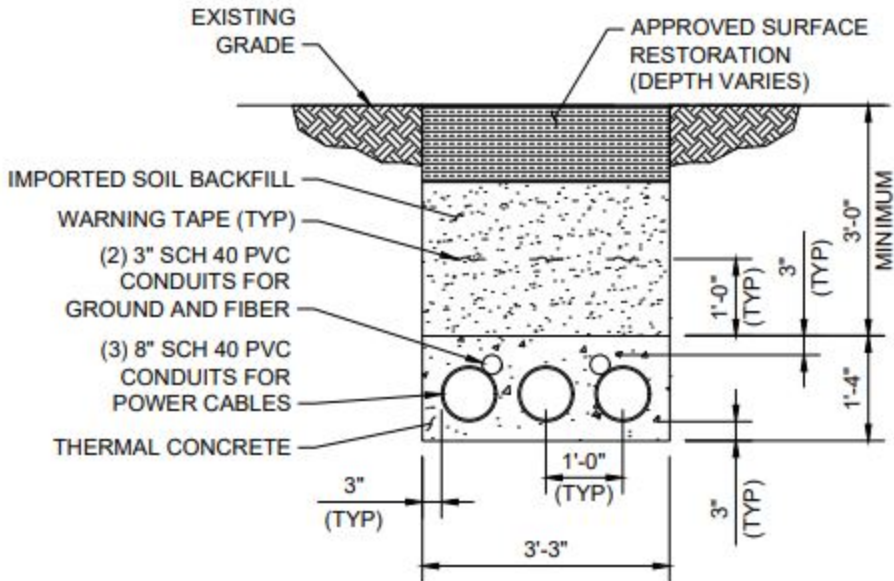
Experience and Qualifications of Jason Kalwa

I am the Director, Offshore Wind Department for PSEG Services, a subsidiary of PSEG. I have held this position since July 2021. My responsibilities include overseeing a team of project management, project engineering, and project controls personnel involved in the development and execution of the scope, schedule, and budget of portions of various offshore wind projects, including providing support for the execution of the Ocean Wind Project, due diligence on a potential investment in other offshore wind projects, as well as development of a bid PSEG submitted with Orsted proposing an expansion to the transmission system supporting offshore wind development in NJ. My support is specifically focused on the onshore aspects of the projects (e.g. onshore substation and onshore transmission lines). Prior to that, from January 2021 to July, 2021, I was Senior Project Manager, Offshore Wind Department in which position I also supported the execution of the Ocean Wind Project, due diligence on a potential investment in other offshore wind projects, as well as development of a bid PSEG submitted with Orsted proposing an expansion to the transmission system supporting offshore wind development in NJ.

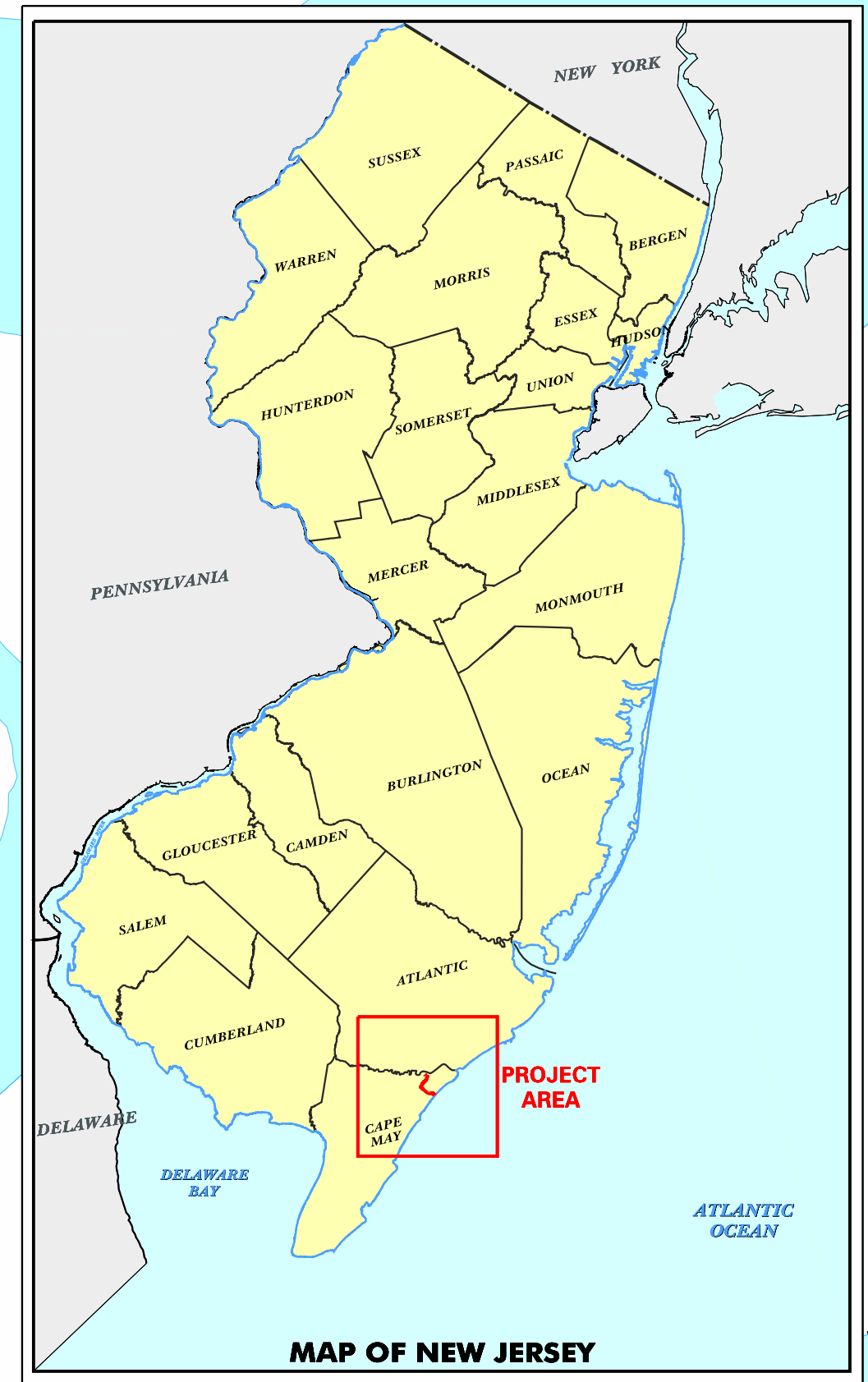
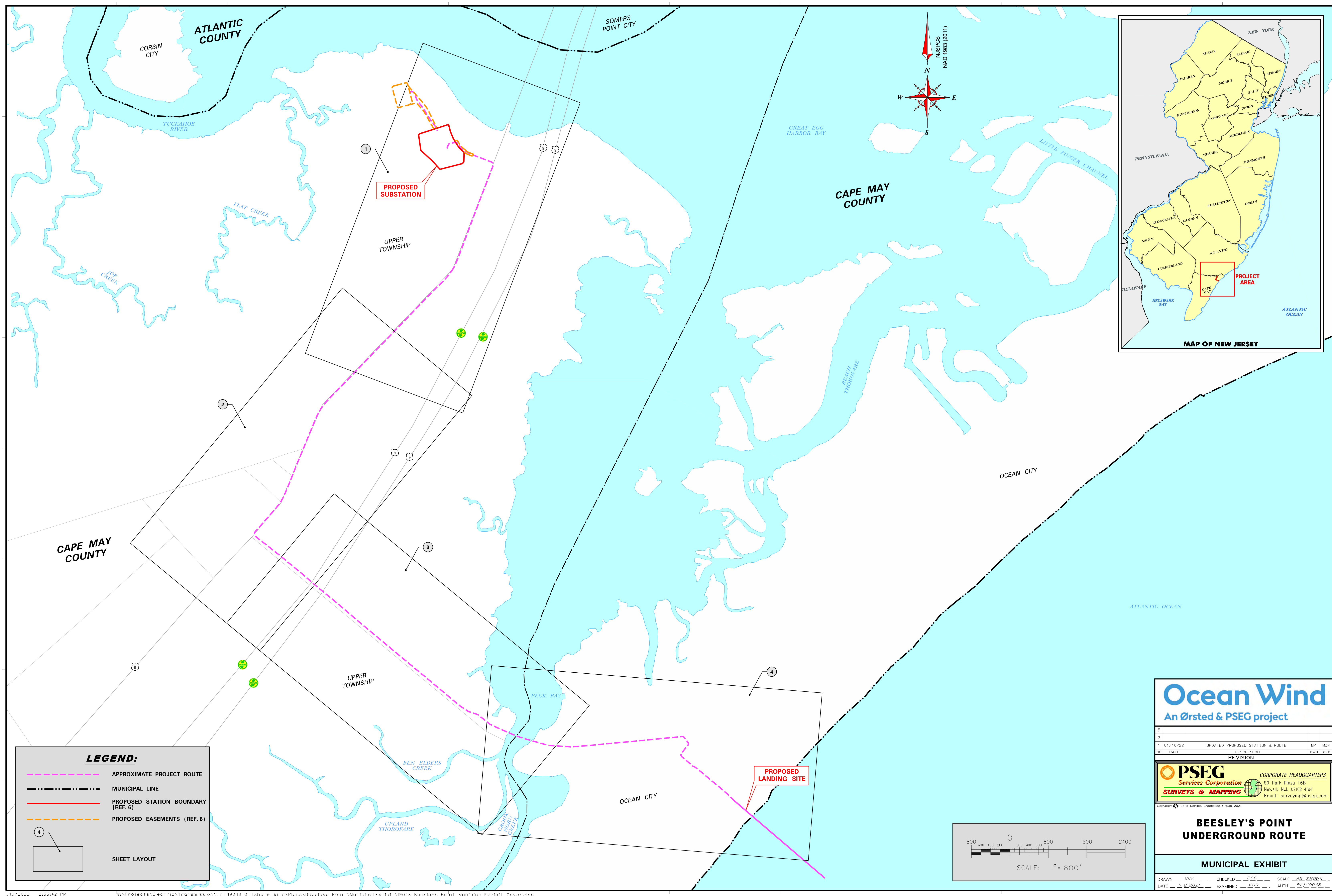
Prior to January 2021, I was Senior Project Manager, in the Delivery Projects and Construction Department at Public Service Electric and Gas Company (PSE&G) a position I held since January 2017. In that position, I was responsible, among other things, for the execution of various electric transmission projects and support of offshore wind projects. Such projects included the installation of electric transmission lines (230kV and 345kV). Prior to that I have also held a variety of positions at PSE&G; namely, (i) Project Manager, Delivery Projects and Construction Department from March 2014 to January 2017, when I worked on various electric transmission projects (138kV, 230kV, 345kV, and 500kV) and co-lead the department's Summer internship program, (ii) Supervising Engineer, Delivery Projects and Construction Department

from December 2010 to March 2014, when I supported the execution of PSE&G's portfolio of projects within PJM Interconnection's Regional Transmission Expansion Plan (RTEP) and provided guidance to the department's engineers and staff engineers, (iii) Engineer, Electric Transmission Construction and Maintenance Department from May 2008 to December 2010, when, among other things, I acted in a construction management role for various electric transmission projects, such as the construction of new electric transmission lines as part of RTEP, to ensure their successful completion and supported the inspection and maintenance of existing electric transmission lines to guarantee the reliability of the PSE&G electric system; and (iv) Technical Intern, Electric Transmission Construction and Maintenance Department from June 2006 to May 2008 when I updated and maintained the records of PSE&G's transmission assets utilizing a geographic information system (GIS), and maintained an electronic database of the transmission line inspection records.

I have a Master of Business Administration from Rutgers University with a concentration in Strategy and Leadership, and a Bachelor of Science from New Jersey Institute of Technology: Albert Dorman Honors College, in Computer Engineering. I am a certified as a Project Management Professional (PMP), by the Project Management Institute (PMI).



ONSHORE TRANSMISSION SINGLE-CIRCUIT
DUCT BANK SECTION
 NOT TO SCALE

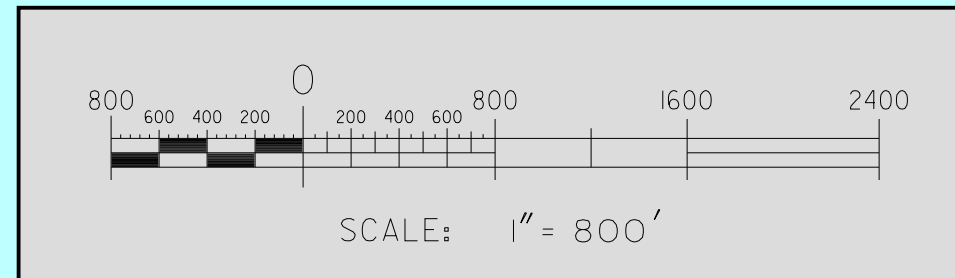


LEGEND:

- APPROXIMATE PROJECT ROUTE
- MUNICIPAL LINE
- PROPOSED STATION BOUNDARY (REF. 6)
- PROPOSED EASEMENTS (REF. 6)

④

SHEET LAYOUT



Ocean Wind
An Ørsted & PSEG project

NO.	DATE	DESCRIPTION	MP	MDR
1	01/10/22	UPDATED PROPOSED STATION & ROUTE	MP	MDR
REVISION				

PSEG
Services Corporation
CORPORATE HEADQUARTERS
80 Park Plaza T6B
Newark, N.J. 07102-4194
Email: surveying@pseg.com

**BEESELY'S POINT
UNDERGROUND ROUTE**

MUNICIPAL EXHIBIT

DRAWN	CCX	CHECKED	BSG	SCALE	AS SHOWN
DATE	11-2-2021	EXAMINED	MDR	AUTH	PRJ-19048



LEGEND NOT ALL ITEMS ARE TO SCALE

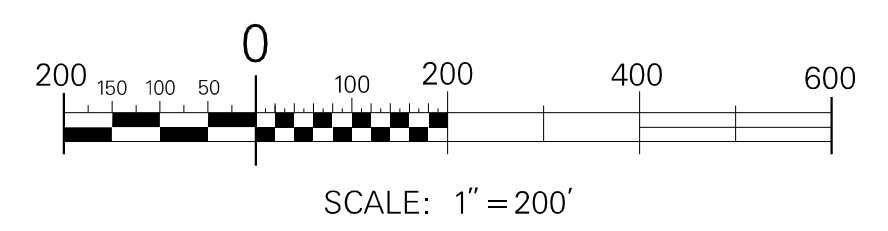
- APPROXIMATE PROJECT ROUTE
- PROPOSED STATION PROPERTY BOUNDARY (REF. 6)
- PROPOSED EASEMENTS (REF. 6)
- MUNICIPAL LINE
- TAX BLOCK LINE & NUMBER
- TAX LOT LINE & NUMBER
- UTILITY EASEMENTS

NOTES:

- MAPPING IS BASED ON THE NJ STATE PLANE COORDINATE SYSTEM. HORIZONTAL DATUM = NAD-83(2011) UNITS = U.S. FOOT
- THESE PLANS ARE FOR DISPLAY PURPOSES ONLY AND NOT INTENDED FOR CONSTRUCTION.

REFERENCES:

- RIGHT OF WAY INFORMATION BASED ON SURVEYS PREPARED THROUGH AUGUST 24, 2021 BY FRAUNGER ENGINEERING, BRIDGEFORD, NJ.
- NEW JERSEY STATE ORTHOPHOTOGRAPHY WAS CAPTURED IN APRIL AND MAY 2018, AND PRODUCED AT A SCALE OF 1:2400 (1"=200') WITH A 1 FOOT PIXEL RESOLUTION, PROVIDED BY NJ OFFICE OF INFORMATION TECHNOLOGY (NOIT), OFFICE OF GEOGRAPHIC INFORMATION.
- TOWNSHIP OF UPPER TAX MAP SHEETS 27.01, 27.02, 27.03, 27.04, 27, 28.01, 28.02, 28.03, 28.04, 28 & 29.
- OCEAN CITY TAX MAP SHEETS 2, 27, 28, 33, 34, 35 & 335.
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- OPTION AGREEMENT TO PURCHASE BETWEEN RC CAPE MAY HOLDINGS, LLC AND OCEAN WIND LLC DATED AS OF JANUARY 31, 2020



Ocean Wind
An Ørsted & PSEG project

NO.	DATE	DESCRIPTION	BY	CHKD.
1	01/10/22	UPDATED PROPOSED STATION & ROUTE	MP	MDR
REVISION				

PSEG
Services & Corporation
CORPORATE HEADQUARTERS
80 Park Plaza T6B
Newark, N.J. 07102-4194
Email: surveying@pseg.com

B.L. ENGLAND SUBSTATION & ONSHORE ROUTING

UPPER TWP CAPE MAY CO., N.J.
MUNICIPAL EXHIBIT

DRAWN: CCX CHECKED: BSG SCALE: AS SHOWN
DATE: 11-2-2021 EXAMINED: MDR AUTH: PRJ-19048



LEGEND NOT ALL ITEMS ARE TO SCALE

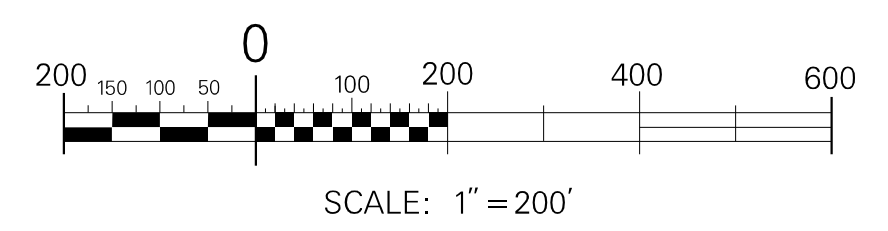
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- PROPOSED STATION PROPERTY BOUNDARY (REF. 6)
- PROPOSED EASEMENTS (REF. 6)
- MUNICIPAL LINE
- TAX BLOCK LINE & NUMBER
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NOTES:

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PSEG
Services Corporation
SURVEYS & MAPPING

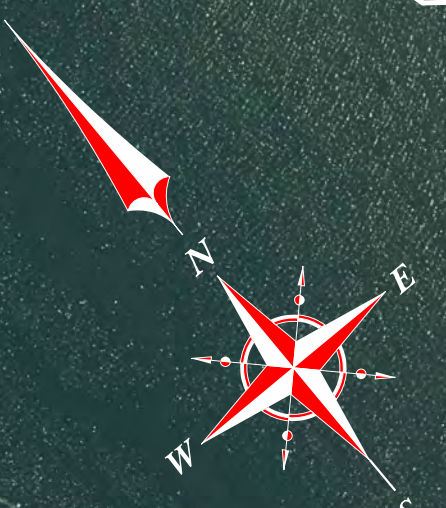
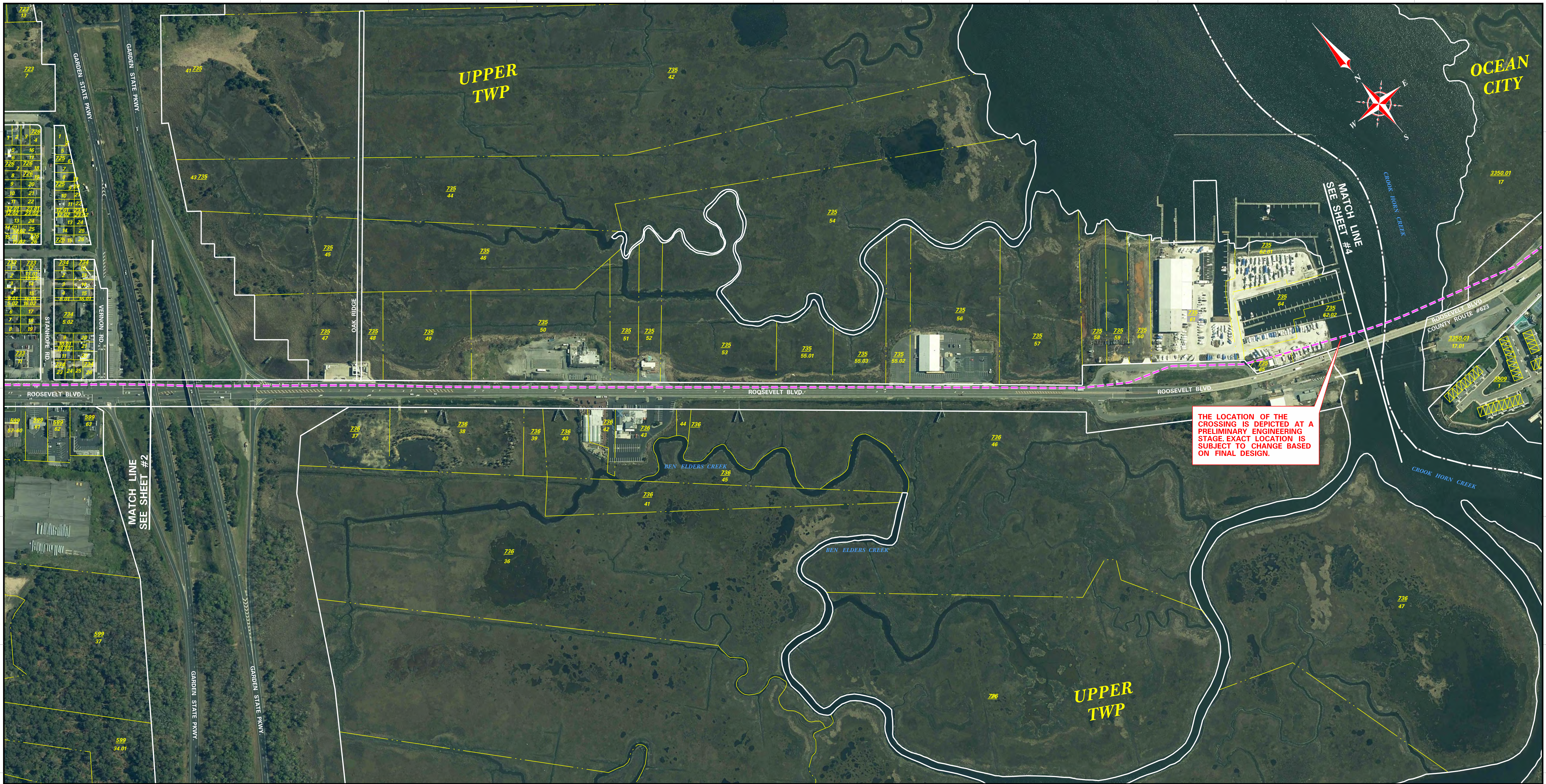
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B.L. ENGLAND SUBSTATION & ONSHORE ROUTING

UPPER TWP CAPE MAY CO., N.J.

MUNICIPAL EXHIBIT

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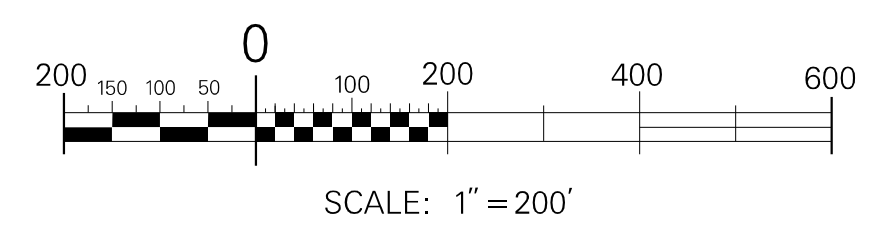
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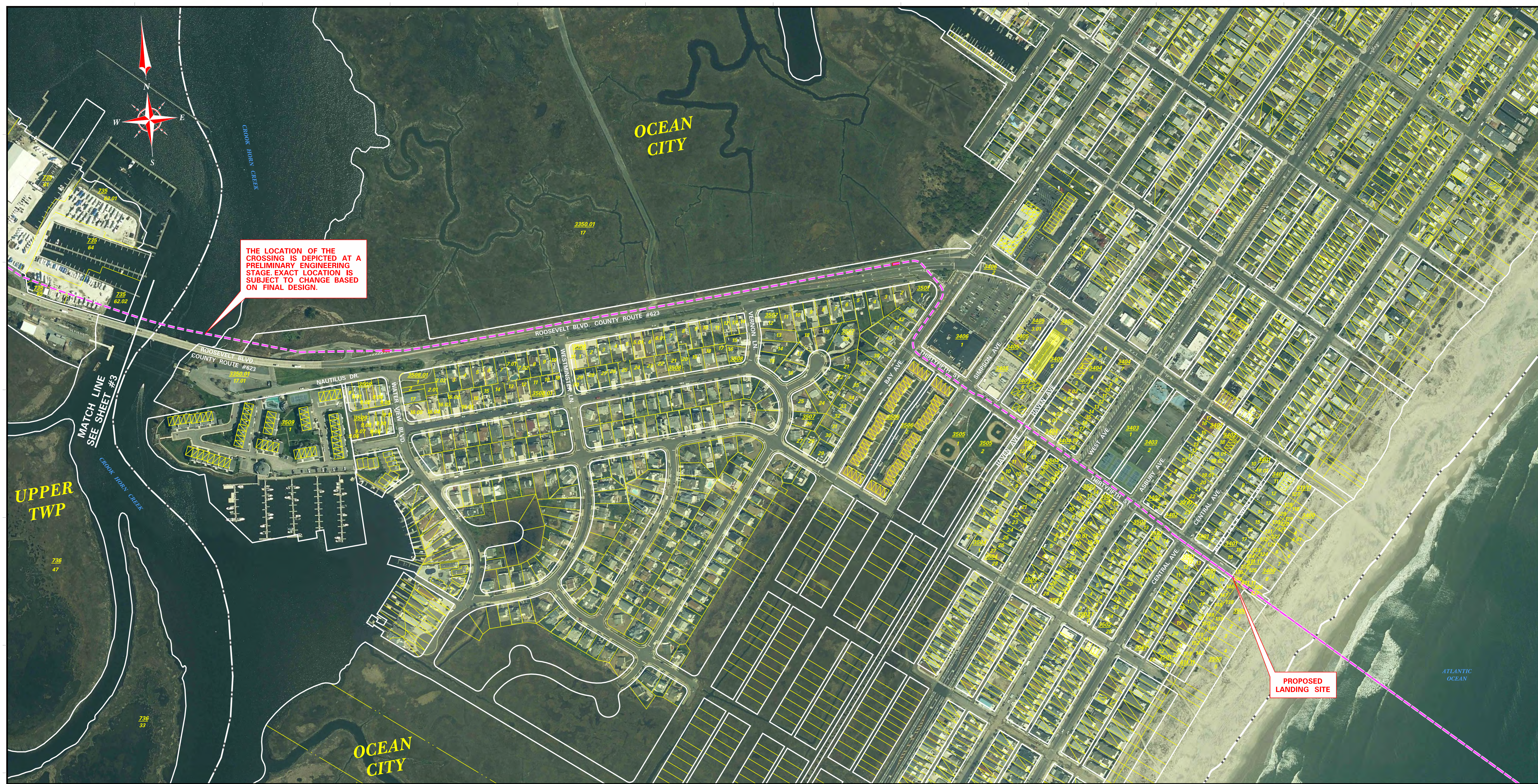
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B.L. ENGLAND SUBSTATION & ONSHORE ROUTING

OCEAN TWP CAPE MAY CO., N.J.
UPPER TWP CAPE MAY CO., N.J.

MUNICIPAL EXHIBIT

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DATE: 11-2-2021 EXAMINED: MDR AUTH: PRJ-19048



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PROPOSED LANDING SITE

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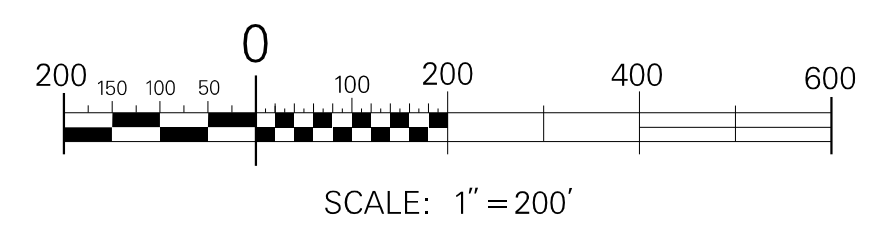
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