

What Powers You

February 22nd, 2022

Melanie Bachman, Esq.
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: PETITION NO. 1479 – Bloom Energy Corporation petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a customer-side 1.5-megawatt fuel cell facility and associated equipment to be located at the NBC Sports Group building, 1 Blachley Road, Stamford, Connecticut.

Dear Ms. Bachman:

Please see the attached responses to the interrogatories provided to Bloom Energy on February 8th, 2022.

Respectfully,



Kristen Grillo
Senior Permitting Specialist | East Coast Field Office
Customer Installations Group | North America
(917) 803-4511
Kristen.Grillo@bloomenergy.com



Bloom Energy Corporation
4353 North First Street, San Jose, CA 95134
408 543 1500
www.bloomenergy.com

Petition No. 1479
Bloom Energy Corporation
NBC Sports Group
1 Blachley Road, Stamford, CT

Interrogatories – Set 1

1. What is the estimated cost of the proposed project?

Response: The estimated cost of the project is \$1,738,989.00.

2. What is the status of Bloom's Department of Energy and Environmental Protection Natural Diversity Database request?

Response: A response from the Department of Energy and Environmental Protection Natural Diversity Database ("NDDDB") was received on January 13, 2022. DEEP does not anticipate negative impacts to State-listed species from the proposed activity. The determination notes that Eastern box turtles may be encountered on site and provides guidance on treatment should any be encountered in the construction work zone. Bloom will provide DEEP's information and directions to its contractor(s). (Please see Attachment 1.)

3. Referring to Petition p. 10, has the City and/or abutters provided comments to Bloom since the Petition filing? If yes, summarize the comments.

Response: No comments have been provided by the City. We received an inquiry from one of the abutters (87 Orange Street) requesting details on the proposed installation; please see the attached email correspondence. (Attachment 2)

4. Referring to Petition Exhibit 2, clarify the location of the electrical service and revise Exhibit 2 if necessary.

Response: The electrical service point of connection will be at the existing substation service connection within the NBC Sports Group Building, as detailed in Exhibit 3. A revised Exhibit 2 is attached.

5. What security measures are proposed for the facility (e.g, fencing, bollards, locks)? Provide site plan detail.

Response: Based on recent consultation with Eversource, Bloom will install a guardrail on the north and west sides of the energy server installation to protect against vehicular damage. Please see the attached detailed site plan and detail sheet #1. (Attachment 3)

6. Referring to Petition Exhibit 4, identify the location of the fuel cell facility on the photos.

Response: Please see Attachment 4 for photo markups that identify the location of the fuel cell facility, as requested.

7. Referring to Petition Exhibit 6 on p. 12, will Bloom provide a copy of the Fuel Cell Emergency Response Plan and conduct fuel cell operation/emergency training with City of Stamford emergency responders prior to the commencement of facility operation?

Response: Yes, Bloom will be in contact with the Stamford Fire Marshal prior to commissioning of the facility to coordinate training and presentation of the fuel cell facility as desired by City representatives.

8. Provide typical construction workdays and hours.

Response: Monday through Friday, 7am-5pm

9. Referring to Petition p. 4, identify the media to be used for pipe cleaning facility in accordance with Public Act 11-101, An Act Adopting Certain Safety Recommendations of the Thomas Commission.

Response: The media to be used for the pipe cleaning procedures at the proposed facility would be compressed air.

10. Referring to Exhibit 7, Property Line Noise Analysis:

- a. What is the distance from the nearest residential property line to the facility?

Response: 197ft.

- b. What are the sound levels predicted at the residential property line referenced above?

Response: 43 dba.

- c. Does Bloom intend to install the foam dampening material at the doors and exhaust of the fuel cell units?

Response: Yes. The foam dampening material is standard on all Bloom Energy Servers.

Attachment 1: NDDB Determination



79 Elm Street • Hartford, CT 06106-5127

www.ct.gov/deep

Affirmative Action/Equal Opportunity Employer

January 13, 2022

Dean Gustafson
All-Points Technology Corp, PC
567 Vauxhall Street Extension Suite 311
Waterford CT 06385
dgustafson@allpointstech.com

Project: Fuel cell installation at NBC Universal, 1 Blachley Road, Stamford, CT
NDDDB Determination No.: 202200302

Dear Mr. Gustafson,

I have reviewed Natural Diversity Database (NDDDB) maps and files regarding the area of work provided for the proposed fuel cell installation at NBC Universal, 1 Blachley Road in Stamford, Connecticut. According to our records there are State Special Concern Eastern box turtles (*Terrapene carolina carolina*) in the vicinity of the project site. I do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site based upon the information provided. The result of this review does not preclude the possibility that listed species, including Eastern box turtles, may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. If turtles are encountered on site they should be moved out of the active work zone, to an adjacent area. Contact NDDDB to report the presence of any listed species and for more detailed guidance. This determination is good for two years. Please re-submit a new NDDDB Request for Review if the scope of work changes or if work has not begun on this project by January 13, 2024.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey, cooperating units of DEEP, landowners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDDB should not be substitutes for on-site surveys necessary for a thorough environmental impact assessment. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the database as it becomes available.

Please contact me if you have further questions at (860) 424-3378, or karen.zyko@ct.gov . Thank you for consulting the Natural Diversity Database.

Sincerely,

A handwritten signature in blue ink, appearing to read "Karen Zyko".

Karen Zyko
Environmental Analyst

WILDLIFE IN CONNECTICUT

STATE SPECIES OF SPECIAL CONCERN

Eastern Box Turtle

Terrapene carolina carolina

Description

The eastern box turtle is probably the most familiar of the 8 species of turtles found in Connecticut's landscape. It is known for its high-domed carapace (top shell). The carapace has irregular yellow or orange blotches on a brown to black background that mimic sunlight dappling on the forest floor. The plastron (under shell) may be brown or black and may have an irregular pattern of cream or yellow. The length of the carapace usually ranges from 4.5 to 6.5 inches, but can measure up to 8 inches long. The shell is made up of a combination of scales and bones, and it includes the ribs and much of the backbone.

Each individual turtle has distinctive head markings. Males usually have red eyes and a concave plastron, while females have brown eyes and a flat plastron. Box turtles also have a horny beak, stout limbs, and feet that are webbed at the base. This turtle gets its name from its ability to completely withdraw into its shell, closing itself in with a hinged plastron. Box turtles are the only Connecticut turtle with this ability.

Range

Eastern box turtles are found throughout Connecticut, except at the highest elevations. They range from southeastern Maine to southeastern New York, west to central Illinois, and south to northern Florida.

Habitat and Diet

In Connecticut, this terrestrial turtle inhabits a variety of habitats, including woodlands, field edges, thickets, marshes, bogs, and stream banks. Typically, however, box turtles are found in well-drained forest bottomlands and open deciduous forests. They will use wetland areas at various times during the season. During the hottest part of a summer day, they will wander to find springs and seepages where they can burrow into the moist soil. Activity is restricted to mornings and evenings during summer, with little to no nighttime activity, except for egg-



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laying females. Box turtles have a limited home range where they spend their entire life, ranging from 0.5 to 10 acres (usually less than 2 acres).

Box turtles are omnivorous and will feed on a variety of food items, including earthworms, slugs, snails, insects, frogs, toads, small snakes, carrion, leaves, grass, berries, fruits, and fungi.

Life History

From October to April, box turtles hibernate by burrowing into loose soil, decaying vegetation, and mud. They tend to hibernate in woodlands, on the edge of woodlands, and sometimes near closed canopy wetlands in the forest. Box turtles may return to the same place to hibernate year after year. As soon as they come out of hibernation, box turtles begin feeding and searching for mates.

The breeding season begins in April and may continue through fall. Box turtles usually do not breed until they are about 10 years old. This late maturity is a result of their long lifespan, which can range up to 50 to even over 100 years of age. The females do not have to mate every year to lay eggs as they can store sperm for up

to 4 years. In mid-May to late June, the females will travel from a few feet to more than a mile within their home range to find a location to dig a nest and lay their eggs. The 3 to 8 eggs are covered with dirt and left to be warmed by the sun. During this vulnerable time, skunks, foxes, snakes, crows, and raccoons often raid nests. Sometimes, entire nests are destroyed. If the eggs survive, they will hatch in late summer to early fall (about 2 months after being laid). If they hatch in the fall, the young turtles may spend the winter in the nest and come out the following spring.

As soon as the young turtles hatch, they are on their own and receive no care from the adults. This is a dangerous time for young box turtles because they do not develop the hinge for closing into their shell until they are about 4 to 5 years old. Until then, they cannot entirely retreat into their shells. Raccoons, skunks, foxes, dogs, and some birds will prey on young turtles.

Conservation Concerns

The eastern box turtle was once common throughout the state, mostly in the central Connecticut lowlands. However, its distribution is now spotty, although where found, turtles may be locally abundant. Because of the population decline in Connecticut, the box turtle was added to the state's List of Endangered, Threatened, and Special Concern Species when it was revised in 1998. It is currently listed as a species of special concern. The box turtle also is protected from international trade by the 1994 CITES treaty. It is of conservation concern in all the states where it occurs at its northeastern range limit, which includes southern New England and southeastern New York.

Many states have laws that protect box turtles and prohibit their collection. In Connecticut, eastern box turtles **cannot** be collected from the wild (DEP regulations 26-66-14A). Another regulation (DEP regulations 26-55-3D) "grandfathers" those who have a **box turtle collected before 1998**. This regulation limits possession to a single turtle collected before 1998. These

regulations provide some protection for the turtles, but not enough to combat some of the even bigger threats these animals face. The main threats in Connecticut (and other states) are loss and fragmentation of habitat due to deforestation and spreading suburban development; vehicle strikes on the busy roads that bisect the landscape; and indiscriminate (and now illegal) collection of individuals for pets.

Loss of habitat is probably the greatest threat to turtles. Some turtles may be killed directly by construction activities, but many more are lost when important habitat areas for shelter, feeding, hibernation, or nesting are destroyed. As remaining habitat is fragmented into smaller pieces, turtle populations can become small and isolated.

Adult box turtles are relatively free from predators due to their unique shells. The shell of a box turtle is extremely hard. However, the shell is not hard enough to survive being run over by a vehicle. Roads bisecting turtle habitat can seriously deplete the local population. Most vehicle fatalities are pregnant females searching for a nest site.

How You Can Help

- *Leave turtles in the wild. They should never be kept as pets. Whether collected singly or for the pet trade, turtles that are removed from the wild are no longer able to be a reproducing member of a population. Every turtle removed reduces the ability of the population to maintain itself.*
- *Never release a captive turtle into the wild. It probably would not survive, may not be native to the area, and could introduce diseases to wild populations.*
- *Do not disturb turtles nesting in yards or gardens.*
- *As you drive, watch out for turtles crossing the road. Turtles found crossing roads in June and July are often pregnant females and they should be helped on their way and not collected. Without creating a traffic hazard or compromising safety, drivers are encouraged to avoid running over turtles that are crossing roads. Also, still keeping safety precautions in mind, you may elect to pick up turtles from the road and move them onto the side they are headed. Never relocate a turtle to another area that is far from where you found it.*
- *Learn more about turtles and their conservation concerns. Spread the word to others on how they can help Connecticut's box turtle population.*



State of Connecticut
Department of Environmental Protection
Bureau of Natural Resources
Wildlife Division
www.ct.gov/dep



The production of this Endangered and Threatened Species Fact Sheet is made possible by donations to the Connecticut Endangered Species/Wildlife Income Tax Checkoff Fund.

Attachment 2: Abutters Inquiry

Kristen Grillo

From: Irene Ropicki <irop87@hotmail.com>
Sent: Tuesday, January 18, 2022 10:09 AM
To: Kristen Grillo
Subject: Re: 1 Blachley Rd, Stamford, CT Fuel Cell Installation

EXTERNAL EMAIL

Good morning and thank you for the clarification!

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From: Kristen Grillo <Kristen.Grillo@bloomenergy.com>
Sent: Tuesday, January 18, 2022 9:53:59 AM
To: Irene Ropicki <irop87@hotmail.com>
Subject: RE: 1 Blachley Rd, Stamford, CT Fuel Cell Installation

Good morning Ms. Ropicki,

Thank you for reaching out about our Fuel Cell Energy installation at the NBC Universal building, located at 1 Blachley Road in Stamford.

The energy server installation will be within an existing paved area at the northwest corner of the main NBC Sports building, south of the parking garage, with connections to existing utilities within and adjacent to the main building. There will not be any expansion of the current area.

There is existing electricity that currently supplies power to the building, which is provided by Eversource. We are tying into existing electric utilities already on site, which allows us to connect to NBC's existing lines to independently produce their own renewable, reliable energy source. Since we are tied into the existing grid, that simply means that when the servers are over-producing power for the NBC site, it will be then exported back into the public grid, assisting it with cleaner, renewable energy.

I hope this answer your concerns. If you need any further information about the project, please don't hesitate to reach out.

Be safe and well,

Kristen Grillo
Senior Permitting Specialist

Bloomenergy™
East Coast | New York
(917) 803-4511
kristen.grillo@bloomenergy.com

From: Irene Ropicki <irop87@hotmail.com>
Sent: Monday, January 17, 2022 10:26 AM

To: Kristen Grillo <Kristen.Grillo@bloomenergy.com>
Subject: 1 Blachley Rd, Stamford, CT Fuel Cell Installation

EXTERNAL EMAIL

Good Morning,

I received your letter dated January 10th regarding the intent to construct and install a 1500-kilowatt fuel cell at NBC Universal.

The letter states it will replace a portion of the annual load and the excess will be exported to the electric grid. But this doesn't identify where on the site this is located, just that its at the office and studio complex. Is there any expansion of the current area?

Also, the excess electricity being exported to the electric grid; is there a current electric grid in place or is there construction to be included in this process. If so, where will it be located? Still within the studio complex or around the perimeter?

Thank you for clarifying the above.

Irene Ropicki
87 Orange St
Stamford, CT

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Exhibit 2: Revised



- Legend**
- Site
 - Enclosed Electrical Area
 - Abutting Property
 - Approximate Assessor Parcel Boundary
 - Project Area
 - Electrical Service
 - Water Service

Map Notes:
 Base Map Source: CTECO 2019 Aerial Photograph
 Map Scale: 1 inch = 250 feet
 Map Date: January 2022

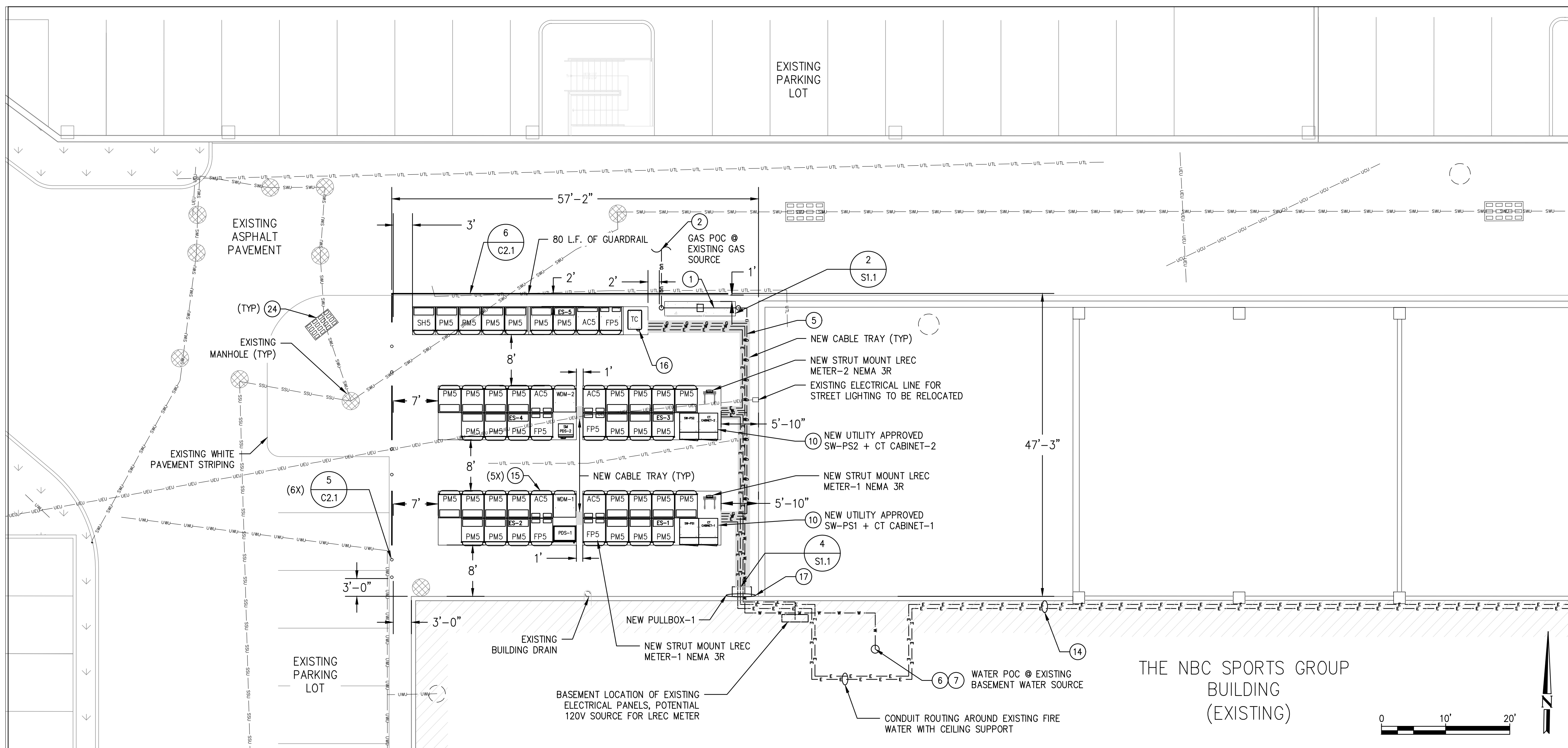


Exhibit 2 Site Vicinity

Proposed Bloom Energy Facility
 NBC Universal
 1 Blachley Road
 Stamford, Connecticut



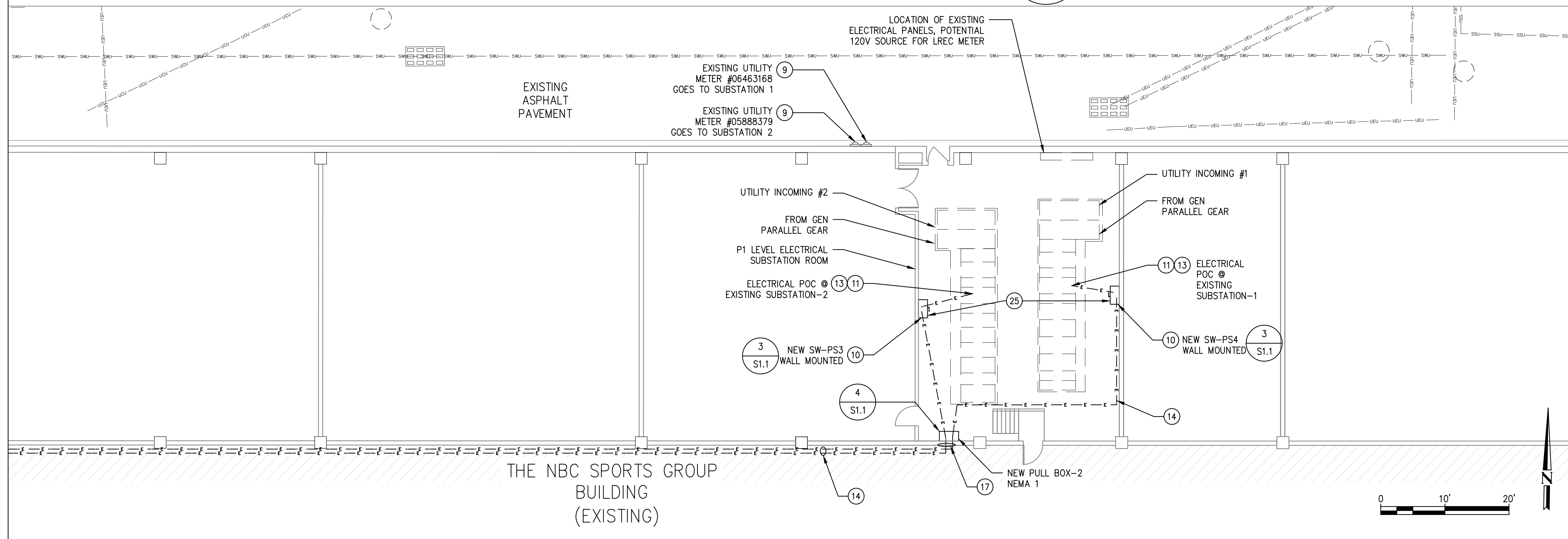
Attachment 3: Guardrail Site Plan Detail



DETAILED SITE PLAN

SCALE: 1" = 10'

1
C1.1



DETAILED SITE PLAN

SCALE: 1" = 10'

2
C1.1

GENERAL NOTES

- CLEAN AND PRIME ALL NEW WALL MOUNTED PIPING AND CONDUIT. PIPING AND CONDUIT SHALL BE PAINTED WITH EXTERIOR GRADE PAINT TO MATCH EXISTING.
- CONDUITS AND PIPES MOUNTED TO BUILDING WALL SHALL BE SUPPORTED AS PER LOCAL CODE, RUN AT HEIGHT ABOVE DOORWAYS, AND STAND OFF WALL TO AVOID EXISTING CONDUITS AND PIPES.
- SEE BLOOM ENERGY PRODUCT INSTALLATION DRAWINGS FOR UTILITY CONNECTIONS TO ANCILLARY EQUIPMENT AND ENERGY SERVER.
- ALL PULL BOXES AND VAULTS REQUIRED ARE NOT SHOWN. CONTRACTOR SHALL PROVIDE PULL BOX OR VAULT FOR CONDUIT RUNS WITH MORE THAN 360-DEG BENDS OR OTHERWISE REQUIRED PER CABLE PULLING TENSION OR SIDEWALL PRESSURE LIMITATIONS. CONTRACTOR SHALL SIZE PULL BOX OR VAULT IN COMPLIANCE WITH NEC REQUIREMENTS.
- ALL EXISTING FEATURES SHALL REMAIN AND PROTECTED THROUGHOUT THE CONSTRUCTION, UNLESS OTHERWISE NOTED ON PLAN.
- ALL THE ABOVE FROST LINE SECTIONS OF WATER PIPES SHALL HAVE POWERED HEAT TRACE AND INSULATION, ENSURE UNDERGROUND WATER DEPTHS ARE BELOW FROST LINE.

REFERENCE SHEET NOTES

- NEW UTILITY PROVIDED AND INSTALLED GAS METER & REGULATOR ASSEMBLY WITH SHUT-OFF VALVE. CONTRACTOR SHALL PROVIDE PAD PER DETAILS IF REQUIRED BY UTILITY COMPANY. COORDINATE ALL CONNECTIONS WITH GAS UTILITY.
- NEW UNDERGROUND GAS SERVICE TAP BY UTILITY COMPANY. COORDINATE WITH GAS UTILITY. CONTRACTOR SHALL PERFORM COMPACTION AND MATCH EXISTING SURFACE AND GRADE. CONTRACTOR SHALL COORDINATE GAS PIPE SIZING AND INSTALLATION REQUIREMENTS WITH UTILITY.
- NEW GAS PIPE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENTS.
- TAP EXISTING WATER LINE AT NEAREST ACCESSIBLE LOCATION IN BUILDING AS SHOWN WITH A LOCAL SHUT-OFF VALVE. REFER TO DOMESTIC WATER CONNECTION DETAIL FOR ADDITIONAL REQUIREMENTS.
- NEW WATER PIPE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO WATER RISER CONNECTION DETAIL FOR ADDITIONAL REQUIREMENTS.
- EXISTING UTILITY ELECTRIC METER. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- NEW BLOOM ENERGY FURNISHED, CONTRACTOR INSTALLED, DISCONNECT SWITCH. MOUNT TO PAD/WALL PER MANUFACTURER AND UTILITY SPECIFICATIONS.
- CONTRACTOR SHALL TERMINATE ELECTRIC FEEDER AS SHOWN. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- NEW ELECTRICAL FEEDER SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- MOUNT NEW CONDUIT/PIPE TO EXTERIOR/INTERIOR WALL. COORDINATE EXACT ROUTING WITH CUSTOMER REPRESENTATIVE IN THE FIELD. REFER TO WALL MOUNTING DETAIL FOR ADDITIONAL REQUIREMENTS.
- BLOOM FURNISHED, CONTRACTOR INSTALLED SKID-MOUNTED BLOOM ENERGY SERVER.
- FACTORY WIRED BLOOM ENERGY SERVER EMERGENCY POWER-OFF SWITCH (EPO).
- CONTRACTOR SHALL CORE CONDUIT AND/OR PIPE THROUGH WALL. SCAN WALL PRIOR TO CORING TO AVOID COLLATERAL DAMAGE TO EXISTING PLUMBING AND WIRING. REFER TO WALL PENETRATION DETAIL FOR ADDITIONAL REQUIREMENTS.
- CONTRACTOR SHALL TRANSITION ALL ABOVEGROUND NEW LINES TO UNDERGROUND TOWARD ANCILLARY EQUIPMENT. ABOVE GROUND UTILITIES SHALL BE PROTECTED AS NECESSARY, THEN ROUTED UNDERGROUND TO EQUIPMENT STUB-UP LOCATIONS PER MECHANICAL DETAIL.
- PROVIDE "DANDY SACK" OR EQUAL WITH OUTFLOW PORTS AT STORM DRAIN INLET. REFER TO EROSION CONTROL DETAIL FOR ADDITIONAL REQUIREMENTS.
- MINIMUM WORKING SPACE CLEARANCE OF 4' TO BE MAINTAINED IN FRONT OF SW-PS3 and SW-PS4.

EXISTING UTILITY NOTE:

THE LOCATION OF EXISTING UTILITIES IS SHOWN FOR THE CONTRACTOR'S REFERENCE. EXACT LOCATION, DEPTH AND SIZE OF ALL EXISTING UTILITIES IS NOT KNOWN. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES NOT SHOWN ON THESE DRAWINGS. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING UNDERGROUND UTILITIES AND PROTECT THE EXISTING UNDERGROUND UTILITIES FROM DAMAGE WHEN CROSSING WITH NEW UNDERGROUND UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY DAMAGED LINES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY FIELD CONDITIONS ENCOUNTERED DIFFER FROM THOSE REPRESENTED HEREON. SUCH CONDITIONS COULD RENDER THE DESIGN HEREON INAPPROPRIATE AND MAY REQUIRE ADJUSTMENTS TO AVOID CONFLICTS.

4353 N. FIRST STREET
SAN JOSE, CA 95134

PROPRIETARY AND CONFIDENTIAL

BLOOM ENERGY CORPORATION ALL RIGHTS RESERVED. THIS DOCUMENT IS FOR REFERENCE ONLY AND MAY NOT BE USED WITHOUT THE WRITTEN PERMISSION OF BLOOM ENERGY. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT PERMISSION OF BLOOM ENERGY IS PROHIBITED.

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ENGINEER OF RECORD
CARSON TURNER, P.E.
LICENSE # 22700

CUSTOMER SITE

NBC UNIVERSAL
1 BLACHLEY ROAD,
STAMFORD, CT 06902



REVISION HISTORY

REV	REVISION ISSUE	DATE
-	INITIAL RELEASE	12/15/2021

DESIGNED BY KATE TAYLOR	REVIEWED BY CARSON TURNER
DRAWN BY THARA SRINIVASACHARI	APPROVED BY CARSON TURNER

SHEET TITLE

DETAILED
SITE PLAN

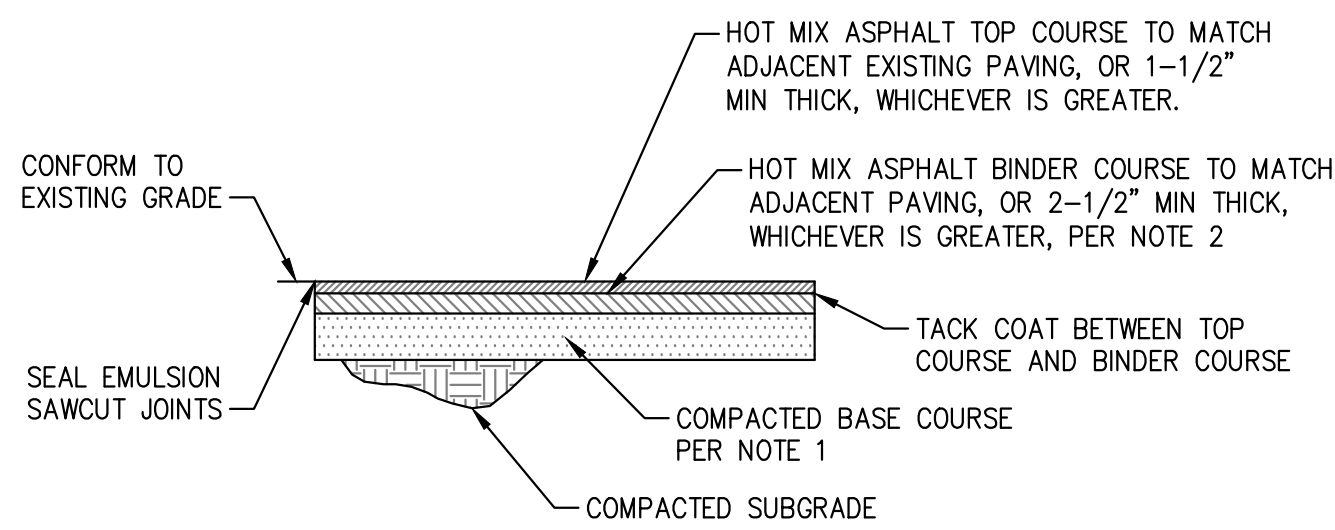
DRAWING NUMBER

C1.1

BLOOM DOCUMENT

DOC-1014147

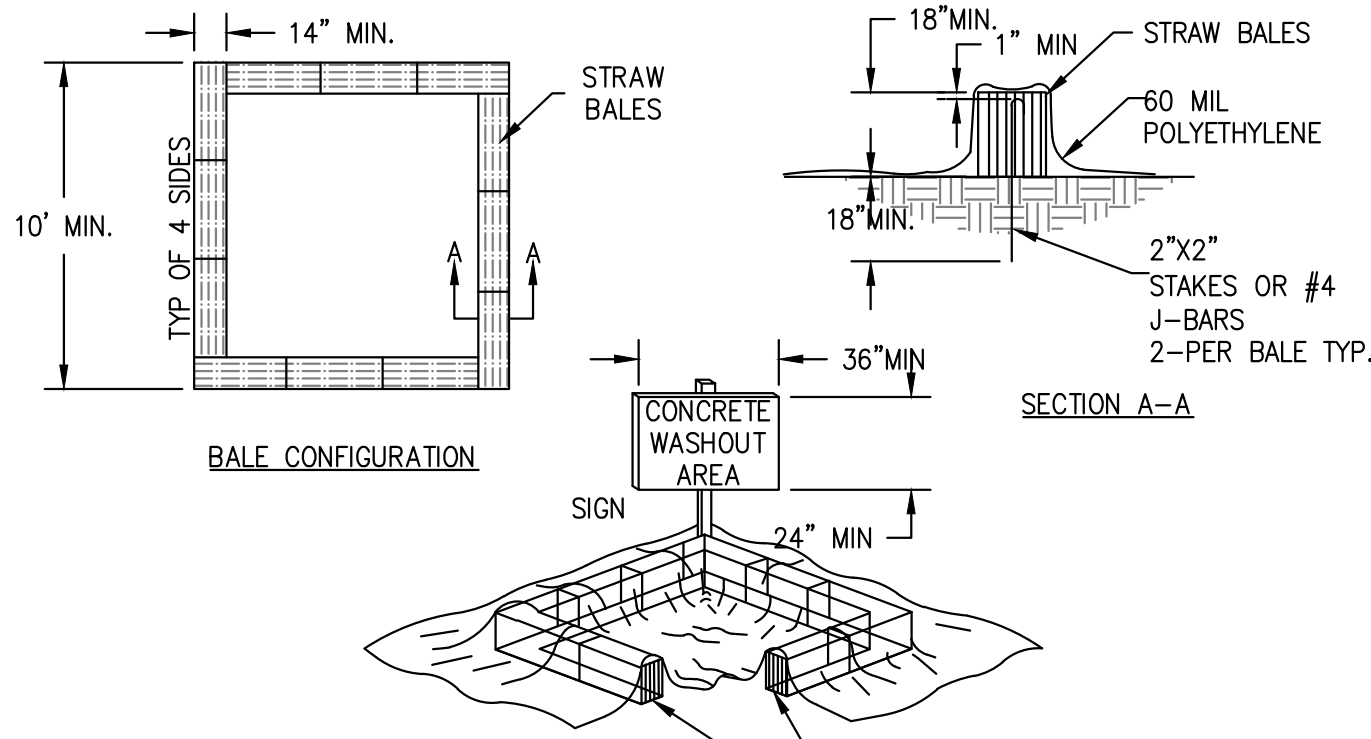
THIS DRAWING IS 24" X 36" AT FULL SIZE
SITE ID: NBC003.0 SHEET 04 OF 13



- DETAIL NOTES:**
1. BASE COURSE SHALL BE CLASS 2 AGGREGATE BASE (3/4" MAX) COMPACTED TO 95% RELATIVE COMPACTION. THICKNESS SHALL MATCH EXISTING THICKNESS OR 6", WHICHEVER IS GREATER.
 2. ASPHALT BINDER COURSE IN ACCORDANCE WITH CURRENT APPLICABLE NATIONAL, STATE AND LOCAL CODES.

ASPHALT RESTORATION

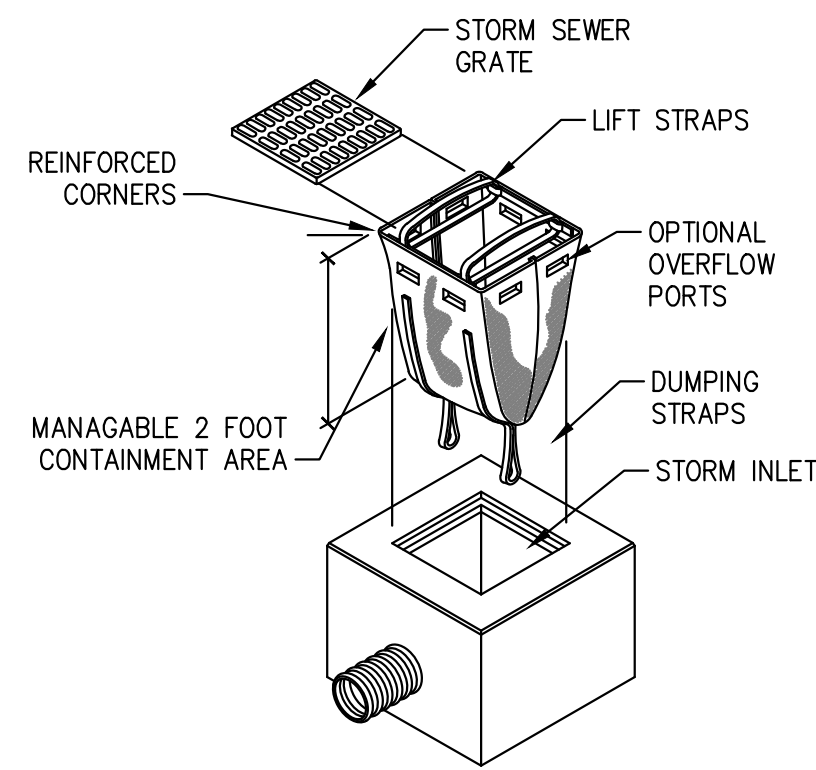
SCALE: NTS



- DETAIL NOTES:**
1. FACE SIGN TOWARDS NEAREST STREET OR ACCESS POINT.
 2. CONCRETE WASHOUT SHALL BE LOCATED BEHIND THE CURB AND 50 FT. MINIMUM FROM DRAINAGE INLETS OR WATERCOURSES
- THIS SECTION REMOVED FOR GRAPHICAL REPRESENTATION ONLY. STRAW BALE PERIMETER SHALL BE CONTINUOUS.

CONCRETE WASHOUT

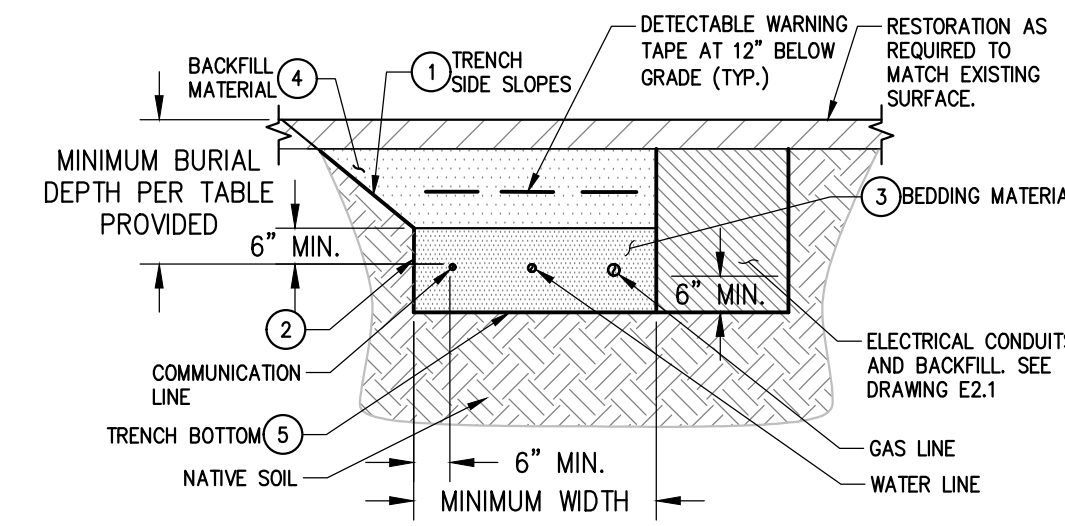
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- DETAIL NOTES:**
1. THE SPECIFIED INLET PROTECTION CAN BE SUPPLIED IN A VARIETY OF SIZES. CONTRACTOR TO SELECT THE APPROPRIATE DRAINAGE INLET PROTECTION AS REQUIRED.

STORM DRAIN PROTECTION

SCALE: NTS



UTILITY	MINIMUM BURIAL DEPTH	MINIMUM HORIZONTAL DISTANCE TO LIKE UTILITY	MINIMUM HORIZONTAL DISTANCE TO DIFFERING UTILITY	MINIMUM VERTICAL DISTANCE TO LIKE UTILITY	VERTICAL DISTANCE TO DIFFERING UTILITY
COMMUNICATION	24"	6"	12"	3"	12"
GAS	24"	6"	12"	6"	12"
WATER	54"	6"	12"	6"	12"

UTILITY TRENCH EXCAVATION SPACING & BACKFILL DETAIL

SCALE: NTS

DETAIL NOTES

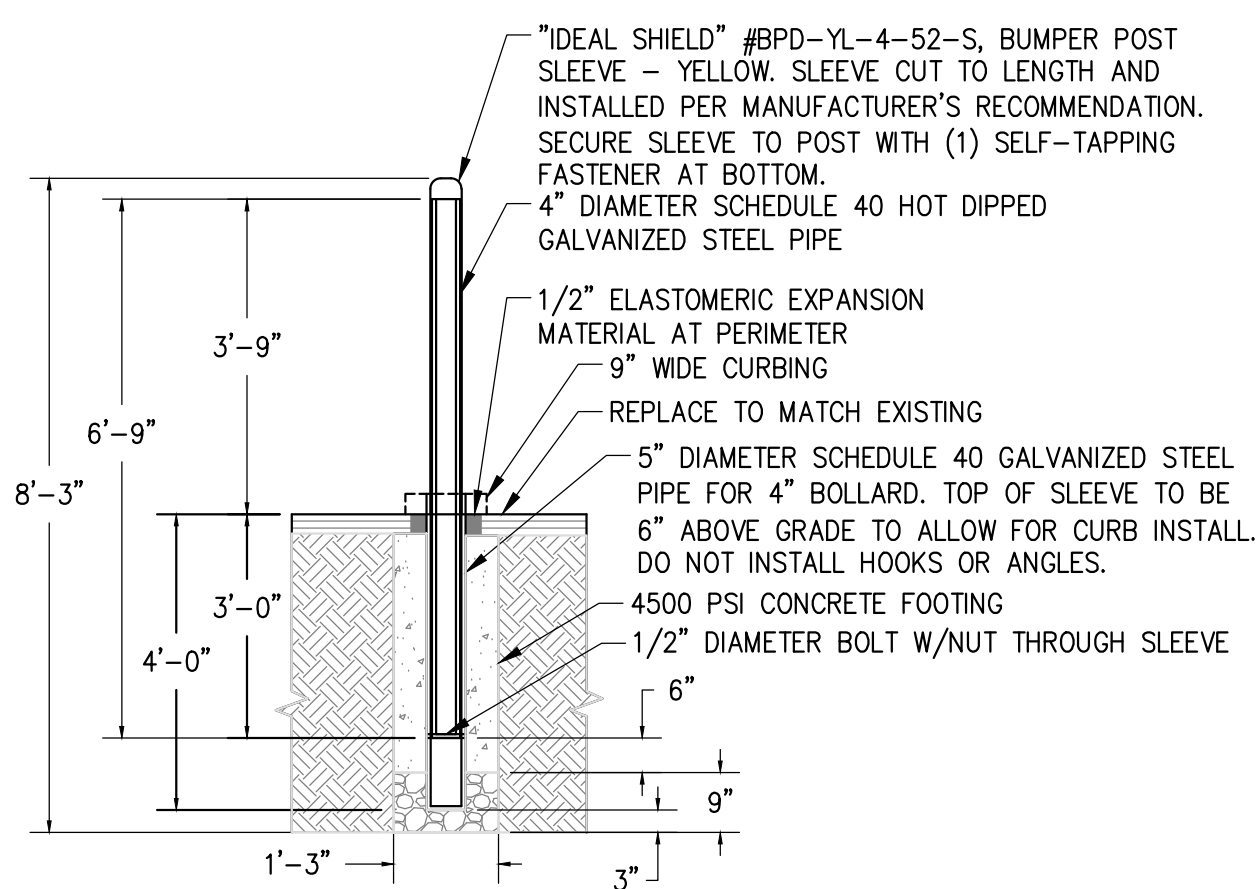
1. CONTRACTOR SHALL HIRE A THIRD PARTY SOILS INSPECTION AND TESTING AGENCY TO ASSURE COMPLIANCE OF MATERIALS AND PLACEMENT PROCEDURES WITH DESIGN DRAWINGS, SPECIFICATIONS, AND LOCAL CODES. WORK SHALL INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:
 - PHOTOGRAPH EXCAVATION BOTTOM
 - VERIFY SOIL SUITABILITY
 - VERIFY AND REPORT COMPACTION
 - SUBMIT INSPECTION REPORTS DATED AND SIGNED BY TESTING AGENCY
2. TESTING SERVICE DOCUMENTATION SHALL INCLUDE THE FOLLOWING:
 - DAILY RECORDS AND REPORT
 - TESTING RECORDS AND DATA SHEETS
 - PHOTOGRAPHIC RECORDS
 - FINAL REPORT
3. ALL RECORDS SHALL AT A MINIMUM BEAR THE PROJECT NAME, LOCATION, DATE, WRITTEN DESCRIPTION OF VISUAL OBSERVATIONS, AND SIGNATURE OF PREPARED OR DESIGNATED AUTHORITY.
4. ANY DEVIATION FROM HORIZONTAL OR VERTICAL UTILITY SEPARATION DISTANCES TO ACCOMMODATE FIELD CONDITIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO BLOOM ENERGY FOR APPROVAL PRIOR TO UTILITY PLACEMENT.

DETAIL REFERENCE NOTES

- ① TRENCH SHALL BE EXCAVATED AND PROTECTED PER OSHA STANDARD 1926 SUBPART P. OPEN TRENCHES SHALL NOT EXCEED OSHA MAXIMUM SIDE SLOPES. CONTRACTOR TO SHORE AND PROTECT ALL VERTICAL EXCAVATIONS AS REQUIRED BY OSHA. TRENCH WALLS SHALL BE VERTICAL FROM BOTTOM OF EXCAVATION TO TOP OF PIPE OR CONDUIT.
- ② TRENCH WALLS SHALL BE VERTICAL FROM BOTTOM OF EXCAVATION TO TOP OF PIPE OR CONDUIT BACKFILL.
- ③ BEDDING MATERIALS SHALL BE PLACED IN 6" MAXIMUM LIFTS AND MATCH ADJACENT DUCT BANK BEDDING MATERIALS WHERE APPLICABLE. ACCEPTABLE BEDDING GRADATIONS ARE:
 - a. 3/4" MAXIMUM AGGREGATE BASE.
 - b. ASTM C-33-FINE CONCRETE AGGREGATE (WELL GRADED SAND).
 - c. ASTM C-33-GRADATION NO. 67 OR NO. 7.
 - d. GRADATIONS SIMILAR TO WELL GRADED FINE ROAD BASE MATERIAL, ASTM D-1241 GRADATION C AND D.
- ④ BACKFILL MATERIALS SHALL BE 3/4" MAX AGGREGATE BASE MATERIAL, ASTM C33 SAND, OR NATIVE SOIL IF APPROVED BY GEOTECHNICAL ENGINEER, AS NOTED PLACE BACKFILL IN 6" MAX. LIFTS AND TO BE COMPACTED TO 95% RELATIVE COMPACTION AT ± 2% OPTIMAL MOISTURE CONTENT PER ASTM D1557. SAND LAYER BELOW CONDUIT SHALL BE A MINIMUM DEPTH OF 3".
- ⑤ IF THE BOTTOM OF THE TRENCH IS SOFT AND COMPACTION CANNOT BE ACHIEVED, CONTRACTOR TO CONTACT GEOTECHNICAL ENGINEER FOR SUBGRADE PREPARATION RECOMMENDATIONS.

BOLLARD - REMOVABLE

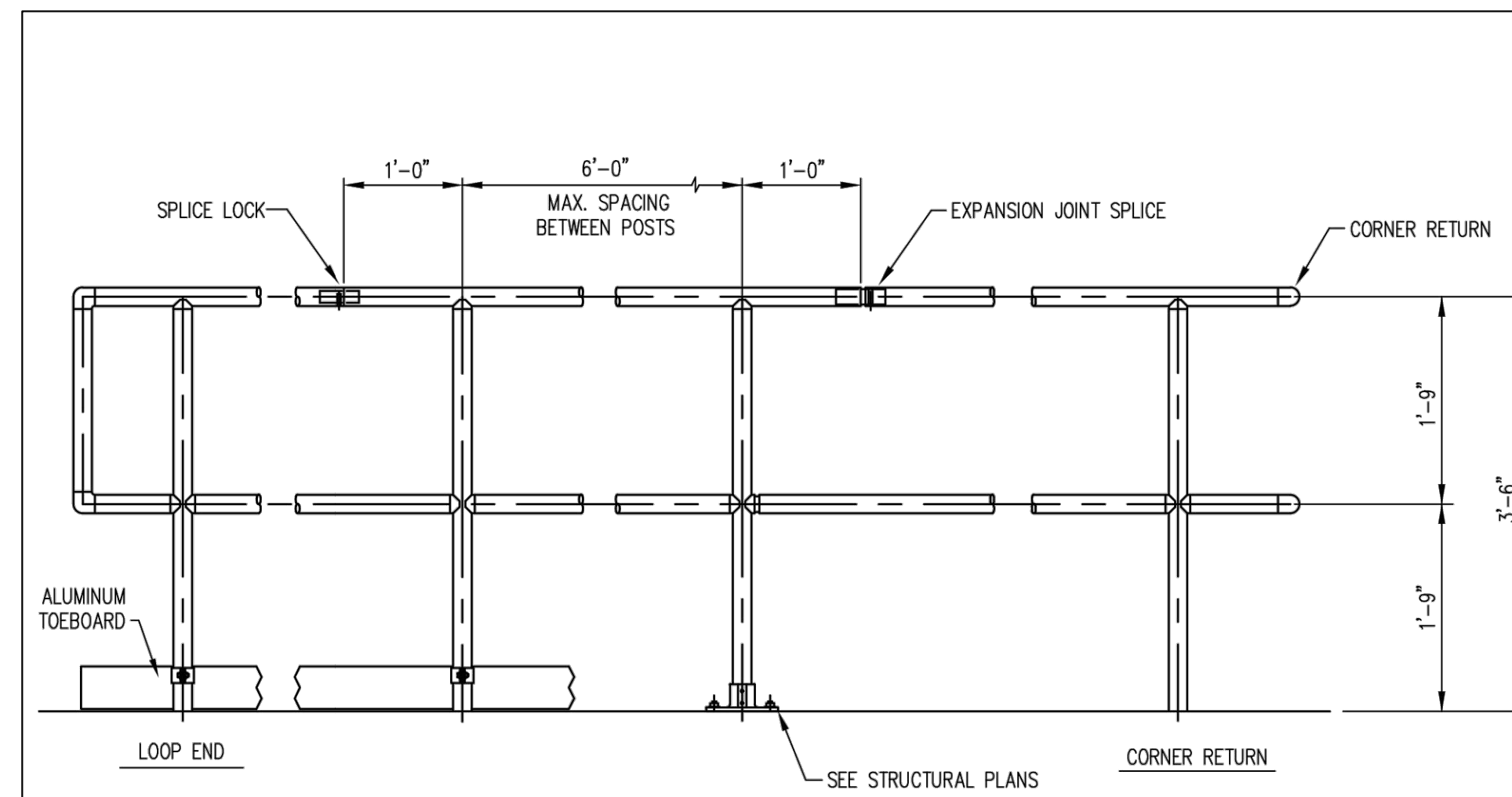
SCALE: NTS



- DETAIL NOTE:**
1. CONCRETE FOUNDATIONS ARE MINIMUM REQUIREMENTS. LOCAL BUILDING CODES OR FROST LINE MAY REQUIRE GREATER DEPTH.

BOLLARD - REMOVABLE

SCALE: NTS



NOTES:

1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ENGINEER TO REVIEW PRIOR TO CONSTRUCTION.
 2. REFER TO STRUCTURAL PLANS FOR WALL ANCHORING DESIGN.
- OSHA SUGGESTED DESIGN SPECIFICATIONS:**
1. RAILING SHALL BE SHOP ASSEMBLED IN LENGTHS NOT TO EXCEED 24 FEET FOR FIELD ERECTION.
 2. RAILINGS SHALL BE 1 1/2" SCHEDULE 40 ALUMINUM PIPE ALLOY 6105-T5, ASTM-B-429 OR ASTM-B-221. POSTS SHALL BE 1 1/2" SCHEDULE 40 ALUMINUM PIPE OF THE SAME ALLOY. POST SPACING SHALL BE A MAXIMUM OF 6'-0".
 3. POSTS SHALL NOT INTERRUPT THE CONTINUATION OF THE TOP RAIL AT ANY POINT ALONG THE RAILING, INCLUDING CORNERS AND END TERMINATIONS (OSHA 1910.23). THE TOP SURFACE OF THE TOP RAILING SHALL BE SMOOTH AND SHALL NOT BE INTERRUPTED BY PROJECTED FITTINGS.
 4. TOE PLATE SHALL CONFORM TO OSHA STANDARDS. TOE PLATE SHALL BE A MINIMUM OF 4" HIGH AND SHALL BE AN EXTRUSION THAT ATTACHES TO THE POSTS WITH CLAMPS THAT WILL ALLOW FOR EXPANSION AND CONTRACTION BETWEEN POSTS. TOE PLATES SHALL BE SET 1/4" ABOVE THE WALKING SURFACE. TOE PLATES SHALL BE PROVIDED ON HANDRAILS AS REQUIRED BY OSHA AND/OR AS SHOWN ON DRAWINGS. TOE PLATES SHALL BE SHIPPED LOOSE IN STOCK LENGTHS FOR FIELD INSTALLATION.

GUARDRAIL DETAIL

SCALE: NTS

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ENGINEER OF RECORD
CARSON TURNER, P.E.
LICENSE # 22700

CUSTOMER SITE

NBC UNIVERSAL
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STAMFORD, CT 06902



REVISION HISTORY

REV	REVISION ISSUE	DATE
-	INITIAL RELEASE	12/15/2021

DESIGNED BY KATE TAYLOR	REVIEWED BY CARSON TURNER
DRAWN BY THARA SRINIVASACHARI	APPROVED BY CARSON TURNER

SHEET TITLE

DETAILS
SHEET 1

DRAWING NUMBER
C2.1

BLOOM DOCUMENT
DOC-1014147

THIS DRAWING IS 24" X 36" AT FULL SIZE
SITE ID: NBC003.0 SHEET 05 OF 13

Attachment 4: Fuel Cell Facility Location Photos

