

NORTHPOINT

Cambridge, Massachusetts

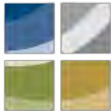
Application for Design Review – Parcel A Pump Station



Prepared for:
DW NP Property, LLC
c/o DivcoWest
One Kendall Square, Ste. B3201
Cambridge, MA 02139



In collaboration with:
The HYM Investment Group, LLC
One Congress Street
10th Floor, Suite 101
Boston, MA 02114



BEALS + THOMAS

Prepared by:
Beals and Thomas, Inc.
Reservoir Corporate Center
144 Turnpike Road
Southborough, MA 01772

In collaboration with:
Prellwitz Chilinski Associates
Galluccio & Watson, LLP
Goulston & Storrs, PC
Michael Van Valkenburgh Associates, Inc.

Submitted in Compliance with the City of Cambridge Zoning Ordinance and M.G.L. c.40A

June 6, 2017



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www.bealsandthomas.com
Regional Office: Plymouth, MA

June 12, 2017

Mr. H. Theodore Cohen, Chair
Cambridge Planning Board
344 Broadway
Cambridge, MA 02139

Via: Hand Delivery

Reference: North Point Parcel A Pump Station Design Review
PB #179
Cambridge, Massachusetts
B+T Project No. 2084.24

Dear Chairman Cohen and Members of the Board:

On behalf of the Applicant, DW NP Property, LLC (an affiliate of DivcoWest), Beals and Thomas, Inc. respectfully submits this Design Review Application for Parcel A Pump Station (the Site), which is part of the larger NorthPoint development. The proposed development is the construction of a pump station structure. The proposed pump station on Parcel A is located entirely within Cambridge.

As shown on the master plan included as part of this Application, the Site is bounded by the overall project boundary to the north, Park 1 to the west, West Boulevard to the south, and Parcel B to the east. The attached application is submitted in accordance with Special Permit #179 (through Major Amendment #6), Condition 10, and the City of Cambridge filing requirements for Large Project Review, pursuant to Section 19.43 of the City of Cambridge Zoning Ordinance (the Ordinance).

The Site is currently undeveloped vacant land. It is one of twenty (20) building parcels in the NorthPoint mixed-use development. To date, condominium buildings on Lot S and Lot T, a rental residential building on Lot N, North Point Common, Child Street Park and related infrastructure and other public amenities (including the Brian P. Murphy Memorial Staircase) have been constructed in NorthPoint. In addition, Parcel JK has gone through Design Review in Cambridge and Somerville, and building permit applications are pending in both cities. The surrounding roadway network was approved by the Planning Board on September 2, 2016, as part of Major Amendment #6, and is currently undergoing construction preparation.

The Parcel A Pump Station building will be approximately nine feet, six inches (9' 6") in height and contain a control building, generator, transformer, and 4kV switch. The approximate dimensions of the building are 40' 2.5" by 29' 3.25". The control building, which will be hidden from view will be composed of precast concrete and will be approximately 20 feet by 12 feet.

The proposed pump station on Parcel A will not ultimately be the only development proposed on the lot. The Site will be temporarily utilized by the MBTA for parking associated with Lechmere Station. Additionally, a permanent structure will be proposed and will be submitted to the Cambridge Planning Board for design review prior to construction. The pump station proposed for Parcel A will be owned and maintained by the City of Cambridge once constructed. As a result of comments made during the design process by the City's Department of Public Works, the pump station was redesigned to be located aboveground, where it was previously designed to be completely belowground.

As part of the attached application, we have submitted fifteen (15) copies, as well as a flash drive containing an electronic version, of the following materials for review by the Cambridge Planning Board:

- Site Plans;
- Cross-sections of Floor Plans;
- Architectural Elevations/Renderings;
- Wind Study;
- Shadow Study;
- Acoustical Report and Noise Mitigation Narrative;
- Compliance Checklists – Zoning Ordinance and NorthPoint Design Guidelines;
- Materials showing cross-sections of abutting streets;
- Building and site model, at a scale of one inch to 40 feet, inserted into a larger model encompassing the entire Development Parcel; and
- Subdivision Plan, previously approved by the Cambridge Planning Board.

Waivers

We respectfully request waivers from the Planning Board to omit the following information from the design review submission, based on the nature of the building proposed:

1. Preliminary Signage Plan;
2. LEED© compliance checklist; and
3. Exterior lighting plan depicting site, façade, and rooftop lighting.

There are no changes proposed to the approved uses or massing on the Site nor are there any changes to the layout of roads serving the Site from that shown on the approved 40-scale Roadway Network Schematic Plan.

Mr. H. Theodore Cohen, Chair
Cambridge Planning Board
June 12, 2017
Page 3

The NorthPoint team is excited to meet with the Planning Board to review and discuss the proposed project. Thank you for your consideration of this application.

Very truly yours,

BEALS AND THOMAS, INC.



John P. Gelcich, AICP
Senior Planner

JPG/---/208402LT081



 **DIVCOWEST**[™]
Real Estate Investments

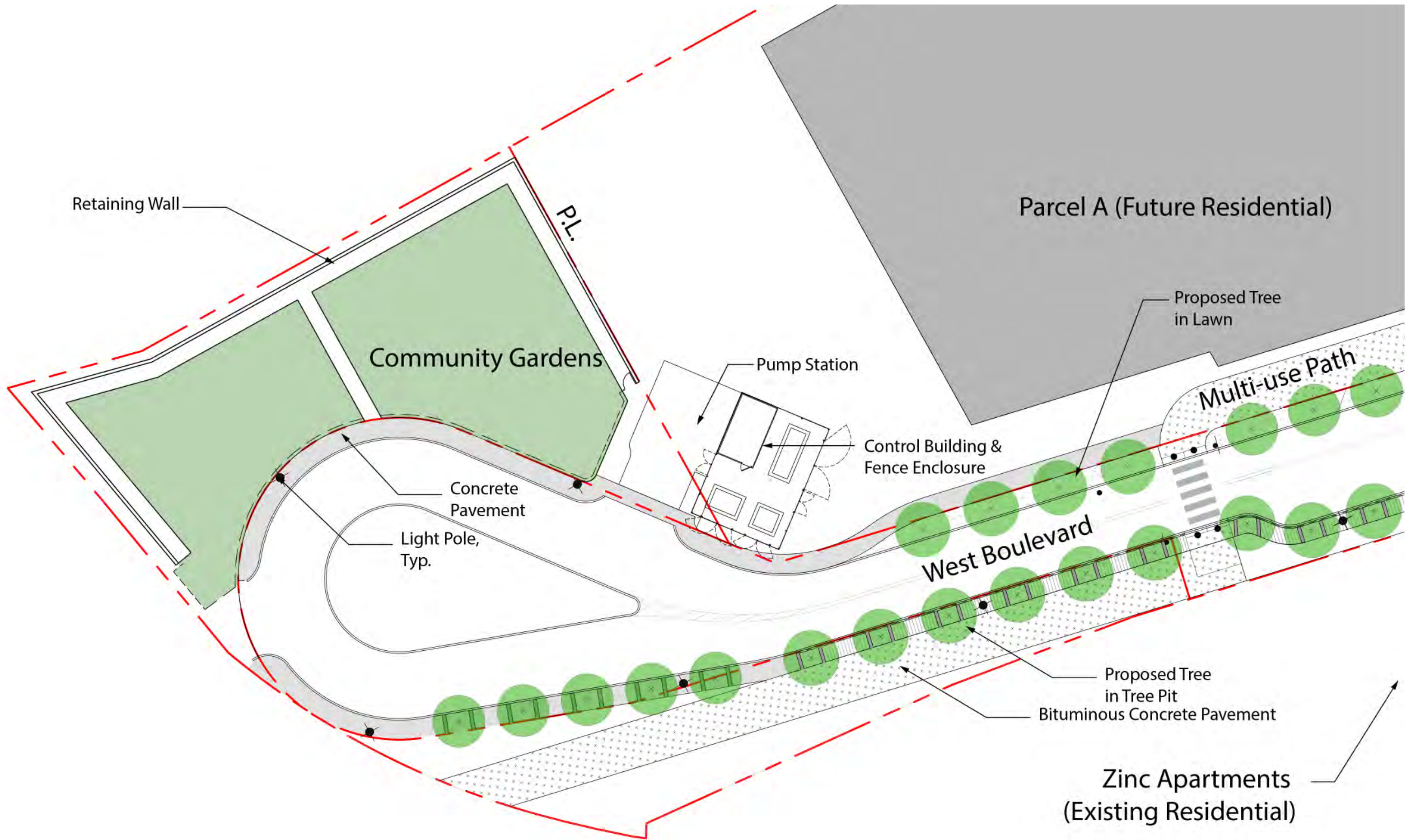
PCA
PRELLWITZ CHILINSKI ASSOCIATES
Architecture Planning Interiors

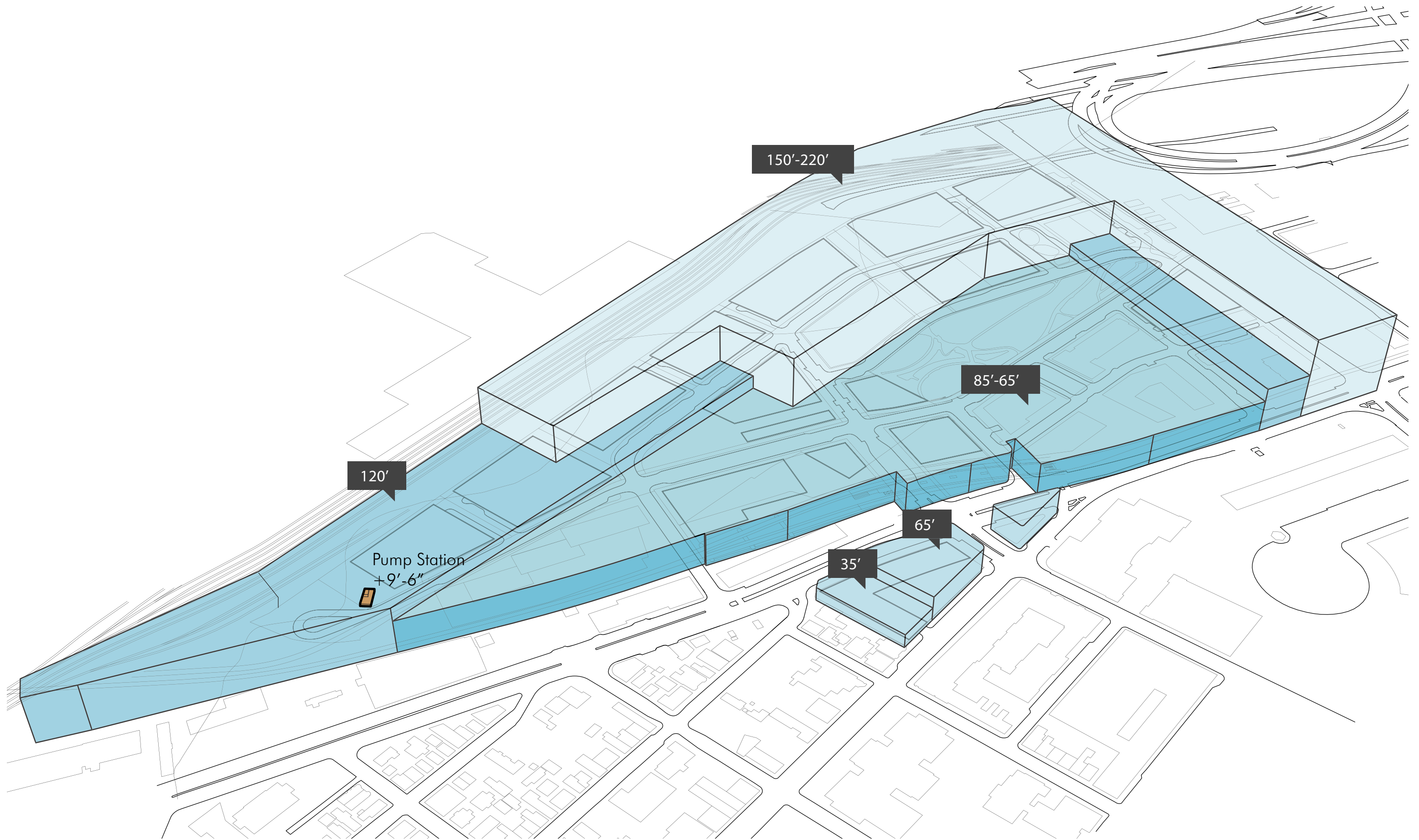
**MICHAEL
VAN
VALKENBURGH
ASSOCIATES
INC**

NORTHPOINT - Pump Station Cambridge, MA

061217









Transformer & Metering Cabinet



Generator



Pump Station Control Building



Pump Station Control Building



Garden Shed Precedent



Wheeler Park, Cambridge MA



Wood Fence Precedent



Wood Fence Precedent

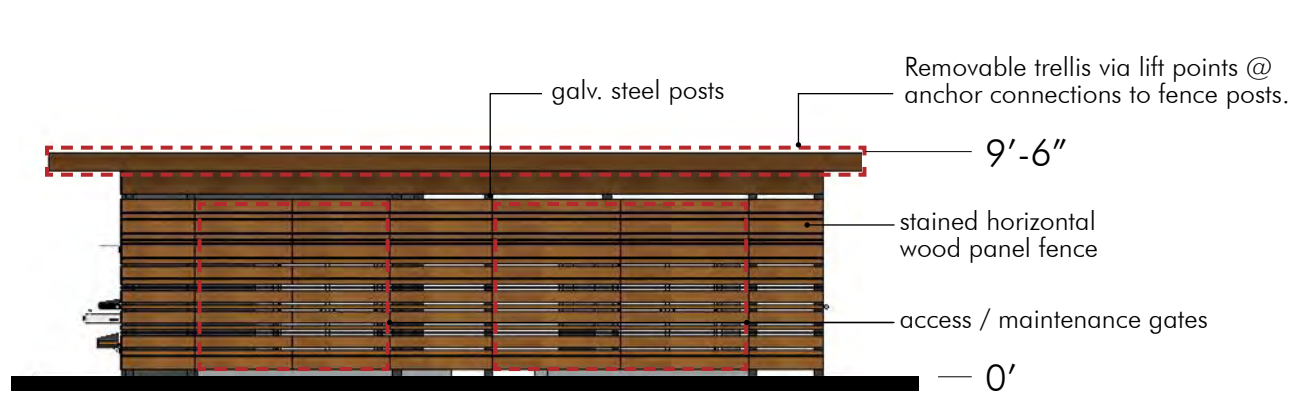


----- Northpoint Property Line ● Site

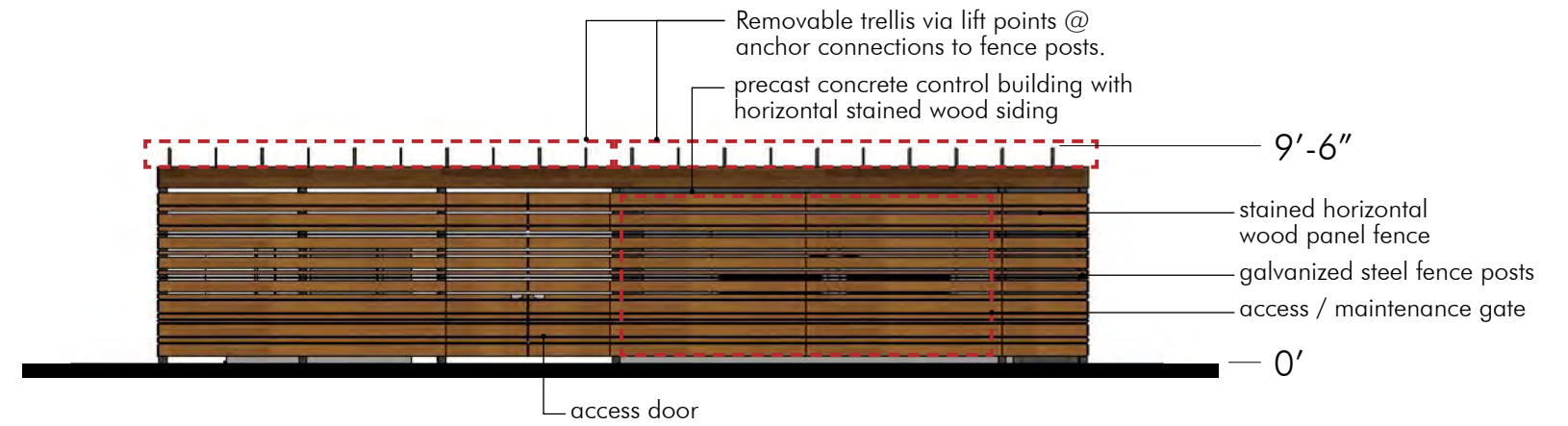




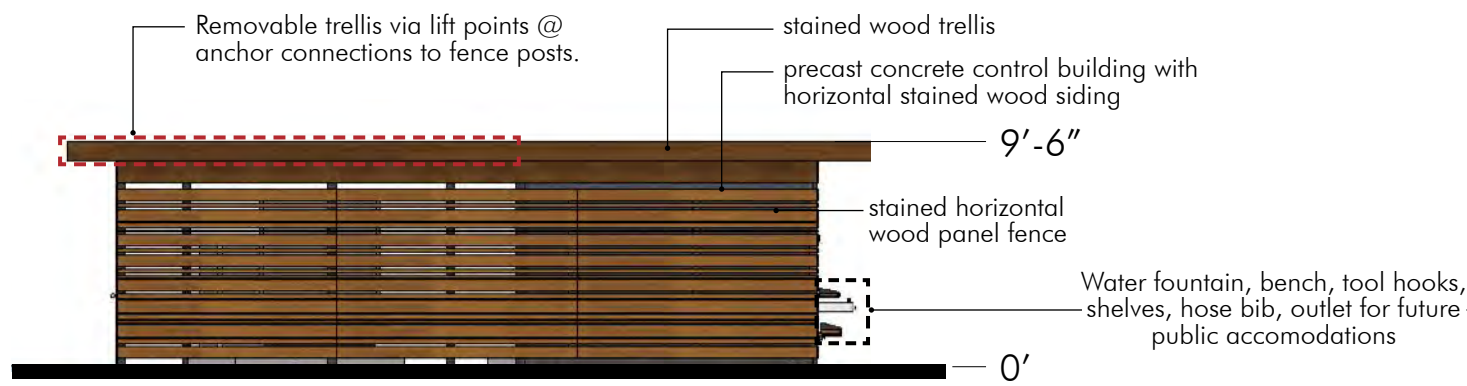




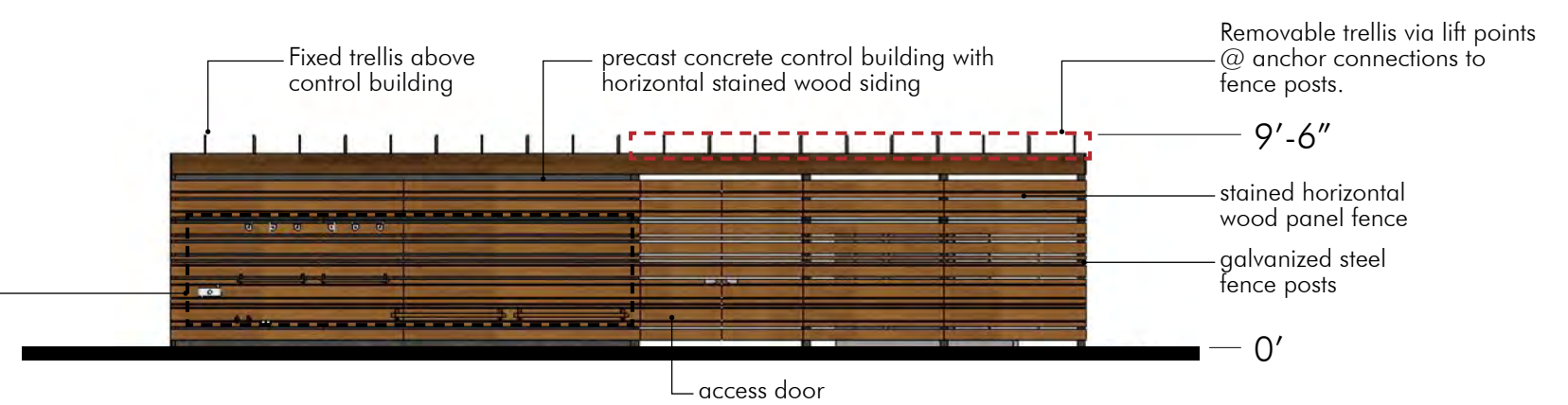
South Elevation



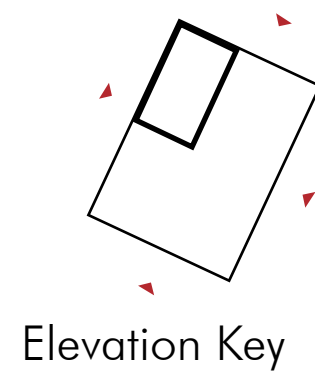
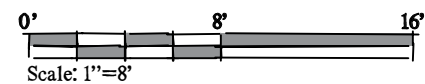
East Elevation

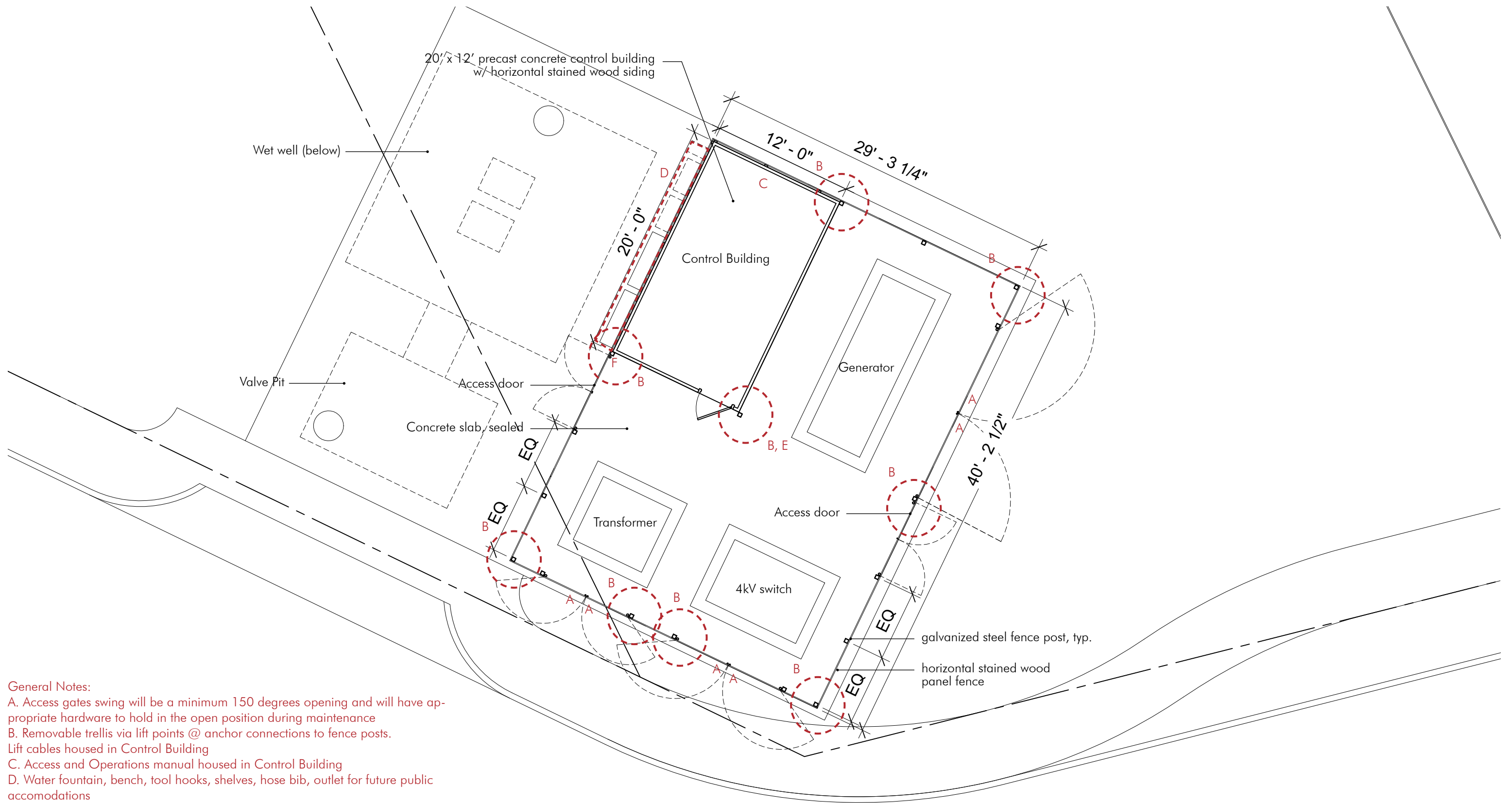


North Elevation

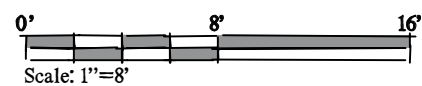


West Elevation

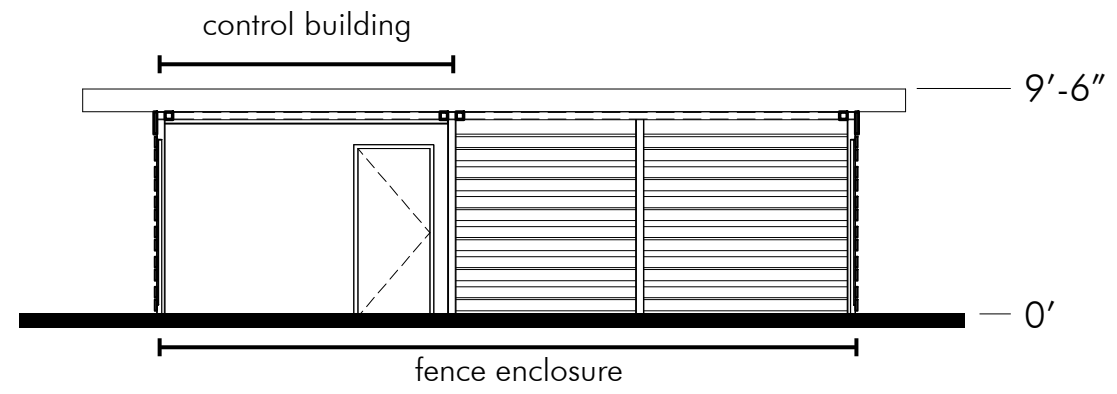




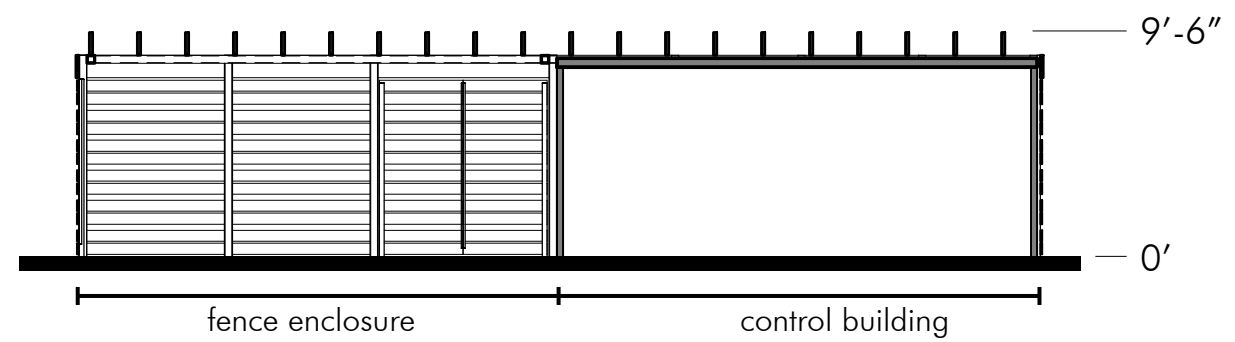
- General Notes:
- A. Access gates swing will be a minimum 150 degrees opening and will have appropriate hardware to hold in the open position during maintenance
 - B. Removable trellis via lift points @ anchor connections to fence posts. Lift cables housed in Control Building
 - C. Access and Operations manual housed in Control Building
 - D. Water fountain, bench, tool hooks, shelves, hose bib, outlet for future public accommodations
 - E. Light Fixture - exterior rated, wall mounted
 - F. Light Switch - exterior rated, wall mounted



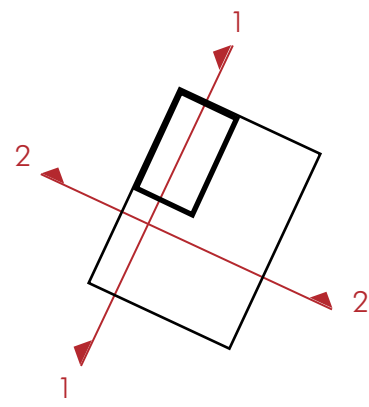
NORTHPOINT - Pump Station
Ground Floor Plan



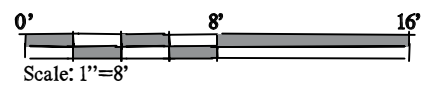
Section 2

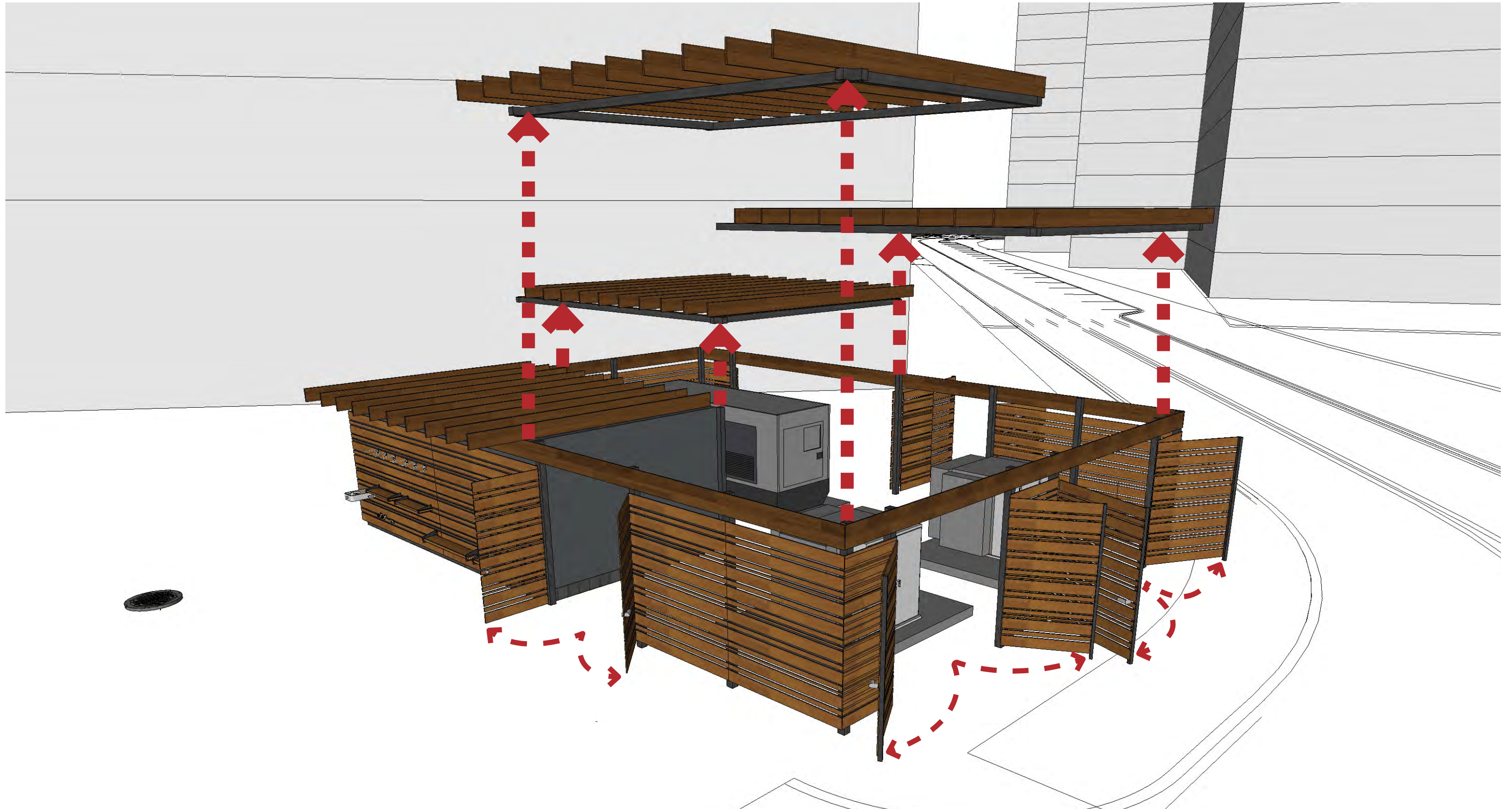


Section 1



Section Key





Portions of fence on east, west and south elevation are fully operable to allow for equipment maintenance. Section of trellis over equipment can also be removed.



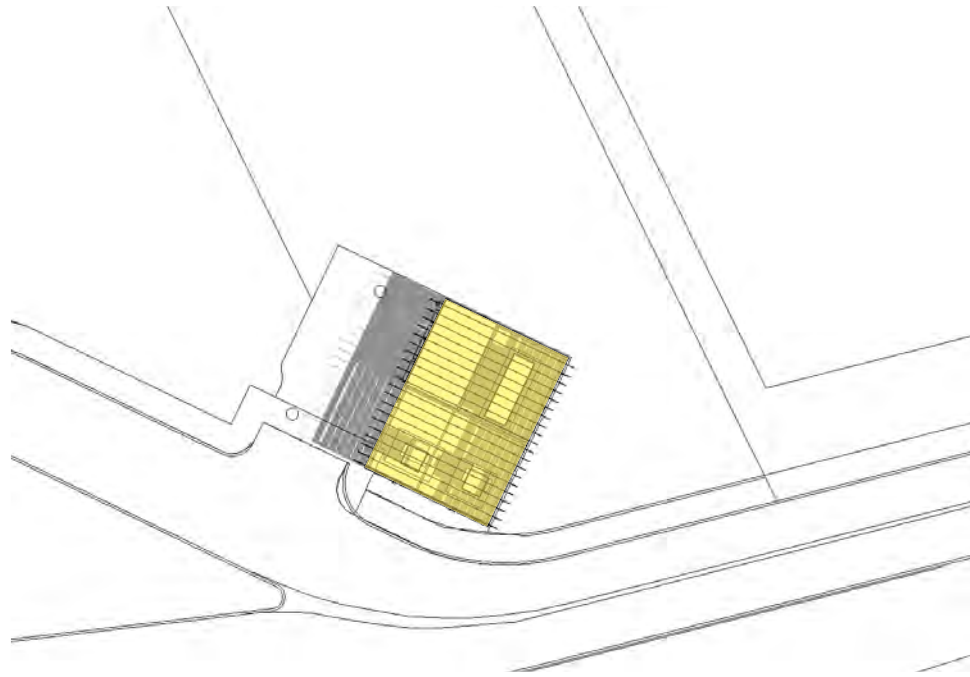
Precast concrete pump station building with no fence & trellis



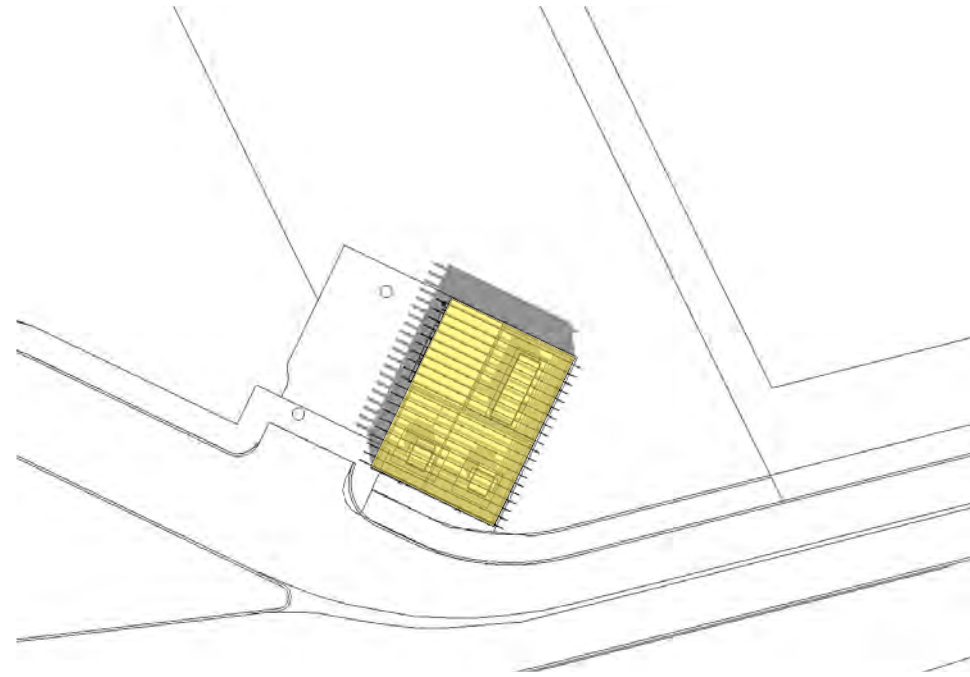
Wood clad pump station building with no fence & trellis



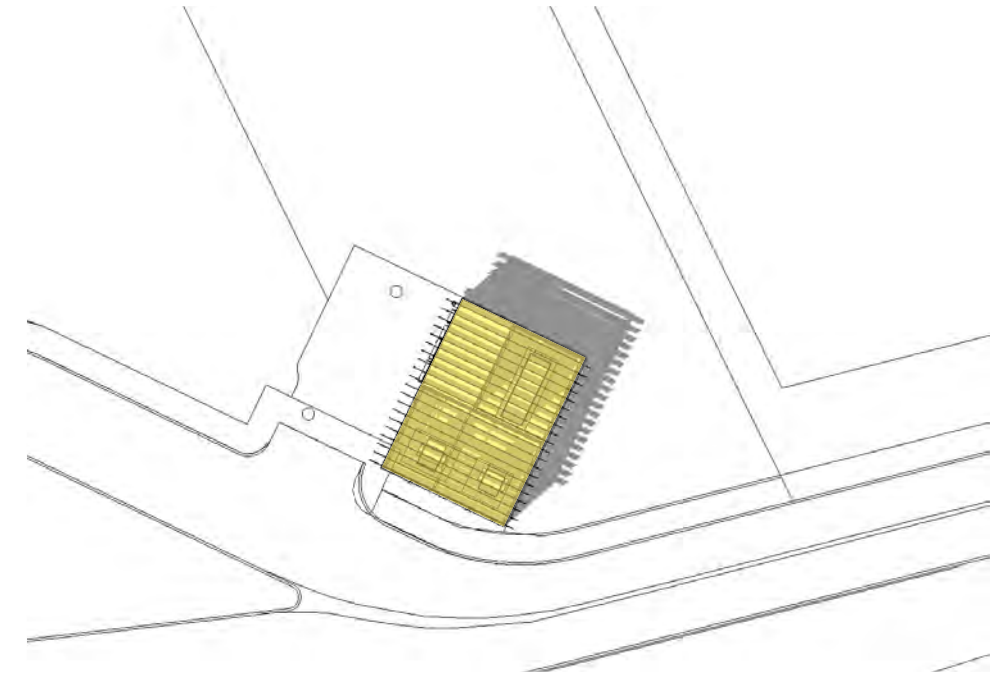
Wood clad pump station building with no fence & trellis



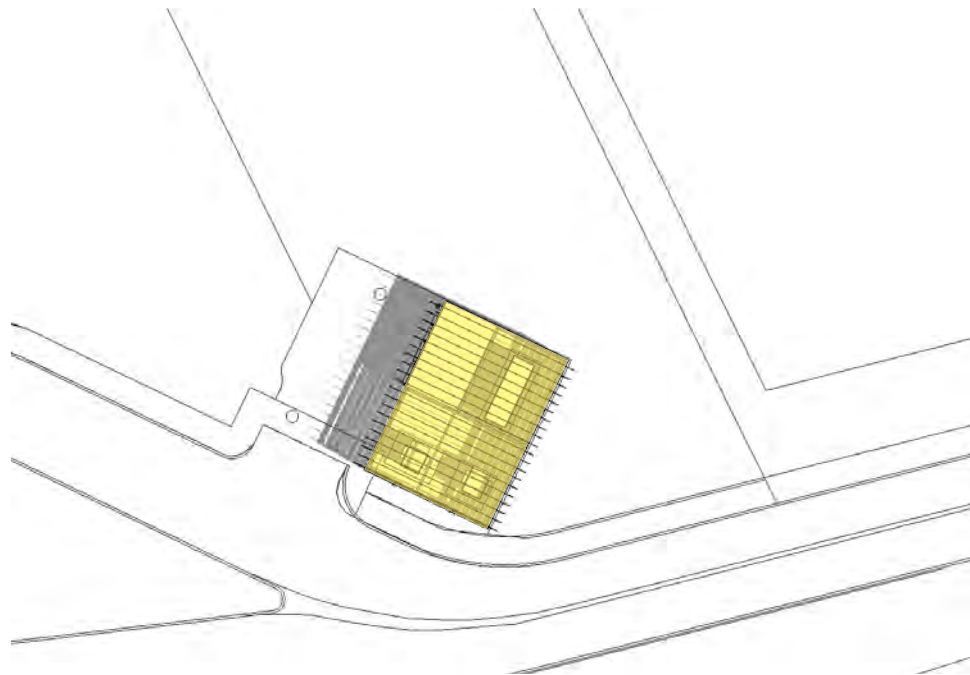
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SHADOW STUDY: MARCH 21ST



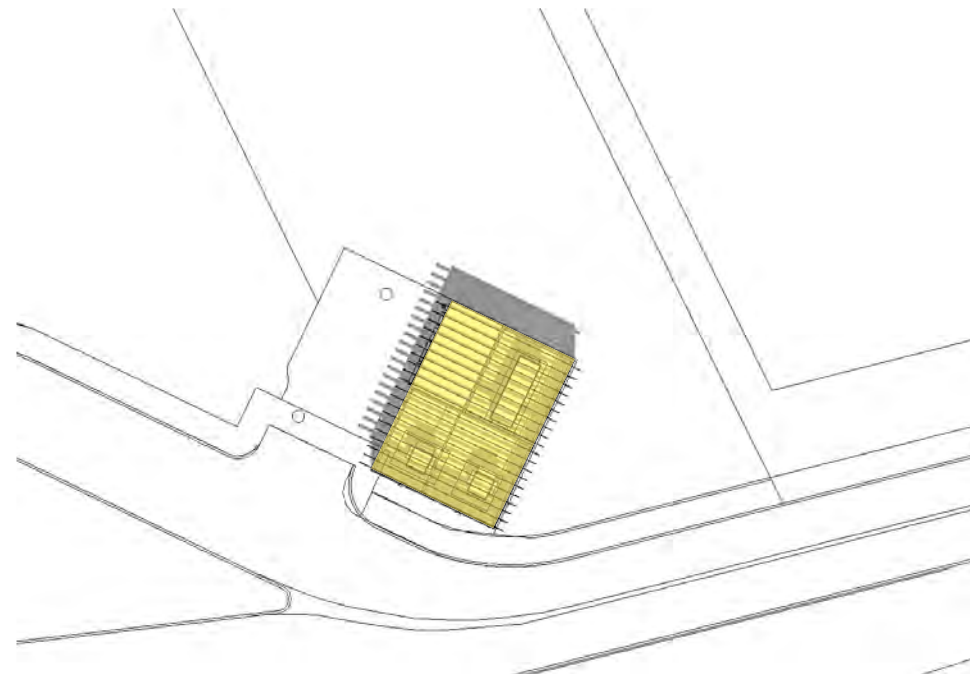
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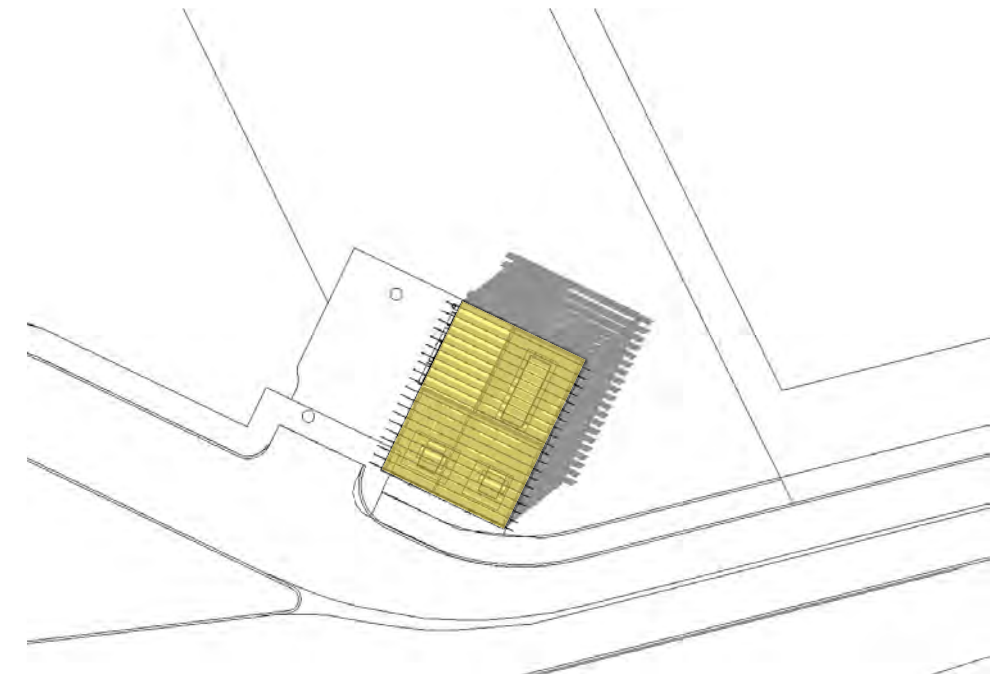
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9:00 AM
SHADOW STUDY: JUNE 21ST

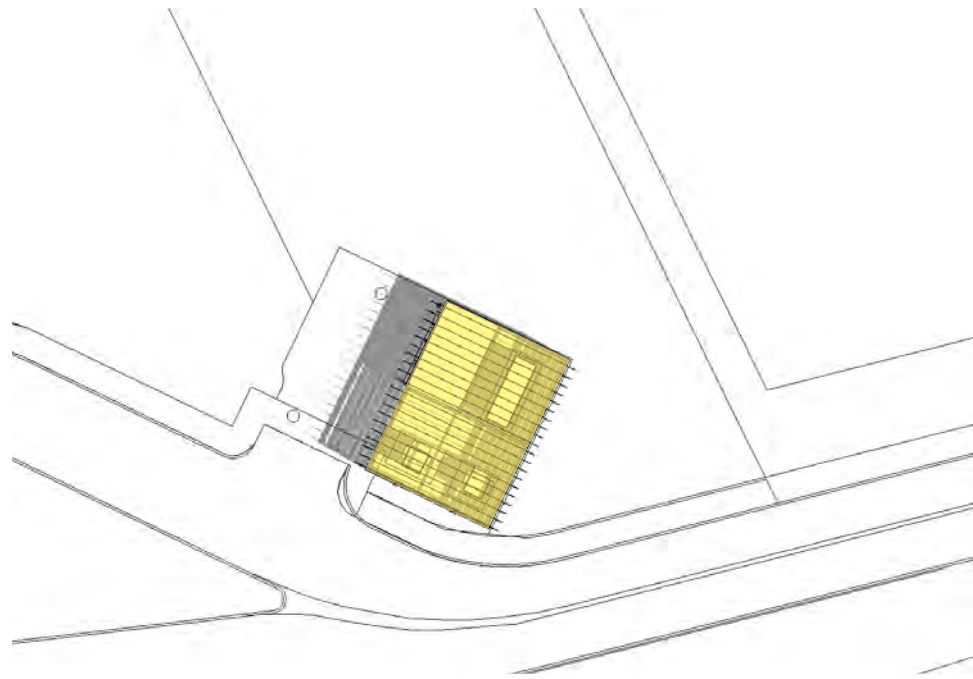


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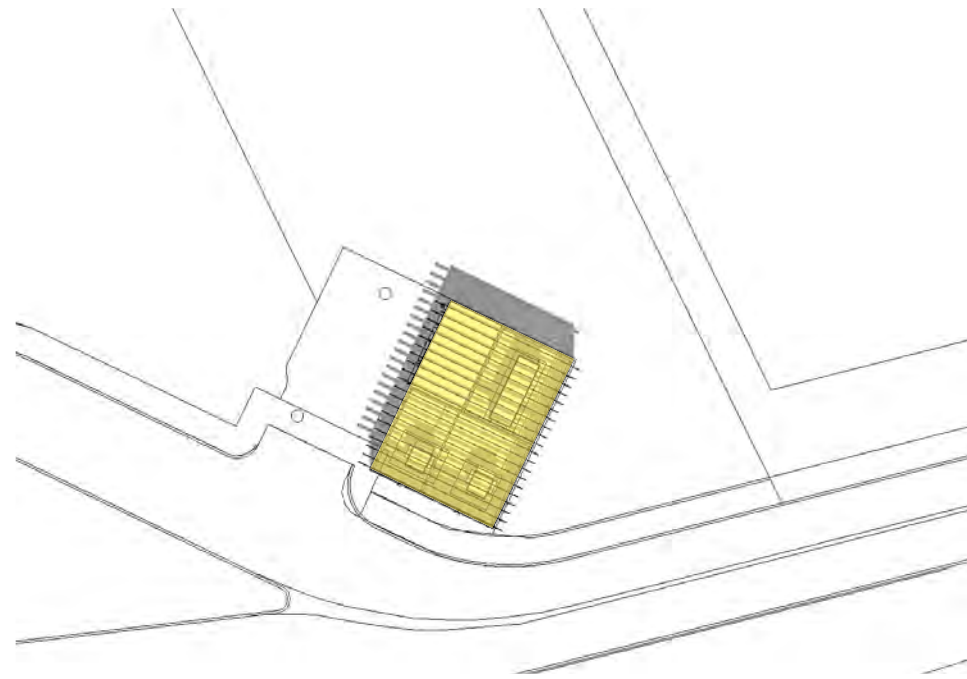


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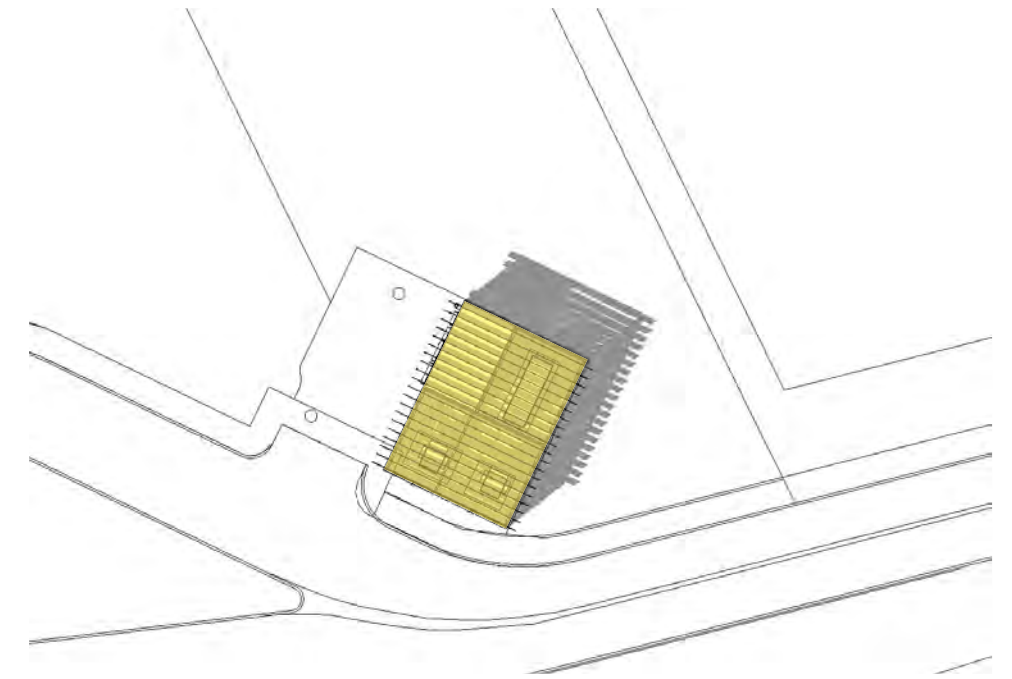




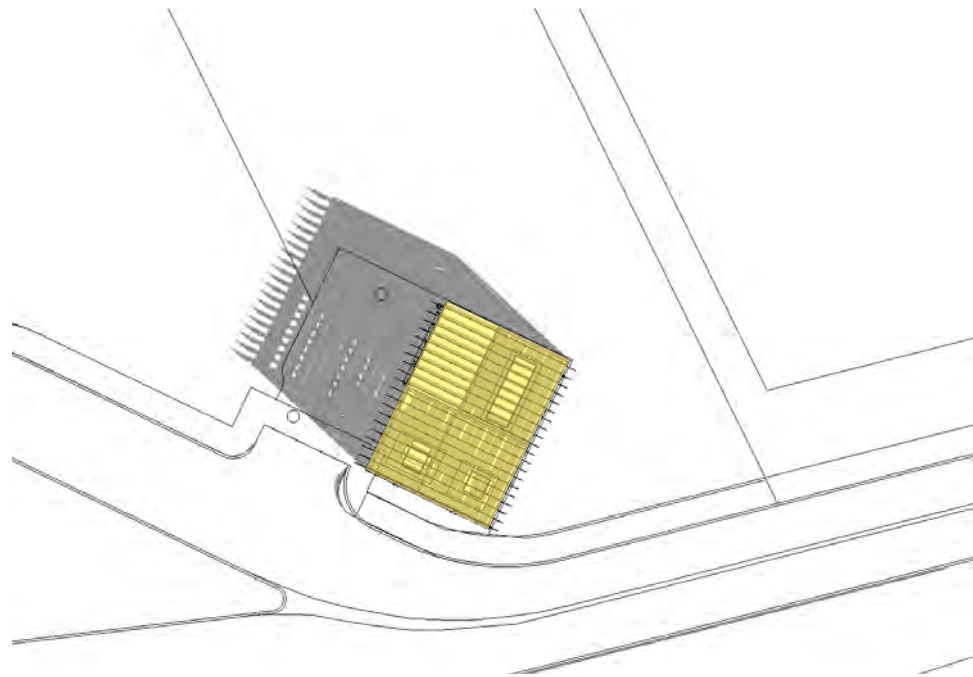
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SHADOW STUDY: SEPTEMBER 21ST



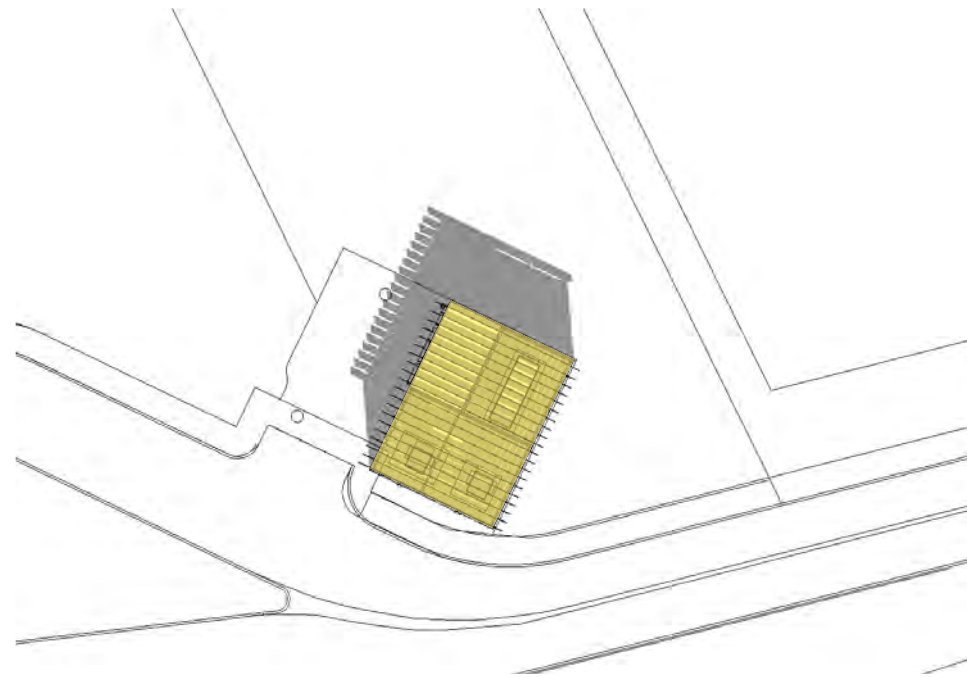
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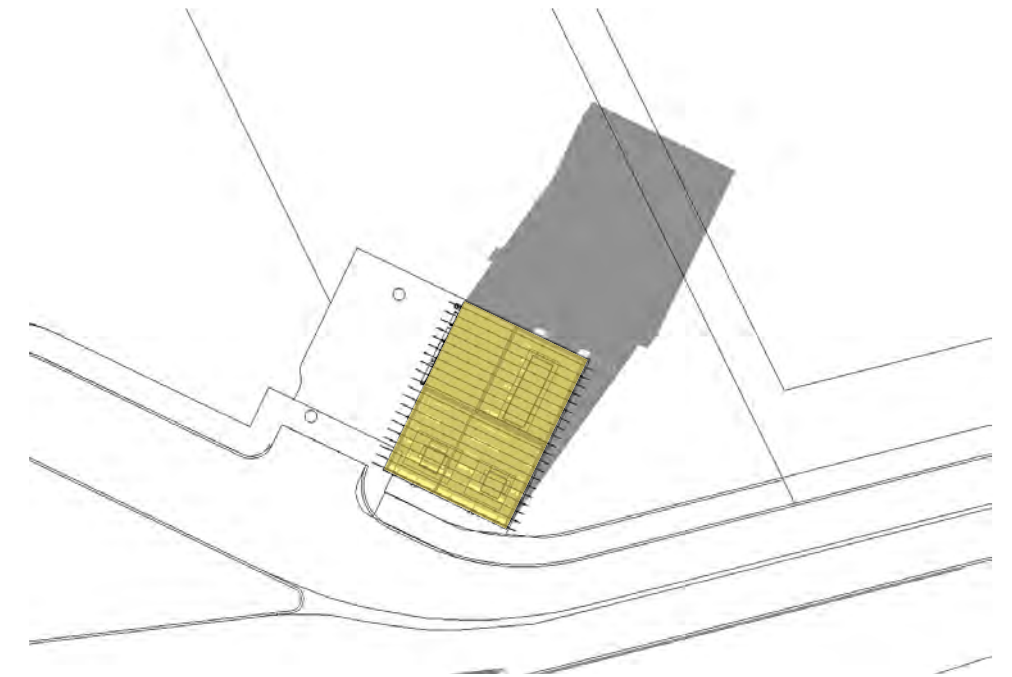
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9:00 AM
SHADOW STUDY: DECEMBER 21ST



12:00 PM



3:00 PM



Compliance with Northpoint Design Guidelines

Page	Section	Guideline Description	Compliance	Check
Úk	1.2.1 Street Level Uses and Design	One and two story stand-alone retail buildings are created to activate the public realm and also create a sense of human scale that will balance the scale of adjacent buildings	Trellis and public accommodations engages public use along the west façade and building height establishes human scale	✓
%&	1.3.1 Public Open Space	In addition to the large park, the creation of a series of smaller open spaces such as pocket parks, public plazas, active recreation areas, courtyards, play areas and gardens is encouraged.	Trellis and public accommodations encourage use of adjacent public open space	✓
+%	3.1 Parcel A	Create a special visual articulation to celebrate the western entry into NorthPoint using visual articulation	Trellis feature creates visual connection to the west. Wood cladding creates connection to the retail pavilions	✓
/0	3.17 Parcel W	Establish human scale	Building height and overhanging trellis establish human scale	✓
/0	3.17 Parcel W	Explore shading devices that create an important visual identity as an important component of NorthPoint's public realm	Overhead trellis extends towards the community gardens to create a shaded area for public use	✓
/k	3.9 Parcel I Retail	Use the orientation and exposure to sun and minimize shadows on parks and surrounding buildings	Building is one story to maximize exposure to sun and minimize shadows on parks and surrounding buildings. Trellis creates shaded area for seating	✓

Compliance with Cambridge Zoning Requirements

Ordinance Section	Requirements/Limitations	Proposed	Check
13.73 Use Regulations	Any use permitted in Article 16, but subject only to the requirements and limitations of Section 13.70.	Municipal Services Facility permitted (4.33.f.4)	✓
13.74.1 Allowed FAR	Maximum Allowable FAR: 2.4, up to 3.0	0.0 FAR; Proposed GFA = 0 sf	✓
13.74.4 Other Dimensional Requirements	No specified minimum lot size, width or yards	N/A	✓
Height Map 13.71; 13.74.31 Portions of Buildings Limited to Sixty-five feet	120 feet, except that buildings within 50 feet of public open space, maximum height = 65	9'6" feet	✓
Article 6.83 Loading Facility; 13.76 Parking and Loading	First Bay Required at 5,000 square feet	0 loading bays; GFA < 5,000 sf of GFA	✓
Article 6.36.f.4; 13.76 Parking and Loading	Bicycle Parking: Municipal Services Facility –0.30 spaces per 1,000 square feet (Long-Term); 0.50 spaces per 1,000 square feet (Short-Term)	No Bicycle Parking required; > 1,000 sf of GFA	✓
6.36.f.4, 13.76 Parking and Loading	Accessory Parking: 1 per 2 employees	Proposed parking = 0; no permanent employees on Site	✓

Mark Eclipse, AIA
Northpoint Pump Station
Noise Compliance

June 7, 2017

Mark Eclipse, AIA, LEED AP
221 Hampshire Street
Cambridge, MA 02139

Subject: Northpoint Pump Station – Noise Compliance

Dear Mark,

This letter presents my analysis of noise emissions from the proposed pump station, adjacent to Parcel A within the Northpoint development in Cambridge.

The pump station will consist of two pumps and motors located below grade in a pit with a concrete cover. I do not expect any noise from this equipment.

There will also be a small standby generator to power the pumps during a power outage. This is a small (40 kW) gas fired generator fitted with a noise control enclosure and critical grade exhaust silencer. The manufacturer’s noise rating for the system is 65 dBA at 23 feet.

Based on the manufacturer’s sound data I calculated noise at several points of interest surrounding the pump station.

LOCATION	DIRECTION	DISTANCE	CALCULATED NOISE
PARCEL A BOUNDARY	South	50 ft	59 dBA
ZINC APARTMENT BLDG.	Southwest	168 ft	48 dBA
NORTHPOINT BOUNDARY	West	70 ft	55 dBA
NORTHPOINT BOUNDARY	East	114 ft	51 dBA

MassDEP Noise Regulation

Our noise monitoring at the site found that the lowest overnight sound levels were 53 dBA. Based on this, the allowable limit under the MDEP noise regulation would be 63 dBA. The calculated noise from the standby generator is less than 63 dBA at all locations.

Cambridge Noise Control Ordinance

The Cambridge noise regulation limits do not apply to emergency equipment such as a standby generator. I would note that the generator noise meets the Cambridge regulation limit of 60 dBA for daytime noise at a residential property. Test runs of the generator will be done during business hours, and if the generator operates at night it will be an emergency condition.

In summary, the noise control measures included with the standby generator are sufficient to comply with local regulations.

Sincerely,

CAVANAUGH TOCCI ASSOCIATES

Timothy J. Foulkes
Timothy J. Foulkes

RWDI PEDESTRIAN WIND CRITERIA

The RWDI pedestrian wind criteria are used in the current study. These criteria have been developed by RWDI through research and consulting practice since 1974. They have also been widely accepted by municipal authorities as well as by the building design and city planning community.

RWDI Pedestrian Wind Criteria

Comfort Category	GEM Speed (mph)	Description
Sitting	≤ 6	Calm or light breezes desired for outdoor restaurants and seating areas where one can read a paper without having it blown away
Standing	≤ 8	Gentle breezes suitable for main building entrances, bus stops, and other places where pedestrians may linger
Strolling	≤ 10	Moderate winds that would be appropriate for window shopping and strolling along a downtown street, plaza or park
Walking	≤ 12	Relatively high speeds that can be tolerated if one's objective is to walk, run or cycle without lingering
Uncomfortable	> 12	Strong winds of this magnitude are considered a nuisance for all pedestrian activities, and wind mitigation is typically recommended

Notes:

- (1) Gust Equivalent Mean (GEM) Speed = max (mean speed, gust speed/1.85); and;
- (2) GEM speeds listed above based on a seasonal exceedance of 20% of the time between 6:00 and 23:00.

Safety Criterion	Gust Speed (mph)	Description
Exceeded	> 56	Excessive gust speeds that can adversely affect a pedestrian's balance and footing. Wind mitigation is typically required.

Notes:

Based on an annual exceedance of 9 hours or 0.1% of the time for 24 hours a day.

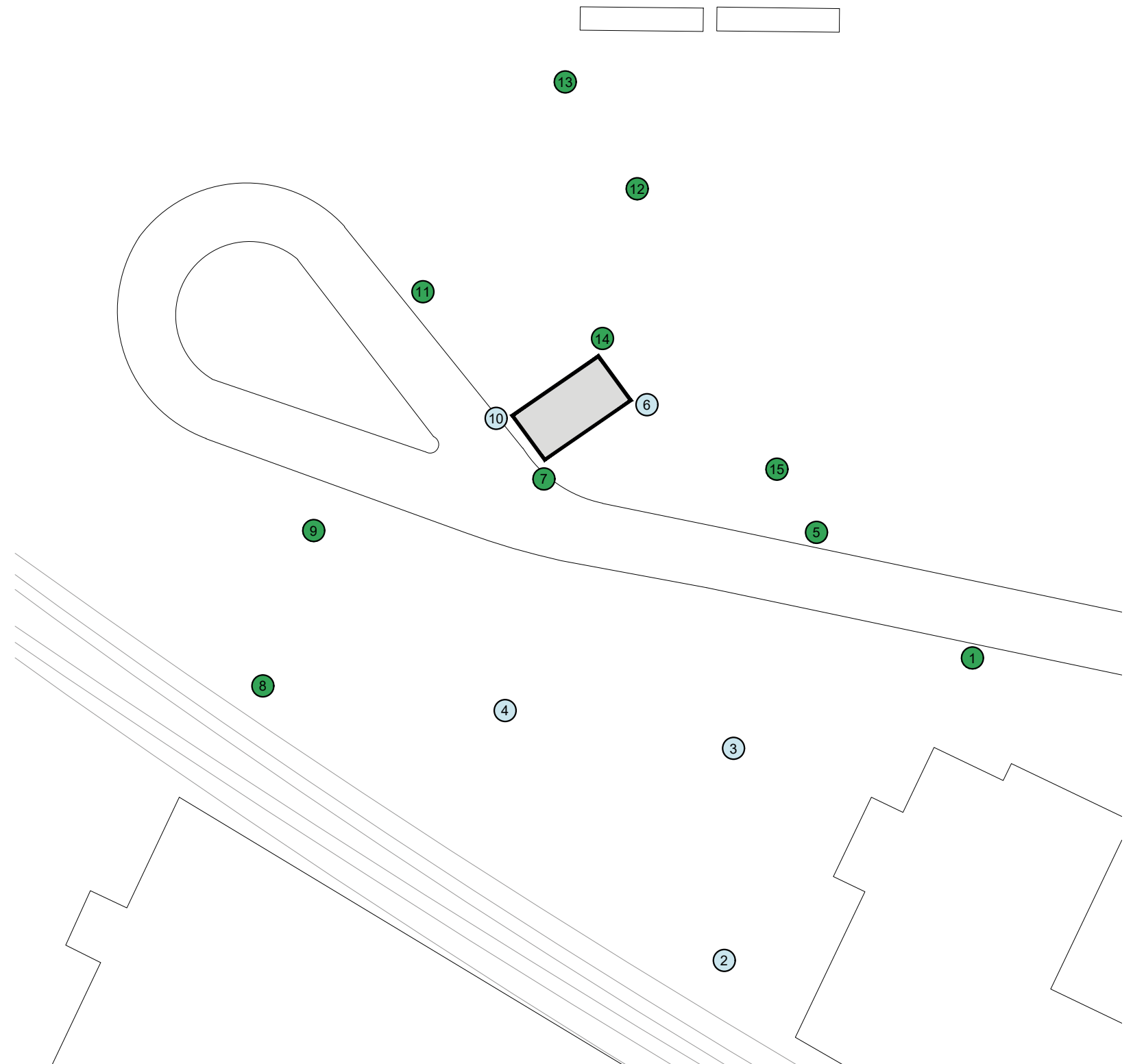
A few additional comments are provided below to further explain the wind criteria and their applications.

- Both mean and gust speeds can affect pedestrian comfort and their combined effect is typically quantified by a Gust Equivalent Mean (GEM) speed, with a gust factor of 1.85.
- Instead of standard four seasons, two periods of summer (May to October) and winter (November to April) are adopted in the wind analysis, because in a moderate or cold climate such as that found in Cambridge, there are distinct differences in pedestrian outdoor behaviors between these two time periods.

LEGEND:

<p>COMFORT CATEGORIES:</p> <p>Sitting ———— </p> <p>Standing ———— </p> <p>Strolling ———— </p> <p>Walking ———— </p> <p>Uncomfortable ———— </p>	<p>SENSOR LOCATION:</p> <p> Grade Level</p>
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Pedestrian Wind Comfort Conditions - Build Summer (May to October, 6:00 to 23:00)

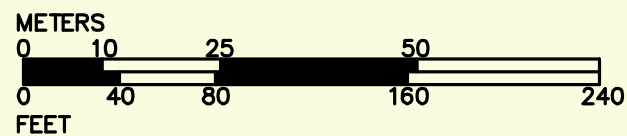
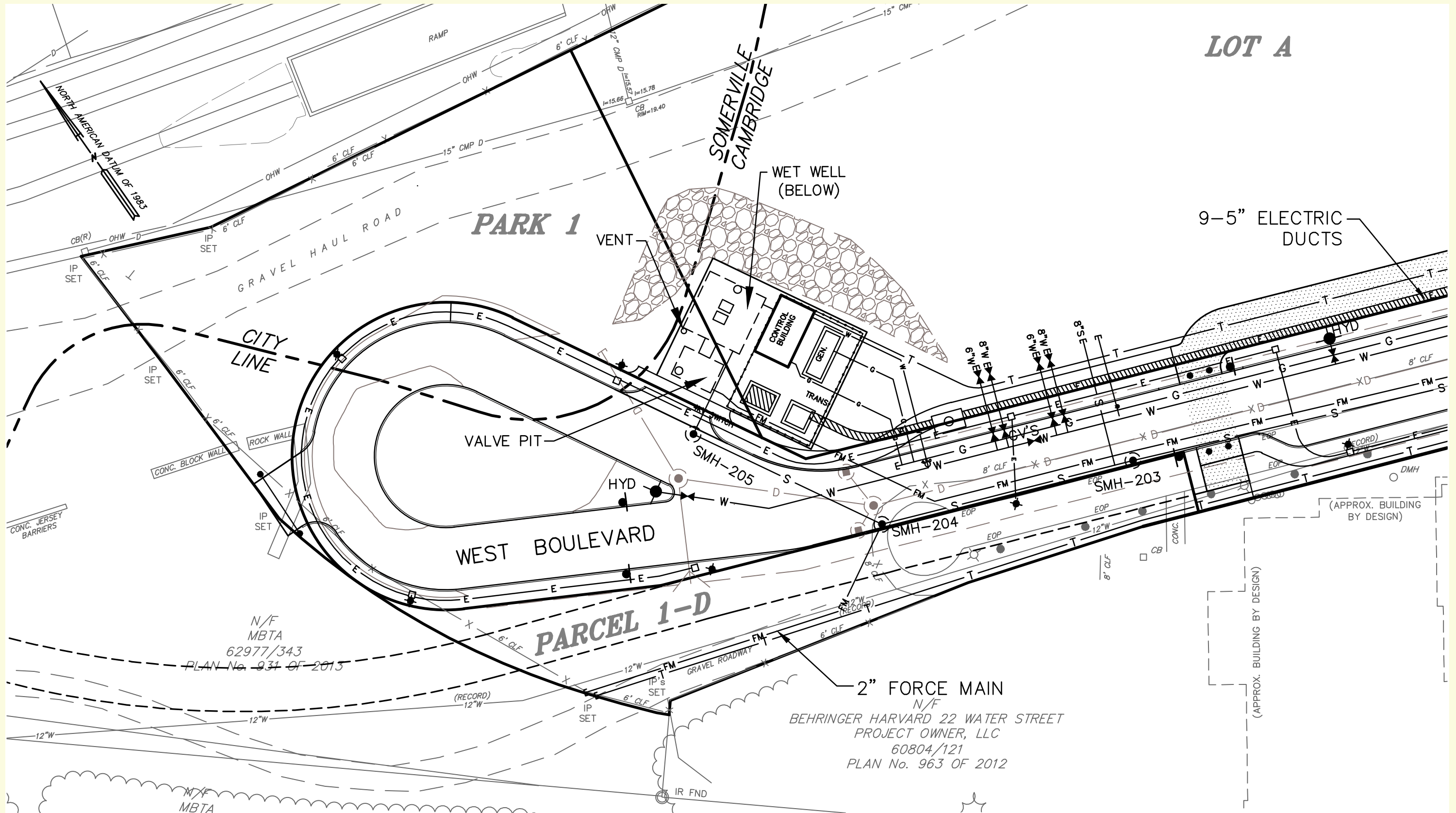


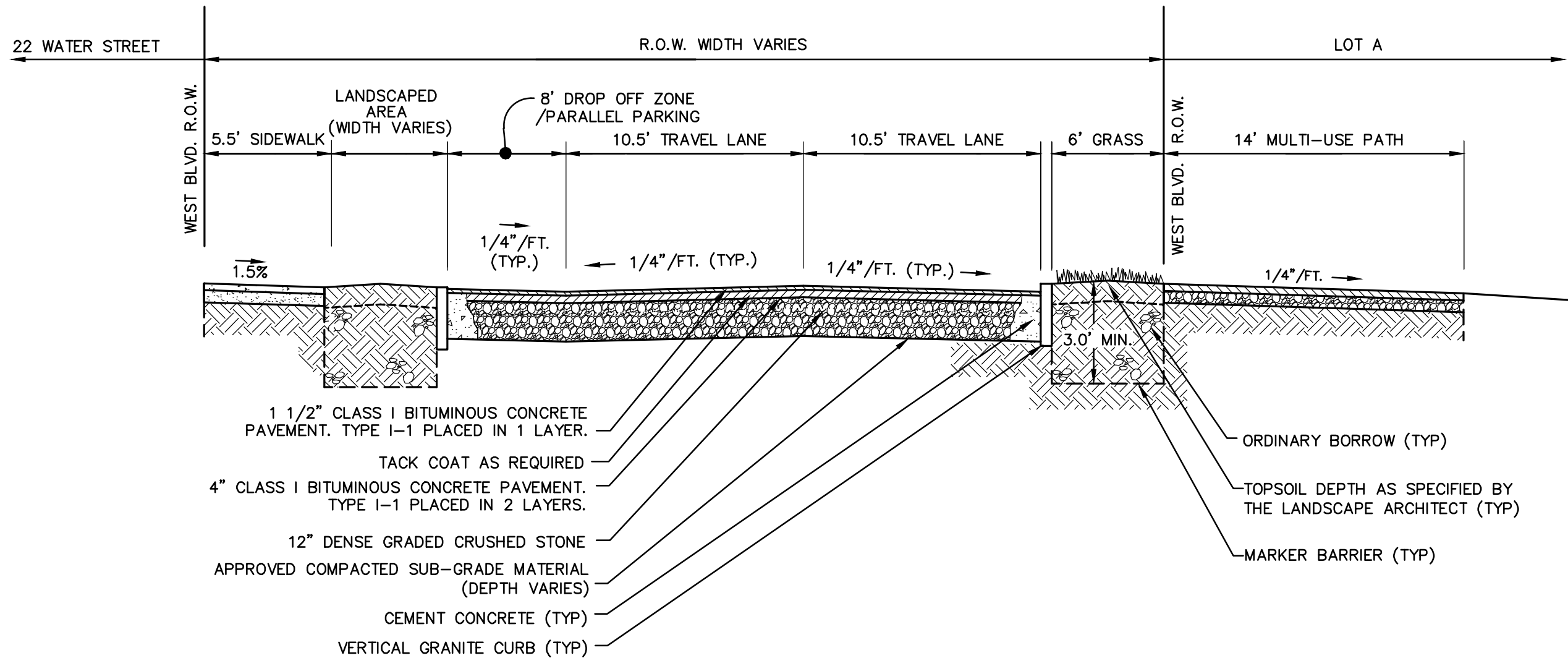
PUMP STATION - COMPLIANCE WITH ZONING REQUIREMENTS

Ordinance Section	Requirements/Limitations	Proposed	Comply (Yes/No)
13.73 Use Regulations	Any use permitted in Article 16, but subject only to the requirements and limitations of Section 13.70.	Municipal Services Facility permitted (4.33.f.4)	Yes
13.74.1 Allowed FAR	Maximum Allowable FAR: 2.4, up to 3.0	0.0 FAR; Proposed GFA = 0 sf	Yes
13.74.4 Other Dimensional Requirements	No specified minimum lot size, width or yards	N/A	Yes
Height Map 13.71 13.74.31 Portions of Buildings Limited to Sixty-five feet	120 feet, except that buildings within 50 feet of public open space, maximum height = 65	9’6” feet	Yes
Article 6.83 Loading Facility 13.76 Parking and Loading	First Bay Required at 5,000 square feet	0 loading bays; GFA < 5,000 sf of GFA	Yes
Article 6.36.f.4 13.76 Parking and Loading	Bicycle Parking: Municipal Services Facility – 0.30 spaces per 1,000 square feet (Long-Term) 0.50 spaces per 1,000 square feet (Short-Term)	No Bicycle Parking required; > 1,000 sf of GFA	Yes
6.36.f.4 13.76 Parking and Loading	Accessory Parking: 1 per 2 employees	Proposed parking = 0; no permanent employees on Site	Yes

NorthPoint

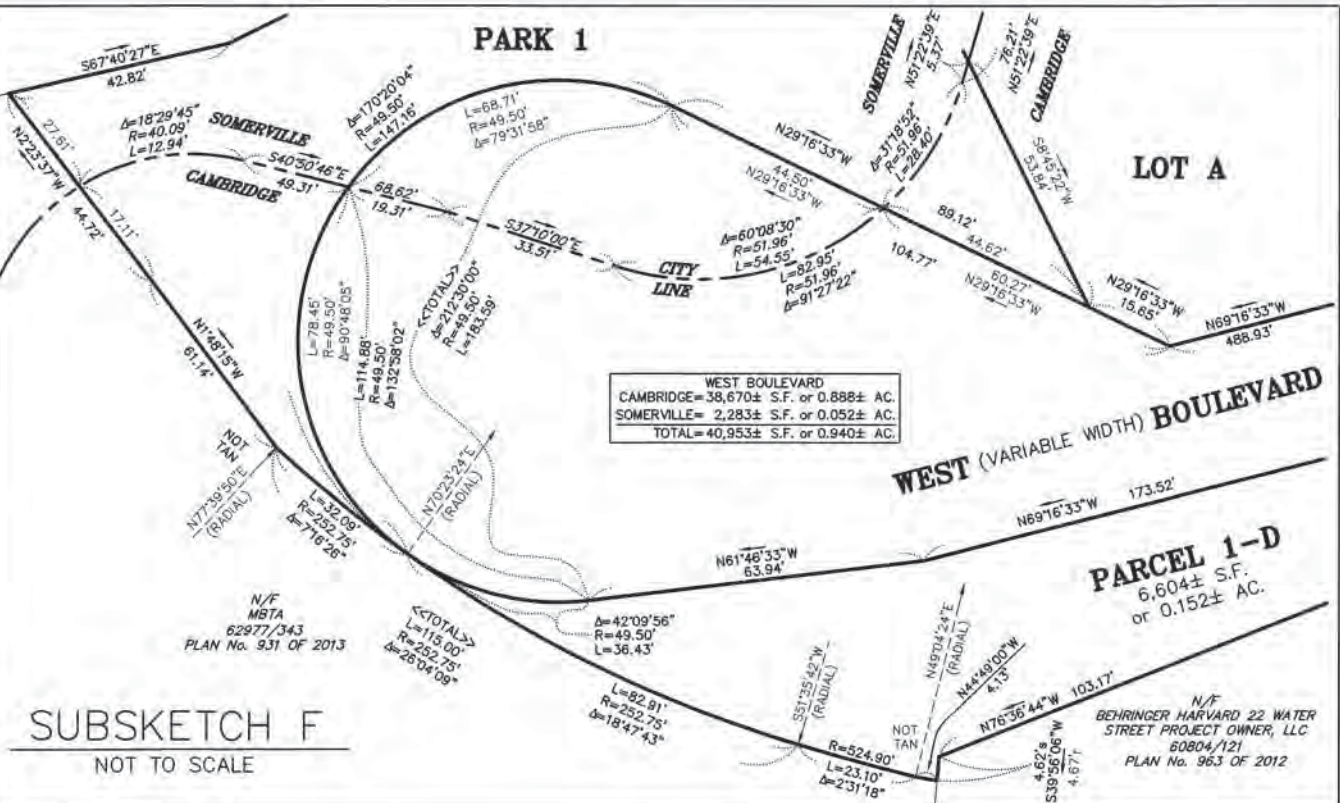
Cambridge, Massachusetts



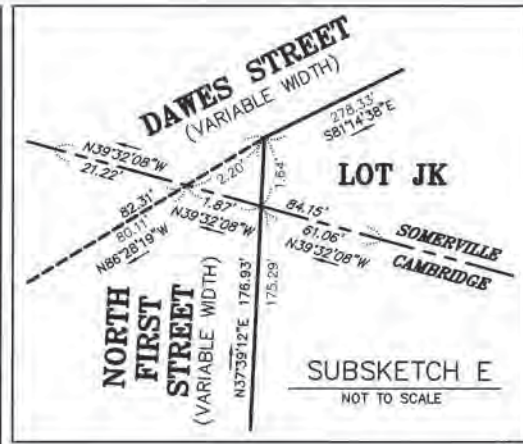


WEST BOULEVARD CROSS SECTION

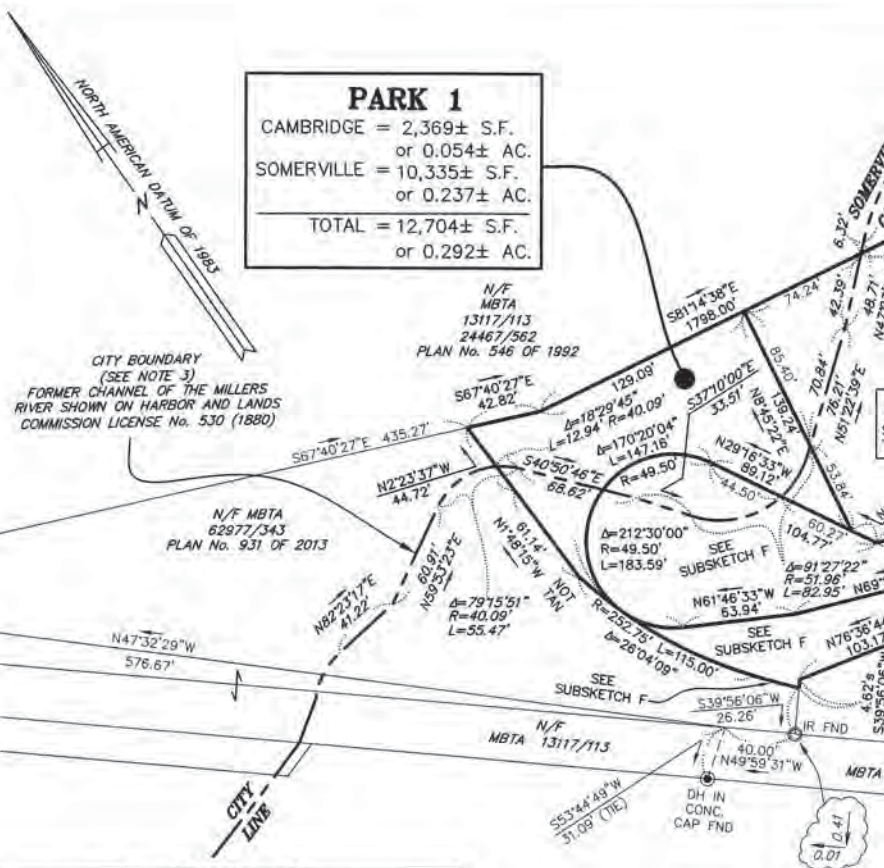
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SUBSKETCH F
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SUBSKETCH E
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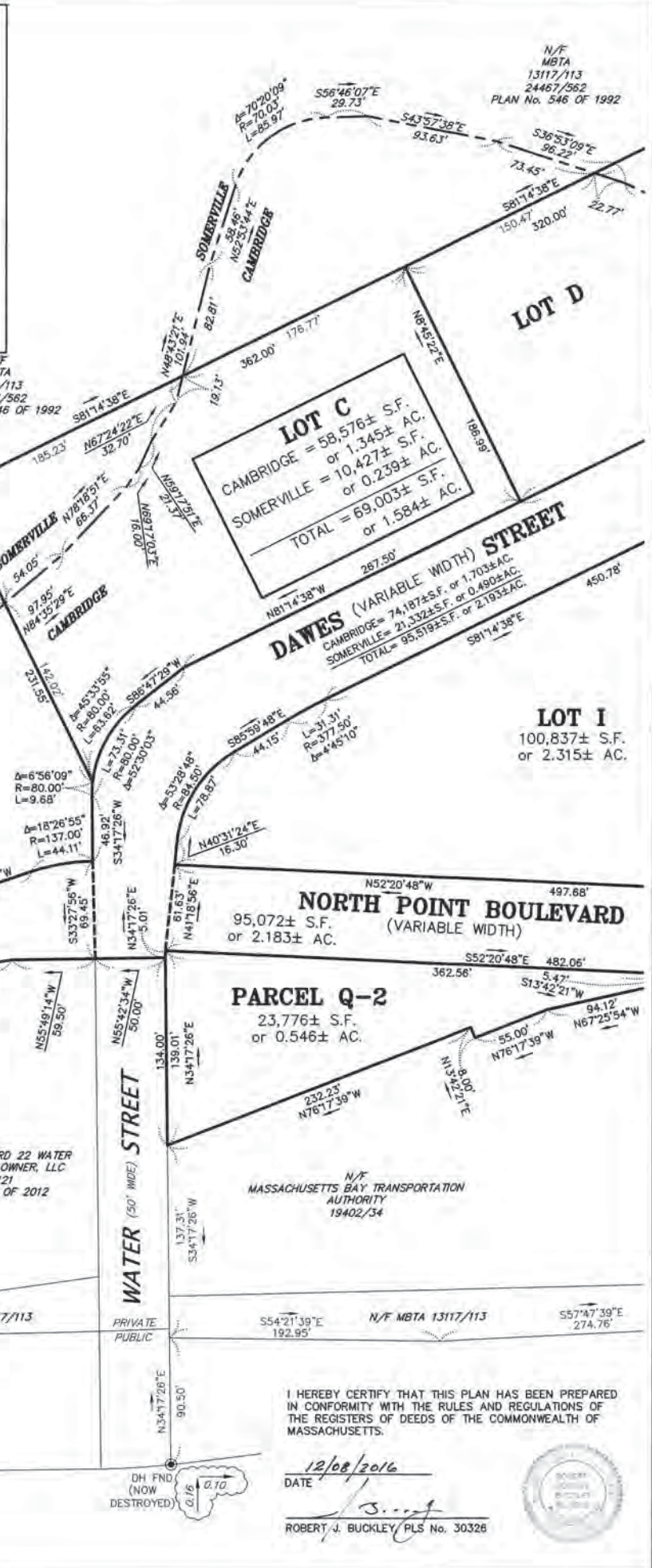
CITY OF SOMERVILLE
CITY OF SOMERVILLE PLANNING BOARD

NO DETERMINATION AS TO COMPLIANCE WITH ZONING ORDINANCE HAS BEEN MADE OR INTENDED BY PLANNING BOARD ENDORSEMENT. NO DETERMINATION OF WETLANDS HAS BEEN MADE OR INTENDED BY PLANNING BOARD ENDORSEMENT.

LEGEND

SB	STONE BOUND
CB	CONCRETE BOUND
DH	DRILL HOLE
IP	IRON PIN/IRON PIPE
IR	IRON ROD
FND	FOUND
EPLP	ESCUTCHEON PIN, LEAD PLUG
CTR.	CENTER

MSGR. O'BRIEN HIGHWAY
1925 MDC HIGHWAY LAYOUT
(PUBLIC - VARIABLE WIDTH)



I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

DATE: 12/08/2016
ROBERT J. BUCKLEY, PLS No. 30328

PREPARED FOR:
DW NP PROPERTY, LLC
c/o DIVCO WEST REAL ESTATE SERVICES, LLC
575 MARKET STREET
35th FLOOR
SAN FRANCISCO, CA 94105

RECORD OWNERS:
DW NP PROPERTY, LLC

65949/156
PARCEL 1
PARCEL 2
"CENTRAL PARK" PARCEL (PLAN NO. 597 OF 2010) (MIDDLESEX COUNTY)

54949/293
PARCEL 1
PARCEL 2
(PLAN BOOK 2010 PAGES 270, 271) (SUFFOLK COUNTY)

5				
4				
3				
2				
1				

0 12/08/2016 INITIAL ISSUE

ISSUE DATE	DESCRIPTION	ATL	MEB	MEB	RJB
		FLD	CALC	DWN	CHK'D

PLAN OF LAND
NORTHPOINT IN CAMBRIDGE AND SOMERVILLE, MA (MIDDLESEX COUNTY) AND BOSTON, MA (SUFFOLK COUNTY)

PREPARED BY:
BEALS + THOMAS
Civil Engineers + Landscape Architects + Land Surveyors + Planners + Environmental Specialists

BEALS AND THOMAS, INC.
Reservoir Corporate Center
144 Turnpike Road
Southborough, Massachusetts 01772-2104
T 508.366.0560 | www.bealsandthomas.com

DATE: DECEMBER 8, 2016 METERS
SCALE: 1"=50' FEET

BTI JOB NO. 2084-02
BTI PLAN NO. 208402P244B-003 **PL-3**
SHEET 3 OF 5