

# THE RESIDENCES AT COLERIDGE COAST

MIXED-USE DEVELOPMENT

181-183 COLERIDGE STREET  
EAST BOSTON, MA 02128



ROCK DEVELOPMENT  
ATTN: RYAN ACONE  
269 WEBSTER STREET #2  
EAST BOSTON, MA 02128

APPLICATION FOR SMALL PROJECT REVIEW  
SUBMITTED TO THE BOSTON PLANNING & DEVELOPMENT AGENCY  
28 FEBRUARY 2019  
REVISED 26 APRIL 2019





28 February 2019

Brian Golden, Director  
Boston Planning & Development Agency  
1 City Hall Square  
Boston, MA 02201

Dear Mr. Golden:

We are pleased to submit this application for Small Project Review in accordance with Article 80, Section 80E of the Boston Zoning Code. This application is for the Residences at Coleridge Coast, located at 181-183 Coleridge Street in East Boston.

This proposed project is a mixed-use building with nineteen residences, twenty-two below grade parking spaces, a Facility of Public Accommodation and a publicly accessible Harborwalk. Seventeen of the units are proposed to be market-rate with two committed to be classified as affordable in accordance with the Mayor's Executive Order regarding the City of Boston's Inclusionary Development Policy (IDP).

The applicant for this project is Rock Development and its owner Ryan Acone. Rock Development has a signed purchase and sale agreement and permission from the property owner to submit applications for the project. The project architects for this building are Touloukian Touloukian Inc. On behalf of the owner and this development and design team, we would like to thank you for your review of this application and the guidance of the BPDA throughout this design process. We look forward to continuing to work with the BPDA as we move toward the final approval of this building.

Regards,

Theodore Touloukian, AIA, President  
As President



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1.0 PROJECT INTRODUCTION  
1.1 PROJECT TEAM

DEVELOPER & APPLICANT .....	Rock Development Attn: Ryan Acone A 269 Webster Street #2 East Boston, MA 02128 T 774-281-3165 E ryan@builtbyrock.com
ARCHITECTURE & URBAN DESIGN.....	Touloukian Touloukian Inc. Attn: Theodore Touloukian, AIA, NCARB A 151 Pearl Street, 2nd Floor Boston, MA 02110 T 617-526-0884 E ttouloukian@ttarch.com
LANDSCAPE ARCHITECTURE.....	Halvorson Design Partnership, Inc. Attn: Robert Uhlig, FAIA A 25 Kingston Street Boston, MA 02111 T 617-536-0380 E bobu@halvorsondesign.com
CIVIL ENGINEERING.....	Highpoint Engineering Attn: Derek Redgate, PE A 45 Dan Road, #140 Canton, MA 02021 T 781-770-0970 E dredgate@highpointeng.com
ENVIRONMENTAL CONSULTING.....	EcoTec, Inc. A 102 Grove Street Worcester, MA 01605 T 508-752-9666
PERMITTING.....	Fort Point Associates, Inc. Attn: Richard Jabba A 31 State Street, 3rd Floor Boston, MA 02109 T 617-357-7044 E rjabba@fpa-inc.com
PROJECT ATTORNEY .....	McDermott Quilty & Miller LLP Attn: Dennis Quilty, P.E. A 28 State Street, Suite 802 Boston, MA 02109 T 617-946-4600 E dquilty@mqmllp.com





## 1.2 PROJECT SUMMARY

Rock Development is proposing the construction of a mixed-use development on an approximately 19,000 square foot (sf) lot in East Boston, Massachusetts. The property is bound by Coleridge Street to the north, Rice Street to the east, Boston Harbor to the south, and a residential parcel with a two-story wood frame house to the west. The adjacent Harborview/Orient Heights neighborhood is characterized by a mix of land uses including recreational, commercial, and industrial space and two to three-story single and multi-family residences on small urban lots. The Massachusetts Bay Transportation Authority (MBTA) Orient Heights and Wood Island Blue Line stations are located within a 15 to 20 minute walk (less than 1 mile) of the project site. The East Boston Greenway Connector and Bennington Street also serve as main neighborhood thoroughfares. The project site is proximate to the East Boston Yacht Club, Constitution Beach, Porrazzo Skating Rink, Wood Island Bay Edge Park, and the Salesian Boys and Girls Club.

The Owner is proposing to develop the project site into a 19-unit transit-oriented residential building with 22 parking spaces in an underground parking garage and a new, publicly accessible community space (a Facility of Public Accommodation of approximately 1,820 gsf). Additionally, there will be significant landscape and street improvements and a new, publicly accessible Harborwalk on Boston Harbor.

## 1.3 COMMUNITY BENEFITS

*The proposed project will offer many public benefits to the Harborview neighborhood and East Boston. Immediate benefits will include:*

- The replacement of an aesthetically unappealing overgrown site in the midst of a thriving neighborhood with an active and attractive residential and community focused development;
- Two attractive and new residential-scale massings with new landscaping and hardscaping on an existing overgrown, fenced-in site with limited views of the water, no public water access, and a coastline littered with invasive species and trash;
- The creation of 17 new market-rate residential units and 2 affordable residential units for a total of 19 residential units.
- 22 new off-street parking spaces;
- The creation of a new Facility of Public Accommodation (1,820 sf), the program of which will be influenced by public feedback;
- The creation of a new, public Harborwalk that provides visual access to the Boston Harbor;
- Increased public open space and natural light provided on site;
- A commitment to negotiate public sidewalk improvements as needed to compliment the new building and site;
- Landscape improvements abutting the public way and private abutters to enliven the streetscape as well as the new public Harborwalk. These will improve natural transitions and continuity between adjacencies;
- The generation of approximately one hundred thousand dollars in revenue annually to the City of Boston in the form of real property tax payments;
- The expected creation of more than 85 construction jobs over the length of the proposed project;
- Resiliency planning in an area susceptible to flooding.



## 2.0 DETAILED PROJECT INFORMATION

The Project will remediate an underutilized parcel on Boston Harbor, transforming it through the construction of a new multi-family housing structure with underground parking, a new publicly accessible Harborwalk and community space, significant landscaping improvements, and additional security measures. Although located in a residential neighborhood, the project site has an industrial and commercial history.

The Project will have a main entrance on Coleridge Street and run linearly along Rice Street. The above ground housing structure will be split into two masses with a courtyard between them in order to provide sight lines to the water from the sidewalk and street, to break down the massing to be in proportion to the surrounding scale of residential architecture, and to provide space for an outdoor stair to bring pedestrians up to the elevated first floor from the street level. Gently sloping rampways at less than 1:20 are also provided to maintain a more natural landscape at the water's edge. Each massing will have three stories. The larger will house eighteen Group 1 (521 CMR) units and the smaller will house the entrance to the underground parking garage at grade accessed from Coleridge Street with a two-story townhouse unit above. The ground floor of the larger building will house an approximately 1,820 gsf facility of public accommodation facing the Harborwalk and the water, which will be accessible from the street and the Harborwalk by outdoor ramps, walkways, and stairs. The specific use has yet to be determined. The surrounding community has and will continue to be directly involved with the decision process regarding the use of this space.

Project site improvements will include cleaning up refuse and trash that has washed ashore, removing invasive species and undergrowth, cleaning debris from the coastal bank for improved coastal ecology and better resistance to flooding and erosion, and provision of a Chapter 91 compliant Harborwalk and Facility of Public Accommodation, which will be publicly accessible to the surrounding community. The existing curb cut will be utilized and improved.

The project site is accessed by an existing curb cut. Currently, the project site houses a small shed and approximately 5,094 sf of impervious paving. There is a mix of native and invasive species and the shoreline is supported by riprap in disrepair and is littered with debris. Plant species observed in the lawn and in/near the eastern site edge include Norway maple, tree-of-heaven, common buckthorn, European privet, black nightshade, Japanese knotweed, common reed, and garlic mustard ground cover.

## 2.1 SITE & PROJECT HISTORY

The project site was used as a cordage and twine manufacturing building from 1927-1950, followed by a commercial laundry building that was constructed around 1950 and has since been demolished. According to records, the existing shoreline has been extended by approximately 50 feet seaward from the location of the 1950s-era shoreline. The property has been vacant for some time with the exception of a small shed.

## 2.2 PROJECT FINANCING

The developers are the owners of Rock Development, a East Boston-based construction company. They have strong working relationships with several major lenders, a strong record of financial security, and intend to finance the project construction and development using traditional institutional lender financing.

CONSTRUCTION COST (ESTIMATED BY OWNER) .....APPROX. \$9 million  
ESTIMATED CONSTRUCTION START ..... AUGUST 2019  
ESTIMATED CONSTRUCTION COMPLETION ..... SEPTEMBER 2020



## 2.3 PROJECT PROGRAM DATA AND DIMENSIONS

LOT AREA .....	19,000 gsf		
GROSS SF .....	MAIN WING & TOWNHOUSE		
GARAGE LEVEL .....	10,724 gsf		
FIRST FLOOR .....	6,337 gsf		
SECOND FLOOR .....	8,906 gsf		
THIRD FLOOR.....	8,787 gsf		
TOTAL APPROXIMATE GSF .....	34,754 gsf		
APPROXIMATE FAR .....	1.30		
USABLE OPEN SPACE.....	8,768 sf/19 units = 461 sf per unit		
TOTAL NUMBER OF UNITS .....	19		
UNITS IN MAIN WING .....	18		
UNITS IN TOWNHOUSE .....	1		
NUMBER OF MARKET-RATE UNITS.....	17		
NUMBER OF AFFORDABLE UNITS .....	2		
NUMBER OF 1-BEDROOM UNITS .....	8		
NUMBER OF 2-BEDROOM UNITS .....	10		
NUMBER OF 3-BEDROOM UNITS .....	1		
TOTAL NUMBER OF BEDROOMS .....	31		
UNIT NSF .....	MAIN WING .....	TOWNHOUSE	
COMMUNITY ROOM .....	1,820 sf	UNIT 19 (3 bedrooms).....	1,737 sf
UNIT 1 (2 bedrooms) .....	969 sf		
UNIT 2 (2 bedrooms) .....	985 sf		
UNIT 3 (1 bedroom) .....	587 sf		
UNIT 4 (1 bedroom) .....	681 sf		
UNIT 5 (2 bedrooms) .....	1,140 sf		
UNIT 6 (1 bedroom) .....	640 sf		
UNIT 7 (1 bedroom) .....	671 sf		
UNIT 8 (1 bedroom) .....	613 sf		
UNIT 9 (2 bedrooms) .....	889 sf		
UNIT 10 (2 bedrooms) .....	1,229 sf		
UNIT 11 (2 bedrooms) .....	1,027 sf		
UNIT 12 (2 bedrooms) .....	1,140 sf		
UNIT 13 (1 bedroom) .....	671 sf		
UNIT 14 (1 bedroom) .....	640 sf		
UNIT 15 (2 bedrooms) .....	889 sf		
UNIT 16 (1 bedroom) .....	686 sf		
UNIT 17 (2 bedrooms) .....	1,025 sf		
UNIT 18 (2 bedrooms) .....	1,229 sf		
TOTAL .....	17,602 sf		1,737 sf
TOTAL APPROX. NET SALEABLE SF .....	17,519 sf RESIDENTIAL + 1,820 sf COMMUNITY ROOM FPA SPACE		
OFF-STREET PARKING .....	22 SPACES (1.15 SPACES PER UNIT)		

## 2.4 URBAN DESIGN APPROACH

The property is bound by Coleridge Street to the north, Rice Street to the east, Boston Harbor to the south, and a residential parcel with a two-story wood frame house to the west. The adjacent Harborview/Orient Heights neighborhood is characterized by a mix of land uses including recreational, commercial, and industrial space and two to three-story single and multi-family residences on small urban lots. The site slopes down approximately 1 -2 feet from Coleridge Street to the top of the coastal bank.

The Project design separates the main residential program between two (2) three-story buildings above the parking garage. One of these massings houses 18 residential units as well as the Facility of Public Accommodation. The other smaller massing houses the entrance to the parking garage with a two (2) story single unit townhouse on the second and third floors above. The larger massing faces onto Coleridge Street, Rice Street, and the Boston Harbor, with the small townhouse facing onto Coleridge Street, the Boston Harbor, and the existing neighboring two-family home. Either building will be accessible by elevator or stair through the parking garage, and from multiple entrances on the site that are integrated into the surrounding plaza and landscaping.

Positioning the two buildings with frontage along Coleridge Street creates a generous open space at the center of the site in keeping with the development pattern of backyards so common in the neighborhood. The public Harborwalk will draw pedestrians along the Harbor edge of the property, and the openness at this side of the site will create a spacious feeling with more natural light and ventilation as well as consistent continuity with the adjacent residential context.

Slenderness of the massing of the two structures allow for light and air to circulate between the buildings and for greater visibility into the site toward the Boston Harbor. Careful articulation of the building massing mediates between the characteristics of the adjacent properties and the proposed project that makes them appear much more in scale with the surrounding context. The architectural design of the Project recalls the details of the context, simplified with sloped mansard-like and gabled roofs, window bays, and proportioned windows. Patterns of materials are also in scale with the materials of surrounding houses, such as siding and masonry.

## 2.5 RESILIENCY, SEA LEVEL RISE, AND FLOODING

In recent years, the City of Boston has ramped up efforts related to building standards with regard to not only energy efficiency but also flood mitigation and resiliency concerns related to climate change. Climate Ready Boston, Greenovate, and other associations have identified multiple Boston neighborhoods, including East Boston as being at high risk for increased flooding as sea levels rise. Increased and intensified storm events and rising sea levels will mean that flood waters from the ocean as well as from over-flowing storm water drains are currently and will continue to be of potential concern.

Climate Ready Boston and Greenovate recently released lengthy studies of flooding concerns in East Boston in October 2017. Although Coleridge Street has not been identified as an area of high risk in the immediate future, there are a number of potential flood pathways that have been identified in proximity to the project site. As such, the Owner has voluntarily chosen to design this project to meet large project design review expectations with regard to the Climate Ready Checklist resiliency standards. The ground floor (lowest inhabitable floor) has been set at 15.5 NAVD88 or 21.96 BCB. This is 5.5 feet above FEMA (Flood Zone AE 9 and Flood Zone AE 10), 2.66 feet above the sea level rise base flood elevation (SLR-BFE), and eight inches above the Design Flood Elevation (set at 2 feet above SLR-BFE) for this site and use as determined from Boston Planning & Development Agency (BPDA) zoning maps. In addition to elevating the first occupiable floor (otherwise referred to as the "ground floor"), the electrical room is located on the ground floor and mechanical equipment is located on the roof. The building will comply with the Massachusetts State Building Code sections that govern construction in flood zones and on floodplains.

The Harborwalk will have a boardwalk surface that is durable, weather resistant, and MAAB-compliant. It will be constructed with environmentally sensitive pressure-treated framing and sustainably harvested lpe decking. Where the Harborwalk needs to be accessed across an adjacent property line with an easement, permeable pavers will be used. Appropriate ramping will be provided to mitigate the incline where the site has been elevated.

The existing upland and coastal bank site conditions are representative of a disturbed site which has been abandoned and left fallow. The upland site vegetation is currently dominated by invasive tree species including *Acer platanoides* (Norway Maple) and *Alanthus altissima* (Tree of Heaven). The Project features an environmentally sensitive planting approach that consists of appropriate, indigenous coastal edge species, the removal and disposal of debris which currently litters and adversely impacts plant growth along the coastal bank as well as resetting the existing stone revetment to stabilize the water's edge.

The landscape approach includes climate change adaptation and resiliency strategies which are integrated with the building placement. These strategies use coastal and upland indigenous landscape plantings within intentionally graded land forms that serve as a protective temporary barrier for the upland site areas against storm surge. The edges serve as a floodable waterfront park which is able to accommodate periodic storm surge and sea level rise while still allowing water to recede without long term flooding and ponding.

Along Rice Street there already exists a row of grand London Plane trees. The approach to the site development takes great measures to ensure the vitality of these trees. The building have been set back in order to minimize impact on the collective existing tree root systems between Rice Street and the site. The owner is committed to both root pruning during construction in the areas of excavation and to pruning the trees as a maintenance practice to remove dead limbs and to improve the structure of the trees. This will be beneficial to their long term health.

Paving materials within the site include permeable pavers set on terra firma with gently graded slopes to meet accessibility standards and encourage and facilitate storm water retention and infiltration on site. A boardwalk provides public access to the harbor edge from DCR property along Rice Street. The boardwalk is designed with open joints and is designed to be above the ground to minimize impacts on the coastal bank and to allow sunlight penetration to facilitate shoreline plant growth. This pathway, as well as the building setback will serve as a physical and visual amenity, a place to appreciate the natural resources and indigenous coastal plantings of the site; providing the ability to get near to the water's edge with exceptional, varying views to the harbor.

## 2.6 SUSTAINABILITY APPROACH

The owner is taking a holistic approach to sustainability by providing a design that will help mitigate pollution on site, support existing wetland resources, responsibly address flooding concerns, effectively control storm water, and incorporate energy efficient solutions, healthy materials, and publicly accessible resources that enhance existing neighborhood amenities. This project promotes reduced greenhouse gas (GHG) emissions and supports use of public transportation as the project site is conveniently located less than one-mile from two MBTA Blue Line T stations and less than 0.5 miles from two bus stations and a bike sharing center.

*Major sustainable design elements include:*

### SITE

- Pollution remediation, removal of invasive species, and removal of debris on the coastal bank strengthens the health of the coastal ecology, supports local fauna, and helps reduce vulnerability to erosion at the project site.
- The existing site vegetation is composed entirely of invasive tree and shrub species. Both the plants and their root stems will be removed. The site soils will be decompacted, debris will be removed and the soils will be stabilized against erosion with jute mesh and New England ecotype coastal seed mix.



- The project's proximity to existing transportation services, including the MBTA Blue Line, the East Boston Greenway Connector, and bicycle-sharing services (Blue Bikes, formerly known as Hubway), and dedicated, enclosed bicycle parking help reduce the number of trips to the Project site by single-occupancy vehicles.
- The majority of the development will be raised in order to elevate the inhabitable spaces above the 100 year flood and 2' above the Base Flood Elevation designated by the BPDA. This is in line with the Climate Resiliency Checklist Guidelines. A site wall located along the harborwalk has a top elevation of 11' NAVD88 which is 1' above the highest FEMA floodplain on this site. This will serve to minimize water from flooding the site during extreme flood events. Site walls with a top elevation of 11' NAVD combined with sloped walkways that ramp up to landings set at 11' NAVD also serve to minimize water from flooding the project at the eastern corner. During extreme flood events when waters may rise to as high as 10' NAVD, the harborwalk may be under water for short periods of time. As the finished surface of the harborwalk is set between 10-9.5' NAVD, the harborwalk will be free from flooding during typical precipitation and weather conditions. These on-site barriers, grading, and landscaping features will have minimal if any affect on overall water flow and drainage patterns.
- Storm water management will help reduce flood risks and reduce the water run-off from the project site.
- A publicly accessible Chapter 91 Harborwalk is provided along the shoreline, which will promote exercise as well as public enjoyment of outdoor leisure activities.

#### RESIDENTIAL ARCHITECTURE

- A solar-ready roof is under consideration. The extent of renewable energy through solar is being studied.
- Well-insulated wall and window assemblies, and operable units will be provided in order to provide natural ventilation to reduce energy consumption and increase occupant comfort.
- All energy and water use will be metered for each unit.
- Low-VOC paints and materials will be used in order to minimize off-gassing.
- Recycled material content will be utilized.
- A high SRI reflective, white roof will help keep the building cooler during summer months to reduce energy needed for cooling and help prevent overheating during potential summer brown-out and power outage scenarios.
- The project is intended to be designed to LEED standards.

#### MEP SYSTEMS

- ENERGY STAR appliances, energy efficient lighting with occupancy sensors, low flow fixtures, and maximized daylighting and natural ventilation will be provided.
- The project will utilize energy efficient HVAC equipment.

#### GREENHOUSE GAS EMISSIONS

*GHG emissions from this project are:*

- Direct emissions of CO<sub>2</sub> from natural gas combustion for space heating and hot water;
- Indirect emissions of CO<sub>2</sub> from electricity generated off-site and used on-site for lighting, building cooling and ventilation, and the operation of other equipment; and
- Transportation emissions of CO<sub>2</sub> from project traffic.
- Proximity to multiple public transportation options and enclosed bicycle storage are expected to help offset transportation emissions.

## 2.7 TRAFFIC, PARKING, AND ACCESS

The proposed project design provides access for pedestrians, drivers, and bicyclists. Movement through the site via stairs, sloped walkways, sidewalks, and the Harborwalk is designed to provide safe circulation for both the residents of the buildings and the members of the community that surrounds it. The parking garage accommodates 22 vehicles, including one van-accessible space. In addition, the garage includes bicycle parking near the elevator lobby. Additional bike racks are located on Coleridge Street at ground level. Pedestrians can enter safely from the parking garage or from Coleridge Street into the buildings, and the parking garage entry is located to create safe conditions at Coleridge Street as well. The parking garage contains a designated trash and recycling room, allowing the building a clean and efficient system of waste removal that does not cross over typical pedestrian access on the site above.

### 3.0 RULES AND REGULATIONS

#### 3.1 ANTICIPATED PERMITS AND APPROVALS

BOSTON PLANNING & DEVELOPMENT AGENCY .....	ARTICLE 80 SMALL PROJECT REVIEW BPDA COMMUNITY REVIEW AFFORDABLE HOUSING AGREEMENT
BOSTON WATER AND SEWER COMMISSION .....	LOCAL SEWER AND WATER TIE-IN & SITE PLAN APPROVAL
BOSTON PUBLIC SAFETY COMMISSION COMMITTEE ON LICENSES .....	PARKING GARAGE PERMITS
BOSTON INSPECTIONAL SERVICES DEPARTMENT .....	ZONING BOARD OF APPEAL APPROVAL BUILDING PERMIT CONSTRUCTION PERMIT CERTIFICATE OF OCCUPANCY
BOSTON CONSERVATION COMMISSION.....	NOTICE OF INTENT (NOI) STORMWATER REPORT ENVIRONMENTAL ORDER OF CONDITIONS
MEPA (MASSACHUSETTS ENVIRONMENTAL PROTECTION AGENCY).....	ENVIRONMENTAL NOTIFICATION FORM (ENF)
DEPARTMENT OF ENVIRONMENTAL PROTECTION - WATERWAYS.....	CHAPTER 91 LICENSE

#### 3.2 BUILDING CODE ANALYSIS

The project is proposed to be classified as per the following:

Use Group Classification: Non-Separated Mixed Use: Multi-family R-2 (19 Residential Units), S-2 (Parking Garage), and Chapter 91 Facility of Public Accommodation to be Business (B) or Mercantile (M)

Construction Type: Type IA "Pedestal System" for the basement parking garage, first floor assembly system and its supporting construction, and Type VB construction above the first floor to and including the roof assembly.

Sprinkler: NFPA 13

### 3.3 ZONING CODE DATA AND VARIANCES

The site is located within a East Boston Neighborhood District with regard to zoning (Map 3A-3C), and a 2F-4000 subdistrict. As per Article 53, Table F, the applicable required and proposed zoning dimensional regulations for the Project are as follows. The Owner will be seeking a variance where the project is not compliant. The initial BPDA rejection letter is included in Appendix F.

DIMENSIONAL REGULATIONS.....	REQUIRED .....	PROPOSED .....
MINIMUM LOT SIZE .....	4,000 sf .....	19,000 sf .....
LOT AREA FOR EACH ADDITIONAL DWELLING UNIT .....	n/a .....	n/a .....
TOTAL MINIMUM LOT AREA REQUIRED FOR PROJECT .....	n/a .....	n/a .....
MINIMUM LOT WIDTH .....	40 ft .....	90 & 100 ft .....
MINIMUM LOT FRONTAGE .....	40 ft .....	90 ft .....
MAXIMUM FAR .....	0.80 .....	approx. 1.30 .....
MAXIMUM BUILDING HEIGHT IN STORIES .....	2-1/2 .....	3 .....
MAXIMUM BUILDING HEIGHT IN FEET .....	approx. 35 ft .....	approx. 43 ft .....
USABLE OPEN SPACE MIN. PER DWELLING UNIT .....	none .....	n/a .....
MINIMUM FRONT YARD SETBACK .....	(see note 1) .....	(see note 1) .....
MINIMUM SIDE YARD SETBACK .....	7 ft .....	5 ft and 0 ft .....
MINIMUM REAR YARD SETBACK .....	40 ft .....	42'-8-1/2" at First Floor .....
.....	.....	30'-6" at Upper Floors .....

OFF-STREET PARKING .....	REQUIRED .....	PROPOSED .....
OFF-STREET PARKING REQUIRED PER MARKET-RATE UNIT .....	2 SPACES .....	1.17 .....
OFF-STREET PARKING REQUIRED PER AFFORDABLE UNIT .....	0.70 SPACE .....	1.0 .....
TOTAL REQUIRED OFF-STREET PARKING .....	36 SPACES .....	22 SPACES .....

#### ZONING RELIEF REQUIRED (APPLICATION #ERT 058678)

ARTICLE 53 SECTION 8 .....	MULTI-FAMILY DWELLING IS FORBIDDEN USE .....
ARTICLE 53 SECTION 8 .....	FACILITY OF PUBLIC ACCOMMODATION IS FORBIDDEN USE .....
ARTICLE 53 SECTION 56 .....	OFF-STREET PARKING INSUFFICIENT .....
ARTICLE 53 SECTION 56 .....	OFF-STREET LOADING INSUFFICIENT .....
ARTICLE 53 SECTION 57.3 .....	TRAFFIC VISIBILITY ACROSS CORNERS .....

ARTICLE 53 SECTION 9 * *** .....	FLOOR AREA RATIO EXCESSIVE .....
ARTICLE 53 SECTION 9 ** .....	BUILDING HEIGHT EXCESSIVE (STORIES) .....
ARTICLE 53 SECTION 9 ** * .....	BUILDING HEIGHT EXCESSIVE (FEET) .....
ARTICLE 53 SECTION 9 ** *** .....	FRONT YARD INSUFFICIENT .....
ARTICLE 53 SECTION 9 *** .....	SIDE YARD INSUFFICIENT .....

NOTE 1: AS PER SECTION 53-57.2: MINIMUM FRONT YARD DEPTH SHALL BE IN CONFORMITY WITH THE EXISTING BUILDING ALIGNMENT OF THE BLOCK.

### 3.4 CHAPTER 91

The majority of the site lies within the zone under Chapter 91 jurisdiction as it is within the Chapter 91 Presumptive Line. The lot area subject to Chapter 91 is 16,826 sf.

#### OPEN SPACE REQUIRED BY CHAPTER 91:

16,826 sf x 50% = minimum 8,413 sf open space and maximum 8,413 sf building footprint

#### PROPOSED OPEN SPACE:

8,768 sf

### HARBORWALK

In accordance with Chapter 91, a 12'-0" wide Harborwalk will be provided. Location and orientation are determined by the top of the coastal bank.

### FACILITY OF PUBLIC ACCOMMODATION

In accordance with Chapter 91, a facility of public accommodation (FPA) will be provided. It is approximately 1,820 sf.

### 3.5 FEMA

A majority of the Project Site is located within the FEMA 100-year flood plain Zone AE with a base flood elevation of 9'-0". The remainder of the site is located in Zone AE with a base flood elevation of 10'-0". It is in a special flood hazard area (SFHA) subject to inundation by the 1% annual chance flood. The Project Site has experienced flooding in the recent past during high-tide storm events.

### 3.6 BPDA CLIMATE RESILIENCY CHECKLIST

Although it is not required for the Article 80 submission, the team has chosen to voluntarily complete the BPDA Climate Resiliency Checklist. A preliminary energy model was used to generate energy use targets. The full checklist is included in Appendix H and will be regularly updated as the design evolves.

### 3.7 DRY FLOOD-PROOFING

The garage level, which is located below the design flood elevation, will be constructed of cast-in-place concrete and will be dry flood-proofed, at a minimum, according to the following codes, standards, and procedures:

ASCE 24-14: Flood Resilient Design and Construction

ASCE 7, Section 5.3: Minimum Design Loads for Buildings and Other Structures

Massachusetts Building Code, 780 CMR 1612.0 Flood Loads

Massachusetts Building Code, 780 CMR 120.G: Flood-Resistant Construction and Construction in Coastal Dunes

Boston Zoning Code, Article 80: Development Review

Among the strategies that will be employed, walls will be sealed up to the design flood elevation. The structure will be designed so as to be able to withstand the required hydrostatic and hydrodynamic pressure. Water resistant materials will also be used for any spaces below the design flood elevation.

The entrance to the underground garage is accessed from Coleridge Street. This entrance ramps up to an elevation of 10'-0" at the stair and driveway ramp before descending down. This is to prevent flood waters from entering the below grade garage.

### 3.8 ACCESSIBILITY

This project is proposed to be compliant with 521 CMR. Residential units to be Group 1 Dwelling Units. Townhouse units (duplexes) are exempt from Group 1 Dwelling Units.

Please see Appendix F: Accessibility Checklist for further information.

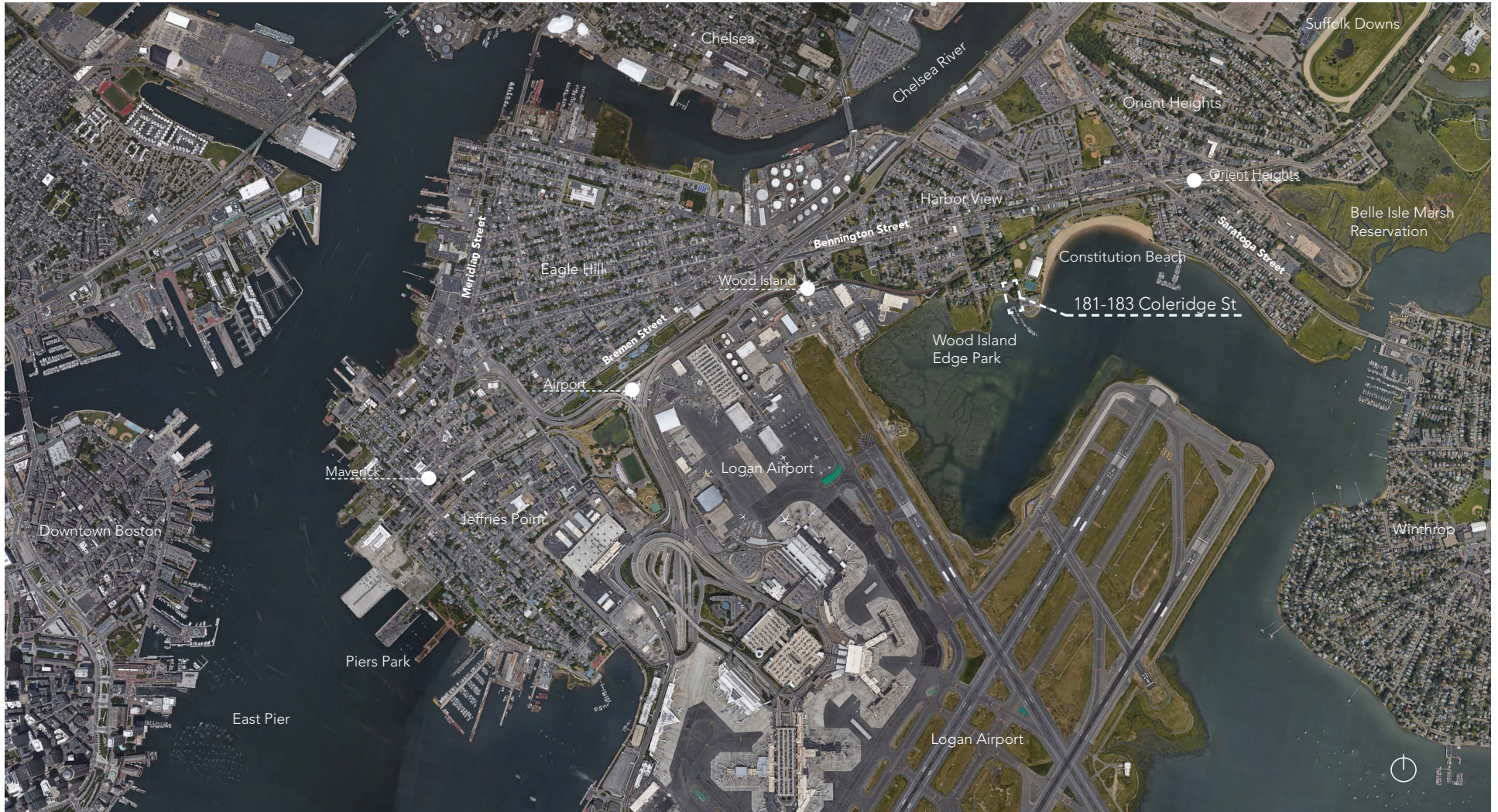




APPENDIX A  
EXISTING SITE CONDITIONS



# EXISTING CONDITIONS



Satellite View

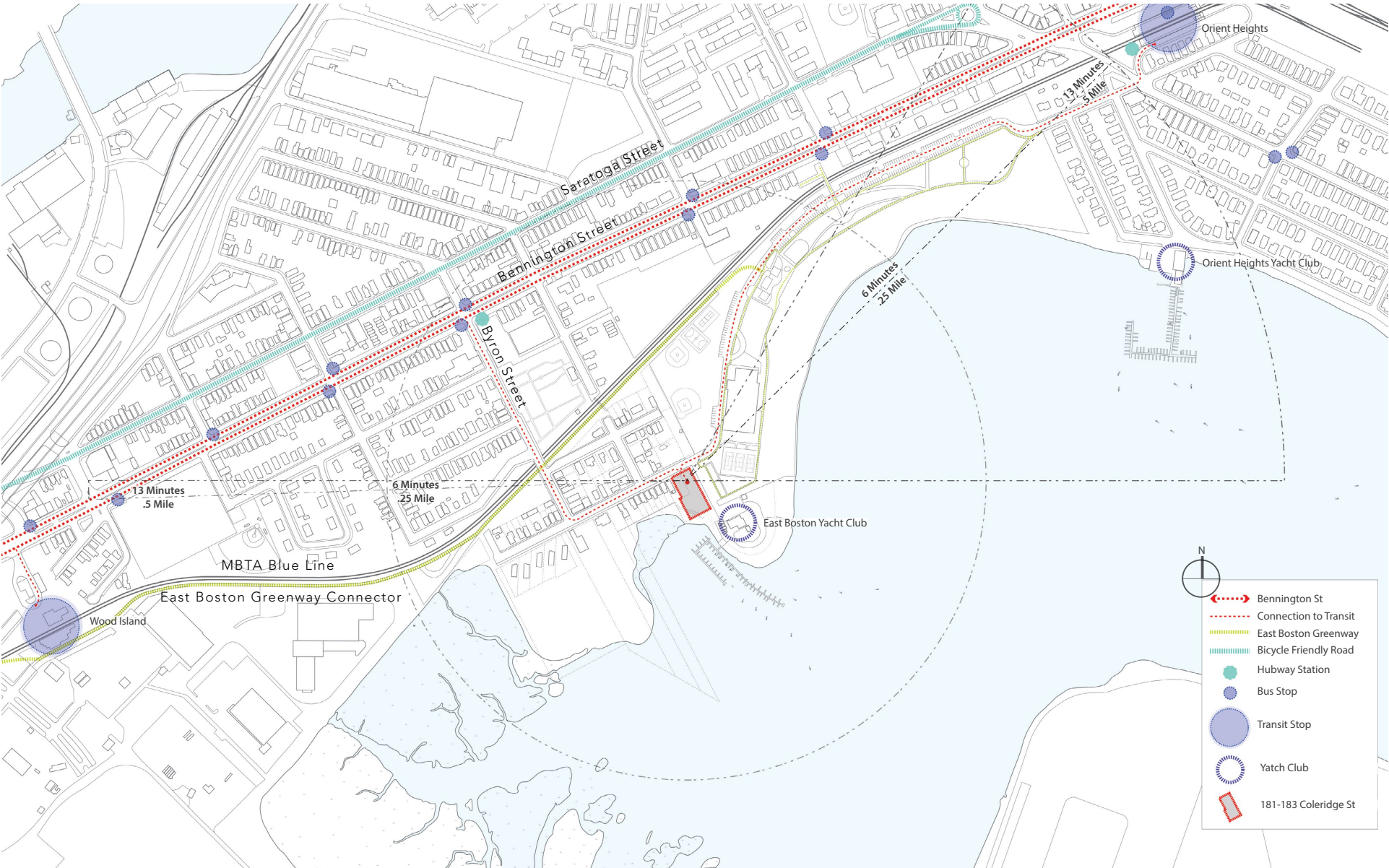


# URBAN ANALYSIS



Site Circulation Patterns and Public Activity

# URBAN ANALYSIS



Site Access and Circulation



# EXISTING CONDITIONS



Satellite View



# EXISTING CONDITIONS



Site Approach from Coleridge Street



# EXISTING CONDITIONS



Site from Coleridge Street



# EXISTING CONDITIONS



Site Approach from Rice Street



# EXISTING CONDITIONS



Park and Constitution Beach Beyond



# EXISTING CONDITIONS



Approach to Future Harborwalk



# EXISTING CONDITIONS



View of Site and Adjacent Neighborhood from Water



# EXISTING CONDITIONS



View from Site towards Airport and Downtown at High Tide



# EXISTING CONDITIONS



Site at High Tide



# EXISTING CONDITIONS



Site at Low Tide



## EXISTING CONDITIONS



Site During Flooding (March 2018)



APPENDIX B  
FEMA AND SEA LEVEL RISE PROJECTIONS





## NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

**Coastal Base Flood Elevations** shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

The AE Zone category has been divided by a **Limit of Moderate Wave Action (LMWA)**. The LMWA represents the approximate landward limit of the 1.5-foot breaking wave. The effects of wave hazards between the VE Zone and the LMWA (or between the shoreline and the LMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Massachusetts State Plane Mainland Zone (NAD 83, GRS 1980 spheroid). Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services  
NOAA, NNGS12  
National Geodetic Survey  
SSMC-3, #5202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at <http://www.ngs.noaa.gov>.

**Base map** information shown on this FIRM is derived from Massachusetts Geographic Information System (MassGIS) digital ortho-photography produced at 45 centimeter (2005) and 30 centimeter (2008) resolution. Aerial photography is dated Spring 2005 and Spring 2008.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data Tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unreviewed streams may differ from what is shown on previous maps.

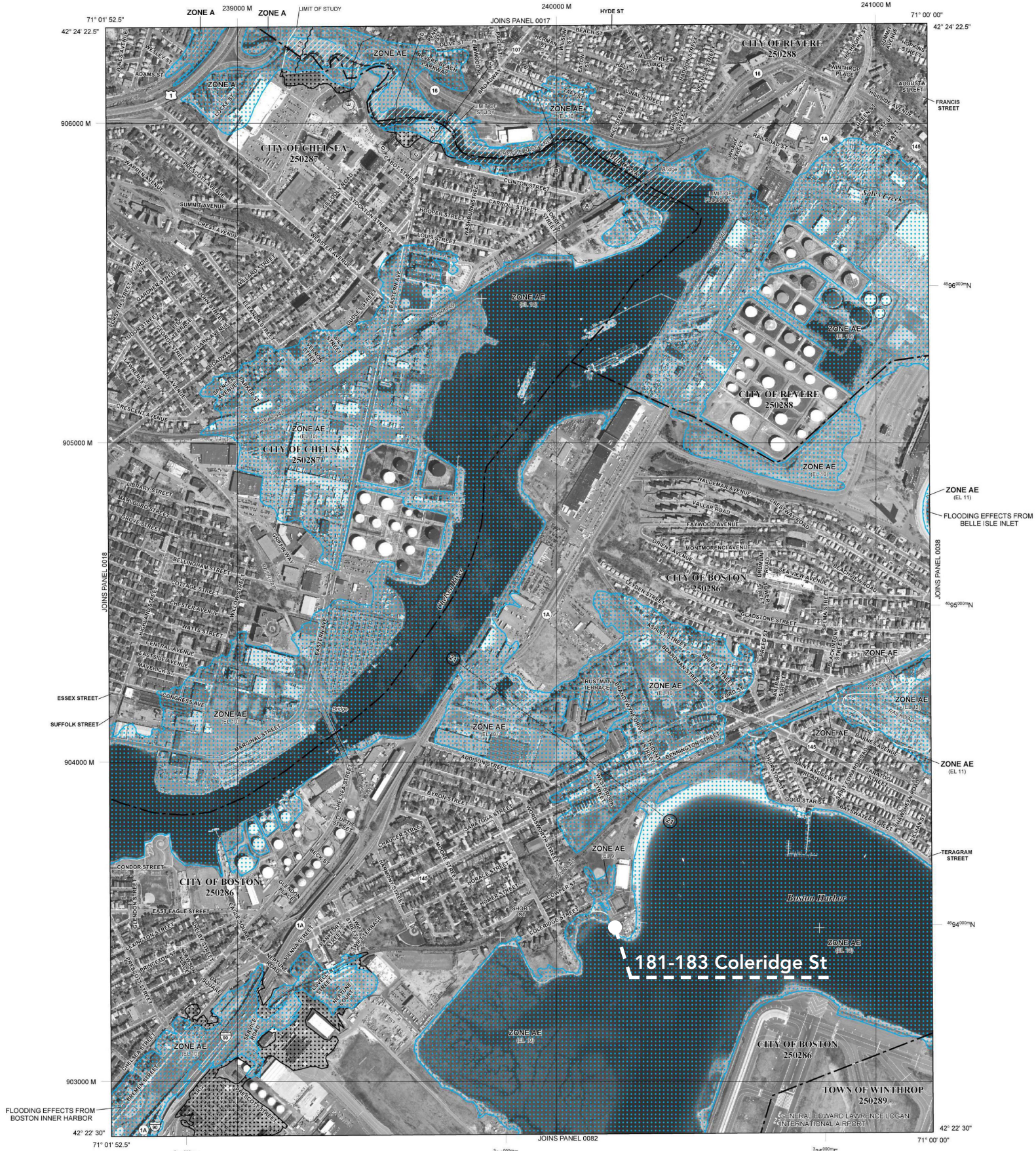
**Corporate limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at <http://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/nfp>.

Only coastal structures that are certified to provide protection from the 1-percent-annual chance flood are shown on this panel. However, all structures taken into consideration for the purpose of coastal flood hazard analysis and mapping are present in the DFIRM database in S\_Gen\_Struct.



## LEGEND

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**  
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently derelictified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS**

**ZONE D** Areas determined to be outside the 0.2% annual chance floodplain.

**ZONE I** Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- Limit of Moderate Wave Action
- Limit of Moderate Wave Action coincident with Zone Break
- Base Flood Elevation line and value; elevation in feet\* (EL 987)
- Base Flood Elevation value where uniform within zone; elevation in feet

\*Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- Culvert
- Bridge
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 4986000 M 1000-meter grid; Massachusetts State Plane Mainland Zone (FIPS Zone 2502), Lambert Conformal Conic projection
- 1000-meter Universal Transverse Mercator tick values, zone 19N
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- MAP REPOSITORIES
- Refer to Map Repositories list on Map Index
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP September 25, 2009
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
- March 16, 2016 - to change Base Flood Elevations and Special Flood Hazard Areas, to change zone designations, to update the effects of wave action, to update corporate limits, to add roads and road names, to incorporate previously issued Letters of Map Revision and to modify Coastal Barrier Resource System units.
- For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.
- To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-438-6620.

Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

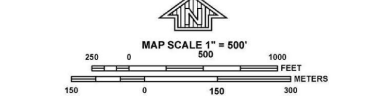
September 25, 2009

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

March 16, 2016 - to change Base Flood Elevations and Special Flood Hazard Areas, to change zone designations, to update the effects of wave action, to update corporate limits, to add roads and road names, to incorporate previously issued Letters of Map Revision and to modify Coastal Barrier Resource System units.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-438-6620.



NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0019J

## FIRM

**FLOOD INSURANCE RATE MAP  
SUFFOLK COUNTY,  
MASSACHUSETTS  
(ALL JURISDICTIONS)**

**PANEL 19 OF 176  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)**

CONTAINS:			
COMMUNITY	NUMBER	PANEL	SUFFIX
BOSTON, CITY OF	250286	0019	J
CHELSEA, CITY OF	250287	0019	J
REVERE, CITY OF	250288	0019	J
WINTHROP, TOWN OF	250289	0019	J

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



**MAP NUMBER**

**25025C0019J**

**MAP REVISED**

**MARCH 16, 2016**

Federal Emergency Management Agency





# ANNUAL EXCEEDANCE PROBABILITY - PRESENT



Image Credit: Woods Hole Group



# ANNUAL EXCEEDANCE PROBABILITY - 2030

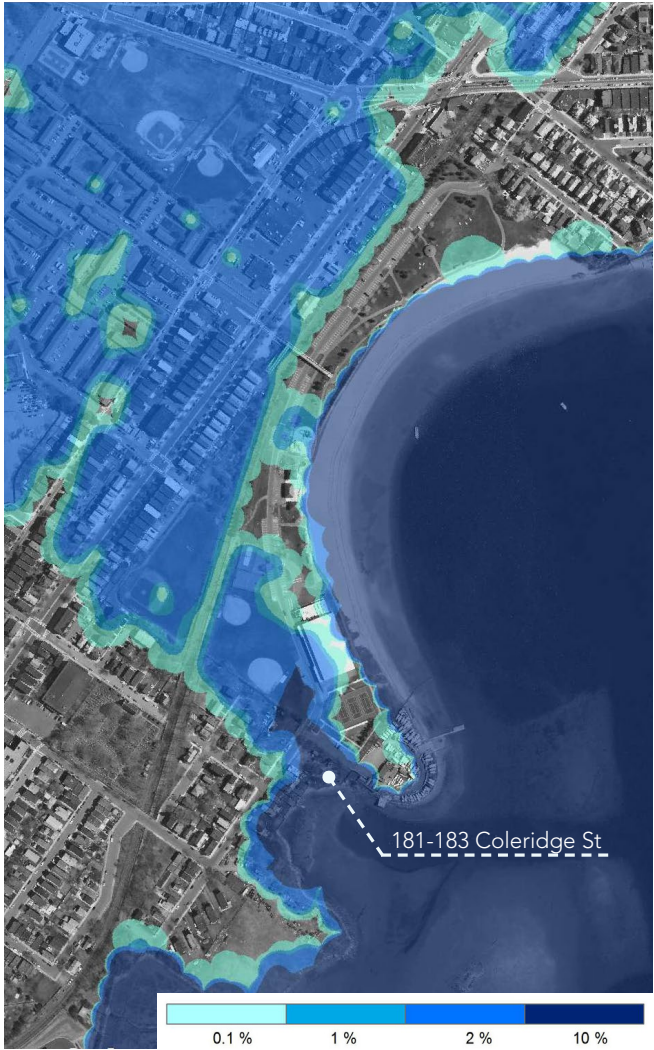


Image Credit: Woods Hole Group



# ANNUAL EXCEEDANCE PROBABILITY - 2070

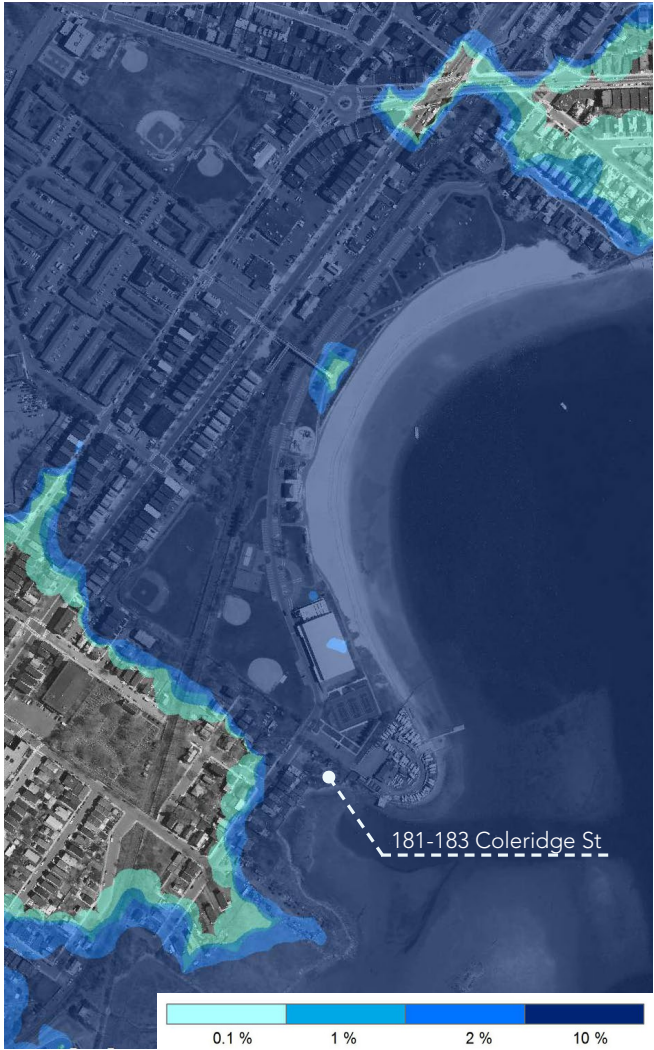
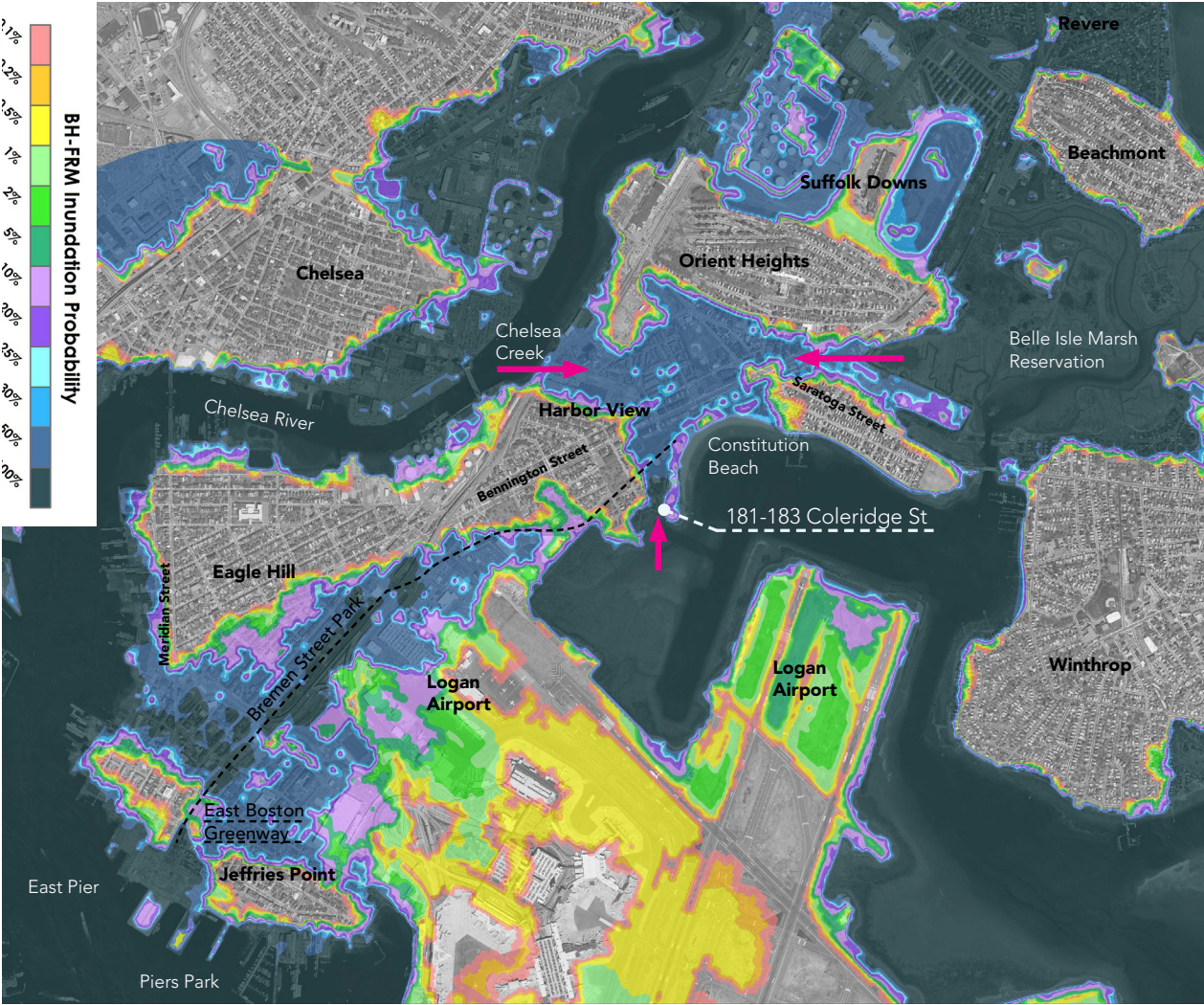


Image Credit: Woods Hole Group

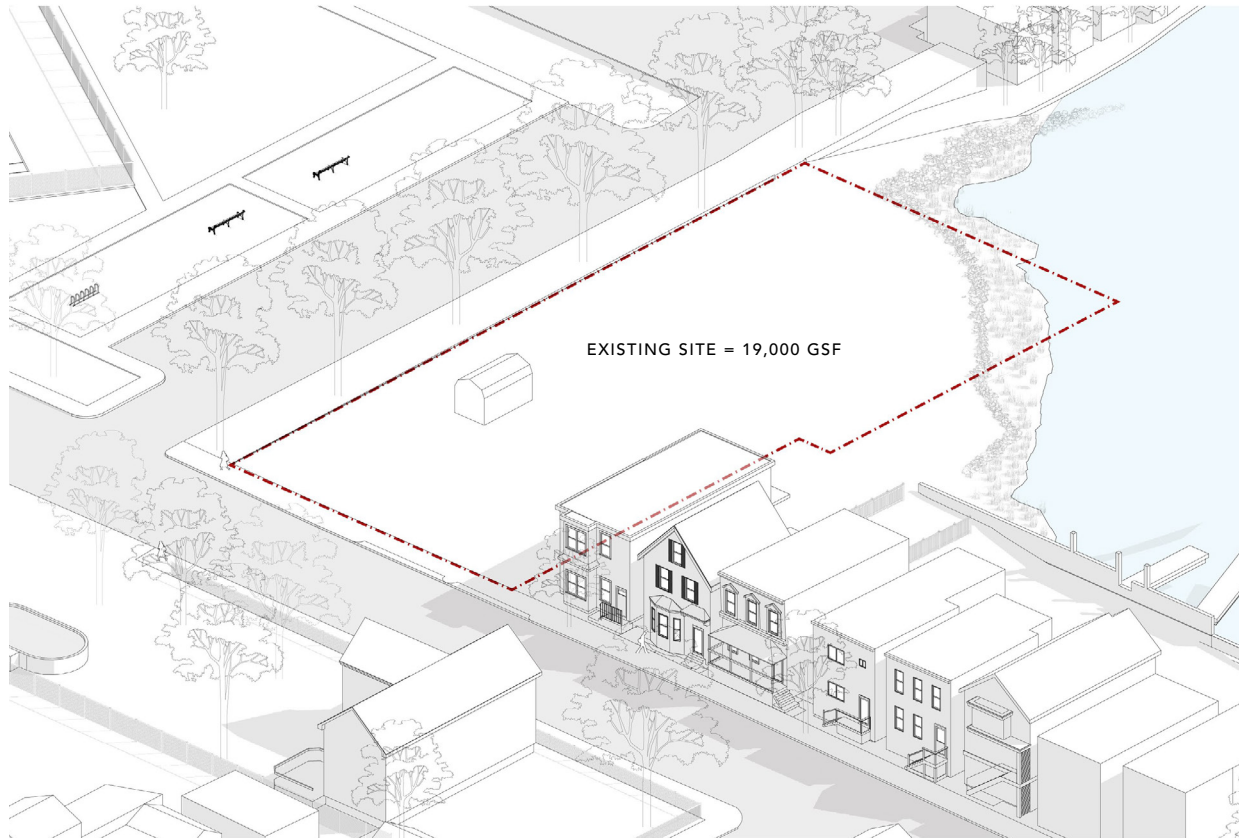




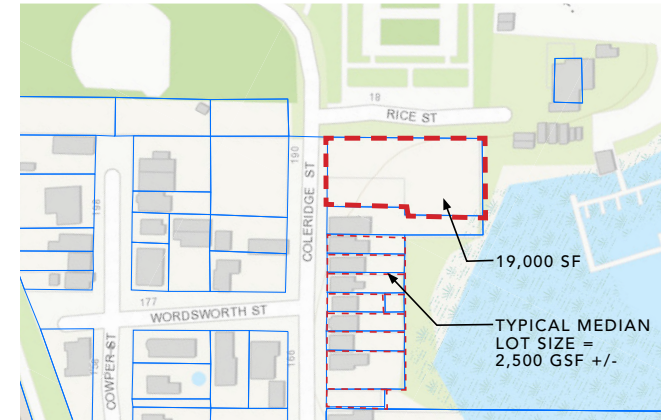
APPENDIX C  
URBAN DESIGN ANALYSIS



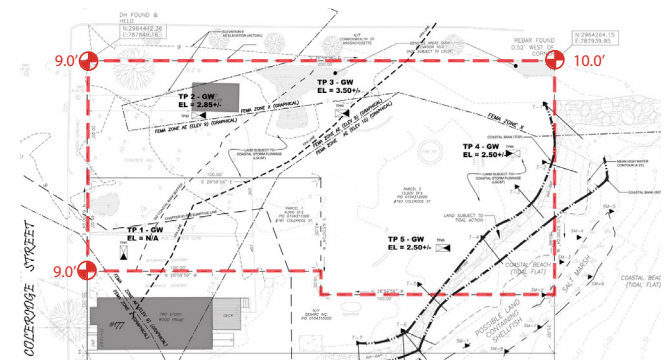
# EXISTING SITE



Axon Showing Existing Site

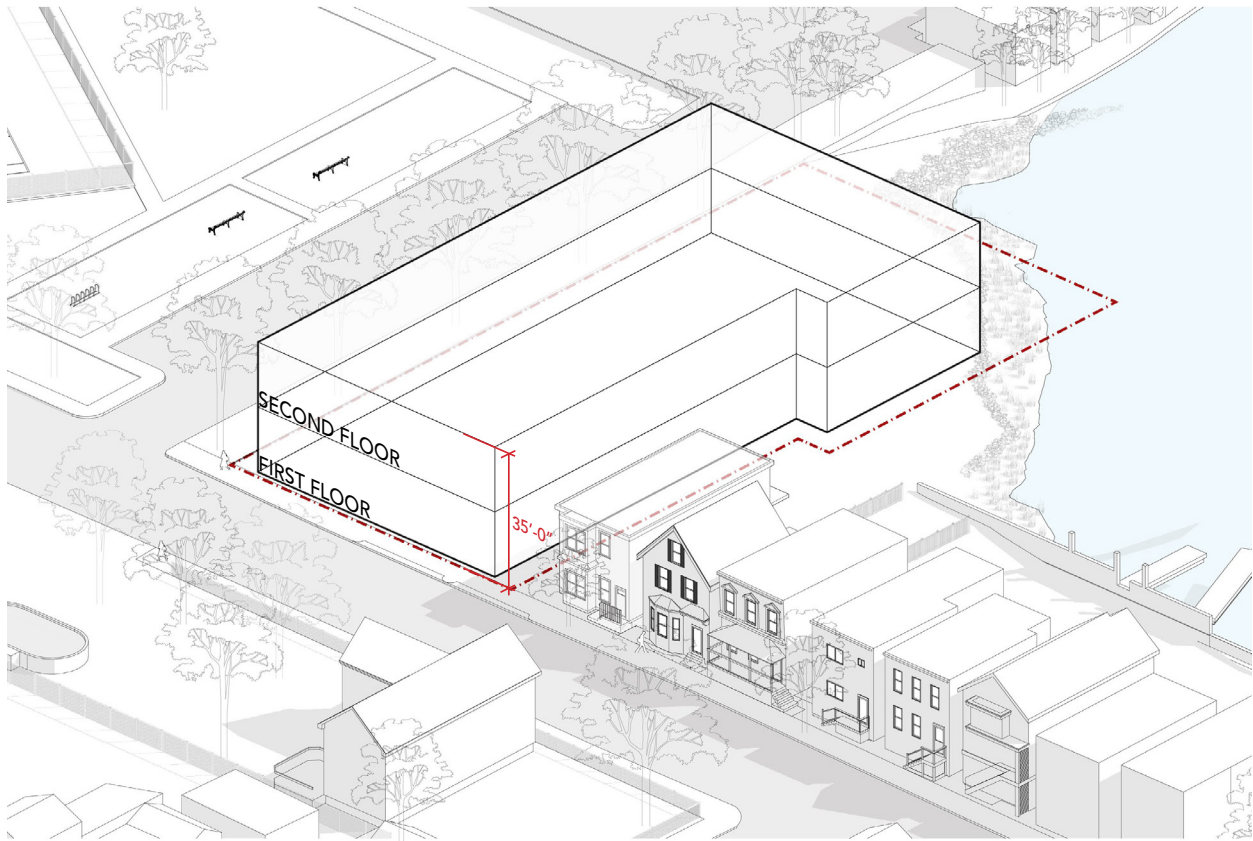


Assessor's Map



Plan Showing Existing Site  
\* elevations above are in NAVD88

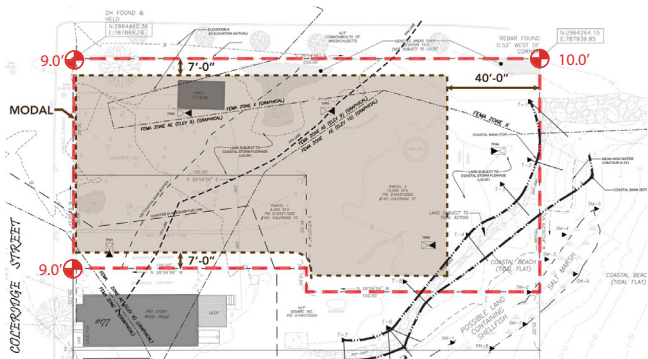
# ZONING CONSTRAINTS



Axon Showing Zoning Constraints



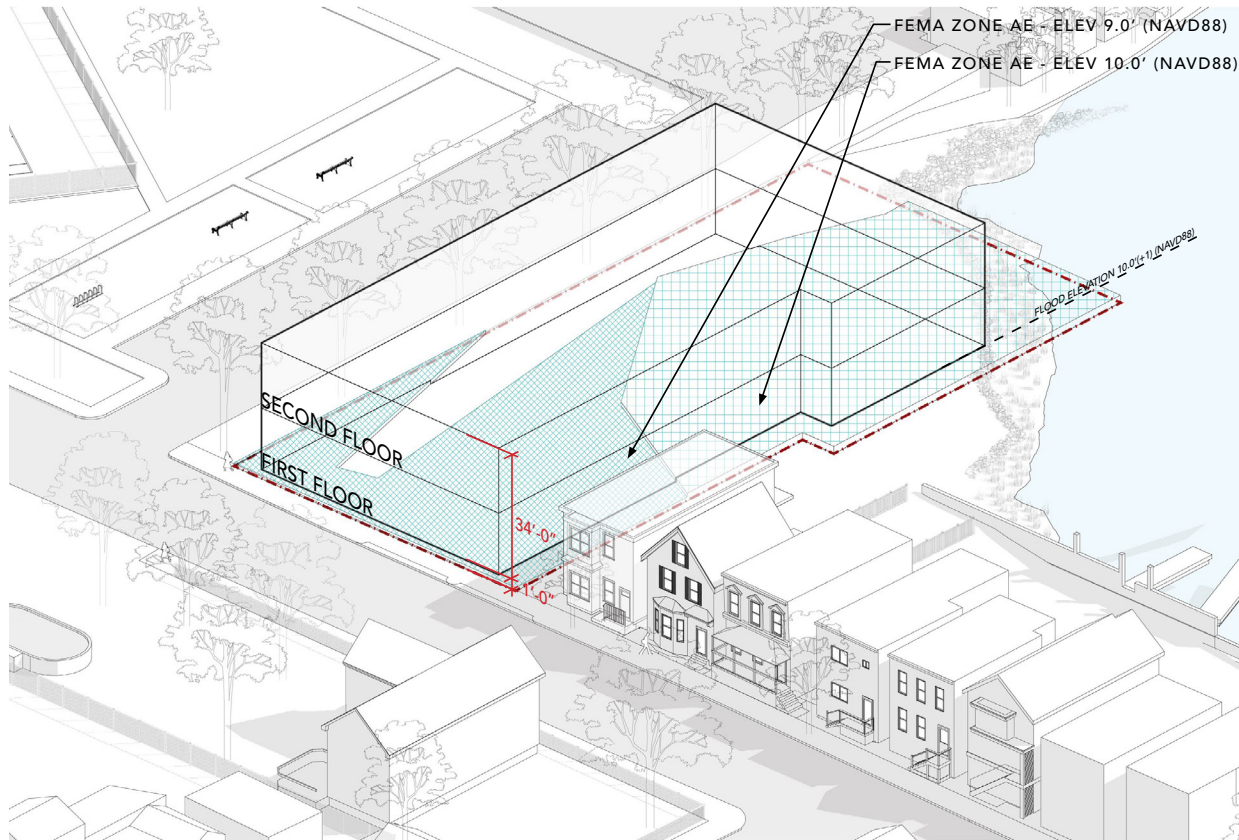
Aerial



Plan Showing Zoning Constraints  
\* elevations above are in NAV88



# FEMA CONSTRAINTS

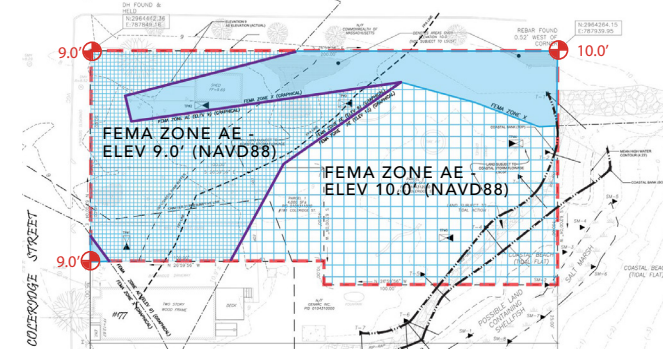


Axon Showing FEMA Constraints



\*FEMA map #25025C0019J

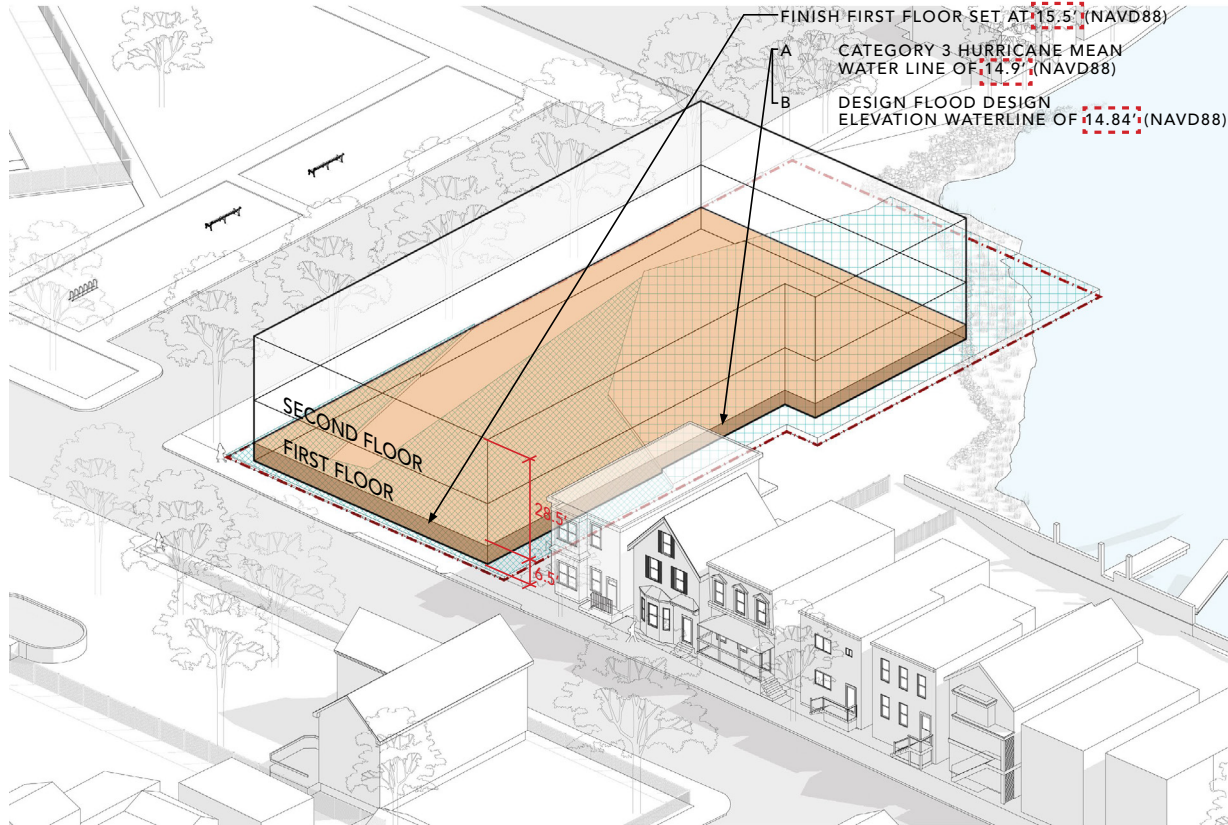
Source: <https://msc.fema.gov/portal/search?AddressQuery=181%20coleridge%20street%20east%20boston%2C%20ma#searchresultsanchor>



Plan Showing FEMA Constraints

\* elevations above are in NAV88

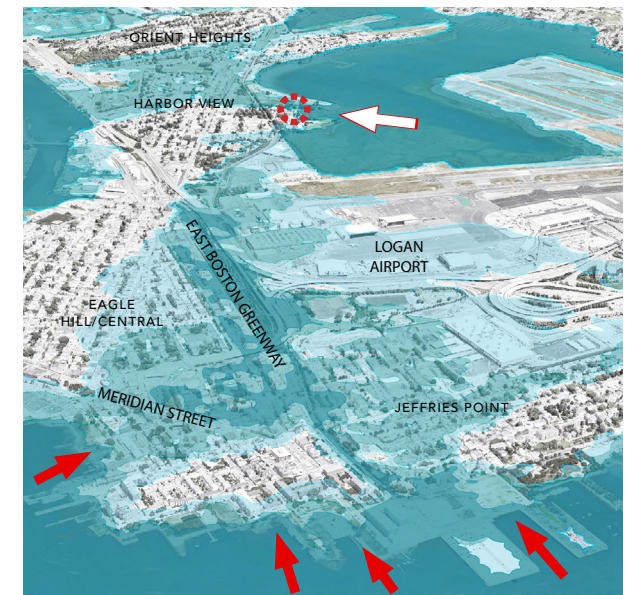
# "BEST" RESILIENT PRACTICES: STORM SURGE & SEA LEVEL RISE



Axon showing "Best" Resilient Practices

"Climate Ready Boston projections indicate that Boston's sea levels will probably rise (from 2000 levels) by at least 9 inches by 2030, 21 inches as soon as 2050, and 36 inches by as soon as 2070."

Source: Coastal Resilience Solutions for East Boston and Charlestown Final Report, published October 2017, page 22

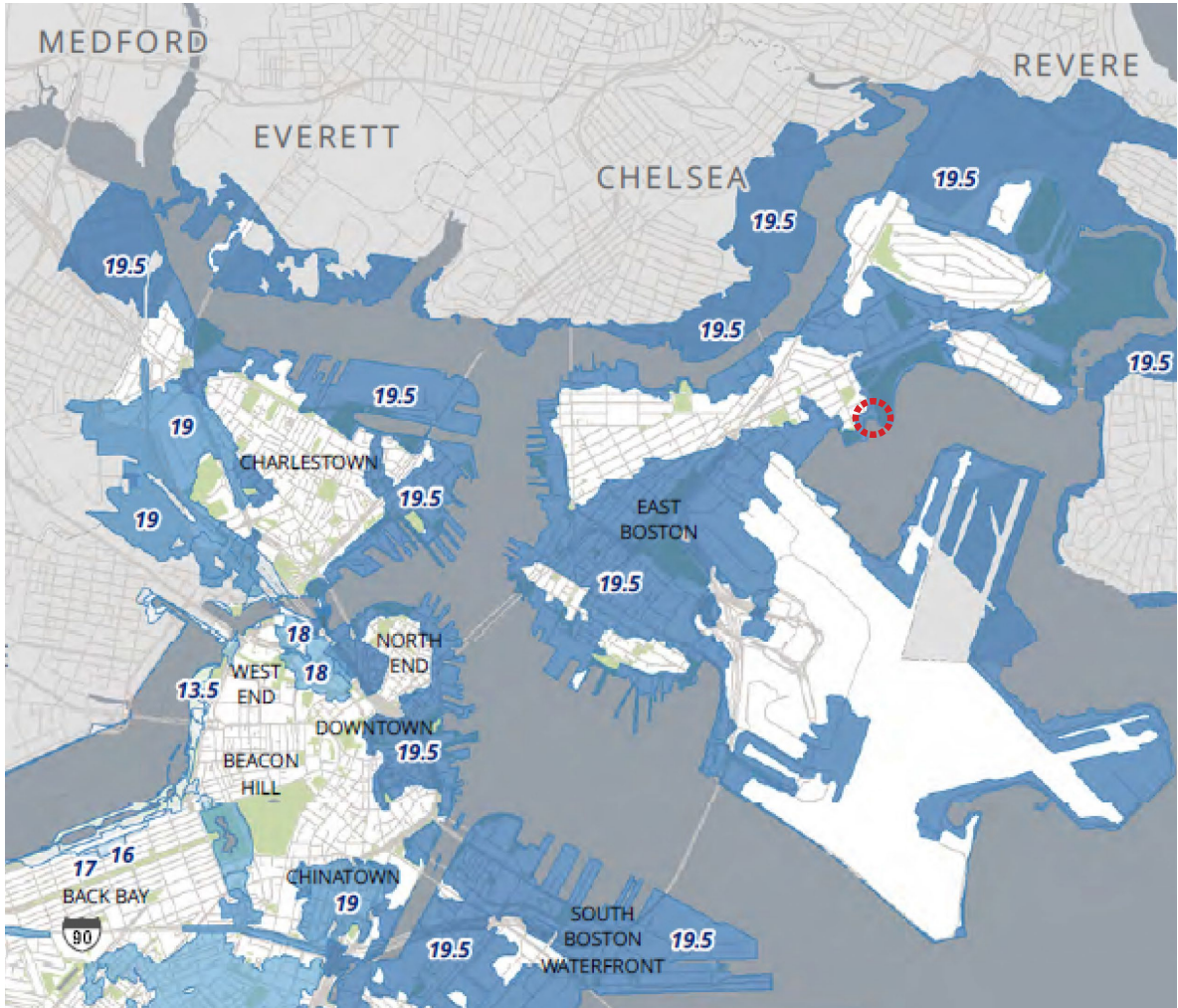


East Boston Predicted Flood Areas

Source: <https://www.boston.gov/sites/default/files/climate-ready-east-boston-charlestown-final-report-web.pdf>



# FLOOD ANALYSIS



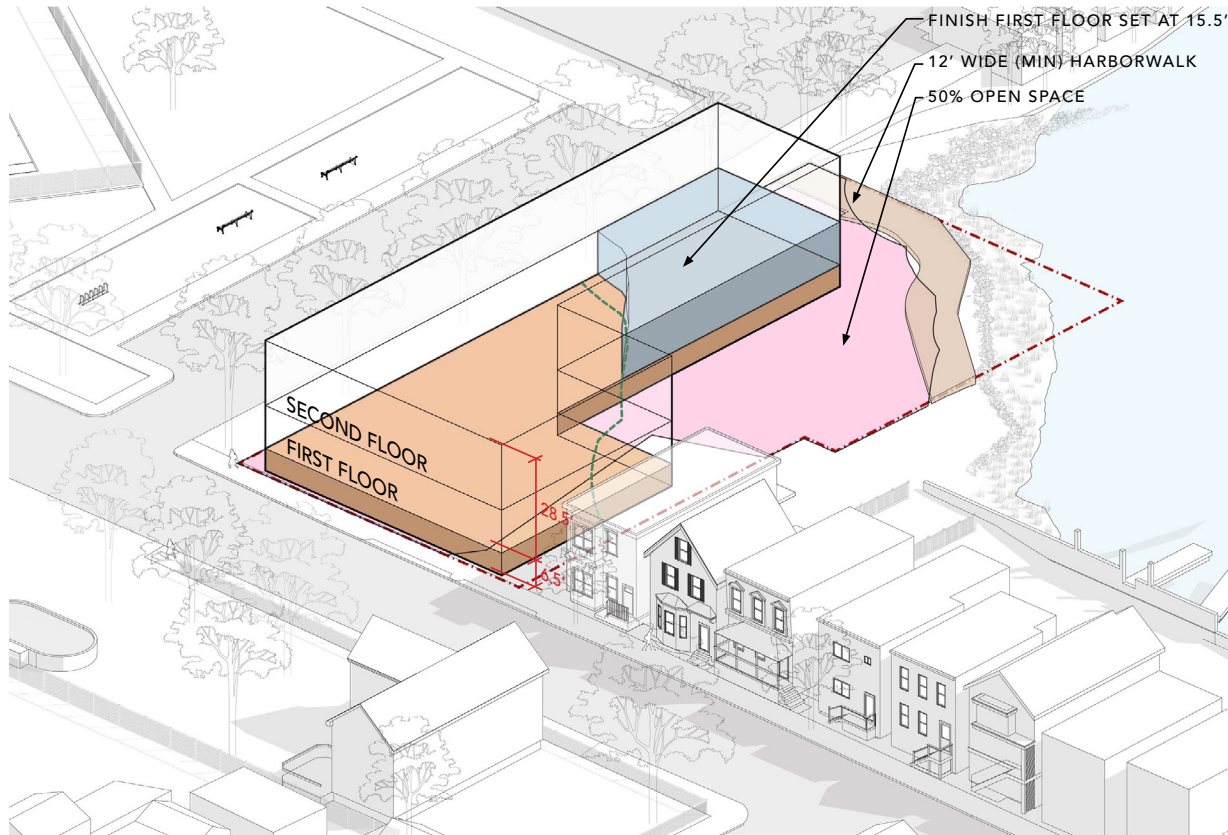
BPDA Sea Level Rise - Flood Elevation Hazard Area Map (Dec. 2017)  
\*map based on spatial distribution at 1% probability in 2070

Base Flood Elevation (BFE)	19.3' (Boston City Base Datum)
Convert to NAVD88 Subtract 6.46'	12.84' (NAVD88)
Design Flood Elevation (DFE) Add 24" for Buildings with Residential on Ground Floor	14.84' (NAVD88)
Finish Floor	15.5' (NAVD88)
Sidewalk Grade	9.0' (NAVD88)
Difference	6.5'

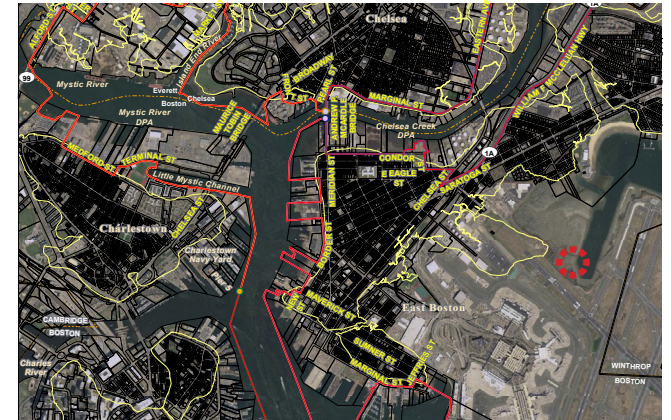
Source: City of Boston Climate Resiliency Guidance/Climate Resiliency Checklist (<http://www.bostonplans.org/getattachment/5d668310-ffd1-4104-98fa-eef30424a9b3>)

# MGL CH. 91 CONSTRAINTS

50% OPEN SPACE + HARBORWALK + FACILITY OF PUBLIC ACCOMMODATION

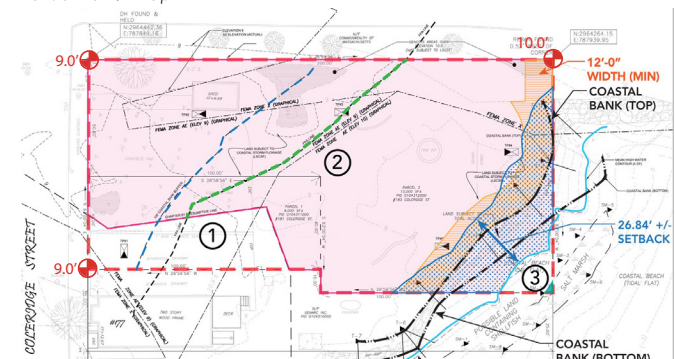


Axon Showing Chapter 91 Constraints



Chapter 91 Presumptive Line

Source: <http://www.bostonharbornow.org/what-we-do/explore/harborwalk/#map>

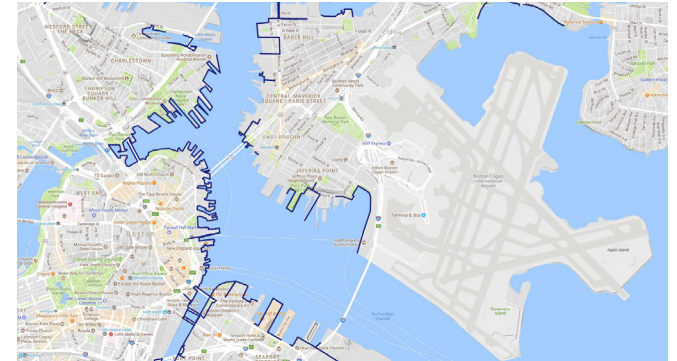
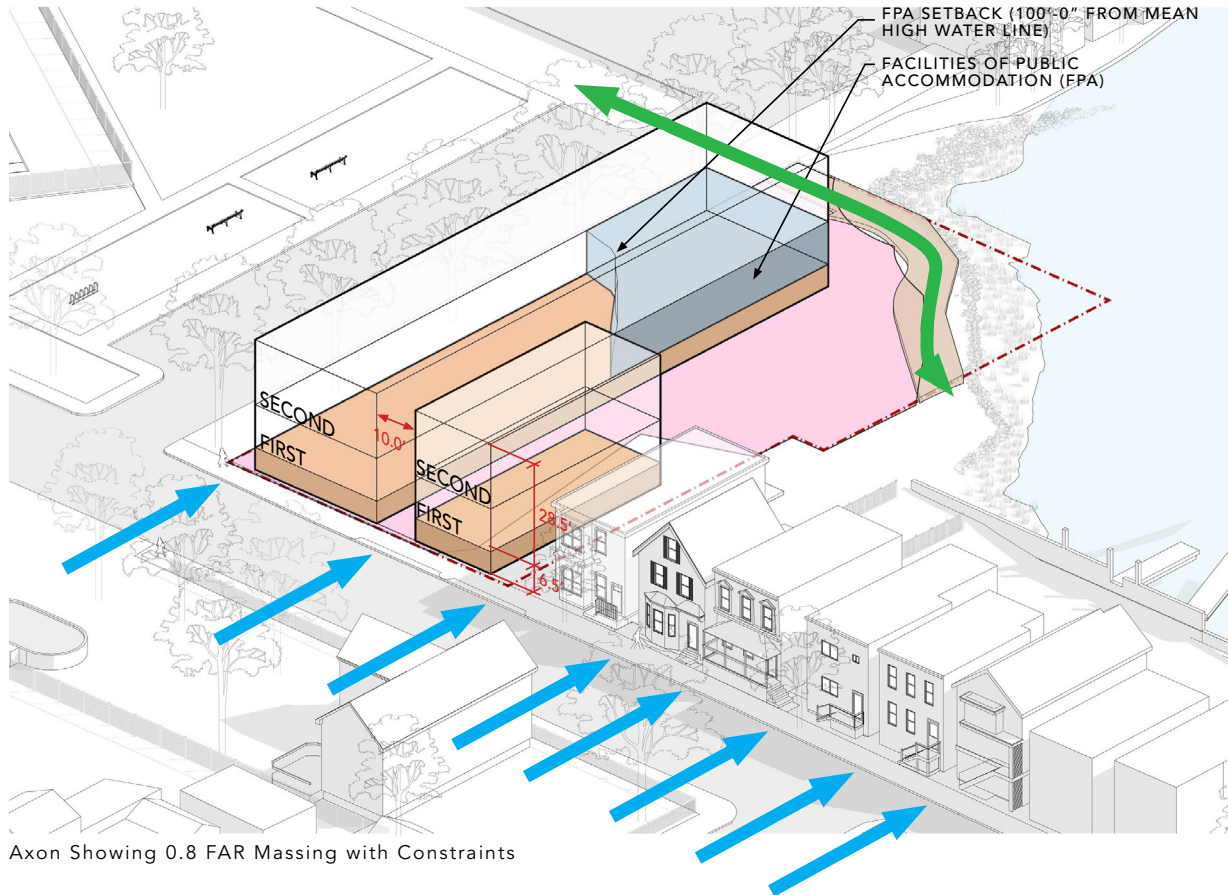


Plan Showing Chapter 91 Constraints

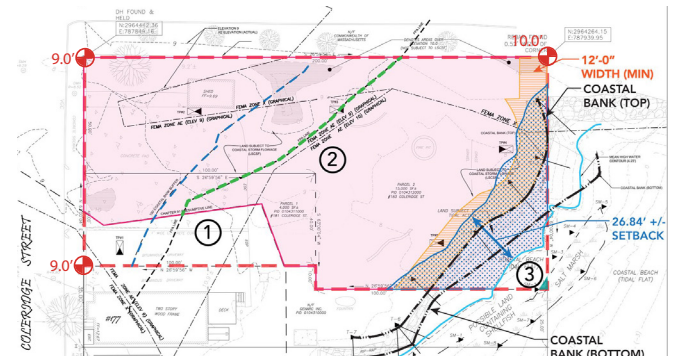
\* elevations above are in NAV88



# CONSTRAINTS OVERLAY WITH FAR=0.8 (ZONING AS-OF-RIGHT)

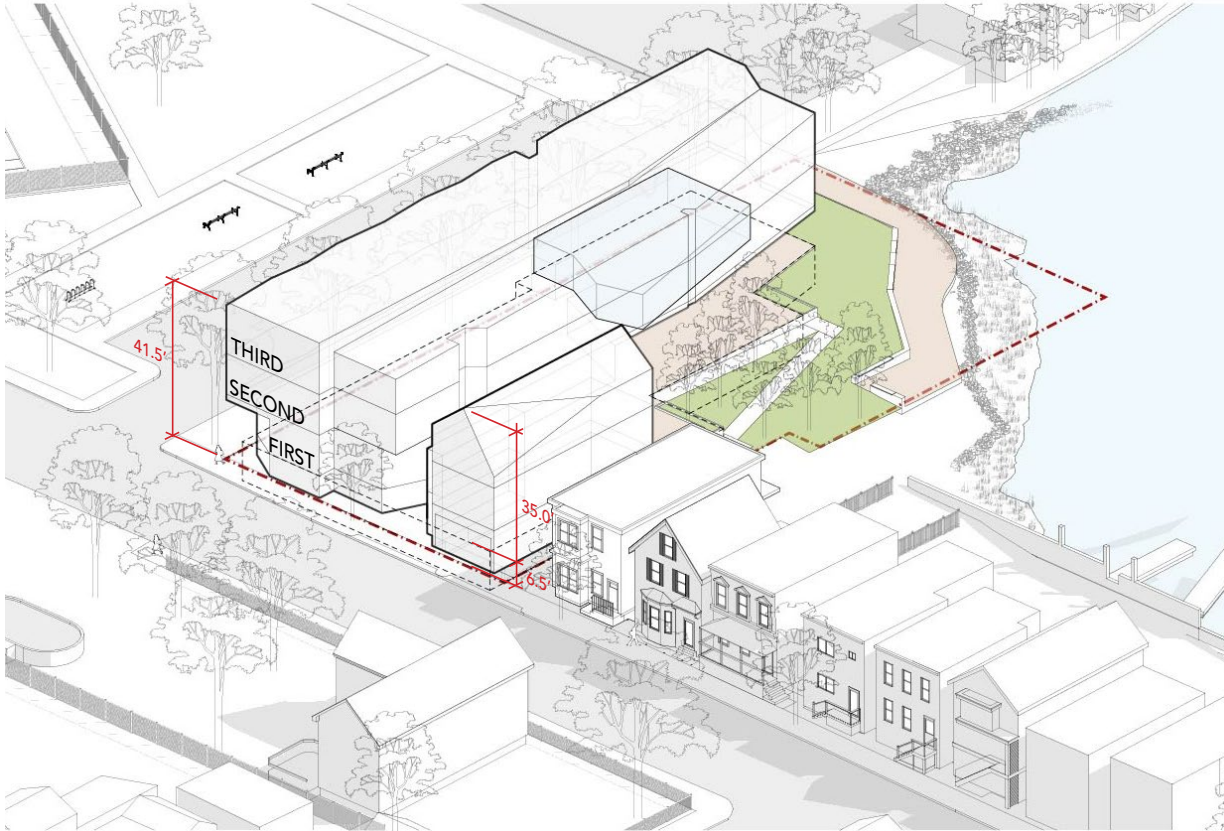


Boston Harborwalk Plan



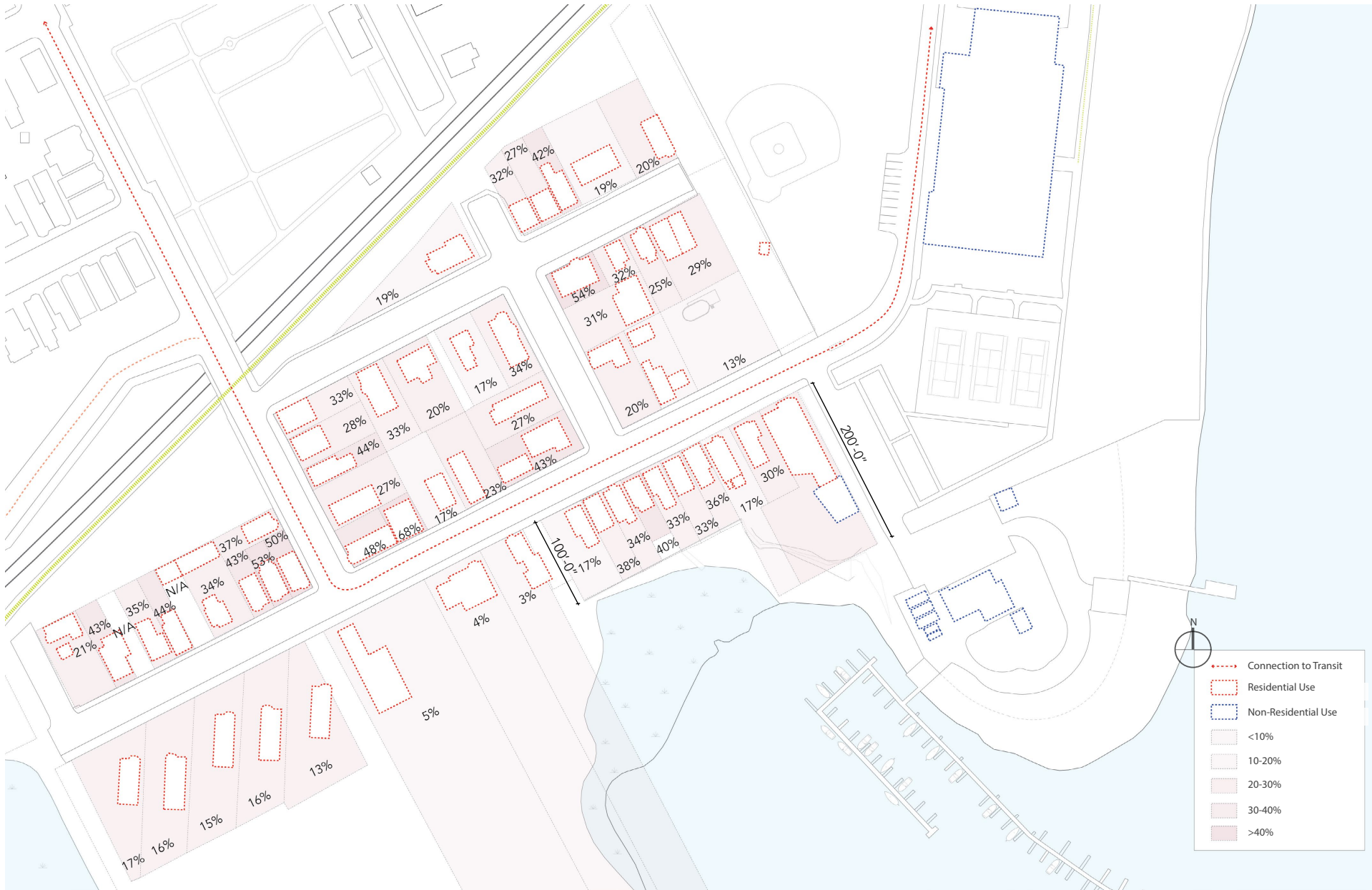
Plan Showing Chapter 91 Constraints  
\* elevations above are in NAV88

# PROPOSAL



Axon showing proposed massing

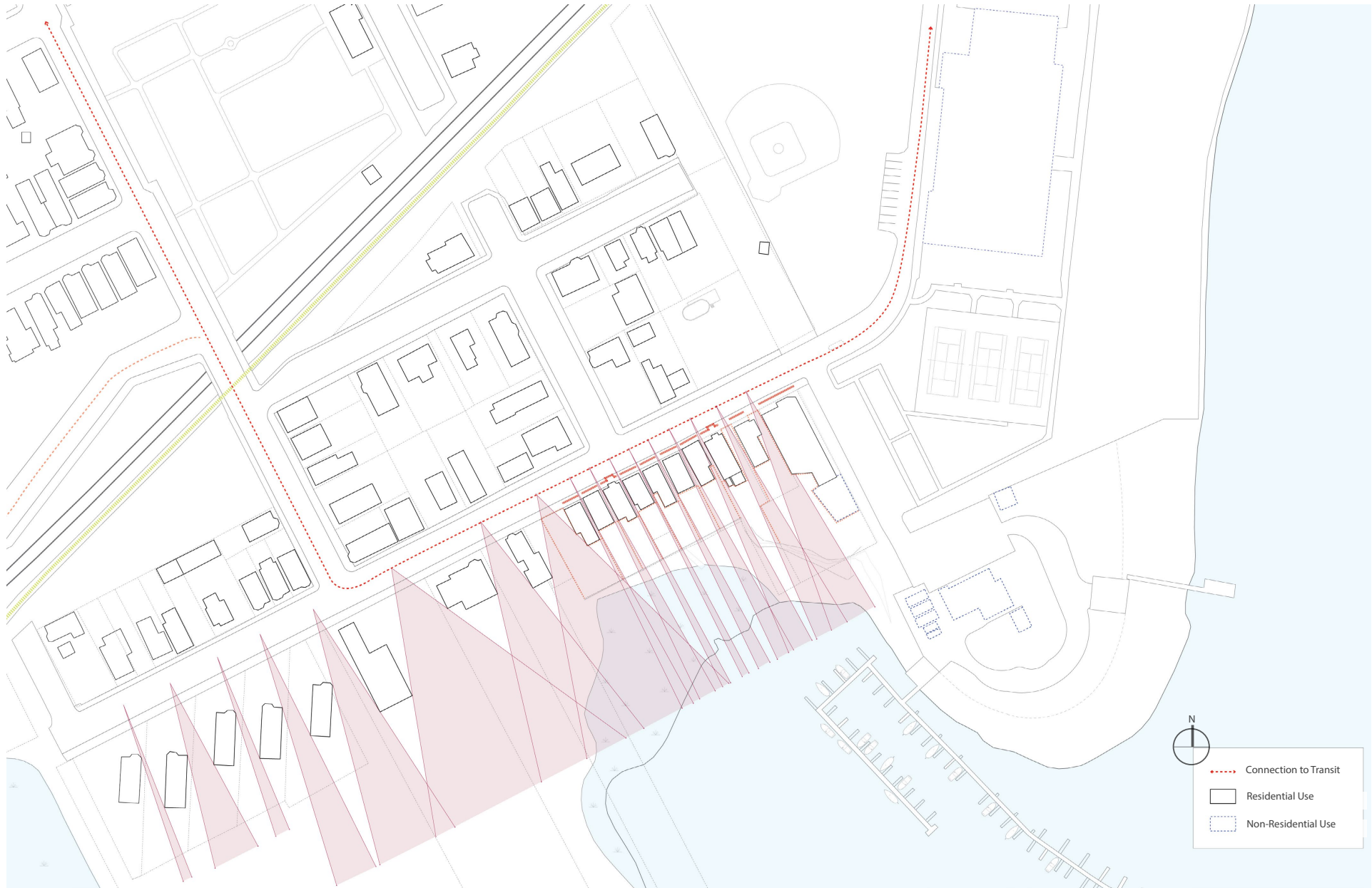
# URBAN ANALYSIS



Residential Footprint to Lot Area Percentage



# URBAN ANALYSIS



Coleridge Street View Corridors

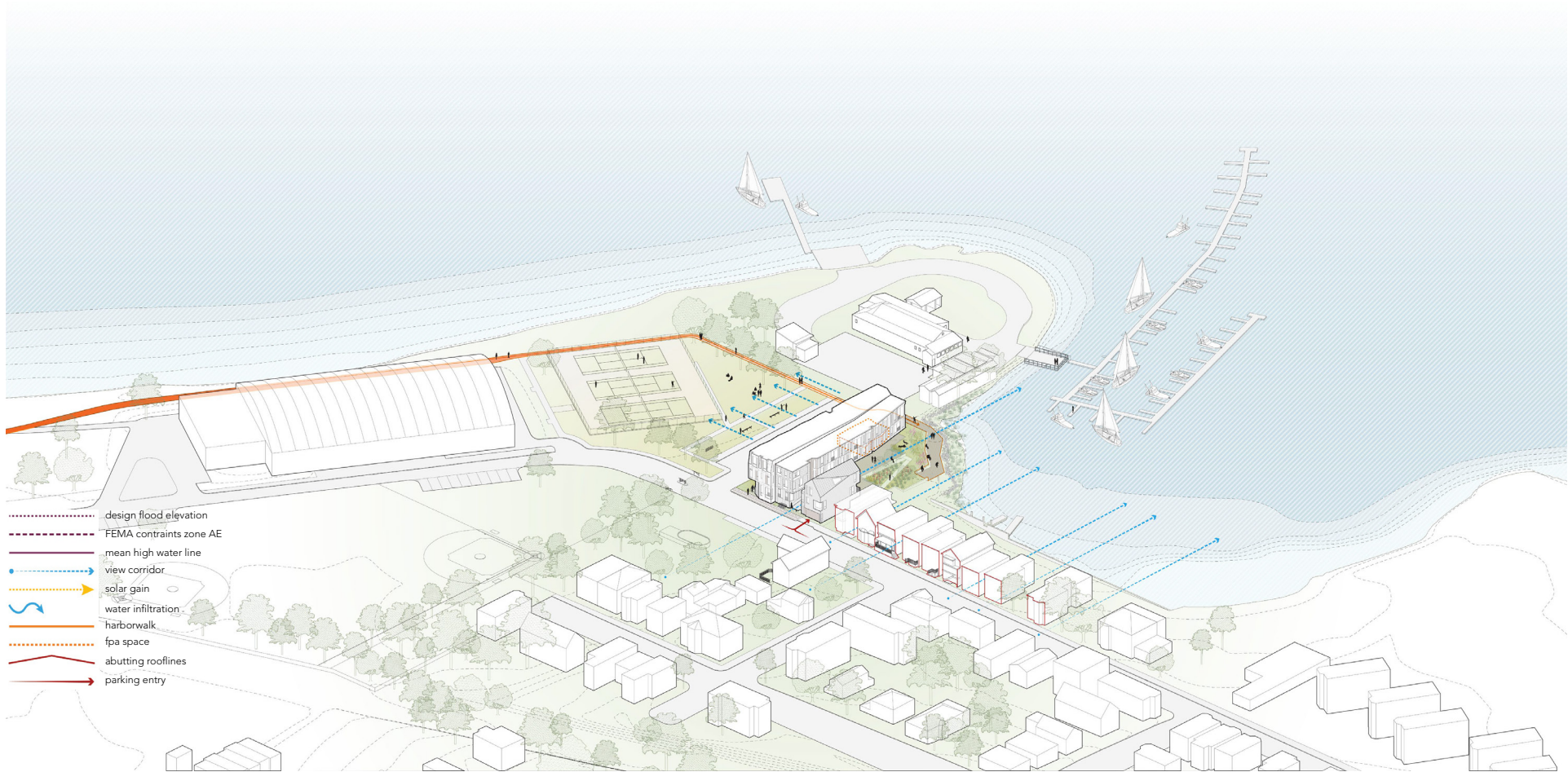
# URBAN ANALYSIS



Density Comparison



# SITE DESIGN STRATEGIES

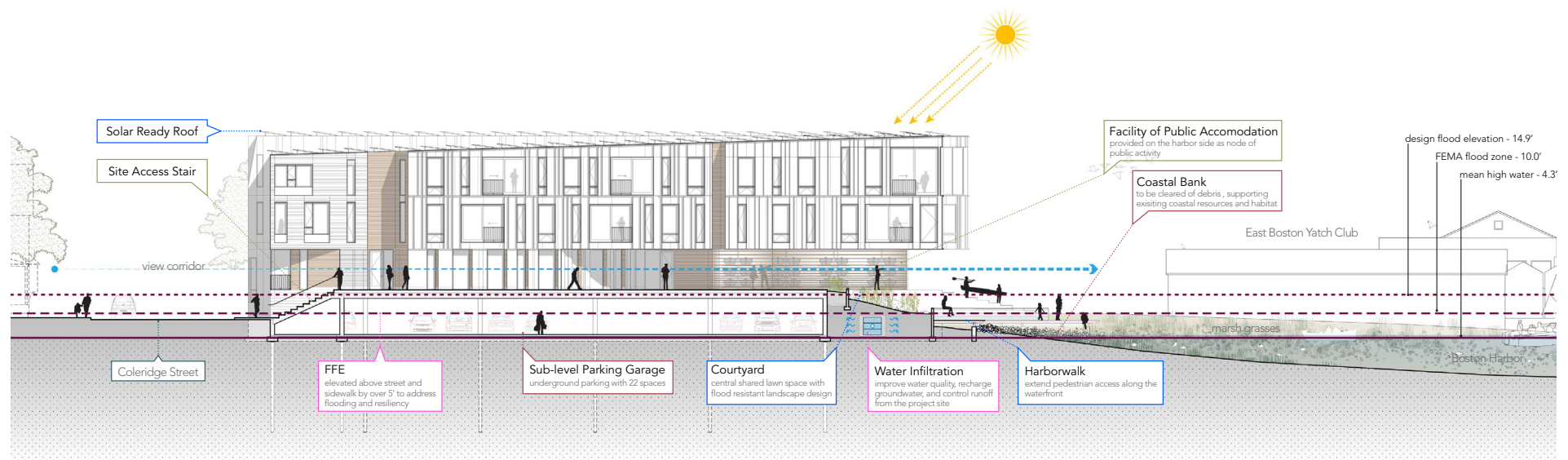




# GROUND FLOOR SITE PLAN



# SITE SECTION



site section through marsh and elevated structure at 181-183 Coleridge Street residences



# SITE IMPROVEMENTS



Clean up debris



Rebuild rock wall



Salt marsh grasses



Rain gardens



Harborwalk



Swamp Oak



SITE IMPROVEMENTS





# PROPOSED DESIGN



Site Approach from Coleridge Street



# PROPOSED DESIGN



Site Entry at Coleridge Street



## PROPOSED DESIGN



Accessible Egress Viewed from Street Level



# PROPOSED DESIGN



Accessible Egress Viewed from Street Level



# PROPOSED DESIGN



View of Rice Street Facade



# PROPOSED DESIGN



View of Chapter 91 Harborwalk



# PROPOSED DESIGN



Proposed Entry to Below Grade Parking



## PROPOSED DESIGN



Proposed Entry to Below Grade Parking



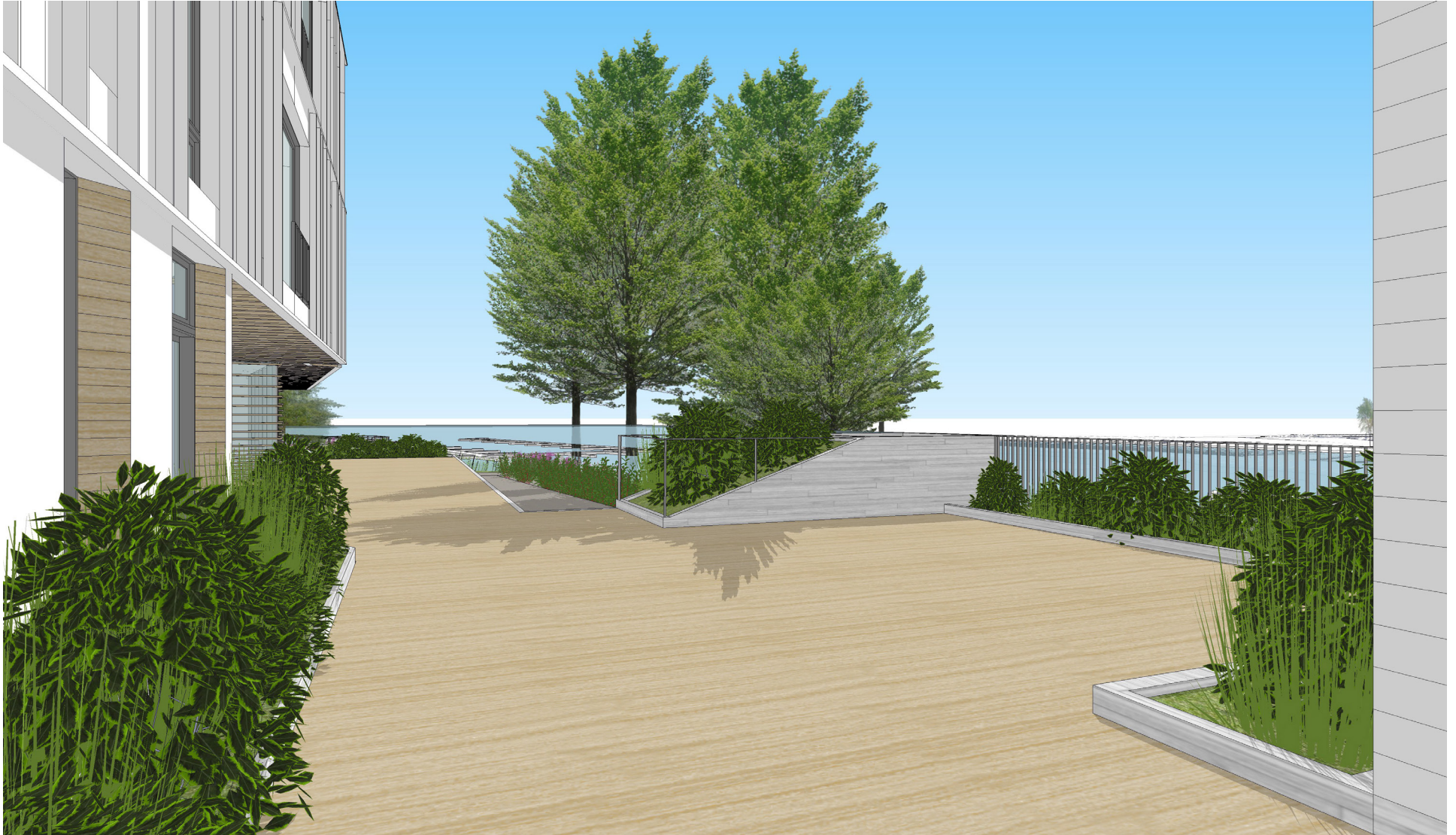
# PROPOSED DESIGN



View from Sloped Walkway



# PROPOSED DESIGN



Ground Floor Looking Toward Landscape and Harbor



## PROPOSED DESIGN



Access from Ground Level



## PROPOSED DESIGN



Access from Ground Level



# PROPOSED DESIGN



Site Entry at Coleridge Street



# PROPOSED DESIGN



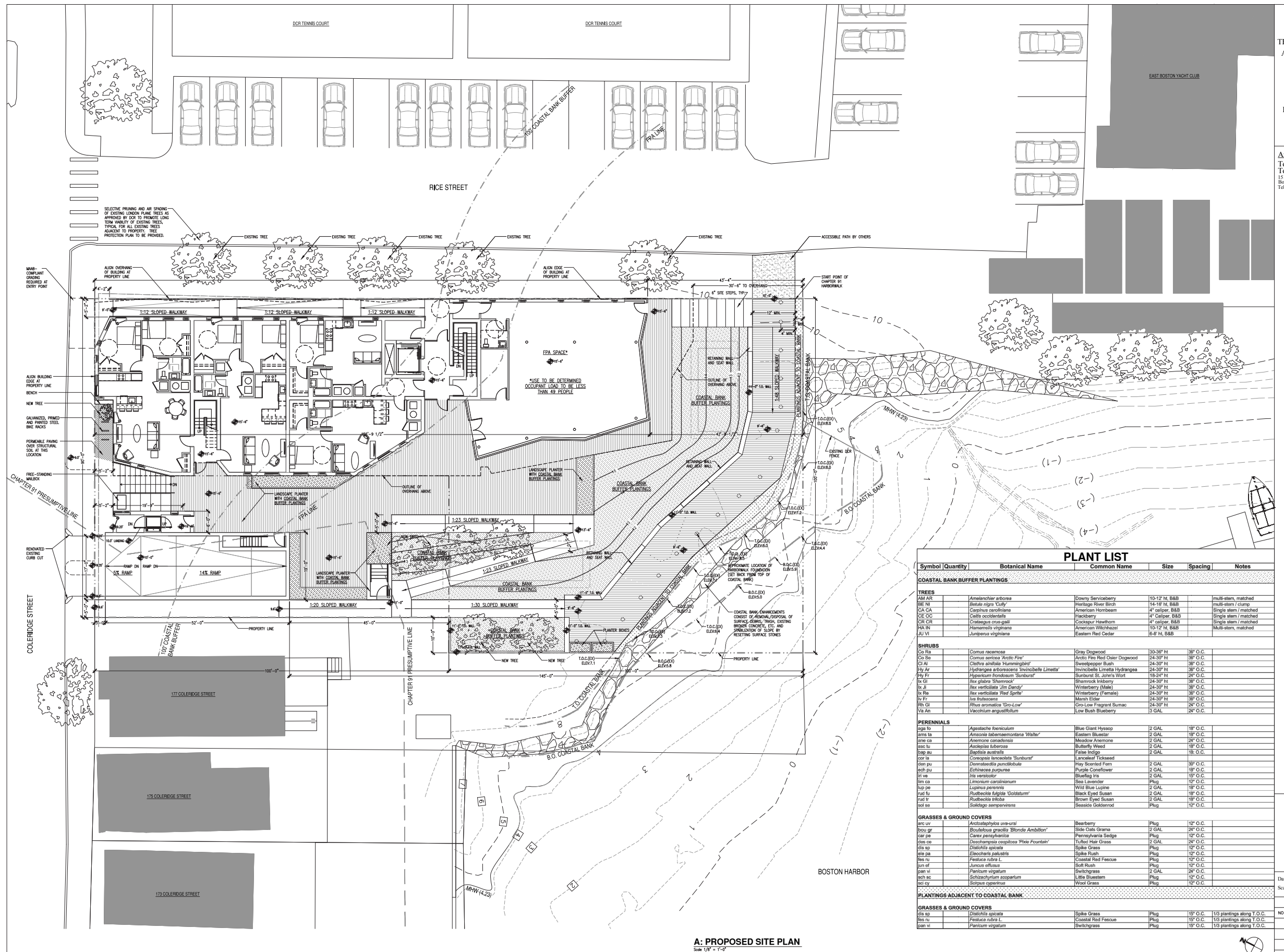
View from Boston Harbor



APPENDIX D  
ARCHITECTURAL DRAWINGS

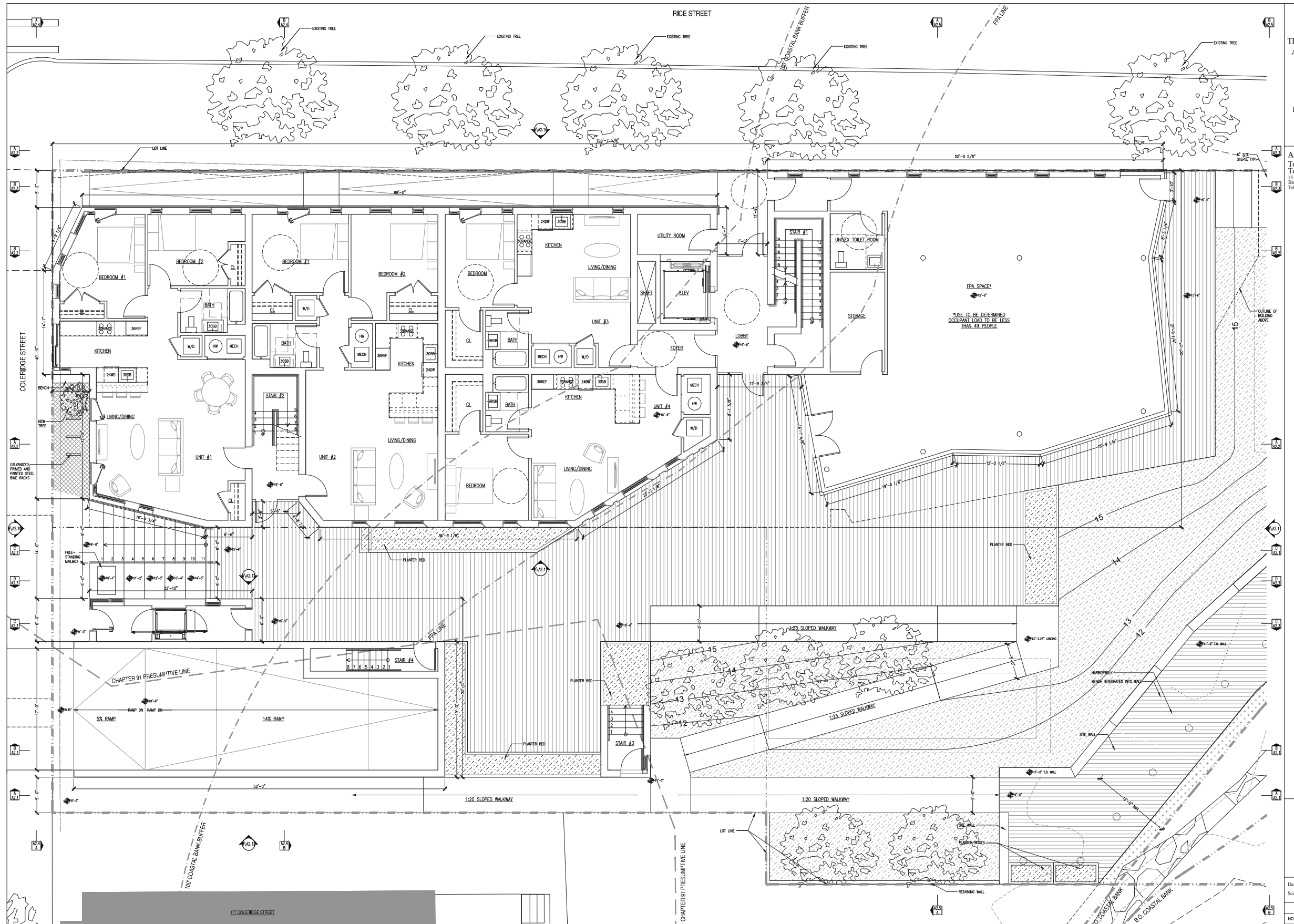










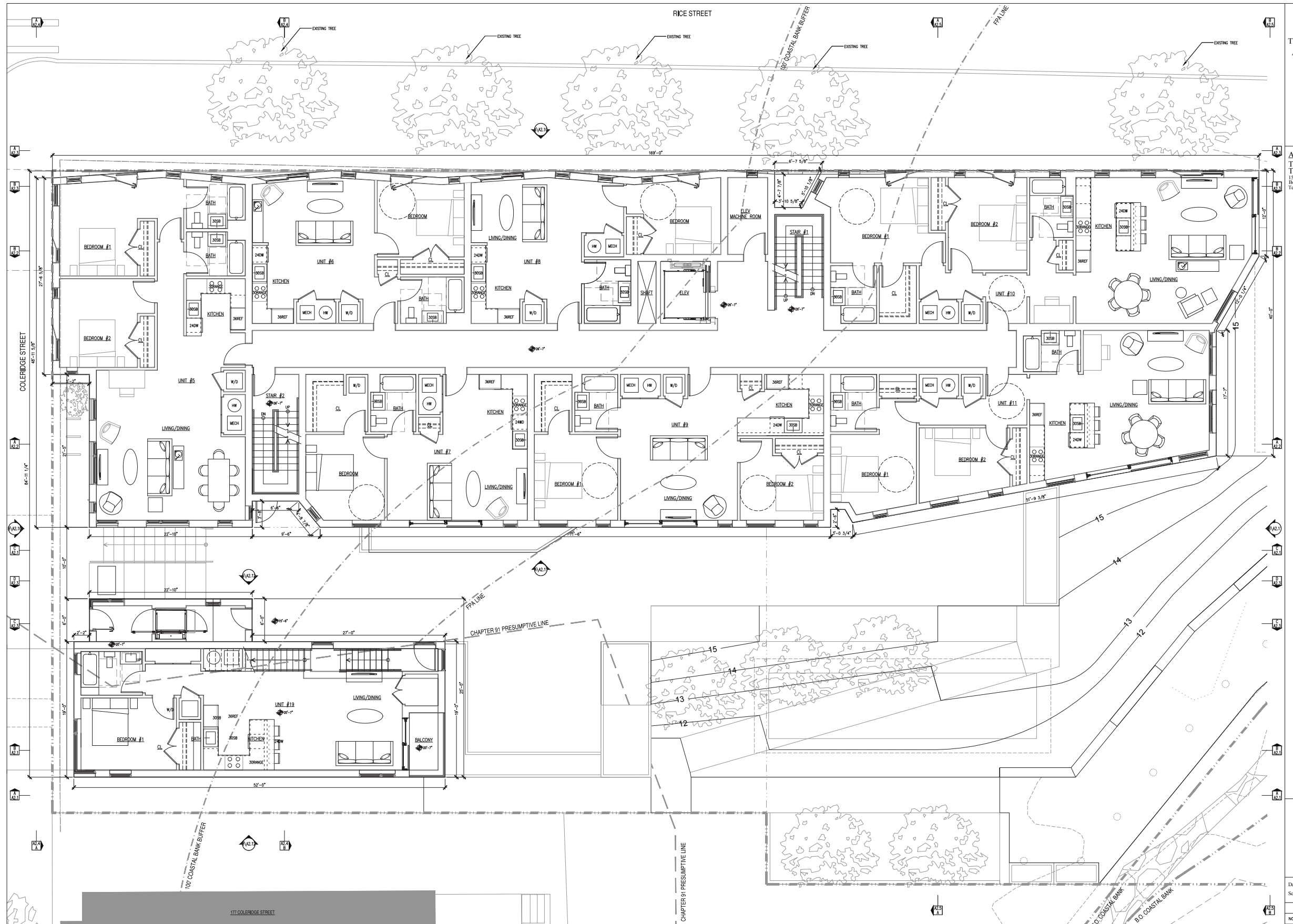


**A: ENLARGED GROUND FLOOR PLAN**  
Scale 1/4" = 1'-0"

**DRAFT NOT FOR CONSTRUCTION**  
SEE A0.0 AND A.0.1 FOR ADDITIONAL INFORMATION

181-183  
Coleridge Street  
East Boston, MA

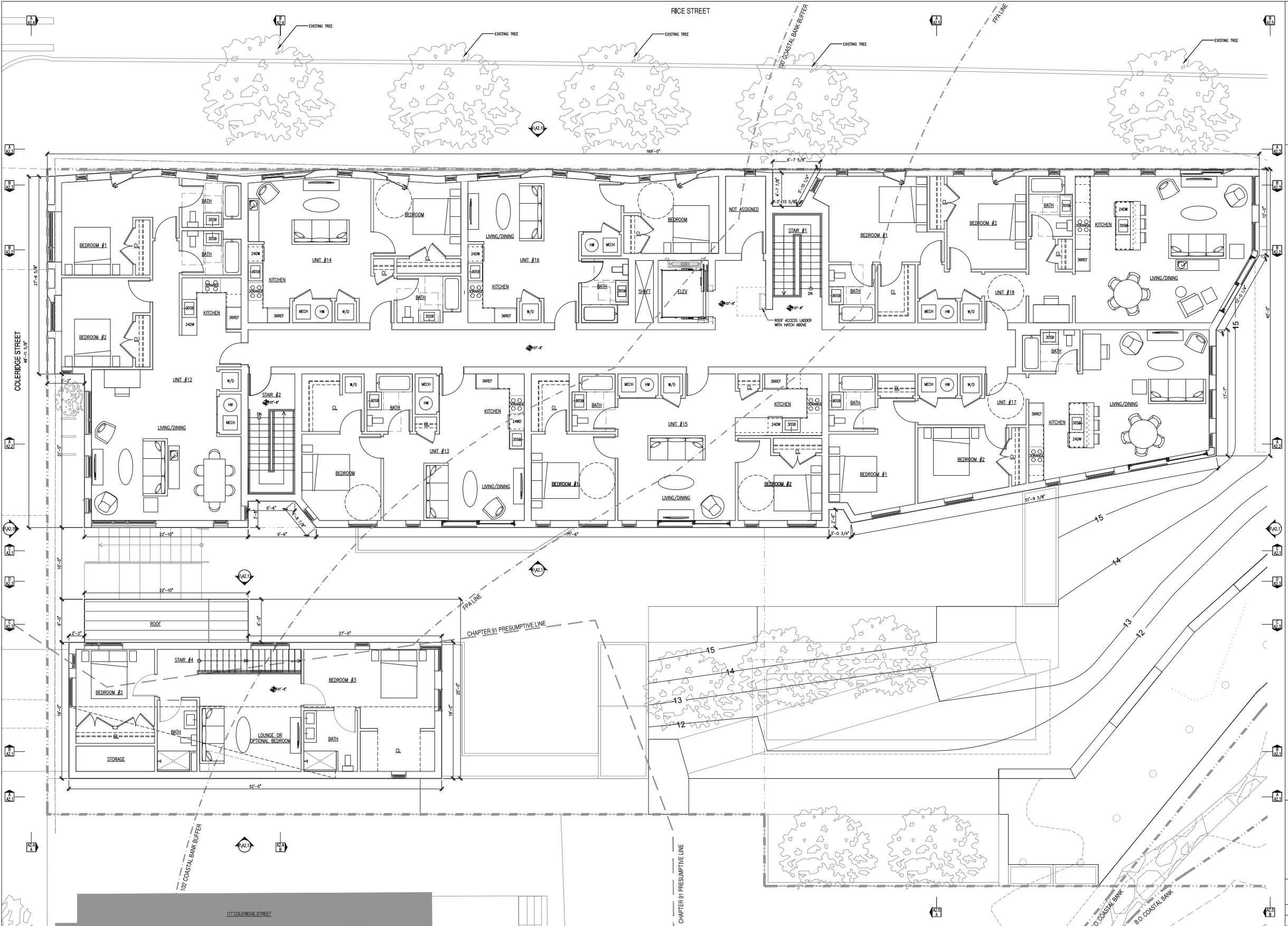
DRAWING NO.  
ENLARGED SECOND  
FLOOR PLAN  
A 1.2



**A: ENLARGED SECOND FLOOR PLAN**  
Scale 1/4" = 1'-0"

**DRAFT NOT FOR CONSTRUCTION**  
SEE A0.0 AND A.0.1 FOR ADDITIONAL INFORMATION





THE RESIDENCES  
AT COLERIDGE  
COAST

181-183  
Coleridge Street  
East Boston, MA

Architect:  
Touloukian  
Touloukian Inc.  
181 Pearl Street, 2nd Floor  
Boston, MA 02110  
Tel: (617) 526-0884

**A: ENLARGED THIRD FLOOR PLAN**  
Scale 1/4" = 1'-0"

**DRAFT NOT FOR CONSTRUCTION**  
SEE A0.0 AND A.0.1 FOR ADDITIONAL INFORMATION

Date: 28 FEBRUARY 2019  
Scale: AS NOTED

REVISIONS	
NO.	DATE

DRAWING NO.  
ENLARGED THIRD  
FLOOR PLAN  
**A 1.3**

181-183  
Coleridge Street  
East Boston, MA

ate: 28 FEBRUARY 2019  
ale: AS NOTED

DRAWING NO.  
ENLARGED ROOF PLAN

**A: ENLARGED ROOF PLAN**  
Scale 1/4" = 1'-0"

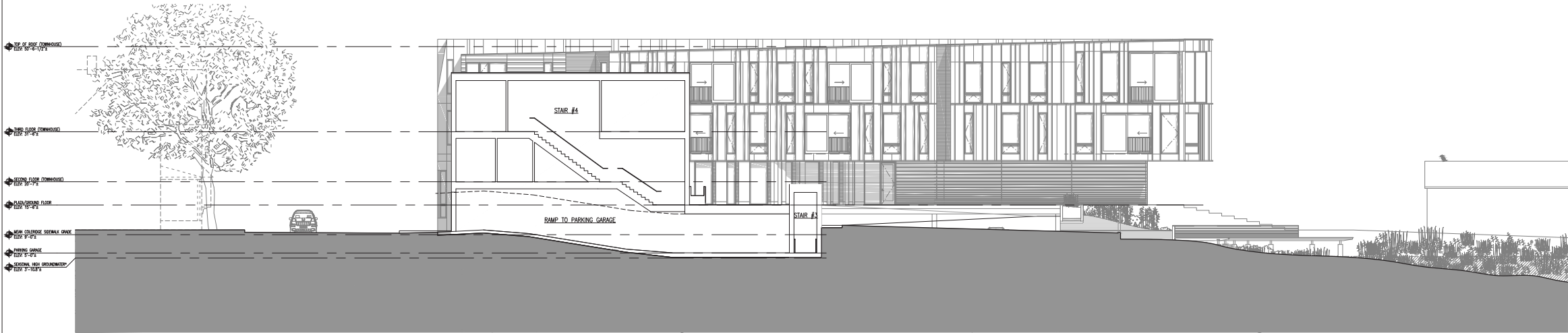
**DRAFT NOT FOR CONSTRUCTION**  
SEE A0.0 AND A.0.1 FOR ADDITIONAL INFORMATION





\* SECTIONAL HIGH DIMENSIONS AS PER IRM ENGINEERS

C: COLERIDGE-HARBOR SITE SECTION (THRU PLAZA)  
Scale 1/8" = 1'-0"



\* SECTIONAL HIGH DIMENSIONS AS PER IRM ENGINEERS

B: COLERIDGE-HARBOR SITE SECTION (THRU TOWNHOUSE)  
Scale 1/8" = 1'-0"



\* SECTIONAL HIGH DIMENSIONS AS PER IRM ENGINEERS

A: COLERIDGE-HARBOR SITE SECTION/TOWNHOUSE S.W. ELEV.  
Scale 1/8" = 1'-0"

THE RESIDENCES  
AT COLERIDGE  
COAST

181-183  
Coleridge Street  
East Boston, MA

Architect:  
Touloukian  
Touloukian Inc.  
181 Pearl Street, 2nd Floor  
Boston, MA 02110  
Tel: (617) 526-0884

Date: 28 FEBRUARY 2019  
Scale: AS NOTED

REVISIONS	
NO.	DATE

DRAWING NO.  
SITE SECTIONS

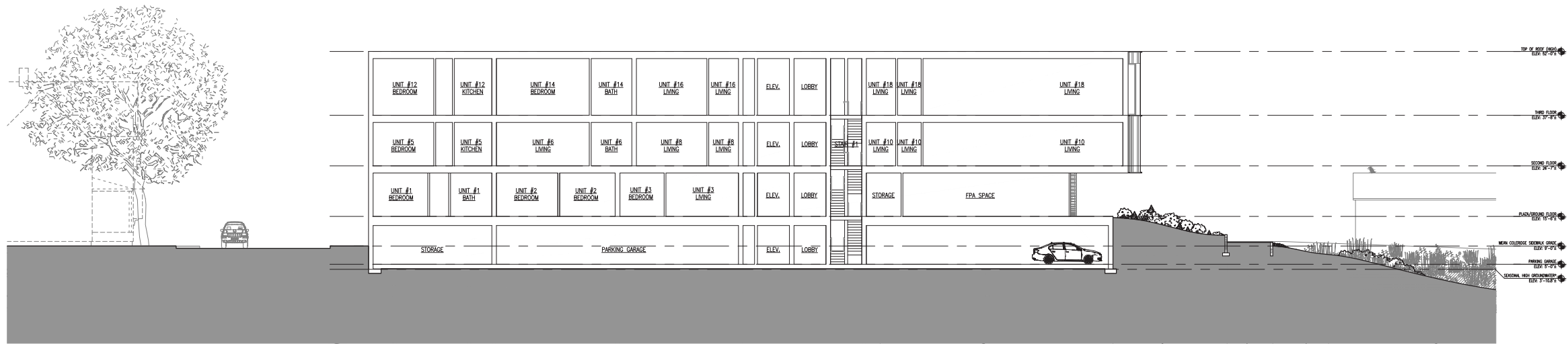
A 2.1

DRAFT NOT FOR CONSTRUCTION  
SEE A0.0 AND A.0.1 FOR ADDITIONAL INFORMATION

THE RESIDENCES  
AT COLERIDGE  
COAST

181-183  
Coleridge Street  
East Boston, MA

Architect:  
Touloukian  
Touloukian Inc.  
151 Pearl Street, 2nd Floor  
Boston, MA 02110  
Tel: (617) 526-0884



\* SEASONAL HIGH GROUNDWATER AS PER IRMM ENGINEERS

B: COLERIDGE-HARBOR SITE SECTION (THRU FPA SPACE)

Scale 1/8" = 1'-0"



\* SEASONAL HIGH GROUNDWATER AS PER IRMM ENGINEERS

A: COLERIDGE-HARBOR SITE SECTION (THRU MAIN BLDG)

Scale 1/8" = 1'-0"

Date: 28 FEBRUARY 2019

Scale: AS NOTED

REVISIONS

NO. DATE

DRAWING NO.

SITE SECTIONS

A 2.2

DRAFT NOT FOR CONSTRUCTION  
SEE A0.0 AND A.0.1 FOR ADDITIONAL INFORMATION





181-183  
Coleridge Street  
East Boston, MA

**Architect:**  
Houloukian  
Houloukian Inc.  
51 Pearl Street, 2nd Floor  
Boston, MA 02110  
Tel: (617) 526-0884



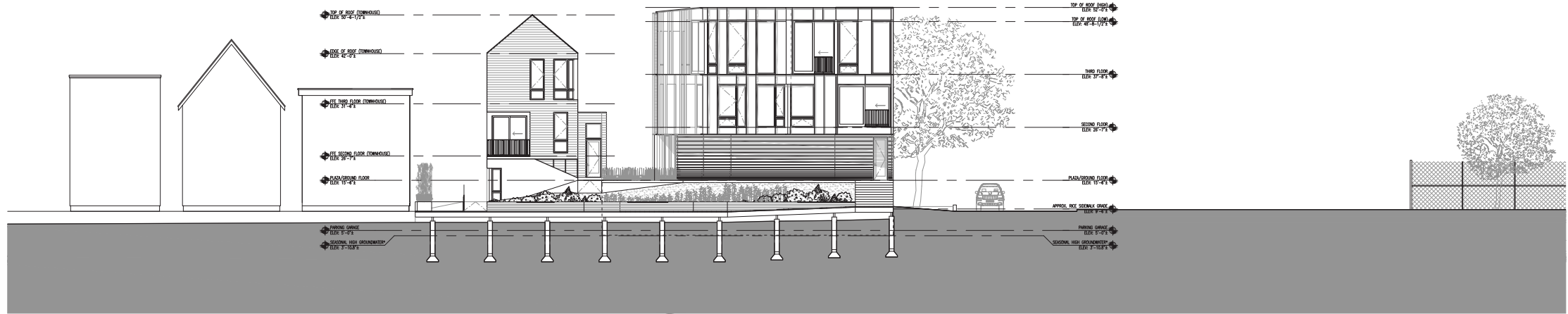
**DRAFT NOT FOR CONSTRUCTION**  
SEE A0.0 AND A.0.1 FOR ADDITIONAL INFORMATION



THE RESIDENCES  
AT COLERIDGE  
COAST

181-183  
Coleridge Street  
East Boston, MA

Architect:  
Touloukian  
Touloukian Inc.  
151 Pearl Street, 2nd Floor  
Boston, MA 02110  
Tel: (617) 526-0884



\* SECONDARY HIGH GROUNDWATER AS PER RAIN ENGINEERS

**B: RICE-NEIGHBORHOOD SITE SECTION (THRU TOWNHOUSE)**  
Scale: 1/8" = 1'-0"



\* SECONDARY HIGH GROUNDWATER AS PER RAIN ENGINEERS

**A: RICE-NEIGHBORHOOD SITE SECTION (THRU COURTYARD)**  
Scale: 1/8" = 1'-0"

DRAFT NOT FOR CONSTRUCTION  
SEE A0.0 AND A.0.1 FOR ADDITIONAL INFORMATION

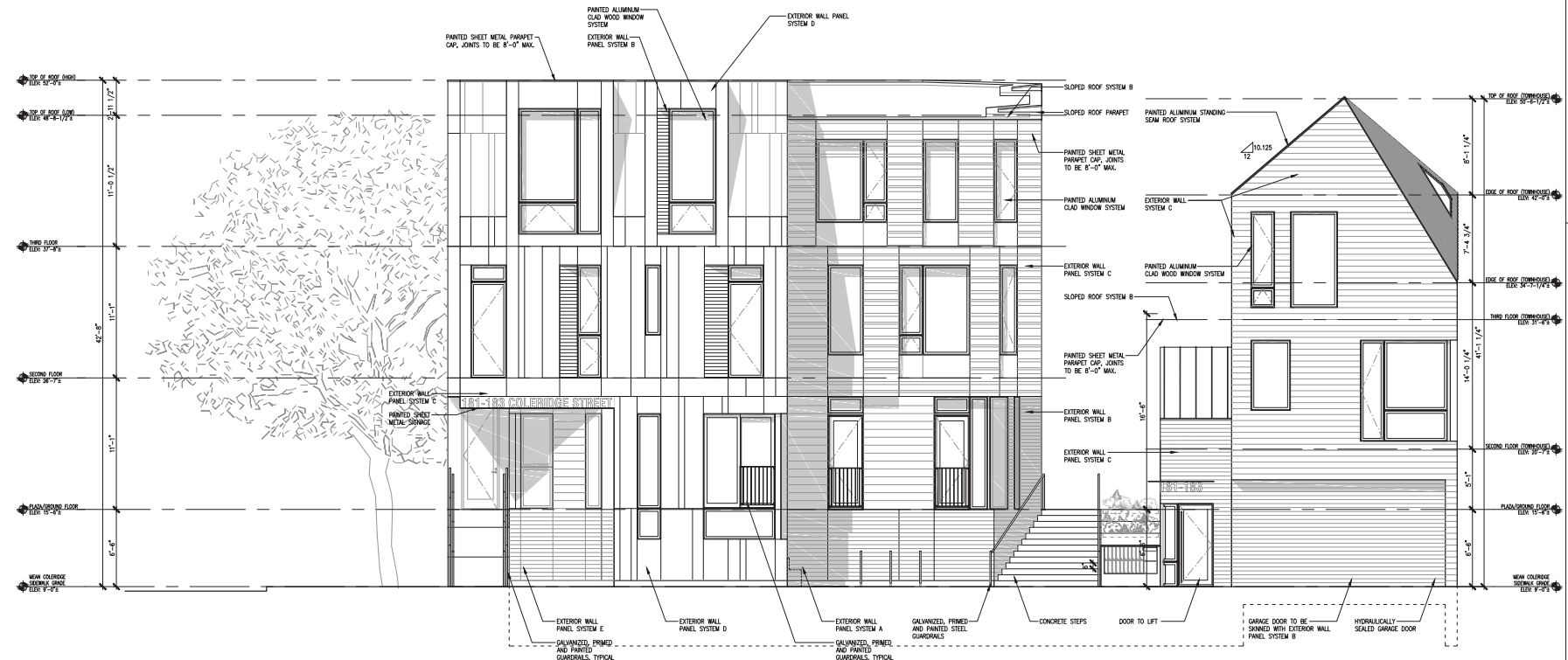
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Scale: AS NOTED

REVISIONS  
NO. DATE

DRAWING NO.  
SITE SECTIONS

A 2.5

EXTERIOR MATERIAL KEY	
EXTERIOR WALL SYSTEM A	CAST-IN-PLACE CONCRETE PANEL WALL SYSTEM
EXTERIOR WALL SYSTEM B	PPE STRIP LAP WALL SYSTEM
EXTERIOR WALL SYSTEM C	PAINTED CEMENTITIOUS SIDING WALL SYSTEM
EXTERIOR WALL SYSTEM D	FIBER CEMENT BOARD PANELS WITH VERTICAL BAFFLES
EXTERIOR WALL SYSTEM E	GROUND FACE/TEXTURED CMU VENEER WALL SYSTEM



**B: COLERIDGE STREET ELEVATION**  
Scale 1/4" = 1'-0"



**A: RICE STREET ELEVATION**  
Scale 1/4" = 1'-0"

THE RESIDENCES  
AT COLERIDGE  
COAST

181-183  
Coleridge Street  
East Boston, MA

Architect:  
Touloukian  
Touloukian Inc.  
151 Pearl Street, 2nd Floor  
Boston, MA 02110  
Tel: (617) 526-0884

Date: 28 FEBRUARY 2019  
Scale: AS NOTED

REVISIONS  
NO. DATE

DRAWING NO.  
BUILDING ELEVATIONS

DRAFT NOT FOR CONSTRUCTION  
SEE A0.0 AND A.0.1 FOR ADDITIONAL INFORMATION

A 2.10



EXTERIOR MATERIAL KEY	
EXTERIOR WALL SYSTEM A	CAST-IN-PLACE CONCRETE PANEL WALL SYSTEM
EXTERIOR WALL SYSTEM B	RPE STRIP-LAP WALL SYSTEM
EXTERIOR WALL SYSTEM C	PAINTED CEMENTITIOUS SIDING WALL SYSTEM
EXTERIOR WALL SYSTEM D	FIBER CEMENT BOARD PANELS WITH VERTICAL BATTLES
EXTERIOR WALL SYSTEM E	GROUND FACE/TEXTURED CMU VENEER WALL SYSTEM



**B: HARBOR ELEVATION**  
Scale 1/4" = 1'-0"



**A: COURTYARD ELEVATION**  
Scale 1/4" = 1'-0"

**DRAFT NOT FOR CONSTRUCTION**  
SEE A0.0 AND A.0.1 FOR ADDITIONAL INFORMATION

THE RESIDENCES  
AT COLERIDGE  
COAST

181-183  
Coleridge Street  
East Boston, MA

Architect:  
Touloukian  
Touloukian Inc.  
151 Pearl Street, 2nd Floor  
Boston, MA 02110  
Tel: (617) 526-0884

Date: 28 FEBRUARY 2019  
Scale: AS NOTED

REVISIONS

NO. DATE

DRAWING NO.  
BUILDING ELEVATIONS

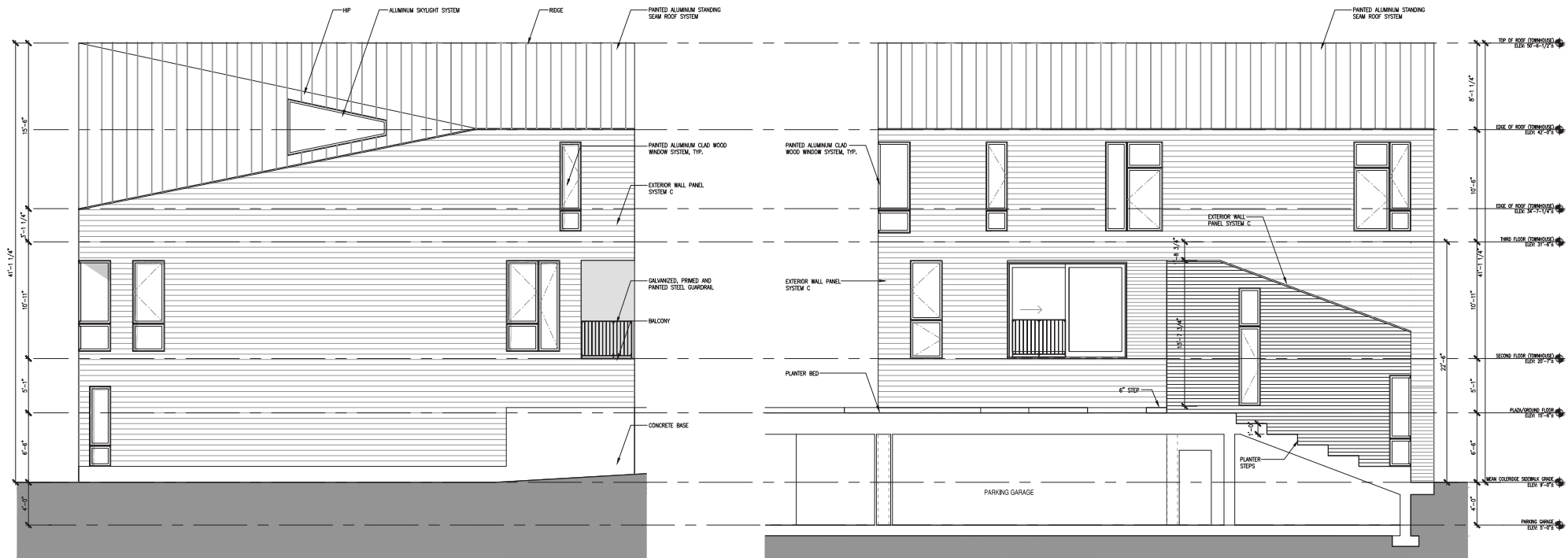
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EXTERIOR MATERIAL KEY	
EXTERIOR WALL SYSTEM A	CAST-IN-PLACE CONCRETE PANEL WALL SYSTEM
EXTERIOR WALL SYSTEM B	PPE STRIP LAP WALL SYSTEM
EXTERIOR WALL SYSTEM C	PAINTED CEMENTITIOUS SIDING WALL SYSTEM
EXTERIOR WALL SYSTEM D	FIBER CEMENT BOARD PANELS WITH VERTICAL BAFFLES
EXTERIOR WALL SYSTEM E	GROUND FACE/TEXTURED CMU VENEER WALL SYSTEM

THE RESIDENCES  
AT COLERIDGE  
COAST

181-183  
Coleridge Street  
East Boston, MA

Architect:  
Touloukian  
Touloukian Inc.  
151 Pearl Street, 2nd Floor  
Boston, MA 02110  
Tel: (617) 526-0884



**B: TOWNHOUSE RAMP ELEVATION**  
Scale 1/4" = 1'-0"

**A: TOWNHOUSE COURTYARD ELEVATION**  
Scale 1/4" = 1'-0"

DRAFT NOT FOR CONSTRUCTION  
SEE A0.0 AND A.0.1 FOR ADDITIONAL INFORMATION

Date: 28 FEBRUARY 2019	
Scale: AS NOTED	
REVISIONS	
NO.	DATE

DRAWING NO.  
BUILDING ELEVATIONS



APPENDIX E  
CIVIL ENGINEERING DRAWINGS





**181 - 183 COLERIDGE STREET  
BOSTON, MASSACHUSETTS**

## PROJECT TEAM

## INDEX OF DRAWINGS

**GENERAL**

1	11.30.2018	BCC/NOI REVISIONS
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REV	DATE	DESCRIPTION
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**ISSUE TYPE:**

PERMIT

ISSUE DATE:

08.01.20

PROJECT NUMBER

16038

DRAWN BY: MKM

CHECKED BY: DBR

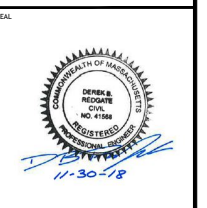
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SHEET TITLE:

# TITLE SHEET

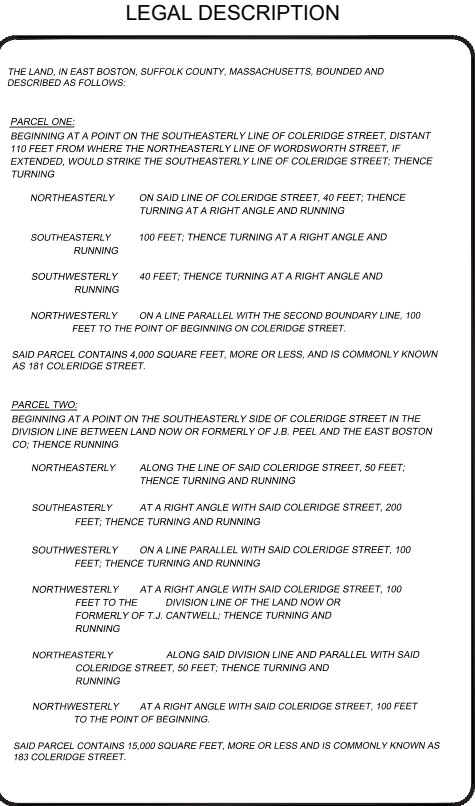
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# T100



**181-183 COLERIDGE STREET**  
**RESIDENTIAL DEVELOPMENT**  
181-183 COLERIDGE STREET  
EAST BOSTON, MA

OWNER/APPLICANT: ROCK DEVELOPMENT I



1. THE PROPERTY IS SHOWN ON THE CITY OF BOSTON ASSESSORS RECORDS AS PARCEL, ID# 0104311000 AND 0104312000 THEREON.

2. TITLE IS RECORDED AT THE SUFFOLK REGISTER OF DEEDS AS FOLLOWS:

- 181-183 COLIERIDGE STREET, DEED BOOK 9853, PAGE 161  
(SEE JUDGEMENT IN DEED BOOK 3902, PAGE 278)  
(PARCELS ONE AND TWO)  
JOSEPH & NANCY TARANTINO TRUST  
P. O. BOX 151284  
CAPE CORAL, FL 33915

3. SURVEY REFERENCES:

- STREET LAYOUT L-2147 (COLIERIDGE STREET 05-05-1885)
- STREET LAYOUT L-5873 (COLIERIDGE STREET 10-19-1933)
- STREET LAYOUT L-7843 (COLIERIDGE STREET 10-23-1933)
- PLAN BY MEDFORD ENGINEERING & SURVEY, THOMAS KILLION, PLS (2011)

4. PROPERTY LINE CONFIGURATION AS SHOWN HEREON WAS COMPILED FROM THE ABOVE EXISTING PLANS, AND IS NOT WARRANTED BY OR ON THE GROUND FIELD SURVEY BY THIS FIRM. BEARING SYSTEM IN USE ON THIS PLAN REFERENCE THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM, 2011 MA MAINLAND NAD83, BY ON-SITE GPS OBSERVATIONS.

5. EXISTING CONDITIONS DETAIL AS SHOWN HEREON WAS DERIVED FROM ON-THE-GROUND FIELD SURVEY BY THIS FIRM CONDUCTED ON NOVEMBER 23, 2016. ELEVATIONS SHOWN ARE REFERENCED TO NAVD83 BY ON-SITE GPS OBSERVATIONS.

6. PRIOR TO CONSTRUCTION OR ANY RELIANCE HEREON, THE LOCATION OF ANY REMAINING EASEMENTS WITH RESPECT TO THIS PROPERTY AND THE DATA SHOWN HEREON MUST BE VERIFIED BY A COMPREHENSIVE REVIEW BY HIGHPOINT ENGINEERING, INC.

7. LOCATION AND DEPTH OF UNDERGROUND UTILITIES IS APPROXIMATE ONLY, AND IS NOT WARRANTED TO BE CORRECT. UNDERGROUND UTILITIES ARE SHOWN BASED ON RECORD DATA PROVIDED BY THE OPERATING AUTHORITIES, AND HAVE BEEN FIELD INSPECTED WHERE BELIEF FORMULA WAS NOT APPLICABLE. THEREFORE, THE LOCATION OF UTILITIES BASED ON ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT INDICATED ON THESE PLANS. ALL EXISTING UTILITIES SHALL BE VERIFIED FOR SERVICE, SIZE, INVERT ELEVATION, LOCATIONS, ETC. PRIOR TO CONSTRUCTION. IN THE EVENT OF CORRELATION OF SAME, CONTRACTOR MUST NOTIFY THE SAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION. NOTIFY THIS FIRM IN WRITING OF ANY AND ALL DISCREPANCIES PRIOR TO COMMENCING ANY WORK.

8. THIS PLANS CONFORMS WITH PROCEDURAL AND TECHNICAL STANDARDS FOR THE PRACTICE OF LAND SURVEYING AS INTERPRETED FROM 250 CMR SECTIONS 6.01 AND 6.02.

9. THE WORD "CERTIFY" IS UNDERSTOOD TO BE AN EXPRESSION OF PROFESSIONAL OPINION BY THE LAND SURVEYOR WHICH IS BASED ON HIS BEST KNOWLEDGE, INFORMATION, AND BELIEF. FORMULA, IN ACCORDANCE WITH COMMONLY ACCEPTED PROCEDURES, CONSISTENT WITH APPLICABLE STANDARDS OF PRACTICE, AND AS SUCH IT CONSTITUTES NEITHER A GUARANTEE NOR WARRANTY, EITHER EXPRESS OR IMPLIED. THE CERTIFICATIONS SHOWN ARE NOT CERTIFICATIONS TO THE TITLE OR OWNERSHIP OF THE PROPERTIES SHOWN.

10. THE SUBJECT PARCEL IS LOCATED WITHIN ZONE "X" (AREA OF IMMEDIATE FLOODING) AS DESIGNATED BY THE CITY OF BOSTON. MAP NUMBER 2305C(2015) EFFECTIVE DATE MARCH 16, 2016 FOR COMMUNITY NUMBER 25236.

11. SURVEY IS BASED ON A TITLE REPORT PREPARED BY RAINEN LAW OFFICE, P.C. DATED 10/26/2016.

12. WETLAND RESOURCE AREA PIN FLAGS SHOWN AS WERE ESTABLISHED ON THE GROUND BY ECOTEC, INC. ON OR NEAR NOVEMBER 14, 2016.

13. ACCORDING TO INFORMATION SUPPLIED BY ECOTEC, INC., THE FOLLOWING RESOURCE AREAS DO NOT OCCUR ON THE SITE PARCELS:

- LAND UNDER THE OCEAN
- DESIGNATED PORT AREAS
- COASTAL DUNE
- BARRIER BEACHES
- ROCKY INTERTIDAL SHORES
- LAND UNDER SALT POUNDS
- BEDS OF OR LAND UNDER THE OCEAN OR RIVER THAT UNDERLIE AN ANADROMOUS/CATADROMOUS FISH RUN

**ZONING DISTRICT: EAST BOSTON NEIGHBORHOOD DISTRICT**  
**SUBDISTRICT: 2F-4000 (TWO FAMILY RESIDENTIAL)**  
**CURRENT PROPERTY USE: VACANT**

**MINIMUM LOT AREA** = 4,000 SF PER UNIT  
**MINIMUM FRONTAGE** = 40 FT  
**MINIMUM FRONT YARD** = 10 FT  
**MINIMUM SIDE YARD** = 7 FT  
**MINIMUM REAR YARD** = 40 FT  
**MINIMUM OPEN SPACE** = 750 SF PER UNIT  
**MAXIMUM BUILDING HEIGHT** = 2.5 STORIES OR 35 FEET  
**FLOOR AREA RATIO** = 0.8



 <p><b>HIGHPOINT ENGINEERING, INC.</b>          CANTON CORPORATE PLACE          45 DAN ROAD, SUITE 140   CANTON, MA 02021          t 781.770.0970   www.highpointeng.com</p>	
CLIENT:	
<p><b>ROCK DEVELOPMENT</b>          546 E BROADWAY   EAST BOSTON, MA 02027          t 774.281.3165   www.builtbyrock.com</p>	
CONSULTANT:	
<p><b>FIELDSTONE SURVEY SERVICES</b></p> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">  <p>sdysr@fieldstonesurvey.com</p> </div> <div> <p>45 MELLIH AVENUE              RY WOODFILL, MA 02360              774-283-2172</p> </div> </div>	
SEAL:	
	
<p><b>181-183 COLERIDGE STREET</b>  <b>RESIDENTIAL DEVELOPMENT</b>          181-183 COLERIDGE STREET          EAST BOSTON, MA</p>	
OWNER/APPLICANT: ROCK DEVELOPMENT	

1	07.16.2018	REVISED
REV	DATE	DESCRIPTION

ISSUE TYPE:  
**PERMIT**

ISSUE DATE:  
**07.31.2018**

PROJECT NUMBER:  
**16038**

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DRAWN BY:

CHECKED BY:

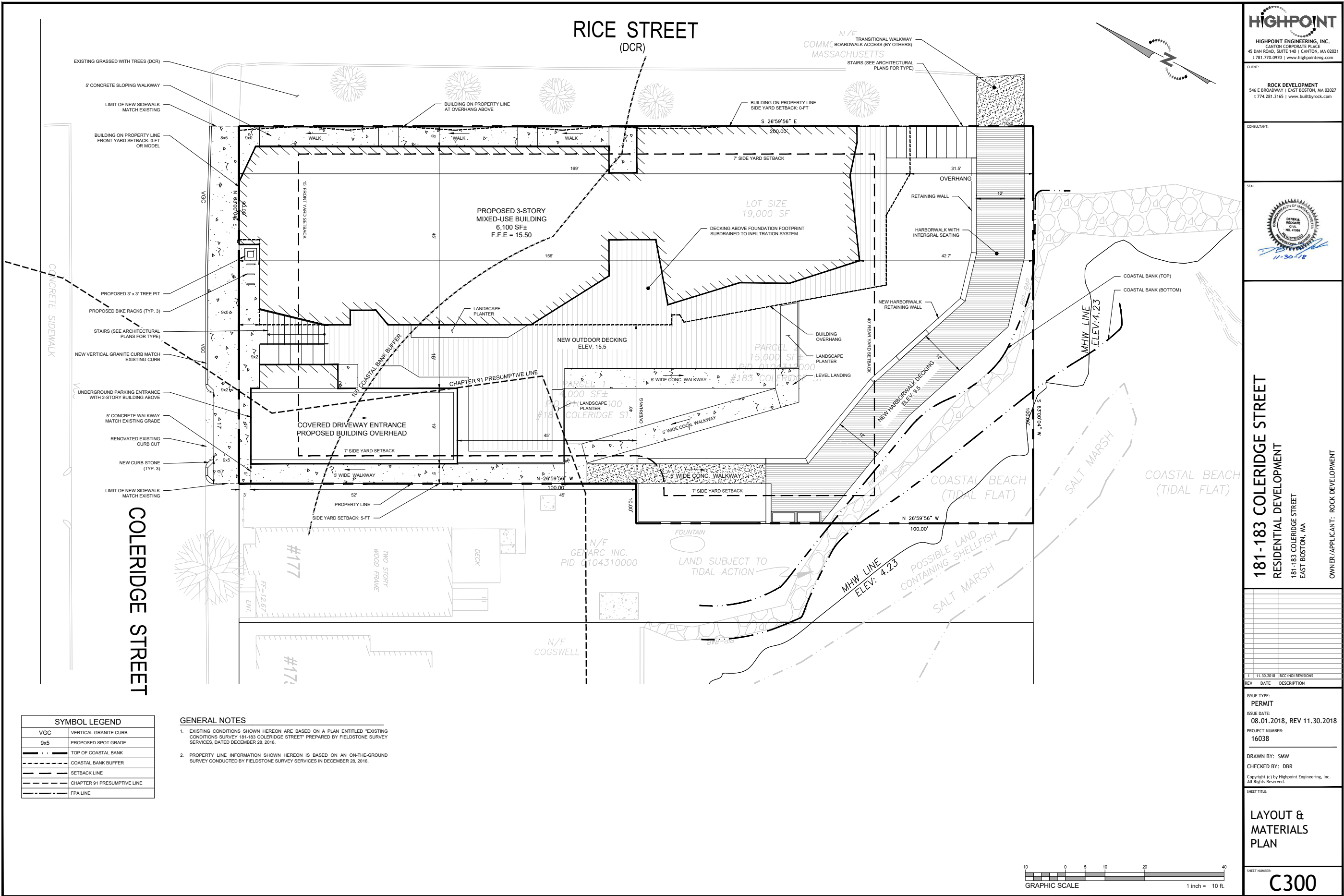
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EXISTING  
CONDITIONS  
PLAN

SHEET NUMBER:  
**EX01**











CLIENT:

**ROCK DEVELOPMENT**  
546 E BROADWAY | EAST BOSTON, MA 02027  
t 774.281.3165 | [www.builtbyrock.com](http://www.builtbyrock.com)

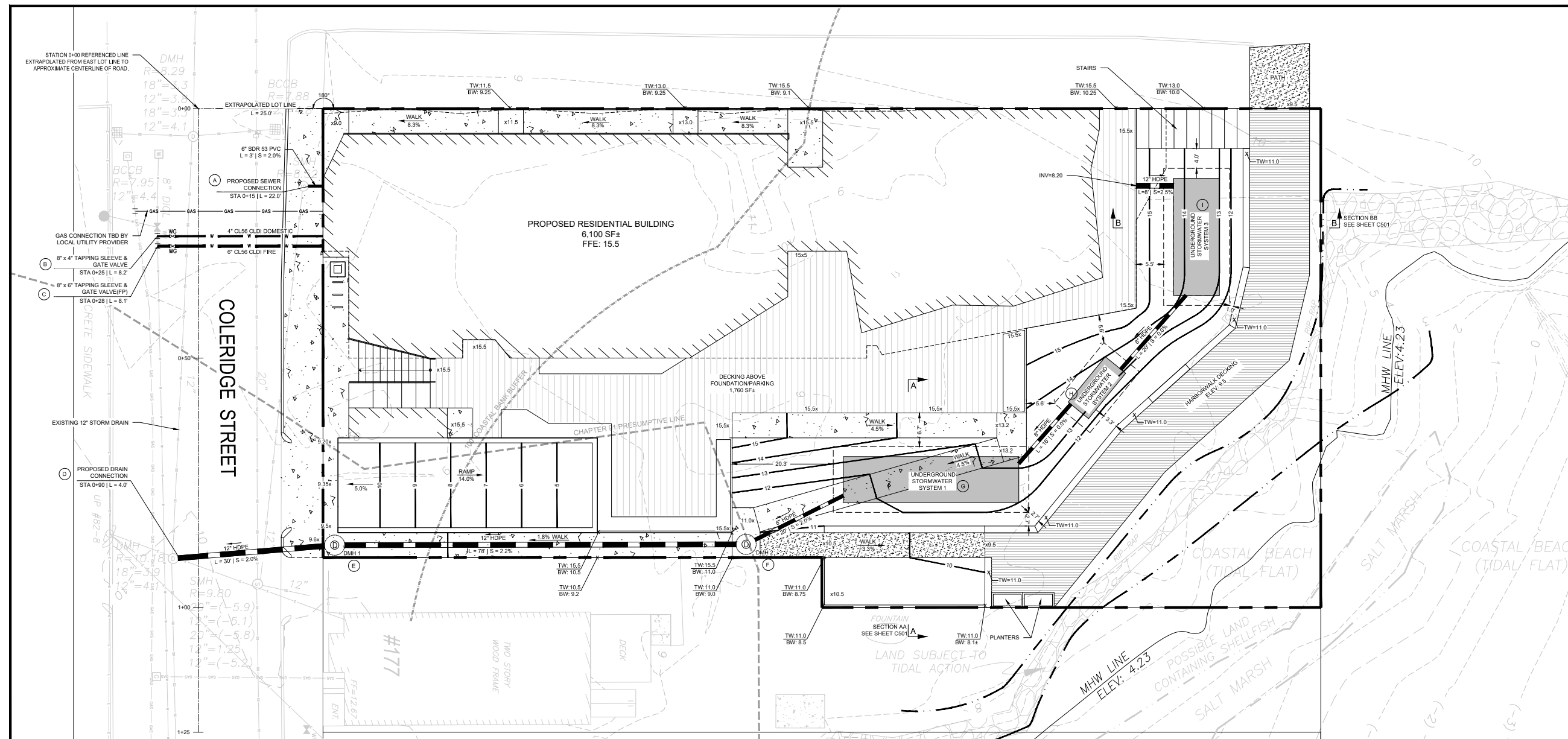
CONSULTANT



**181-183 COLERIDGE STREET**  
**RESIDENTIAL DEVELOPMENT**

181-183 COLERIDGE STREET  
EAST BOSTON, MA









OWNER/APPLICANT: ROCK DEVELOPMENT



1. THE LOCATION OF UNDERGROUND UTILITIES AS REPRESENTED ON THESE PLANS IS BASED UPON EXISTING CONDITIONS PLAN BY FIELDSTONE SURVEY SERVICES DATED NOVEMBER 2016 REVISED THROUGH JULY 18, 2018 AND INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES OR MUNICIPAL DEPARTMENTS SUPPLEMENTED BY FIELD IDENTIFICATION WHEREVER POSSIBLE. NO WARRANTY IS MADE AS TO THE ACCURACY OF THE LOCATIONS OF ALL THAT UNDERGROUND UTILITIES ARE SHOWN. THE CONTRACTOR SHALL NOTIFY DGS SAFETY AT 8-1-1 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY DEMOLITION OR CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES BETWEEN THESE PLANS AND OBSERVED EXISTING CONDITIONS PRIOR TO PROCEEDING WITH WORK.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING, EXTENDING OR RELOCATING THEM. IF THE NEW WORK POSES A CONFLICT WITH EXISTING UTILITIES, THE ENGINEER IS TO BE NOTIFIED PRIOR TO THE CONTRACTOR CONTINUING.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANY AND ALL REQUIRED INSPECTIONS ASSOCIATED WITH THE WORK SHOWN HEREON WITH THE CITY OF BOSTON PUBLIC WORKS, FIRE DEPARTMENT, BOSTON WATER AND SEWER COMMISSION, OR ANY OTHER MUNICIPAL AGENCY AS REQUIRED BY LOCAL REGULATIONS.
4. FILL MATERIAL SHALL BE AS SPECIFIED BY THE ARCHITECT/ENGINEER AND SELECTED FROM ON-SITE EXCAVATION MATERIAL WHERE POSSIBLE.
5. MATERIAL FOR BACKFILL SHALL NOT INCLUDE UNSUITABLE MATERIAL, SUCH AS PEAT, TRASH, STUMPS, DEBRIS OR HAZARDOUS WASTE.
6. BOSTON WATER AND SEWER COMMISSION, DEPARTMENT OF PUBLIC WORKS, AND FIRE DEPARTMENT SHALL BE NOTIFIED PRIOR TO THE START OF ANY WORK ON THE WATER SYSTEM.
7. UNLESS OTHERWISE SPECIFIED ON THE PLANS AND SPECIFICATIONS ALL SITE CONSTRUCTION MATERIALS AND METHODOLOGIES ARE TO CONFORM TO THE BOSTON WATER AND SEWER COMMISSION CONSTRUCTION SPECIFICATIONS AND THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION, AS APPLICABLE.
8. THE CONTRACTOR SHALL ENSURE THAT ALL ABANDONED AND/OR INACTIVE WATER, SEWER, DRAIN, FIRE PIPES AND RELATED APPURTENANCES INCLUDING BUT NOT LIMITED TO ITEMS SUCH AS METERS, METER PITS, SIDEWALK CONTROL TUBES, MAIN TUBE SHOES AND MAIN CONTROL BOXES ARE REMOVED.
9. CONTRACTOR TO VERIFY LOCATION AND SIZE OF EXISTING WATER MAIN IN FIELD PRIOR TO ORDERING VALVES AND FITTINGS AND INSTALLING WATER CONNECTIONS.
10. FOR THIS PROJECT IT IS REQUIRED THAT AN AS-BUILT PLAN BE PROVIDED. THIS AS-BUILT WILL CONTAIN THE LOCATIONS OF ANY ABANDONED UTILITIES THAT ARE SITUATED IN THE ROADWAY.
11. THE LOCATION OF ALL NEW INSTALLATIONS ARE TO BE LOCATED AND THERE SHOULD BE THE MEASUREMENTS FROM EXISTING STRUCTURES, PROPERTY LINES AND CORNERS.
12. PLANS SHOWING DEPTHS OF WATER PIPE ARE REQUIRED AT ALL GATES, BENDS AND CONNECTIONS, SIZE AND TYPE OF ALL PIPES & VALVES.
13. INSTALL WATER LINE WITH A MINIMUM OF FIVE FEET OF COVER AND A MAXIMUM OF SEVEN FEET OF COVER WITH ALL FINAL DESIGN GRADES.
14. CONTRACTOR TO VERIFY SEWER INVERTS IN FIELD PRIOR TO INSTALLING SEWER CONNECTION. NOTIFY ENGINEER IF DESIGN ASSUMPTIONS CONFLICT WITH FIELD CONDITIONS.
15. CONTRACTOR TO VERIFY LOCATIONS OF GAS SERVICE IN FIELD. GAS DISTRIBUTION LAYOUT TO BE PROVIDED BY LOCAL UTILITY.
16. ELECTRICAL SERVICE TO BE PROVIDED BY PRIVATE SERVICE COMPANY.

## DRAIN SCHEDULE

EXISTING DMH	
RIM	= 10.18
INV(0)	= 5.9 (18' EXISTING)
INV(1)	= 5.0 (12' NEW HOPE)
INV(2)	= 4.1 (12' EXISTING)
DMH 1	
RIM	= 9.60
INV(0)	= 5.60 (12' HDPE)
INV(1)	= 5.75 (12' HDPE)
DMH 2	
RIM	= 11.05
INV(0)	= 7.50 (12' HDPE)
INV(1)	= 7.60 (8' HDPE)
<b><u>UNDERGROUND STORMWATER INFILTRATION DETENTION</u></b>	
<b><u>BASIN #1</u></b>	
105 STONE-EMBEDDED R-TANK 3.5 CHAMBERS	
TOP OF STONE	= 10.15
TOP OF CHAMBERS	= 9.65
BOTTOM OF CHAMBERS	= 4.75
BOTTOM OF STONE	= 4.50
INV(1-8' HDPE)	= 7.00
INV(0-8' HDPE)	= 8.00
<b><u>UNDERGROUND STORMWATER INFILTRATION DETENTION</u></b>	
<b><u>BASIN #2</u></b>	
20 STONE-EMBEDDED R-TANK 3.5 CHAMBERS	
TOP OF STONE	= 10.15
TOP OF CHAMBERS	= 9.65
BOTTOM OF CHAMBERS	= 4.75
BOTTOM OF STONE	= 4.50
INV(1-8' HDPE)	= 7.00
INV(0-8' HDPE)	= 7.00
<b><u>UNDERGROUND STORMWATER INFILTRATION DETENTION</u></b>	
<b><u>BASIN #3</u></b>	
70 STONE-EMBEDDED R-TANK 3.5 CHAMBERS	
TOP OF STONE	= 10.15
TOP OF CHAMBERS	= 9.65
BOTTOM OF CHAMBERS	= 4.75
BOTTOM OF STONE	= 4.50
INV(1-12' HDPE)	= 8.00
INV(0-8' HDPE)	= 7.00

SYMBOL LEGEND	
	PROPOSED WATER SERVICE
	PROPOSED GRAVITY SEWER
	PROPOSED GAS LINE
	PROPOSED DRAIN PIPE
	PROPOSED WATER GATE
	PROPOSED DRAIN MANHOLE
	PROPOSED ELEVATION CONTOUR
	PROPOSED SPOT ELEVATION

**PROJECT NAME:**  
THE RESIDENCES AT COLERIDGE COAST  
181-183 COLERIDGE STREET (EAST BOSTON)  
BOSTON, MA 02128

**WARD AND PARCEL:**  
181 COLERIDGE ST: 01 - 0431 - 10  
183 COLERIDGE ST: 01 - 0431 - 20

**BWSC ACCOUNT NO:**  
181-183 COLERIDGE ST: 18339

BWSO INSPECTION SIGN-OFF		INSPECTOR	DATE	COMMENT	DYE TEST
A	6" SEWER CONNECTION				
B	4" TAPPING SLEEVE / WATER GATE				
C	6" TAPPING SLEEVE / WATER GATE				
D	12" DRAIN CONNECTION				
E	DRAIN MANHOLE				
F	DRAIN MANHOLE				
G	UNDERGROUND INFILTRATION SYSTEM 1				
H	UNDERGROUND INFILTRATION SYSTEM 2				
I	UNDERGROUND INFILTRATION SYSTEM 3				

FOR BWSC USE ONLY



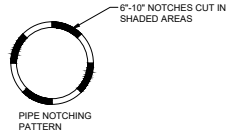
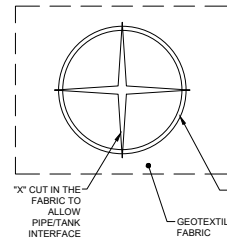
1	11.30.2018	BCC/NOI REVISIONS
REV	DATE	DESCRIPTION
ISSUE TYPE: PERMIT		
ISSUE DATE: 08.01.2018, REV 11.30.2018		
PROJECT NUMBER: 16038		

DRAWN BY: MKM  
CHECKED BY: DBR  
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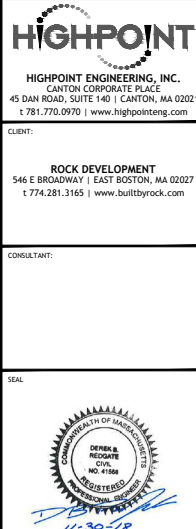
GRADING,  
DRAINAGE &  
UTILITY PLAN

SHEET NUMBER:  
**C400**

**PERMITTING NOT FOR CONSTRUCTION**

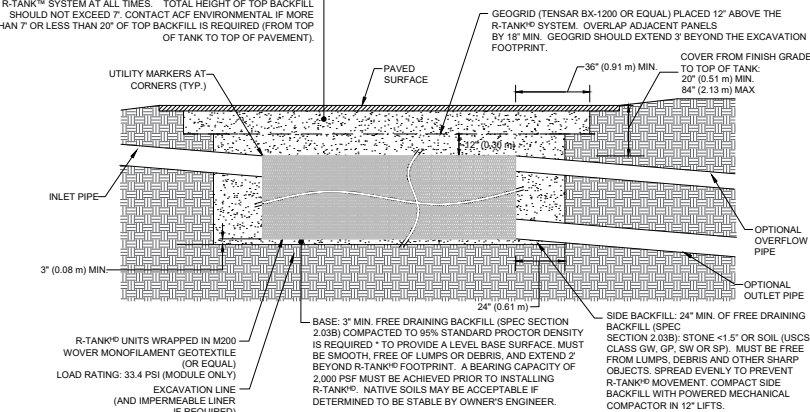
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C2



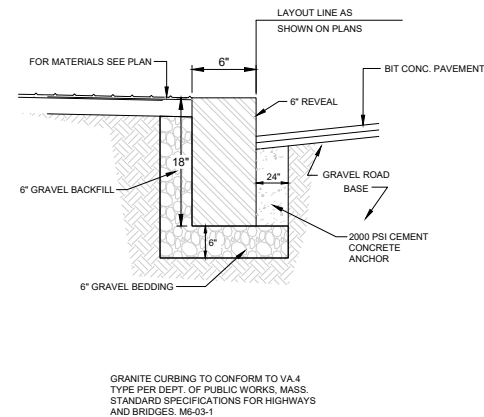
C1

- NOTES:
- FOR COMPLETE MODULE DATA, SEE APPROPRIATE R-TANK® MODULE SHEET
- INSTALLATIONS PER THIS DETAIL MEET GUIDELINES OF H20 LOADING PER THE 1983, 13TH EDITION OF THE AMERICAN ASSOCIATION OF STATE, HIGHWAY AND TRAFFIC OFFICIALS (AASHTO) STANDARD SPECIFICATIONS
- PRE-TREATMENT STRUCTURES NOT SHOWN
- FOR INFILTRATION SYSTEMS CRUSHED STONE IS TO BE DOUBLE-WASHED PRIOR TO INSTALLATION TO PREVENT CLOGGING OF FILTER FABRIC

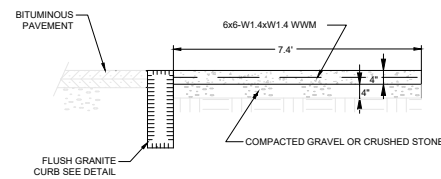


\* FOR INFILTRATION APPLICATIONS, BASE SHALL BE 4" MIN. UNCOMPACTED FREE DRAINING BACKFILL (SPEC SECTION 2.03B) TO PROVIDE A LEVEL BASE SURFACE. MUST BE SMOOTH, FREE OF LUMPS OR DEBRIS, AND EXTEND 2' BEYOND R-TANK® FOOTPRINT. A BEARING CAPACITY OF 2,000 PSF MUST BE ACHIEVED PRIOR TO INSTALLING R-TANK®.

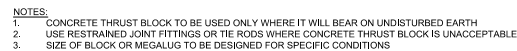
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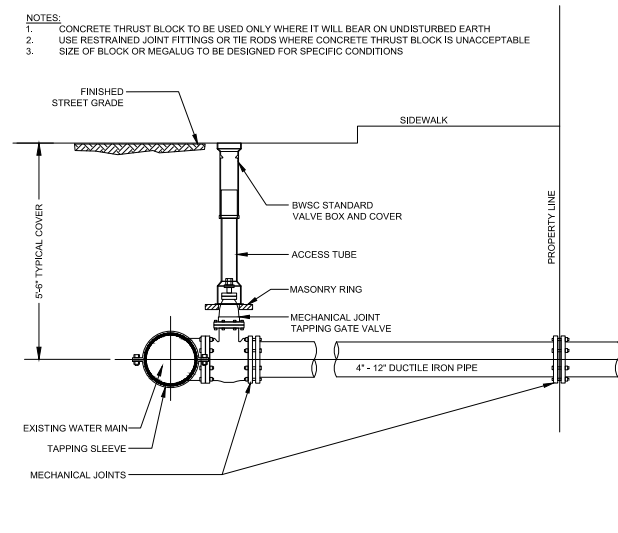
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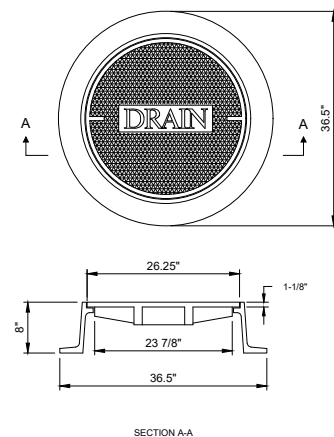
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A4



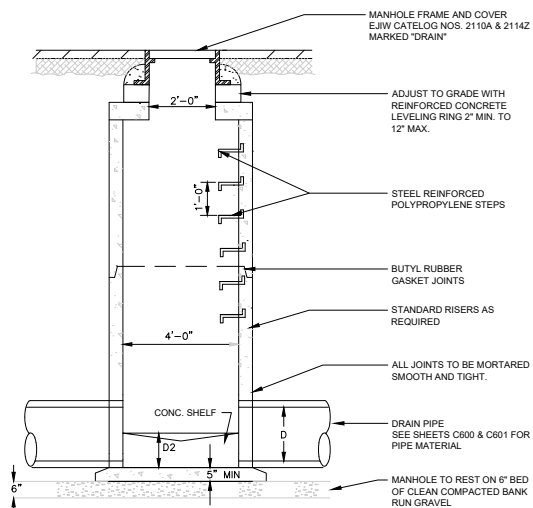
### A3



NOTE:

FRAME AND COVER SHALL BE EAST JORDAN IRON WORKS CATALOG NOS. 2110A & 2114Z MARKED "DRAIN", OR APPROVED EQUAL.

A2



A1

\_\_\_\_\_

SHEET NUMBER:  
**C500**

**PERMITTING NOT FOR CONSTRUCTION**





**181-183 COLERIDGE STREET**  
RESIDENTIAL DEVELOPMENT  
181-183 COLERIDGE STREET  
EAST BOSTON, MA  
OWNER/APPLICANT: ROCK DEVELOPMENT

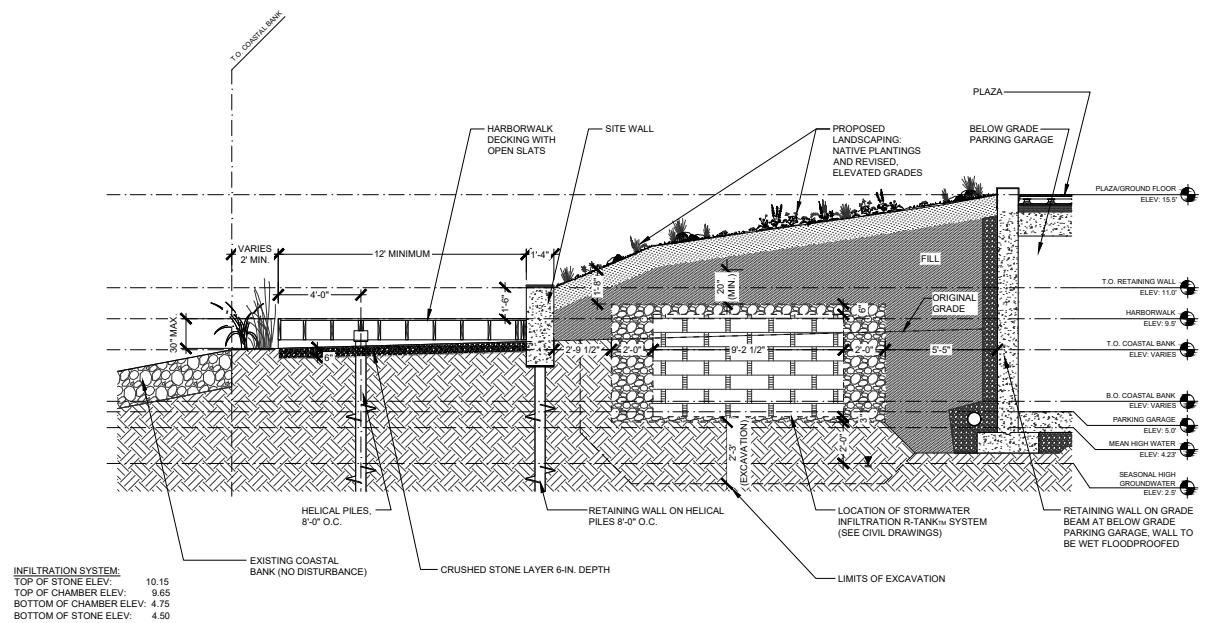
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ISSUE TYPE:  
**PERMIT**  
ISSUE DATE:  
08.01.2018, REV 11.30.2018  
PROJECT NUMBER:  
16038  
DRAWN BY: MKM  
CHECKED BY: DBR  
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DETAIL SHEET

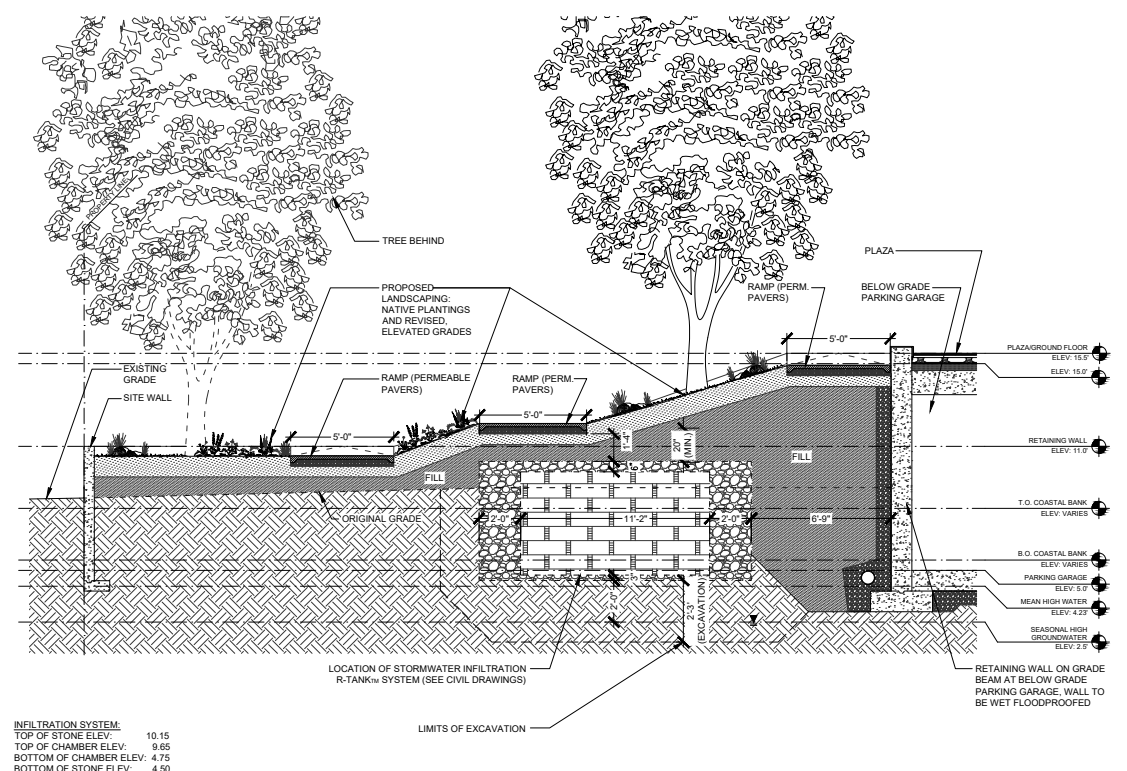
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NOT TO SCALE **DD**



**BB SITE SECTION AT HARBORWALK**  
SCALE 1/4" = 1' - 0"

NOT TO SCALE **CC**



**AA SITE SECTION AT RAMPS**  
SCALE 1/4" = 1' - 0"





CLIENT:

**ROCK DEVELOPMENT**  
546 E BROADWAY | EAST BOSTON, MA 02027  
t 774.281.3165 | www.builtbyrock.com

CONSULTANT:

SEAL



**181-183 COLERIDGE STREET**  
RESIDENTIAL DEVELOPMENT  
181-183 COLERIDGE STREET  
EAST BOSTON, MA

OWNER/APPLICANT: ROCK DEVELOPMENT

REV DATE DESCRIPTION

ISSUE TYPE:

NOTICE OF INTENT

ISSUE DATE:

02.01.2019

PROJECT NUMBER:

16038

DRAWN BY: MKM

CHECKED BY: DBR

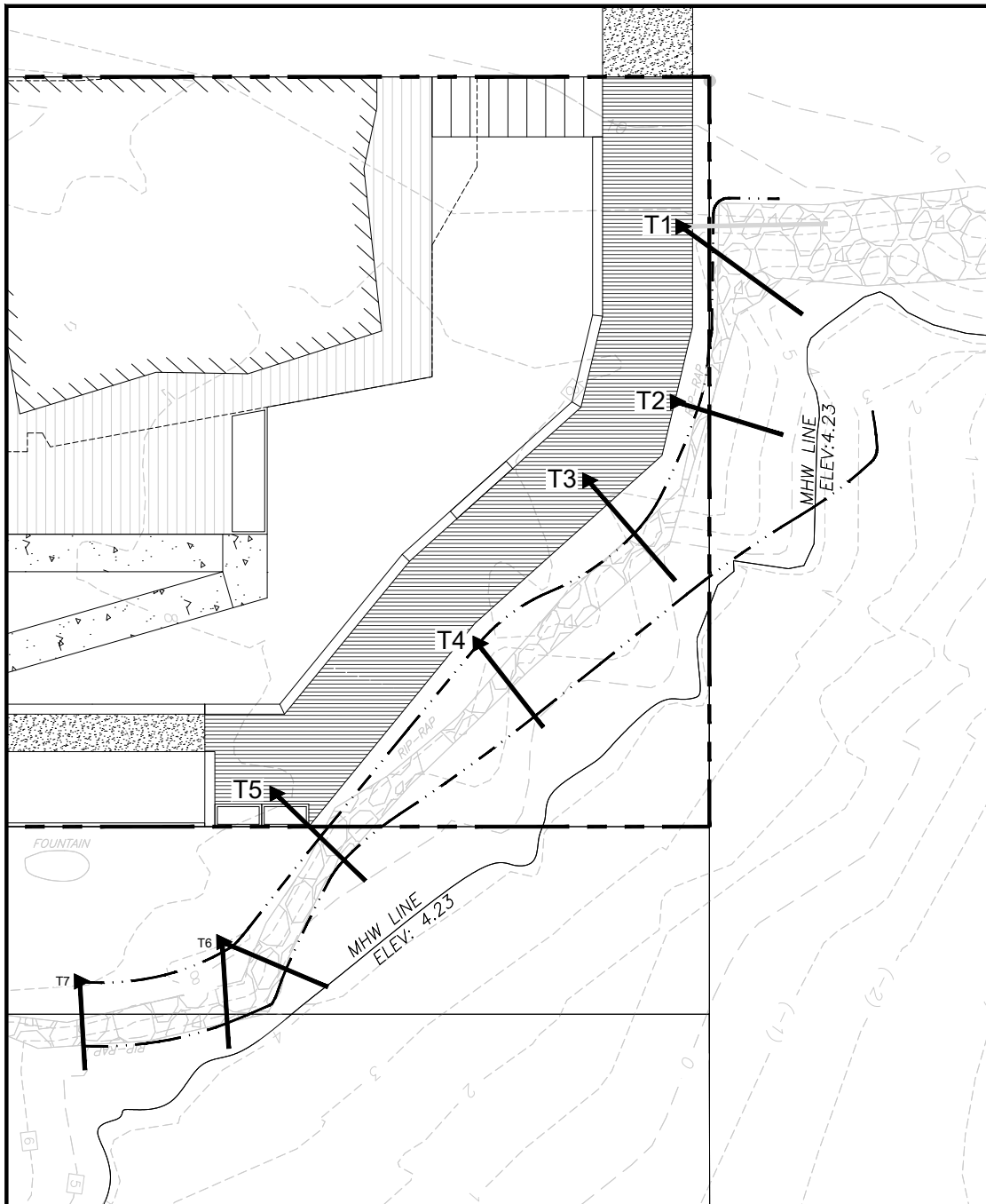
Copyright (c) by Highpoint Engineering, Inc.  
All Rights Reserved.

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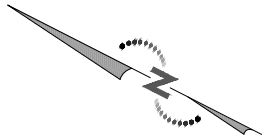
**COASTAL BANK  
DELINEATION  
PLAN - POSTDEV**

SHEET NUMBER:

**POST-01**



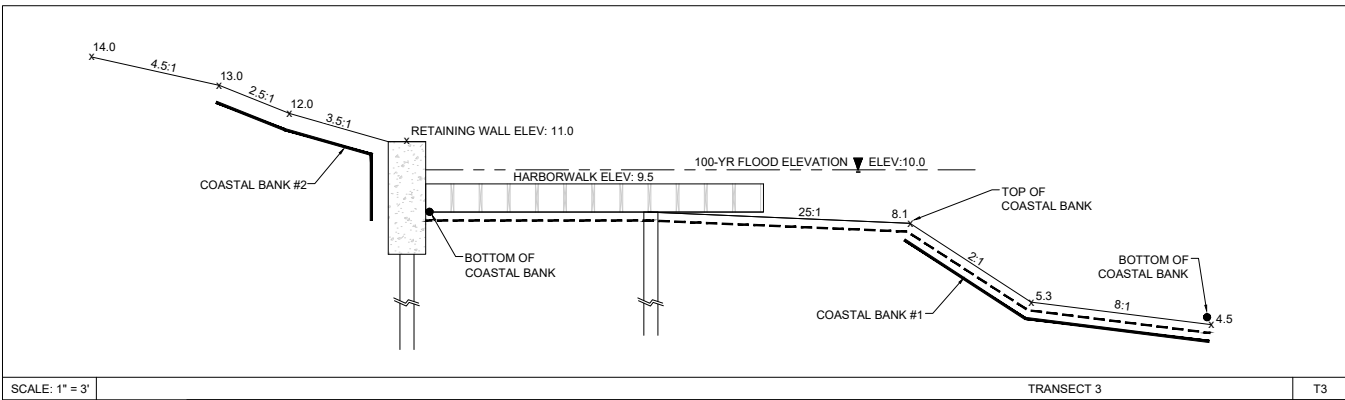
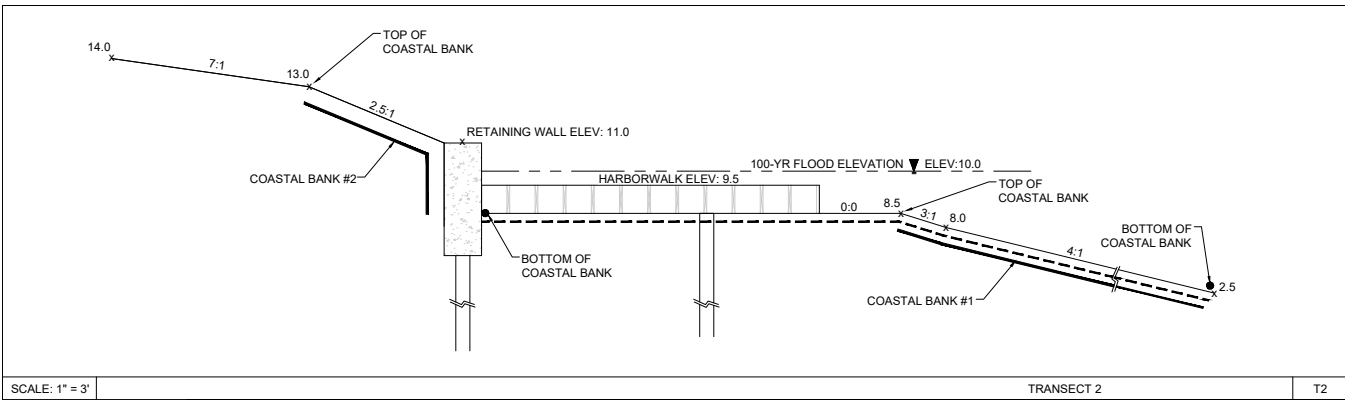
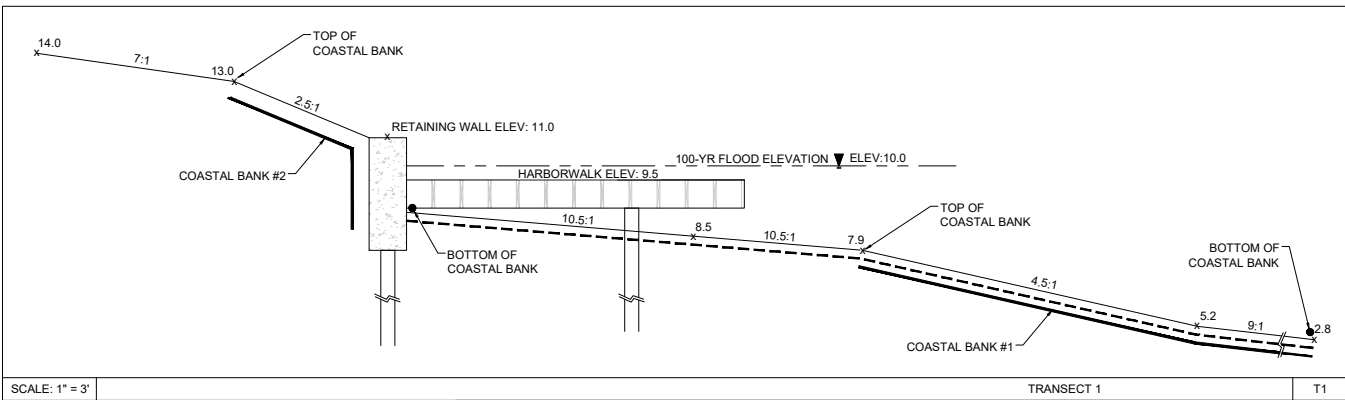
181 COLERIDGE STREET, EAST BOSTON

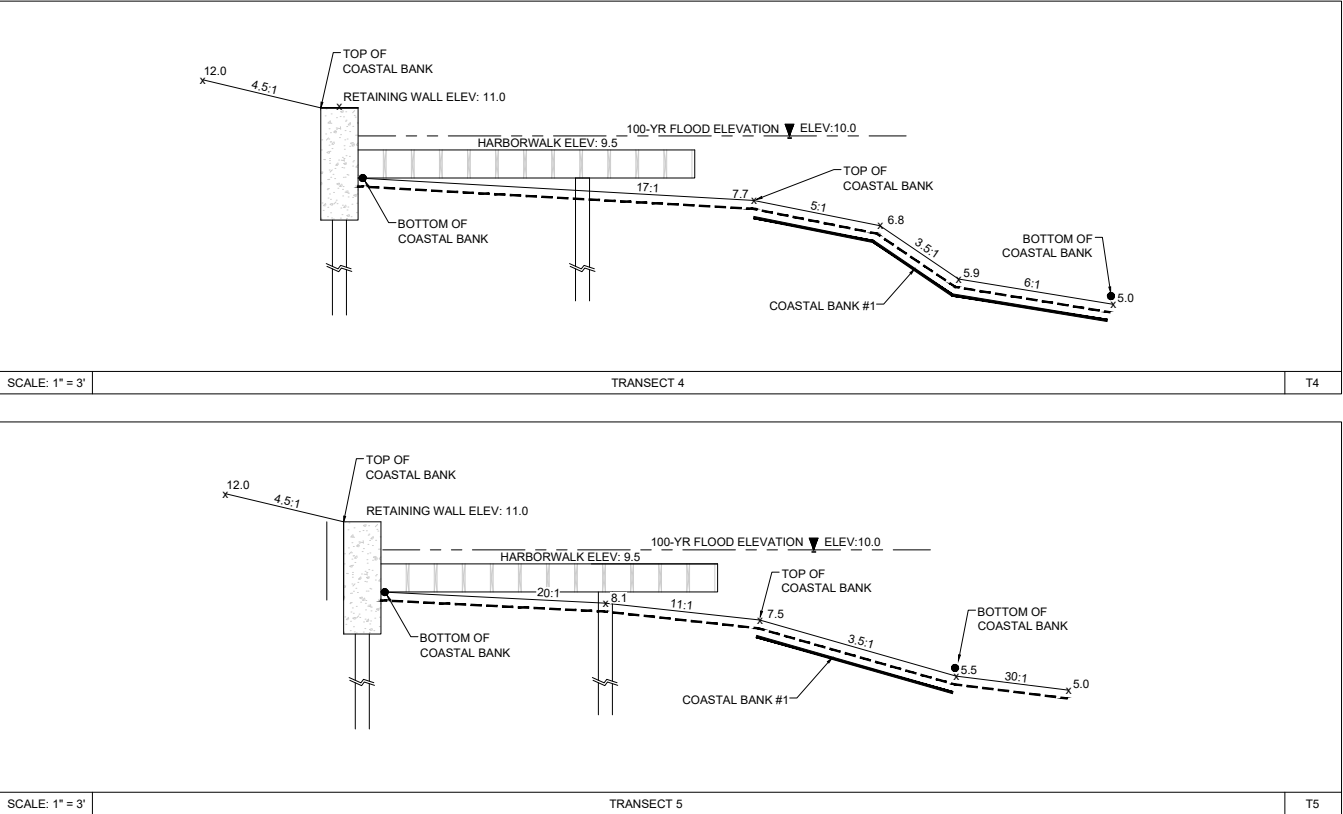


**SYMBOL LEGEND**

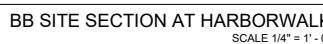
	TRANSECT
	LAND SUBJECT TO COASTAL STORM FLOWAGE (LSCSF)
	LIMITS OF COASTAL BANK
	100 YEAR FLOOD ELEVATION
	TOE OF BANK

NOTE: TOE OF BANK LIES AT THE LANDWARD EDGE OF A COASTAL BEACH, LAND SUBJECT TO TIDAL ACTION, OR OTHER WETLAND



[illegible]









APPENDIX F  
ACCESSIBILITY CHECKLIST





## Article 80 – Accessibility Checklist

### A requirement of the Boston Planning & Development Agency (BPDA) Article 80 Development Review Process

The Mayor's Commission for Persons with Disabilities strives to reduce architectural, procedural, attitudinal, and communication barriers that affect persons with disabilities in the City of Boston. In 2009, a Disability Advisory Board was appointed by the Mayor to work alongside the Commission in creating universal access throughout the city's built environment. The Disability Advisory Board is made up of 13 volunteer Boston residents with disabilities who have been tasked with representing the accessibility needs of their neighborhoods and increasing inclusion of people with disabilities.

In conformance with this directive, the BPDA has instituted this Accessibility Checklist as a tool to encourage developers to begin thinking about access and inclusion at the beginning of development projects, and strive to go beyond meeting only minimum MAAB / ADAAG compliance requirements. Instead, our goal is for developers to create ideal design for accessibility which will ensure that the built environment provides equitable experiences for all people, regardless of their abilities. As such, any project subject to Boston Zoning Article 80 Small or Large Project Review, including Institutional Master Plan modifications and updates, must complete this Accessibility Checklist thoroughly to provide specific detail about accessibility and inclusion, including descriptions, diagrams, and data.

For more information on compliance requirements, advancing best practices, and learning about progressive approaches to expand accessibility throughout Boston's built environment. Proponents are highly encouraged to meet with Commission staff, prior to filing.

#### Accessibility Analysis Information Sources:

1. Americans with Disabilities Act – 2010 ADA Standards for Accessible Design  
[http://www.ada.gov/2010ADASTandards\\_index.htm](http://www.ada.gov/2010ADASTandards_index.htm)
2. Massachusetts Architectural Access Board 521 CMR  
<http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/aab/aab-rules-and-regulations-pdf.html>
3. Massachusetts State Building Code 780 CMR  
<http://www.mass.gov/eopss/consumer-prot-and-bus-lic/license-type/csl/building-codebbrs.html>
4. Massachusetts Office of Disability – Disabled Parking Regulations  
<http://www.mass.gov/anf/docs/mod/hp-parking-regulations-summary-mod.pdf>
5. MBTA Fixed Route Accessible Transit Stations  
[http://www.mbta.com/riding\\_the\\_t/accessible\\_services/](http://www.mbta.com/riding_the_t/accessible_services/)
6. City of Boston – Complete Street Guidelines  
<http://bostoncompletestreets.org/>
7. City of Boston – Mayor's Commission for Persons with Disabilities Advisory Board  
[www.boston.gov/disability](http://www.boston.gov/disability)
8. City of Boston – Public Works Sidewalk Reconstruction Policy  
[http://www.cityofboston.gov/images\\_documents/sidewalk%20policy%200114\\_tcm3-41668.pdf](http://www.cityofboston.gov/images_documents/sidewalk%20policy%200114_tcm3-41668.pdf)
9. City of Boston – Public Improvement Commission Sidewalk Café Policy  
[http://www.cityofboston.gov/images\\_documents/Sidewalk\\_cafes\\_tcm3-1845.pdf](http://www.cityofboston.gov/images_documents/Sidewalk_cafes_tcm3-1845.pdf)

#### Glossary of Terms:

1. **Accessible Route** – A continuous and unobstructed path of travel that meets or exceeds the dimensional and inclusionary requirements set forth by MAAB 521 CMR: Section 20
2. **Accessible Group 2 Units** – Residential units with additional floor space that meet or exceed the dimensional and inclusionary requirements set forth by MAAB 521 CMR: Section 9.4
3. **Accessible Guestrooms** – Guestrooms with additional floor space, that meet or exceed the dimensional and inclusionary requirements set forth by MAAB 521 CMR: Section 8.4
4. **Inclusionary Development Policy (IDP)** – Program run by the BPDA that preserves access to affordable housing opportunities, in the City. For more information visit: <http://www.bostonplans.org/housing/overview>
5. **Public Improvement Commission (PIC)** – The regulatory body in charge of managing the public right of way. For more information visit: <https://www.boston.gov/pic>
6. **Visitability** – A place's ability to be accessed and visited by persons with disabilities that cause functional limitations; where architectural barriers do not inhibit access to entrances/doors and bathrooms.

## Article 80 | ACCESSIBILITY CHECKLIST

<b>1. Project Information:</b> <i>If this is a multi-phased or multi-building project, fill out a separate Checklist for each phase/building.</i>			
Project Name:	Residences at Coleridge Coast		
Primary Project Address:	181-183 Coleridge Street East Boston, MA 02128		
Total Number of Phases/Buildings:	One		
Primary Contact (Name / Title / Company / Email / Phone):	Ryan Acone, Rock Development <a href="mailto:ryan@builtbyrock.com">ryan@builtbyrock.com</a> , (774) 281-3165		
Owner / Developer:	Ryan Acone, Rock Development 269 Webster Street, East Boston, MA 02128		
Architect:	Touloukian Touloukian Inc. 151 Pearl Street, Second Floor Boston, MA 02110		
Civil Engineer:	Highpoint Engineering Canton Corporate Place 45 Dan Road, Suite 140, Canton, MA 02021		
Landscape Architect:	Halvorson Design Partnership, Inc. 25 Kingston Street, Boston, MA 02111		
Permitting:	Fort Point Associates, Inc. 31 State Street, Boston, MA 02109  McDermott, Quilty & Miller LLP 28 State Street, Suite 802, Boston, MA 02109		
Construction Management:	n/a		
At what stage is the project at time of this questionnaire? Select below:			
	PNF / Expanded PNF Submitted	Draft / Final Project Impact Report Submitted	BPDA Board Approved
	BPDA Design Approved	Under Construction	Construction Completed:
Do you anticipate filing for any variances with the Massachusetts Architectural Access Board (MAAB)? <i>If yes, identify and explain.</i>	No		
<b>2. Building Classification and Description:</b> <i>This section identifies preliminary construction information about the project including size and uses.</i>			
What are the dimensions of the project? <b>90' x 169'</b>			



**Article 80 | ACCESSIBILITY CHECKLIST**

Site Area:	<b>19,000 SF</b>	Building Area:	<b>34,754 GSF</b>	
Building Height:	<b>43 FT.</b>	Number of Stories:	<b>3 Flrs.</b>	
First Floor Elevation:	<b>15.5 NAVD88 21.96 BCB</b>	Is there below grade space:	<b>Yes / No</b>	
What is the Construction Type? (Select most appropriate type)				
	<b>Wood Frame</b>	Masonry	<b>Steel Frame</b>	<b>Concrete</b>
What are the principal building uses? (IBC definitions are below – select all appropriate that apply)				
	Residential – One - Three Unit	<b>Residential - Multi-unit, Four +</b>	Institutional	Educational
	<b>Business</b>	<b>Mercantile</b>	Factory	Hospitality
	Laboratory / Medical	Storage, Utility and Other		
List street-level uses of the building:	<b>Entrance to Public Courtyard, Parking Garage Entrance</b>			
<b>3. Assessment of Existing Infrastructure for Accessibility:</b> <i>This section explores the proximity to accessible transit lines and institutions, such as (but not limited to) hospitals, elderly &amp; disabled housing, and general neighborhood resources. Identify how the area surrounding the development is accessible for people with mobility impairments and analyze the existing condition of the accessible routes through sidewalk and pedestrian ramp reports.</i>				
Provide a description of the neighborhood where this development is located and its identifying topographical characteristics:	<b>The property is bound by Coleridge Street to the north, Rice Street to the east, Boston Harbor to the south, and a residential parcel with a two-story wood frame house to the west. The adjacent Harborview/Orient Heights neighborhood is characterized by a mix of land uses including recreational, commercial, and industrial space and two to three-story single and multi-family residences on small urban lots.</b>			
List the surrounding accessible MBTA transit lines and their proximity to development site: commuter rail / subway stations, bus stops:	<b>The Massachusetts Bay Transportation Authority (MBTA) Orient Heights and Wood Island Blue Line stations are located within a 15 to 20 minute walk (less than 1 mile) of the project site. The East Boston Greenway Connector and Bennington Street also serve as main neighborhood thoroughfares with access to buses (Route 120 on Bennington Street) and ride sharing.</b>			
List the surrounding institutions: hospitals, public housing, elderly and disabled housing developments, educational facilities, others:	<b>Nearby healthcare facilities include a number of East Boston Neighborhood Health Center locations, Winthrop Neighborhood Health Center, North Suffolk Mental Health, MGH Chelsea Healthcare Center, MGH Imaging in Chelsea, and Chelsea Naval Hospital. Nearby schools include Excel Academy, Brooke Charter School, and the Cheverus School. Assisted living facilities include the Don Orione Home, The Arbors Assisted Living at Winthrop, and Eastpointe Rehabilitation and Visiting Angels in Chelsea. Nearby public housing includes Brandywyne Village.</b>			
List the surrounding government buildings: libraries, community centers, recreational facilities, and other related facilities:	<b>The project site is proximate to the East Boston Yacht Club, Constitution Beach, Porrazzo Skating Rink, Wood Island Bay Edge Park, and the Salesian Boys and Girls Club.</b>			

<b>4. Surrounding Site Conditions – Existing:</b> <i>This section identifies current condition of the sidewalks and pedestrian ramps at the development site.</i>	
Is the development site within a historic district? <i>If yes</i> , identify which district:	No
Are there sidewalks and pedestrian ramps existing at the development site? <i>If yes</i> , list the existing sidewalk and pedestrian ramp dimensions, slopes, materials, and physical condition at the development site:	There is a public sidewalk on Coleridge Street. This sidewalk is about 6-8' wide. There is an existing curb cut that will be modified as part of the construction of this project.
Are the sidewalks and pedestrian ramps existing-to-remain? <i>If yes</i> , have they been verified as ADA / MAAB compliant (with yellow composite detectable warning surfaces, cast in concrete)? <i>If yes</i> , provide description and photos:	Sidewalks will be addressed and redesigned so as to meet ADA/MAAB compliance as necessary at the Coleridge/Rice corner of the site.
<b>5. Surrounding Site Conditions – Proposed</b> <i>This section identifies the proposed condition of the walkways and pedestrian ramps around the development site. Sidewalk width contributes to the degree of comfort walking along a street. Narrow sidewalks do not support lively pedestrian activity, and may create dangerous conditions that force people to walk in the street. Wider sidewalks allow people to walk side by side and pass each other comfortably walking alone, walking in pairs, or using a wheelchair.</i>	
Are the proposed sidewalks consistent with the Boston Complete Street Guidelines? <i>If yes</i> , choose which Street Type was applied: Downtown Commercial, Downtown Mixed-use, Neighborhood Main, Connector, Residential, Industrial, Shared Street, Parkway, or Boulevard.	Yes, "Neighborhood Residential"
What are the total dimensions and slopes of the proposed sidewalks? List the widths of the proposed zones: Frontage, Pedestrian and Furnishing Zone:	
List the proposed materials for each Zone. Will the proposed materials be on private property or will the proposed materials be on the City of Boston pedestrian right-of-way?	



## Article 80 | ACCESSIBILITY CHECKLIST

Will sidewalk cafes or other furnishings be programmed for the pedestrian right-of-way? <b>If yes</b> , what are the proposed dimensions of the sidewalk café or furnishings and what will the remaining right-of-way clearance be?	<b>No. There will be a Facility of Public Accommodate provided adjacent to the Harborwalk.</b>
If the pedestrian right-of-way is on private property, will the proponent seek a pedestrian easement with the Public Improvement Commission (PIC)?	<b>No.</b>
Will any portion of the Project be going through the PIC? <b>If yes</b> , identify PIC actions and provide details.	
<b>6. Accessible Parking:</b> <i>See Massachusetts Architectural Access Board Rules and Regulations 521 CMR Section 23.00 regarding accessible parking requirement counts and the Massachusetts Office of Disability – Disabled Parking Regulations.</i>	
What is the total number of parking spaces provided at the development site? Will these be in a parking lot or garage?	<b>There will be twenty-two parking spaces in a below grade parking structure below the mixed-use development above.</b>
What is the total number of accessible spaces provided at the development site? How many of these are “Van Accessible” spaces with an 8 foot access aisle?	<b>There is one van-accessible space with an 8 foot access aisle.</b>
Will any on-street accessible parking spaces be required? <b>If yes</b> , has the proponent contacted the Commission for Persons with Disabilities regarding this need?	<b>There will be no on-street parking spaces of any kind.</b>
Where is the accessible visitor parking located?	<b>Accessible visitor parking will be located in the below grade parking structure below the mixed-use development above.</b>
Has a drop-off area been identified? <b>If yes</b> , will it be accessible?	
<b>7. Circulation and Accessible Routes:</b> <i>The primary objective in designing smooth and continuous paths of travel is to create universal access to entryways and common spaces, which accommodates persons of all abilities and allows for visitability-with neighbors.</i>	

## Article 80 | ACCESSIBILITY CHECKLIST

Describe accessibility at each entryway: Example: Flush Condition, Stairs, Ramp, Lift or Elevator:	There is a sloped driveway entrance to the below grade parking garage off of Coleridge Street. There is also a grand stair which meets the sidewalk on Coleridge Street. Lastly there is a ramp at 1:12 with a guard and handrail at the west edge of the project and a sidewalk and sloped walkway at less than 1:20 at the east side of the site.
Are the accessible entrances and standard entrance integrated? <i>If yes, describe. If no, what is the reason?</i>	Yes, all pedestrian entrances lead to the raised plaza at the center of the site. They also all lead to the Harborwalk.
<i>If project is subject to Large Project Review/Institutional Master Plan, describe the accessible routes way-finding / signage package.</i>	n/a
<b>8. Accessible Units (Group 2) and Guestrooms: (If applicable)</b> <i>In order to facilitate access to housing and hospitality, this section addresses the number of accessible units that are proposed for the development site that remove barriers to housing and hotel rooms.</i>	
What is the total number of proposed housing units or hotel rooms for the development?	19
<i>If a residential development, how many units are for sale? How many are for rent? What is the breakdown of market value units vs. IDP (Inclusionary Development Policy) units?</i>	
<i>If a residential development, how many accessible Group 2 units are being proposed?</i>	19
<i>If a residential development, how many accessible Group 2 units will also be IDP units? If none, describe reason.</i>	
<i>If a hospitality development, how many accessible units will feature a wheel-in shower? Will accessible equipment be provided as well? If yes, provide amount and location of equipment.</i>	n/a



## Article 80 | ACCESSIBILITY CHECKLIST

Do standard units have architectural barriers that would prevent entry or use of common space for persons with mobility impairments? Example: stairs / thresholds at entry, step to balcony, others. <b>If yes</b> , provide reason.	No, only the townhouse unit has floors and spaces that are not ADA/MAAB accessible.
Are there interior elevators, ramps or lifts located in the development for access around architectural barriers and/or to separate floors? <b>If yes</b> , describe:	There is an elevator in the main wing of the building which provides access to 18 of the 19 units.
<b>9. Community Impact:</b> <i>Accessibility and inclusion extend past required compliance with building codes. Providing an overall scheme that allows full and equal participation of persons with disabilities makes the development an asset to the surrounding community.</i>	
Is this project providing any funding or improvements to the surrounding neighborhood? Examples: adding extra street trees, building or refurbishing a local park, or supporting other community-based initiatives?	There will be a tree, bike racks, and a bench provided on the private property that will be at street level adjacent to the sidewalk on Coleridge Street.
What inclusion elements does this development provide for persons with disabilities in common social and open spaces? Example: Indoor seating and TVs in common rooms; outdoor seating and barbeque grills in yard. Will all of these spaces and features provide accessibility?	All outdoor and indoor spaces in the main wing will be fully accessible.
Are any restrooms planned in common public spaces? <b>If yes</b> , will any be single-stall, ADA compliant and designated as "Family"/ "Companion" restrooms? <b>If no</b> , explain why not.	There is one single-user unisex toilet provided in the Facility of Public Accommodation space.
Has the proponent reviewed the proposed plan with the City of Boston Disability Commissioner or with their Architectural Access staff? <b>If yes</b> , did they approve? <b>If no</b> , what were their comments?	

## Article 80 | ACCESSIBILITY CHECKLIST

<p>Has the proponent presented the proposed plan to the Disability Advisory Board at one of their monthly meetings? Did the Advisory Board vote to support this project? <b>If no</b>, what recommendations did the Advisory Board give to make this project more accessible?</p>	
<p><b>10. Attachments</b> <i>Include a list of all documents you are submitting with this Checklist. This may include drawings, diagrams, photos, or any other material that describes the accessible and inclusive elements of this project.</i></p>	
<p>Provide a diagram of the accessible routes to and from the accessible parking lot/garage and drop-off areas to the development entry locations, including route distances.</p>	
<p>Provide a diagram of the accessible route connections through the site, including distances.</p>	
<p>Provide a diagram the accessible route to any roof decks or outdoor courtyard space? (if applicable)</p>	
<p>Provide a plan and diagram of the accessible Group 2 units, including locations and route from accessible entry.</p>	
<p>Provide any additional drawings, diagrams, photos, or any other material that describes the inclusive and accessible elements of this project.</p> <ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> </ul>	

This completes the Article 80 Accessibility Checklist required for your project. Prior to and during the review process, Commission staff are able to provide technical assistance and design review, in order to help achieve ideal accessibility and to ensure that all buildings, sidewalks, parks, and open spaces are usable and welcoming to Boston's diverse residents and visitors, including those with physical, sensory, and other disabilities.

For questions or comments about this checklist, or for more information on best practices for improving accessibility and inclusion, visit [www.boston.gov/disability](http://www.boston.gov/disability), or our office:

The Mayor's Commission for Persons with Disabilities  
1 City Hall Square, Room 967,  
Boston MA 02201.

Architectural Access staff can be reached at:

[accessibility@boston.gov](mailto:accessibility@boston.gov) | [patricia.mendez@boston.gov](mailto:patricia.mendez@boston.gov) | [sarah.leung@boston.gov](mailto:sarah.leung@boston.gov) | 617-635-3682



APPENDIX G  
BDPA CLIMATE RESILIENCY CHECKLIST





In October 2017 in conformance with the Mayor's 2014 Climate Action Plan and the 2016 Boston Research Advisory Group and the Climate Ready Boston recommendations, the Boston Planning and Development Agency (BPDA) updated the Climate Change Review Policy. All development projects subject to Boston Zoning Article 80 Large Project, Planned Development Area, and Institutional Master Plan review, including modifications and updates, are to consider and analyze the impacts of future climate conditions and to incorporate measures to avoid, eliminate, or mitigate greenhouse gas emissions and impacts related to climate change in project planning, design, and construction.

### **Climate Change Research and Information**

Following are links to information about the City of Boston's climate change policies and practices including:

- [\*"Climate Ready Boston"\*](#), the 2016 update of the City's climate action plan.
- [\*"Climate Change and Sea Level Rise Projections for Boston"\*](#), 2016 report of the Boston Research Advisory Group
- [\*"Climate Change and Extreme Weather Vulnerability Assessments And Adaptation Options for the Central Artery"\*](#), MassDOT-FHWA Pilot Project, June 2015
- [\*"Building Resilience in Boston: Best Practices for Climate Change Adaptation and Resilience for Existing Buildings"\*](#), Linnean Solutions, The Built Environment Coalition, The Resilient Design Institute, 2013.
- [\*"Enhancing Resilience in Boston: A Guide for Large Buildings and Institutions"\*](#), A Better City. 2015.
- [\*"The Commercial Net Zero Energy Building Market in Boston"\*](#), A Better City, 2017
- [\*"The Power of Zero, Optimizing Value for Next Generation Green"\*](#), BNIM, Integral Group, Davis Langdon / AECOM, and AIA COTE, 2015 (cost study of net zero energy buildings).

For additional information visit [boston.gov/climate-ready](http://boston.gov/climate-ready).

### **Climate Resiliency Checklist Report**

A completed Climate Resiliency Checklist (Climate Resiliency Report) is due with each of the following Article 80 or similar filings as deemed appropriate by the BPDA and the IGBC:

- Initial Filing – with a Project Notification Form, Notice of Project Change, or other initial project filing or similar update; provide a Climate Resiliency Report reflecting the proposed project and specific commitments.
- Design / Building Permit Filing – in conjunction with BPDA final design submission but prior to requesting a building permit; provide an updated Climate Resiliency Report reflecting final project planning.
- Construction / Certificate of Occupancy Filing – in conjunction with construction competition but prior to requesting a final Certificate of Occupancy; provide an updated Climate Resiliency Report reflecting actual built conditions.

### **Climate Resiliency Reports are to be completed online**

To better capture response data, the Climate Resiliency Checklist is provided as an online fillable form. A blank Checklist is provide in pdf and word format to support off-line work and preparation. When the online form is completed and submitted, the "Filing Contact" will be emailed a (pdf) copy of the Climate Resiliency Report **AND** a link to the online form that will allow Report editing and resubmission. A (pdf) copy of the completed Climate Resiliency Report should be included with each BPDA filing.

The Climate Resiliency Report, along with Article 37 submission materials, will be reviewed by the Interagency Green Building Committee (IGBC). See [Boston Zoning Article 37 Green Buildings](#) for additional guidance and related materials.

### Greenhouse Gas Reduction

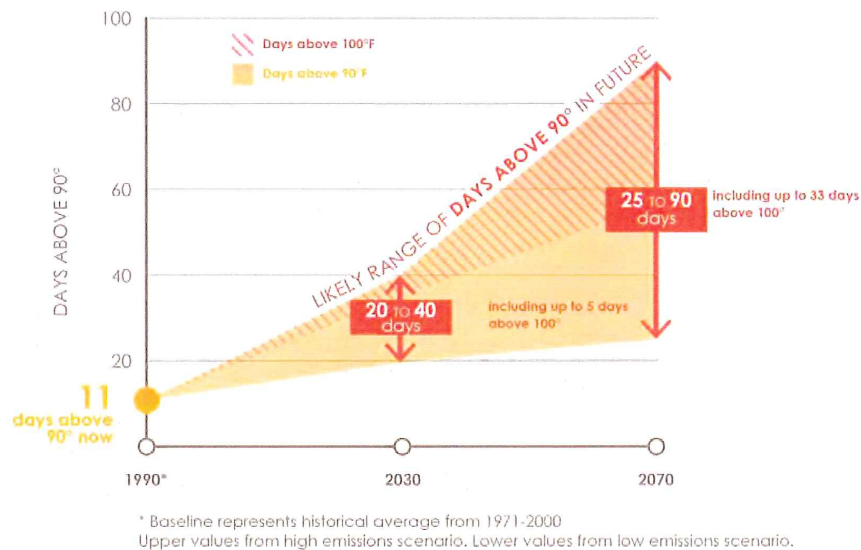
Reducing greenhouse gas emissions is critical to avoiding more extreme climate change conditions. In response Mayor Walsh has set a goal for Boston to be carbon neutral by 2050.

New building projects should employ an integrated planning and design approach to maximize building energy efficiency and include onsite clean and renewable energy solutions to ensure the constructed building has minimized greenhouse gas emissions.

Additionally, project planning should identify future adaptation strategies for increasing building energy efficiency, clean and renewable energy production, and other measures for achieving carbon net zero / net positive performance by 2050. Projects should use the [Massachusetts Environmental Policy Act Protocol](#) when calculating greenhouse gas emissions.

### Extreme Heat

The annual average temperature in Boston increased by about 2°F in the past hundred years and will continue to rise due to climate change. By the end of the century, the average annual temperature could increase to 56° (compared to 46° now) and the number of days above 90° (currently about 10 a year) could rise to 90 days per year.



Data source: Rossi et al, 2015

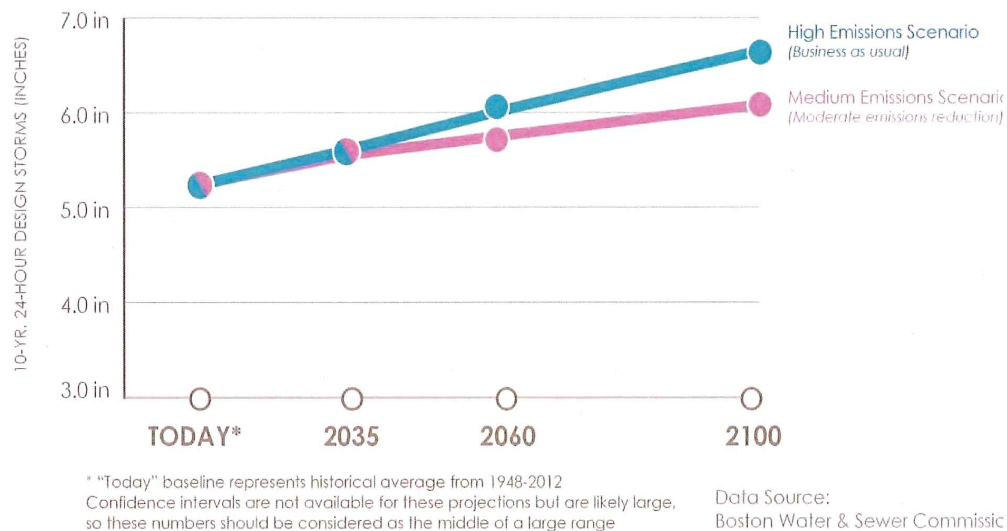
*56° and 90 days above 90° should be used as the minimum performance target for future Extreme Heat and for reducing or eliminating the risks and impacts of increasing temperatures.*

New building projects should be planned and designed to minimize thermal cooling and heating requirements. Passive strategies, including building siting, orientation, fenestration and envelope design, should be prioritized over active mechanical system solutions. Building mechanical systems should be designed to meet present and future conditioning requirements without diminishing system efficiency.

Additionally, project planning should identify future strategies for adapting to higher annual temperatures and more extreme heat waves including both building envelope and mechanical systems.

### Extreme Precipitation Events

From 1958 to 2010, there was a 70 percent increase in the amount of precipitation that fell on the days with the heaviest precipitation. Currently, the 10-Year, 24-Hour Design Storm precipitation level is 5.25". There is a significant probability that this will increase to at least 6" by the end of the century. Additionally, fewer, larger storms are likely to be accompanied by more frequent droughts.



*The 6" 10-Year, 24-Hour Design Storm precipitation level should be used for the minimum performance target for Extreme Precipitation Events and for reducing or eliminating flood risk and potential damage.*

New buildings should be planned and designed to manage more intense precipitation events and to reduce infrastructure burdens including rainwater harvesting, on-site stormwater retention and infiltration strategies.

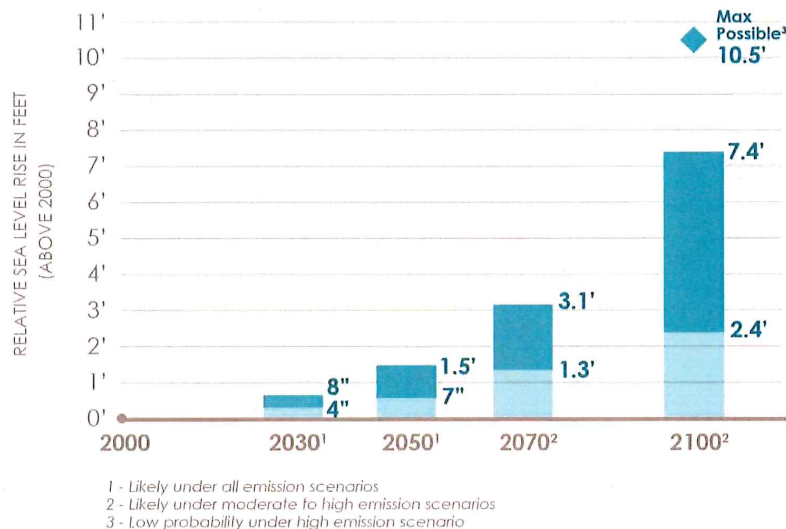


Additionally, project planning should identify future adaptation measures for managing an increase in precipitation levels.

### Sea Level Rise

Climate Ready Boston's Research Advisory Group used three greenhouse gas emissions scenarios — high ("business as usual"), medium, and low (consistent with the 2015 Paris accords) — to project future sea-level rise in Boston. As indicated in the Boston Research Advisory Group (BRAG) Report, under the medium emissions scenario, there is a 5% probability that sea level rise will be higher than three feet by 2070 and a 65% probability that sea level rise will be higher than three feet by 2100.

Based on these greenhouse gas emission scenarios, or other plausible greenhouse gas emissions scenarios, the sea level in Boston will continue to rise throughout the century and will exceed three feet sooner in the high emission scenario, later in the low emission scenario. For the BPDA Climate Resiliency Checklist these scenarios represent reasonable future climate conditions and sea level rise risk thresholds for evaluating new development impacts.



The implications of these scenarios are represented on BPDA Sea Level Rise - Flood Hazard Area (SLR-FHA) map as a modeled 1% annual chance flood event with 40 inches of sea level rise (SLR) as derived from the MassDOT-FHWA Boston Harbor Flood Risk Model (BH-FRM). The 40" of SLR is a combination of the mean sea level rise (3.2 feet above 2013 tide levels) plus 2.5 inches of local land subsidence. The SLR-FHA data and map are by the Woods Hole Group and the BPDA.

These measures may be updated based upon future climate science, coastal flooding assessments, and flood risk models.

Projects should first evaluate **if the location and site conditions** are vulnerable to flooding:

- To determine if the Project site is within a FEMA SFHA, visit: <https://msc.fema.gov/portal>.
- To determine if the Project site is within a BPDA Sea Level Rise - Flood Hazard Area (SLR-FHA) use the online [BPDA SLR-FHA Mapping Tool](http://maps.bostonredevelopmentauthority.org/zoningviewer/?climate=true), visit:  
<http://maps.bostonredevelopmentauthority.org/zoningviewer/?climate=true>

*Project sites and buildings located in either the FEMA SFHA or the BPDA SLR-FHA may be vulnerable to flooding due to either present or future conditions, including rising sea levels.*

**If the Project site is located in either the FEM SFHA or the BPDA SLR-FHA**, use the online [BPDA SLR-FHA Mapping Tool](http://maps.bostonredevelopmentauthority.org/zoningviewer/?climate=true) to determine the highest Sea Level Rise - Base Flood Elevation (SLR-BFE) for the project site and calculate the Sea Level Rise - Design Flood Elevation (SLR-DFE) by adding at minimum 24" of freeboard for critical facilities and infrastructure and buildings with ground floor residential units OR at minimum 12" of freeboard for all other buildings and uses. Include the SLR-BFE and SLR-DFE determinations for the project site in the Resiliency Report.

*The SLR-DFE should be used as the minimum performance target for assessing sea level rise impacts and for reducing or eliminating flood risk, potential damage, and related adverse impacts.*

New building projects should be planned and designed to reduce or eliminate flood risk and potential damage. Strategies include raising the elevation of the site and access routes, elevating building ground floors, dry and wet flood proofing, locating critical building equipment and systems above potential flood elevations, and deploying temporary barricades.

Additionally, project planning and design should identify future adaptation strategies that might be necessary for meeting and exceeding the SLR-DFE and adapting to higher SLR conditions.

#### **Disclaimer**

The Sea Level Rise - Flood Hazard Areas (SLR-FHA) and Sea Level Rise - Base Flood Elevations (SLR-BFE) depicted in these maps are for planning purposes. The 40-inch SLR forecast and resulting SLR-BFE's do not represent a worst case SLR scenario. Project proponents are encouraged to reference the 2016 Boston Research Advisory Group Report and evaluate their own tolerance for risk given the specifics of the project site, location, and use(s) to determine what, including additional, flood hazard mitigation and prevention measures should be incorporated into their project. Compliance with these guidelines does not guarantee against present or future flooding and resulting damages.

This mapping information is not intended for flood insurance determinations, nor should it be directly related to FEMA Flood Insurance Rate Maps or Flood Insurance Studies.

## Climate Change Checklist Appendix

### Flood Insurance Discount

Elevating a building above minimum freeboard requirements can help protect a project from future flooding and may lead to reductions in federal flood insurance premiums. Both residential and commercial projects that incorporate up to four feet of freeboard may be eligible for discounts. Please visit the Massachusetts Office of Coastal Zone Management [freeboard webpage](#) for more information.

### Glossary

**1% Annual Chance Flood:** also known as the **100-Year Flood** and the **Base Flood**. Defined by FEMA as a flood with a 1% annual chance of occurring or being exceeded. FEMA Flood Insurance Rate Maps delineate the horizontal extent of the **Base Flood**, along with its corresponding Base Flood Elevations.

**100-Year Floodplain:** the boundary of a flood that has a 1% annual chance of occurring or being exceeded. Also referred to as **Special Flood Hazard Areas (SFHA)** on FEMA Flood Insurance Rate Maps.

**Adaptation:** changes that respond to anticipated environmental risks.

**Base Flood Elevation (BFE):** defined by FEMA as the top of water elevation projected for a specified flooding scenario. BFEs listed on FEMA Flood Insurance Rate Maps are based on the 1% Annual Chance Flood.

**Boston City Base (BCB):** a city-wide elevation datum typically used for site and building planning, design, and engineering. BCB elevations can be converted the NAVD88 datum by subtracting 6.46 feet. (BCB - 6.46' = NAVD88)

**Boston Harbor - Flood Risk Model (BH-FRM):** is a dynamic flood model which uses climate change projections to simulate flooding from extreme weather and sea level rise. The model incorporates a number of variables including topography, the influence of wind, wave action and storm surge. As a result, the mapped SLR BFE's vary and can increase across the SLR-FHA's. The model was developed by UMass-Boston, Woods Hole Group, Inc. and the University of New Hampshire as part of the Massachusetts Department of Transportation (MassDOT) and Federal Highway Administration (FHWA) Resilience Pilot Project.

**BPDA Sea Level Rise – Flood Hazard Area Map (SLR-FHA Map):** is derived from the MassDOT-FHWA Boston Harbor Flood Risk Model (BH-FRM) and was prepared by the Woods Hole Group. The map depicts Sea Level Rise - Flood Hazard Areas (SLR-FHA) and Sea Level Rise - Base Flood Elevations (SLR-BFE) based upon a modeled 1% annual chance coastal flood event with 40 inches of sea level rise (SLR). The SLR-FHA's and SLR-BFE's depicted on the maps are for use with the Climate Resiliency Checklist.

**Building Floodproof Elevation:** a BPDA term for the height below which water will not enter the building, including above and below grade building conditions.

**Coastal Flood Exceedance Probability (CFEP):** the likelihood that a location will experience a flood during a given year. The MassDOT BH-FRM uses the 1% CFEP and the 0.1% CFEP to estimate flood depths in 2013, 2030 and 2070.



**Critical Facilities and Infrastructure:** defined by FEMA as a facility where even a low risk of disruption would constitute a severe threat. FEMA includes hospitals, fire stations, police stations, critical record storage facilities, and similar structures within this scope. The American Society of Civil Engineers also includes facilities related to energy, water, transportation, communication systems, and natural and virtual resources within their definition of critical facilities.

**Design Flood Elevation (DFE):** defined by FEMA as the height of the lowest occupiable floor (when wet floodproofing), or the height of the lowest structural member of an inhabitable floor (when elevating a building). The DFE is separated from the BFE by freeboard.

**Federal Emergency Management Agency (FEMA):** manages the federal government's response to natural and manmade disasters. FEMA also manages the NFIP and produces Flood Insurance Rate Maps (FIRM).

**Flood Insurance Rate Map (FIRM):** maps produced by FEMA that delineate the borders of the 100-year floodplain and corresponding Base Flood Elevations. The flood projections shown on FIRMs are based on historic data, and do not include factors related to future sea level rise.

**Floodproofing:** defined by FEMA as structural or non-structural interventions that reduce flood damage to a space or a building.

**Freeboard:** defined by FEMA as a factor of safety, or a buffer between predicted flood levels and a building's lowest occupiable floor. In other words, the distance between the SLR-BFE and the SLR-DFE.

**North American Vertical Datum of 1988 (NAVD88):** an elevation datum created by the National Geodetic Survey typically used to coastal water heights. NAVD88 elevations can be converted to the BCB datum by adding 6.46 feet. ( $\text{NAVD88} + 6.46' = \text{BCB}$ )

**Resilience:** the ability of a system to prepare for, withstand, and recover quickly from a disaster. Ideally, resilient systems should recover from an event by becoming stronger than they were prior to the stress.

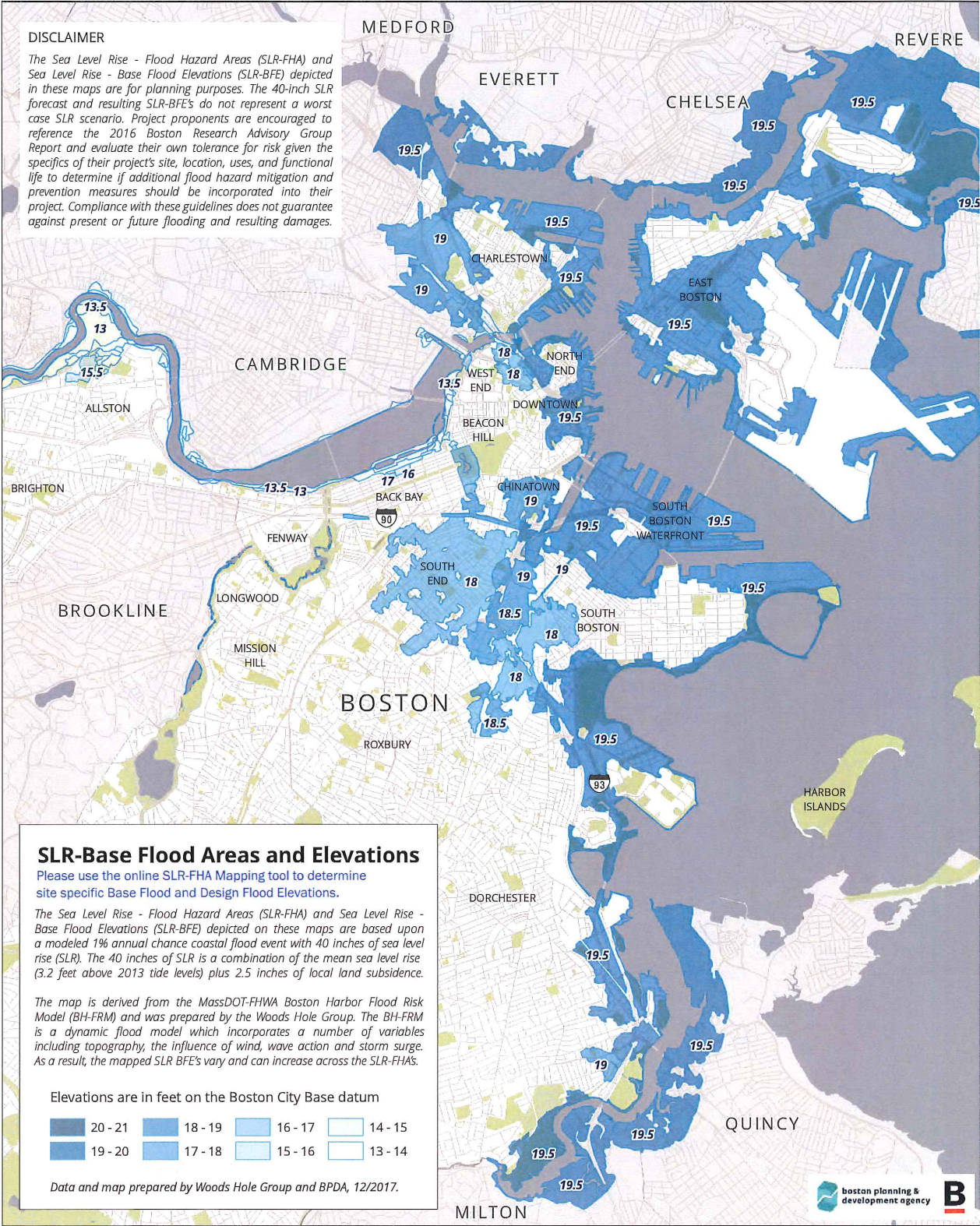
**Sea Level Rise - Base Flood Elevation (SLR-BFE):** a BPDA term for the top of water elevation predicted by the BH-FRM's 1% CFEP in 2070 scenario. This includes 3.2' of sea level rise above 2013 tide levels, an additional 2.5" to account for subsidence, and the 1% Annual Chance Flood. The SLR-BFE is separated from the SLR-DFE by freeboard.

**Sea Level Rise - Design Flood Elevation (SLR-DFE):** a BPDA term for the height of the lowest occupiable floor. This elevation is separated from the SLR-BFE by freeboard.

**Sea Level Rise - Flood Hazard Area (SLR-FHA):** a BPDA term that delineates the extent of flooding projected in the BH-FRM for a 1% annual chance coastal flood event with 40 inches of sea level rise (SLR).

**Sustainability:** Meeting the needs of the present without compromising the ability of future generations to meet their own needs. UN Brundtland Commission

# BPDA Sea Level Rise-Flood Hazard Area Map





## Climate Resiliency Checklist

NOTE: Project filings should be prepared and submitted using the online [Climate Resiliency Checklist](#).

### A.1 - Project Information

Project Name:	The Residences at Coleridge Coast		
Project Address:	181-183 Coleridge Street		
Project Address Additional:	East Boston, Massachusetts		
Filing Type (select)	<input checked="" type="radio"/> Initial PNF, EPNF, NPC or other substantial filing Design / Building Permit (prior to final design approval), or Construction / Certificate of Occupancy (post construction completion)		
Filing Contact	Name	Company	Email
Is MEPA approval required	<input checked="" type="radio"/> Yes <input type="radio"/> no		Date

### A.3 - Project Team

Owner / Developer:	Ryan Acone, Rock Development
Architect:	Touloukian Touloukian Inc.
Engineer:	Civil Engineer: Highpoint Engineering
Sustainability / LEED:	Touloukian Touloukian Inc.
Permitting:	Fort Point Associates, Inc.
Construction Management:	TBD

### A.3 - Project Description and Design Conditions

List the principal Building Uses:	Residential (R-2), FPA Space (Assembly), Parking (S-2)
List the First Floor Uses:	Residential (R-2), FPA Space (Assembly)
List any Critical Site Infrastructure and or Building Uses:	

#### Site and Building:

Site Area:	19,000 SF	Building Area:	34,112 GSF
Building Height:	45-47 Ft	Building Height:	3 Stories
Existing Site Elevation – Low:	15.46 Ft BCB	Existing Site Elevation – High:	16.46 Ft BCB
Proposed Site Elevation – Low:	11.46 Ft BCB	Proposed Site Elevation – High:	21.96 Ft BCB
Proposed First Floor Elevation:	21.96 Ft BCB	Below grade levels:	1 Stories

#### Article 37 Green Building:

LEED Version - Rating System :		LEED Certification:	Yes / No
Proposed LEED rating:	Certified/Silver/ Gold/Platinum	Proposed LEED point score:	Pts.



### Building Envelope

When reporting R values, differentiate between R discontinuous and R continuous. For example, use "R13" to show R13 discontinuous and use R10c.i. to show R10 continuous. When reporting U value, report total assembly U value including supports and structural elements.

Roof:	R-38 (R)	Exposed Floor:	R-30 (R)
Foundation Wall:	R-21 (R)	Slab Edge (at or below grade):	R-10 (R)

Vertical Above-grade Assemblies (%'s are of total vertical area and together should total 100%):

Area of Opaque Curtain Wall & Spandrel Assembly:	0 (%)	Wall & Spandrel Assembly Value:	(U)
Area of Framed & Insulated / Standard Wall:	78.6 (%)	Wall Value	R-18 (R)
Area of Vision Window:	21.4 %	Window Glazing Assembly Value:	0.30 (U)
		Window Glazing SHGC:	0.56 (SHGC)
Area of Doors:	4.8 %	Door Assembly Value:	0.30 (U)

### Energy Loads and Performance

For this filing – describe how energy loads & performance were determined

See attached.			
Annual Electric:	(kWh)	Peak Electric:	(kW)
Annual Heating:	454 (MMbtu/hr)	Peak Heating:	(MMbtu)
Annual Cooling:	407 (Tons/hr)	Peak Cooling:	(Tons)
Energy Use - Below ASHRAE 90.1 - 2013:	%	Have the local utilities reviewed the building energy performance?:	Yes / <u>(no)</u>
Energy Use - Below Mass. Code:	0 %	Energy Use Intensity:	57.9 (kBtu/SF)

### Back-up / Emergency Power System

Electrical Generation Output:	N/A (kW)	Number of Power Units:	N/A
System Type:	N/A (kW)	Fuel Source:	N/A

### Emergency and Critical System Loads (in the event of a service interruption)

Electric:	N/A (kW)	Heating:	N/A (MMbtu/hr)
		Cooling:	N/A (Tons/hr)

---

## B – Greenhouse Gas Reduction and Net Zero / Net Positive Carbon Building Performance

Reducing GHG emissions is critical to avoiding more extreme climate change conditions. To achieve the City's goal of carbon neutrality by 2050 new buildings performance will need to progressively improve to net carbon zero and positive.

### B.1 – GHG Emissions - Design Conditions

For this Filing - Annual Building GHG Emissions: 

Not yet determined.	(Tons)
---------------------	--------

For this filing - describe how building energy performance has been integrated into project planning, design, and engineering and any supporting analysis or modeling:

See attached.

Describe building specific passive energy efficiency measures including orientation, massing, envelop, and systems:

See attached.

Describe building specific active energy efficiency measures including equipment, controls, fixtures, and systems:

See attached.

Describe building specific load reduction strategies including on-site renewable, clean, and energy storage systems:

See attached.

Describe any area or district scale emission reduction strategies including renewable energy, central energy plants, distributed energy systems, and smart grid infrastructure:

N/A

Describe any energy efficiency assistance or support provided or to be provided to the project:

See attached.

### B.2 - GHG Reduction - Adaptation Strategies

Describe how the building and its systems will evolve to further reduce GHG emissions and achieve annual carbon net zero and net positive performance (e.g. added efficiency measures, renewable energy, energy storage, etc.) and the timeline for meeting that goal (by 2050):

See attached.

---

## C - Extreme Heat Events

Annual average temperature in Boston increased by about 2°F in the past hundred years and will continue to rise due to climate change. By the end of the century, the average annual temperature could be 56° (compared to 46° now) and the number of days above 90° (currently about 10 a year) could rise to 90.

### C.1 – Extreme Heat - Design Conditions

Boston Climate Resiliency - Checklist – Page 3 of 6

December 14, 2017 revised

Temperature Range - Low:	<input type="text" value="Deg."/>	Temperature Range - High:	<input type="text" value="Deg."/>
Annual Heating Degree Days:	<input type="text"/>	Annual Cooling Degree Days:	<input type="text"/>

What Extreme Heat Event characteristics will be / have been used for project planning

Days - Above 90°:	<input type="text" value="#"/>	Days - Above 100°:	<input type="text" value="#"/>
Number of Heatwaves / Year:	<input type="text" value="#"/>	Average Duration of Heatwave (Days):	<input type="text" value="#"/>

Describe all building and site measures to reduce heat-island effect at the site and in the surrounding area:

## C.2 - Extreme Heat – Adaptation Strategies

Describe how the building and its systems will be adapted to efficiently manage future higher average temperatures, higher extreme temperatures, additional annual heatwaves, and longer heatwaves:

Describe all mechanical and non-mechanical strategies that will support building functionality and use during extended interruptions of utility services and infrastructure including proposed and future adaptations:

## D - Extreme Precipitation Events

From 1958 to 2010, there was a 70 percent increase in the amount of precipitation that fell on the days with the heaviest precipitation. Currently, the 10-Year, 24-Hour Design Storm precipitation level is 5.25". There is a significant probability that this will increase to at least 6" by the end of the century. Additionally, fewer, larger storms are likely to be accompanied by more frequent droughts.

### D.1 – Extreme Precipitation - Design Conditions

10 Year, 24 Hour Design Storm:  Type 3

Describe all building and site measures for reducing storm water run-off:

On-site retention and infiltration of up to 1" of rainfall for all new impervious surfaces. Meet all BWSC site plan approval requirements for on-site retention.

### D.2 - Extreme Precipitation - Adaptation Strategies

Describe how site and building systems will be adapted to efficiently accommodate future more significant rain events (e.g. rainwater harvesting, on-site storm water retention, bio swales, green roofs):

Site grading and plantings, on-site stormwater detention/infiltration and low impact development site features, including pervious pavers and planted depression areas.

## E – Sea Level Rise and Storms



Under any plausible greenhouse gas emissions scenario, sea levels in Boston will continue to rise throughout the century. This will increase the number of buildings in Boston susceptible to coastal flooding and the likely frequency of flooding for those already in the floodplain.

Is any portion of the site in a FEMA SFHA?

☒ Yes ☐ No

What Zone:

A, ☒ AE, AH, AO, AR, A99, V, VE

Current FEMA SFHA Zone Base Flood Elevation:

15.46/16.46 Ft BCB

Is any portion of the site in a BPDA Sea Level Rise - Flood Hazard Area? Use the online [BPDA SLR-FHA Mapping Tool](#) to assess the susceptibility of the project site.

☒ Yes ☐ No

***If you answered YES to either of the above questions, please complete the following questions. Otherwise you have completed the questionnaire; thank you!***

### E.1 – Sea Level Rise and Storms – Design Conditions

Proposed projects should identify immediate and future adaptation strategies for managing the flooding scenario represented on the BPDA Sea Level Rise - Flood Hazard Area (SLR-FHA) map, which depicts a modeled 1% annual chance coastal flood event with 40 inches of sea level rise (SLR). Use the online [BPDA SLR-FHA Mapping Tool](#) to identify the highest Sea Level Rise - Base Flood Elevation for the site. The Sea Level Rise - Design Flood Elevation is determined by adding either 24" of freeboard for critical facilities and infrastructure and any ground floor residential units OR 12" of freeboard for other buildings and uses.

Sea Level Rise - Base Flood Elevation:

19.3 Ft BCB

Sea Level Rise - Design Flood Elevation:

21.3 Ft BCB

First Floor Elevation:

21.96 Ft BCB

Site Elevations at Building:

21.96 Ft BCB

Accessible Route Elevation:

15.46-21.96 Ft BCB

Describe site design strategies for adapting to sea level rise including building access during flood events, elevated site areas, hard and soft barriers, wave / velocity breaks, storm water systems, utility services, etc.:

See attached.

Describe how the proposed Building Design Flood Elevation will be achieved including dry / wet flood proofing, critical systems protection, utility service protection, temporary flood barriers, waste and drain water back flow prevention, etc.:

See attached.

Describe how occupants might shelter in place during a flooding event including any emergency power, water, and waste water provisions and the expected availability of any such measures:

See attached.

Describe any strategies that would support rapid recovery after a weather event:

See attached.

## E.2 – Sea Level Rise and Storms – Adaptation Strategies

Describe future site design and or infrastructure adaptation strategies for responding to sea level rise including future elevating of site areas and access routes, barriers, wave / velocity breaks, storm water systems, utility services, etc.:

See attached.

Describe future building adaptation strategies for raising the Sea Level Rise Design Flood Elevation and further protecting critical systems, including permanent and temporary measures:

See attached.

A pdf and word version of the Climate Resiliency Checklist is provided for informational use and off-line preparation of a project submission. **NOTE: Project filings should be prepared and submitted using the online [Climate Resiliency Checklist](#).**

For questions or comments about this checklist or Climate Change best practices, please contact:  
[John.Dalzell@boston.gov](mailto:John.Dalzell@boston.gov)

## **Energy Loads and Performance**

*For this filing – describe how energy loads & performance were determined:*

Schematic Design Energy Modeling was performed for the proposed project using NREL's Energy-10 modeling program. TMY weather files for Boston, MA were used. Three sessions were run in the model. The first represented a "code-compliant" building, a second with improved "as-proposed" design measures, and a third to determine what is necessary to get the building near net zero energy.

### **B.1**

*For this filing – describe how building energy performance has been integrated into project planning, design and engineering and any supporting analysis or modeling:*

Building energy performance modeling is currently being used in the schematic design phase to evaluate options and determine energy efficiency standards for the next phases of the design.

*Describe building specific passive energy efficiency measures including orientation, massing, envelope, and systems:*

Operable windows, overhangs at large expanses of glass to assist with solar shading, and deep set entrances. R and U values for the roof, walls, windows and doors are to be further determined through the energy model iterative design process.

*Describe building specific active energy efficiency measures including equipment, controls, fixtures, and systems:*

Energy efficient lighting (LED), occupancy sensors, multiple thermostats per unit with zoning (where applicable) is being evaluated for the future design phases.

*Describe building specific active energy efficiency measures including on-site renewable, clean, and energy storage systems:*

A PV-ready roof structure and membrane are being evaluated for the future design phases.

*Describe any energy efficiency assistance or support provided or to be provided to the project:*

We are considering applying for solar array grant assistance, if applicable.

### **B.2**

*Describe how the building and its systems will evolve to further reduce GHG emissions and achieve annual carbon net zero and net positive performance (e.g. added efficiency measures, renewable energy, energy storage, etc.) and the timeline for meeting that goal by 2050:*

Integrating passive design strategies, including a high performance building envelope, and specifying energy efficient HVAC systems will continue to reduce the amount of GHG emissions over time. We are planning a solar ready roof design to support the opportunity to provide renewable energy on site in the future.



## C

*Describe all building and site measures to reduce heat-island effect at the site and in the surrounding area:*

- Over 20% of site covered in grass with 50% of the site as open space.
- The main building, approximately 40% of site, is proposed to be covered in a high SRI reflective, white PVC roof system. This will help keep the building cooler during summer months to reduce energy needed for cooling and help prevent overheating during potential summer brown-out and power outage scenarios.

## E.1

*Describe site design strategies for adapting to sea level rise including building access during flood events, elevated site areas, hard and soft barriers, wave/velocity breaks, storm water systems, utility services, etc.:*

All of the occupiable space for the residential units and supporting common areas, and the Facility of Public Accommodation space are set above the sea level rise (SLR) design flood elevation. The entry points to the underground parking garage are elevated one foot above the FEMA floor plain. During the flood events, occupants in the main buildings can egress to the exterior plaza space (elevated site areas) set above the SLR design flood elevation. One of the primary site egress stairs leads from the SLR design flood elevation to the adjacent property in the FEMA Flood Zone X. There are hard barriers, such as the foundation walls for the below grade parking garage, set around the entire elevated site area. There are soft barriers, such as planting and berms, set intermittently around the perimeter leading from the elevation of the public way and coastal bank to the elevated site areas.

Roof storm water will also divert storm water to a groundwater infiltration system. Outdoor plaza areas set above the base flood design elevation is to include positive drainage to a groundwater infiltration system. The harborwalk consists of open decking between which there is positive drainage to the ground conditions below.

The electrical utility room is raised above the SLR design flood elevation so that it will be protected during extreme flooding.

The coastal bank will include minor clean-up of miscellaneous debris. The site will be planted with drought-resistant plants and native species.

*Describe how the proposed Building Design Flood Elevation will be achieved including dry/wet flood proofing, critical systems protection, utility service protection, temporary flood barriers, waste and drain water back flow prevention, etc.:*

Construction of the perimeter of the below grade parking structure will be set above the SLR design flood elevation and will be designed by a structural engineer. The below grade parking structure will be designed to meet floodproofing code requirements.

Critical systems and electrical utilities will not be located below the SLR design flood elevation.

The entry points to the underground parking garage such as the garage doors and pedestrian doors are to be designed as required by the flood proofing code requirements.

Waste and drain, and water back flow prevention are to be designed as required by code.

*Describe how occupants might shelter in place during a flooding event including any emergency power, water, and waste water provisions and the expected availability of any such measures:*

No information at this time.

*Describe any strategies that would support rapid recovery after a weather event:*

No information at this time.

## **E.2**

*Describe future site design and or infrastructure adaptation strategies for responding to sea level rise including future elevating of site areas and access routes, barriers, wave/velocity breaks, storm water systems, utility services, etc.:*

There are no future site design strategies considered at this time.

*Describe future building adaptation strategies for raising the Sea Level Rise Design Flood Elevation and further protection critical systems, including permanent and temporary measures:*

There are no future building adaptation design strategies considered at this time.





APPENDIX H  
BPDA REJECTION LETTER





Martin J. Walsh  
Mayor

## Boston Inspectional Services Department Planning and Zoning Division

1010 Massachusetts Avenue Boston, MA 02118 Telephone: (617) 635-5300

### ZONING CODE REFUSAL

Sean Lydon  
Inspector of Buildings

THEODORE TOULOUKIAN  
151 PEARL STREET, 2ND FLOOR  
BOSTON, MA 02110

September 27, 2018

**Location:** 181-183 COLERIDGE ST EAST BOSTON MA 02128  
**Ward:** 01  
**Zoning District:** East Boston Neighborhood  
**Zoning Subdistrict:** 2F-4000  
**Appl. #:** ERT858678  
**Date Filed:** August 15, 2018  
**Purpose:** Combine lots (PID 0104312000 and 0104311000) into a single lot to be 19,000 SF. Erect a three-story mixed-use building with 19 residential units, 22 off-street parking spaces below grade, and "facility of public accommodation" as per Chapter 91 Massachusetts Public Waterfront Act.

YOUR APPLICATION REQUIRES RELIEF FROM THE BOARD OF APPEAL AS SAME WOULD BE IN VIOLATION OF THE BOSTON ZONING CODE TO WIT: CHAPTER 665, ACTS OF 1956 AS AMENDED:

<u>Violation</u>	<u>Violation Description</u>	<u>Violation Comments</u>
Article 53 Section 8	Use Regulations	Multi-Family Dwelling is <b>Forbidden</b> Use
Article 53 Section 8	Use Regulations	Facility of Public Accommodation is <b>Forbidden</b> Use
Article 53, Section 56	Off-Street Parking & Loading Req	Off-Street Parking Insufficient
Article 53, Section 56	Off-Street Parking & Loading Req	Off-Street Loading Insufficient
Article 53, Section 57.3	Traffic Visibility Across Corners	
Article 53, Section 9 * ***	Floor Area Ratio Excessive	
Article 53, Section 9 **	Bldg Height Excessive (Stories)	
Article 53, Section 9 * * *	Bldg Height Excessive (Feet)	
Article 53, Section 9 * * * * *	Front Yard Insufficient	
Article 53, Section 9 * * *	Side Yard Insufficient	





APPENDIX I  
ESTIMATED PROJECT SCHEDULE





# Estimated Project Schedule

28 February 2019

## DESIGN MILESTONES

Schematic Design .....	08/2018
Design Development .....	01/2019
Construction Documents .....	04/2019
BPDA Small Project Design Review .....	TBD
Community Meetings .....	12/04/2017, 03/05/2018, 03/30/2018, 09/10/2018
Abutters Meetings .....	03/21/2018, 08/14/2018

## STATE APPROVALS

### Massachusetts Environmental Policy Act Office

#### Massachusetts Environmental Policy Act

Environmental Notification Form (ENF) .....	submitted 06/14/2018 certificate received 07/20/2018
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### Department of Environmental Protection

#### DEP Waterways

Chapter 91 Filing .....	submitted 08/09/2018
Chapter 91 Public Hearing .....	09/13/2018
Chapter 91 Technical Review .....	TBD
Chapter 91 License .....	received TBD

## LOCAL APPROVALS

### Boston Conservation Commission

Notice of Intent Filed .....	08/01/2018, 12/05/2018
Conservation Commission Hearing .....	01/09/2019, 02/20/2019
Receive Order of Conditions .....	TBD

### Zoning Board of Appeals

Zoning Set Submitted .....	08/15/2018
ISD Rejection Letter Issued .....	09/27/2018
Request for Variances .....	Submitted
Public Hearing .....	TBD
Draft Written Decision Submitted to Law Department .....	TBD
ZBA Signs Written Decision and Sends to ISD .....	TBD
Public Notice .....	TBD
Appeal Period .....	TBD

### Boston Planning & Development Agency

BPDA Planning Meetings .....	10/30/2017, 04/17/2018, 12/17/2019
BPDA Small Project Design Review Pre-Filing Meeting .....	TBD
Small Project Review Meetings Held with BPDA .....	TBD
Article 80 Submitted for BPDA Small Project Design Review.....	TBD
BPDA Sign-off .....	TBD

