COMMUNITY ENGAGEMENT

STOSS LANDSCAPE URBANISM

- PUBLIC PRESENTATIONS, SITE ACTIVATIONS, EVENT TABLING, UPDATED ONLINE STRATEGY

MEMORANDUM

TO: Allison Perlman, Boston Parks & Recreation Department

FROM: Amy Whitesides (Stoss), Marin Braco (Stoss)

DATE: September 17, 2020

TASK: 2.1A: Multi-faceted Engagement Strategy

SUBJECT: Community Engagement Summary

Public Presentations, Site activations, Event Tabling, and Updated Online Strategy

The following is a comprehensive list of community engagement activities. For an analysis of feedback received and a description of how the design was modified based on community input see Appendix 2.2A: Outreach Modification Memo.

Public Presentations

- Boston Harbor Now 'Harbor Use Forum': May 27th, 2020
    - Recorded webinar presentation made available on Park's website, and emailed directly to organizations including:
        - WINN Development
        - Fourth Presbyterian Church Boston
        - Hurley Blocks Neighborhood Association
        - McCormack Neighborhood Association
        - Savin Hill Civic Association
        - Harbor Point Redevelopment
        - Old Colony Task Force
        - Mary Ellen McCormack Task Force
        - South Boston Neighborhood Corporation
- South Boston Neighborhood House Seniors Group: February 20th, 2020
- Boston Harbor Now 'Boston Harbor for All': June 4th, 2020

Site Activations / Installations

- Moakley Park Winter Warmer, February 29th, 2020
- Make Moakley Yours Bus Stop Posters, Fall 2019
    - 22 Posters placed in Dorchester, Roxbury, South End, Allston, and Fenway

Events Tabling

- New England Aquarium Science Under the Sun, Multiple Dates
- Unity Festival, August 3rd, 2019
- Mayor's Movie Night at Moakley Park, August 12th, 2019
- Olliepalooza, August 14th, 2019
- Mayor's Movie Night at Ramsay Park, August 14th, 2019
- Mayor's Movie Night at Hynes Field, August 22nd, 2019

- South Boston Street Festival, September 14th, 2019
- CRB Dorchester Open House, September 26th, 2019
- Harbor[Walk] Part 1: Neponset River to Carson Beach, October 5th, 2019
- Harbor[Walk] Part 2: Carson Beach to Barking Crab Seaport, October 12th, 2019
- CRB Dorchester Open House, December 11th, 2019

Online Strategy

- Moakley Park Website
    - Park updates
    - Access to project materials such as online survey and coloring pages
- Social Media Campaign: #MoakleyMondays, May-June 2020
    - Educational information on the site history, geology
    - Updates on the project findings and current events
    - Interactive posts on current use
    - Downloadable Materials - Zoom Backgrounds, Coloring Pages
- Online Survey, July 2019-July 2020

Other

- Moakley Park / Resilient Boston Harbor Plan Movie Trailer (https://www.youtube.com/watch?v=DBMo8BPsQWQ)
- UMASS Senior Studio
    - Provided Presentation, January 31, 2019
    - Students Submitted Project, April 28, 2020
    - https://www.boston.gov/news/college-students-reimagine-new-future-south-bostons-moakley-park

OUTREACH COVERAGE

STOSS LANDSCAPE URBANISM

- OUTREACH COVERAGE DIAGRAMS AND OUTREACH MODIFICATION MEMOS

MEMORANDUM

TO: Allison Perlman, Boston Parks & Recreation Department

FROM: Amy Whitesides (Stoss), Marin Braco (Stoss)

DATE: September 29, 2020

TASK: 2.2A: Analysis of Public Input and Interactions

SUBJECT: 2.2A Outreach Modification Memo

Analysis of Public Input and Interactions

Overview

Over the course of the last year, the Boston Parks and Recreation Department (BPRD), Environment Department, the Mayor's Office of New Urban Mechanics, and the design team have worked together to build on the outreach that took place throughout the Vision Plan. A partnership with South Boston Neighborhood House (SBNH) allowed the team to share the details of the Vision Plan, provide updates, receive comments, and address questions with a focus on the residents immediately surrounding the park. Working with Boston Harbor Now (BHN), the engagement has been able to reach a broader audience, across the city and region. Last summer and early fall, the design team and BPRD attended a variety of neighborhood events, including movie nights at the park, South Boston neighborhood festivals, and Climate Ready Dorchester Open Houses. The team has hosted in-depth discussions with focus groups including SBNH local seniors' group, families and community members affiliated with the Ollie Daycare facility located within Moakley Park, as well as the South Boston Association of Non-Profits. As a way to continue engagement through the winter, and activate the park during its less-popular season, the design team and both partner organizations hosted the Moakley Park Winter Warmer. This provided the opportunity for storytelling, s'mores and more, all around a warm fire. For a complete list of events, public presentations and virtual outreach strategies see Appendix: Sub-Task 2.1 Multi-faceted Engagement Strategy.

Online Strategy

During the COVID pandemic, the engagement approach since March of 2020 was thoughtfully tailored to accommodate social distancing measures. The team and project partners virtually engaged with stakeholders and the local community through public presentations. In partnership with Boston Harbor Now, a virtual Harbor Use Forum on Moakley Park was held on April 27th, 2020. This interactive presentation offered participants the opportunity to learn more about the Vision Plan and ongoing technical analysis, ask questions, and voice their thoughts and

concerns. The team received important feedback on who is currently left out of the conversations, most notably Chinatown residents. The presentation was recorded and shared with stakeholder groups to make it available for those unable to attend the live event. A virtual tour of the park was also included as part of BHN's Boston Harbor of All Summit, on June 4th, 2020.

Working with the Environment Department's Greenovate, the team developed an online campaign called 'Moakley Monday'. Each week information on the project and park was shared. This included facts about the site history and geology, promotion of public presentations, links to virtual programming, and interactive features including coloring book page and drawing activities. The team also continued to promote the online survey, which paralleled the printed survey used during in-person events.

In-Person Strategy

In-person community engagement efforts centered on attending existing events that were popular in the community. This allowed the design team to reach a variety of community members, many of whom would not necessarily attend a more traditional project open house. At events such as Ollipalooza and the South Boston Street Festival, the design team collected survey responses, 'Make Moakley Yours' drawings, and had the opportunity to discuss Moakley Park and the project with community members. Due to their varied locations throughout the City of Boston, the Mayor's Movie Nights were another opportunity for the design team to share the project with a wider audience.

Community Feedback + Design Integration

Having received valuable feedback over the course of the last year, the team has revised the design to reflect the needs, aspirations, and concerns of the community. The revised design will be shared with the community and key stakeholders through a public open house and series of one on one meetings in the fall of 2020 as public health recommendations allow. The feedback received has been divided into two large categories based on where the comments were received. Survey responses, which focused primarily on preferred programming and community concerns. And Community conversations, capturing additional feedback received on site-wide organization and program location. These conversations took place at public events and in smaller focus group settings.

Survey Responses: Preferred Programming + Community Concerns

From July 2019-July 2020, 969 were completed. This includes 685 digital surveys, and 236 physical surveys. Below is a summary of the top preferred future improvements and main concerns. For each category, a description of how the design has addressed them is included.

Respondents were asked to select their top five future improvements they would most enjoy in Moakley Park. Percentages represent the number of survey respondents that selected the given option. For example, forty-six percent of survey respondents selected Seasonal Events as one of their top five preferred future improvements.

Top preferred future improvements:

1. *Seasonal Events (46%)*
   The revised design includes multiple event spaces that can accommodate a wide range of event types and sizes. There are two spaces for larger events: the stadium field and seating, and the destination building located adjacent to the stadium and Little League fields. The two entry plazas and the waterfront amphitheater can host medium-sized events such as fairs, festivals, and markets. Scattered throughout the park are spaces for more intimate events, such as small concerts, outdoor theater performances, and community gatherings. A range of shelters and stages have been added to promote this type of use. These structures along with the dedicated indoor events space allow for year-round park programming.

2. *Cultural Music Events (45%)*
   See description above, Seasonal Events, which include cultural events spaces.

3. *Café / Food Trucks (44%)*
   A range of spaces and types of food services have been proposed to provide different price points and experiences. Permanent structures for a café, restaurant, and concessions have been incorporated into the plan. The destination building will include a full-service restaurant and cafe, while concessions have been recommended for the Sports Headquarters and the comfort station adjacent to the Little League fields. The design accommodates food truck access at multiple points throughout the park. The 2 major areas designated for food trucks include the entry plazas and smaller amenity zones within the City Edge located along Old Colony Ave, as well as the waterfront park which runs along Day Blvd. The circulation system includes paths that can accommodate vehicular traffic, providing additional opportunities for food truck distributions through the park. Within the coastal park, picnic and barbeque areas have been added for residents that would prefer to bring their own food.

4. *Improved Sports Facilities (44%)*
   The proposed design includes new sports fields with lighting, spectator seating, team seating and shelters, as well as fencing. All fields have been graded to provide optimal drainage in conjunction with a stormwater management plan that integrates both green and gray infrastructure. Additionally, the revised design includes a Sports Headquarters which will provide restrooms, changing rooms, equipment storage, and concessions. The lack of adequate facilities was also consistently raised in conversations with coaches of youth leagues and UMass Boston sports teams. The main reasons listed for improvements were poor lighting and flooded fields. Those issues are addressed below (Issues #1 and #2 under ‘Main Concerns’ category).

5. *Exercise and Jogging on Dedicated Trails (37%)*
   Woven throughout the park are a series of trails and loops that provides runners with many different circuit options. The perimeter of the park includes a raised bicycle lane, a three-lane running loop, and exercise equipment dispersed along the path. Additional jogging paths include half-mile, one mile, and one and a half-mile loops that traverse the City Edge, the forested areas within the core of the park, the crest of the flood management system, and the wetlands and dunes within the waterfront park. Connections are also provided to the Harborwalk, a city-wide waterfront multi-use trail.

Main Concerns:

Respondents were asked to select their top two concerns for Moakley Park right now. Percentages represent the number of survey respondents that selected the given option. For example, forty percent of survey respondents selected 'Flooded Fields' as one of their top two current concerns.

1. *Flooded Fields (40%)*
   All fields will be graded to provide optimal drainage in conjunction with a stormwater management plan that integrates both green and gray infrastructure in order to significantly reduce the amount of ponding the current fields see today. The flood management system comprised of a core wall and earthen berm will prevent future coastal flooding projected with increased storm events and sea level rise.

2. *Poor Lighting (40%)*
   The design team worked with LAM Architectural Lighting Design to produce a conceptual lighting design framework that is fully integrated within the landscape and programming of the park. The primary goal of the lighting design is to address safety based on the concerns expressed throughout the engagement process. Additional goals included to improve wayfinding, develop a hierarchy of spaces, highlight key park features, as well as provide community spaces by syncing brightness levels tailored to the places of gathering.

3. *Poor Access and Circulation (24%)*
   The proposed park layout provides a system of circulation within the park site, as well as off-site improvements to address concerns of access to the park. Off-site improvements are outside of the current BPRD property and are understood to be recommendations for the purposes of future coordination only.

   Park circulation:
   A circulation system was developed to provide connections to programming through the park for pedestrians, cyclists, and joggers. These paths also allow for maintenance and service access of buildings, structures, and fields where needed. Dedicated paths for running and cycling around the perimeter of the park will create safe walkways and avoid conflicts between these different modes of moving into and throughout the park.

   Park Access:
   Over the course of the engagement process, survey respondents voiced concerns about park access. Despite the Park's proximity to residential neighborhoods and two MBTA stops, the wide roads with fast-moving vehicles create a significant barrier for pedestrians arriving to the site BPRD and the design team have worked closely with several adjacent property owners to ensure future improvements are coordinated. Below is a complete list:

   - MassDOT: Preble and Kosciuszko Circle
   - DCR: Day Boulevard

- Boston Housing Authority / Winn Development: Mary Ellen McCormack and Old Colony Development
- BPRD: Connection to JFK Red Line Station

Visitors of the park arriving by public transportation must cross either K-Circle (from UMass/JFK station) or Preble (from Andrews Station). The reconfiguration of both Preble and Kosciuszko Circle and the addition of pedestrian crosswalks along Old Colony would provide safe connections from the neighborhood to the park. Day Boulevard is another area of concern for pedestrian safety (see pg.7). In the current proposal, Day Boulevard is reimagined as a shared street, prioritizing pedestrian crossing from the park to Carson Beach and creating a seamless connection between the park and the waterfront. A shared street will still allow for Day Boulevard to function as a vehicular route as needed but can also allow it to be closed to vehicular traffic during select times.

Community Conversations: Site Organization + Program Location
Focus groups, Vision Plan Final Open House, Winter Warmer

From July 2019- February of 2020, the Moakley Park team attended over 10 community events and festivals. Between February and June 2020, 2 public presentations and 2 focus group meeting occurred. Many of the issues discussed were in the form of survey responses addressed in the previous section. In addition, there were five main design responses that resulted from feedback heard directly through these conversations.

1. *Rugby:*

   Throughout the course of the Vision Plan, the community expressed the crucial role Moakley Park plays in the various Rugby leagues throughout the city. Concern was especially expressed as to the material of the fields—artificial turf was deemed unacceptable for Rugby, due to safety concerns. To ensure that the park continues to serve its current users, the proposed design includes two grass sports fields that can fit regulation size Rugby matches, while a third and fourth field may accommodate the smaller, Boston Touch Rugby field's needs.

2. *Stadium Location:*

   In the original Vision Plan, the stadium area had been moved from its current location to the north side of the park. At the completion of the Vision Plan process, concerns were raised regarding the distance to the UMass/ JFK T Stop from this facility. This location would force stadium users to walk the length of the park (often with sports gear) to arrive at the stadium. This feedback was received in survey responses, through conversations at the final Vision Plan Open House, and through direct communication to the Boston Parks and Recreation Department. Design changes were made to keep the stadium area in its existing location. In the revised plan, the stadium is moved back to the south

side of the park. It is realigned to better fit the field programming and rotated to provide views out to the water from the stadium seating.

3. *Neighborhood Amenities:*

While the community was excited for the many programs proposed within the Vision Plan, there was a strong desire to have neighborhood amenities clustered on the side closest to the residential neighborhood. The existing playgrounds and Ollie Daycare Center are located near Old Colony Avenue and are heavily used. In conversations with current park users, they expressed the need to maintain this relationship. There were separate requests for an increased diversity in children's play as well as programming appropriate for the neighborhood's senior population.

Taking all of this feedback into account, the design team proposed the 'City Edge' within the revised park proposal. This linear spine of activity and program creates a direct link between the park and the surrounding neighborhood. The spine includes a cycle track, a double row of street trees, a three-lane running track, and pockets of program designated for a variety of ages and abilities. The following is a more detailed description of program elements within the City Edge:

Children's Play
The desire for fantastic children's play came across heavily throughout the entire engagement process. In the Vision Plan, community members expressed a strong desire for improved, and additional, children's play. In the second Open House, Children's and Water Play fell in the top three 'Most Important Programs Overall.' Drawings collected from community youth also illustrated a clear desire for creative play spaces including water play, and elements of nature play.

In the most recent round of engagement, the community expressed the desire for "amenities geared towards different stages of childhood development." Many community members felt the park needed to include play features that benefited every age group. Ideas for these features ranged from baby swings to rollercoasters.

In response to this, a series of play spaces were proposed to cater to all ages and abilities. Many of the play spaces will emphasize developmental and interactive play. Water play and smaller elements are included in the City Edge. This concept also inspired one of the larger play features in the park, the adventure play, which is organized by zones for different ages and abilities. Play spaces are also woven throughout the entire park, thus providing children with play elements while on a walk with their family, or at an older sibling's sports game.

Teen Hangout Spaces
Throughout the engagement process, over 75 people have expressed the desire for a skate park within Moakley. Community members have expressed that there is a need for the park to accommodate the growing skate community in Boston. The BPRD has had many conversations with Orchard Skateshop to understand their specific preferences.

The proposed skate park is located adjacent to the southern entry plaza. Additional activities for this age group include the basketball courts and the existing hockey rink.

Each are embedded within the City Edge and include built-in terraced seating to provide adequate gathering spaces.

Amenities for Seniors
The design team held a focus group session with the South Boston Seniors Group in February of 2020 to better understand this population's specific needs. Activities were used to facilitate the conversation. Through a series of questions, four preferred programs emerged: nature walks, gardens, pickup games, and events spaces. Many of the responses to the survey questions were consistent with the larger trends. Improved seating was one item that was highlighted as very important to this group. Given the size of the park, they expressed the need for seating to be provided at regular intervals, to allow for rest while walking through the park.

In response to these comments, the City Edge incorporates various forms of leisure and passive play. This includes activities such as bocce ball, built-in chess tables, and sensory gardens. These have the additional benefit of providing play for those visitors of any age that have limited mobility. The entry plazas and amenity zones accommodate smaller events and performances adjacent to the neighborhood.

4. Day Boulevard

The Vision Plan called for long-term closure of Day Boulevard due to future flood risks and road safety concerns. Reponses to this proposal were a mix of support of the goal to create a stronger connection between the park and the waterfront, improve access, and strong concerns around the larger traffic implications this move may have. To accommodate these concerns, while also addressing future flood risk and providing safe and direct access to the waterfront, the Boulevard is now imagined as a shared street. This will maintain vehicular access, but give pedestrians the primary right-of-way to safely pass from any point along the eastern side of the park to the beach. As previously stated in the section regarding traffic and access to the park, Day Boulevard is also considered an off-site improvement. This is outside of the current BPRD property and recommendations are understood to be for the purposes of future coordination only.

5. Connection to Nature

As one of Boston's largest parks, Moakley has the potential to provide significant native habitat; from New England forests to maritime shrublands and dunes as well as dry and wet meadows. The proximity to greenspace this park can provide is a major community benefit. In the last year, the design team has developed a plant palette based on native plant communities to promote biodiversity and provide habitat to local fauna. Students from UMass Boston also expressed the importance of this from an urban design perspective.

Conclusions

The success of Moakley Park project relies on the support and investment from the people it aims to serve. This includes residents from the immediate neighborhood of

South Boston, surrounding neighborhoods including the South End, Chinatown, Dorchester, and Roxbury, as well as the larger Boston metropolitan area. The input received over the course of the last year shaped the park design in significant ways. The 'City Edge', as described in the previous section, is intended to serve as a community resource and civic space. The center of the park, referred to as the 'Crest and Core', are a series of rooms created to delineate sports fields which are the heart of the park's current use and activity. The 'Coastal Park' will become a destination for the adjacent neighborhood and greater Boston.

While the engagement during this past year was impactful, there is still a lot of work to do to ensure that all voices are heard. There are two categories that will be the focus of our engagement efforts moving forward: overcoming the challenges of engagement during the COVID-19 pandemic, and outreach to groups that have been identified as missing in the cross-section of communities currently represented. There were several focus groups meetings that have been postponed given the current pandemic. Efforts were made to maintain communication with these constituents. The recording and distribution of the Harbor Use Forum was an example of this. However, more in-depth conversations with these groups would greatly benefit the team's understanding of their specific needs. These groups include MEM and Old Colony, as well as neighborhood organizations located in Roxbury, Dorchester, and the South End. Outreach efforts will also target teens, sports teams, and cyclists. Additionally, the team is committed to creating a truly public space, where people from all social, economic, and ethnic backgrounds feel welcome. This requires a continued effort to be sure diverse populations are reached. The current survey was filled out by people living in 66 different zip codes and in 5 different languages. While this is a significant achievement, the pandemic has exacerbated limitations to connection with communities that have been historically harder to reach, most notably low-income groups with limited access to broad-band internet. In the next phase of work, the team will research, test, and evaluate new strategies for engagement to overcome these hurdles. It is critical that the project receives continued input from the local community to ensure that this park is truly for all. The team is acutely aware of pitfalls from other resiliency initiatives across the country that have focused solely on coastal resiliency, and not enough on the potentially negative social and economic impacts of inequitable investments of this scale. The Moakley Park team is committed to providing multi-layered benefits to the existing neighborhood and creating a space for South Boston residents today, and for generations to come.

COMMUNITY ENGAGEMENT
FINAL SURVEY ANALYSIS

22K
PROJECTED EXPOSURE

969
SURVEYS COMPLETED
685 DIGITAL
236 IN-PERSON
14 EVENTS

5 LANGUAGES

ENGLISH	SPANISH	CHINESE	VIETNAMESE	HAITIAN CREOLE

66 ZIP CODES

61%
RESPONDENTS VISIT MOAKLEY PARK AT LEAST ONE A MONTH

CURRENT FAVORITE ACTIVITIES

63% WALKING / JOGGING

46% SPORTS

41% PLAYGROUNDS KIDS ACTIVITIES

MAIN CONCERNS

40% FLOODED FIELDS (AFTER RAIN)

40% POOR LIGHTING

24% POOR ACCESS + CIRCULATION

TOP PREFERRED FUTURE IMPROVEMENTS

1.	SEASONAL EVENTS	46%
2.	CULTURAL EVENTS / MUSIC EVENTS	45%
3.	CAFE / FOOD TRUCKS	44%
3.	IMPROVED SPORT FACILITIES	44%
4.	EXERCISING / JOGGING ON DESIGNATED TRAILS	37%

I would like to see the concession open back up with clean bathrooms and more options for food and drinks. Closing the road is a great idea and extending the park over to the beach.

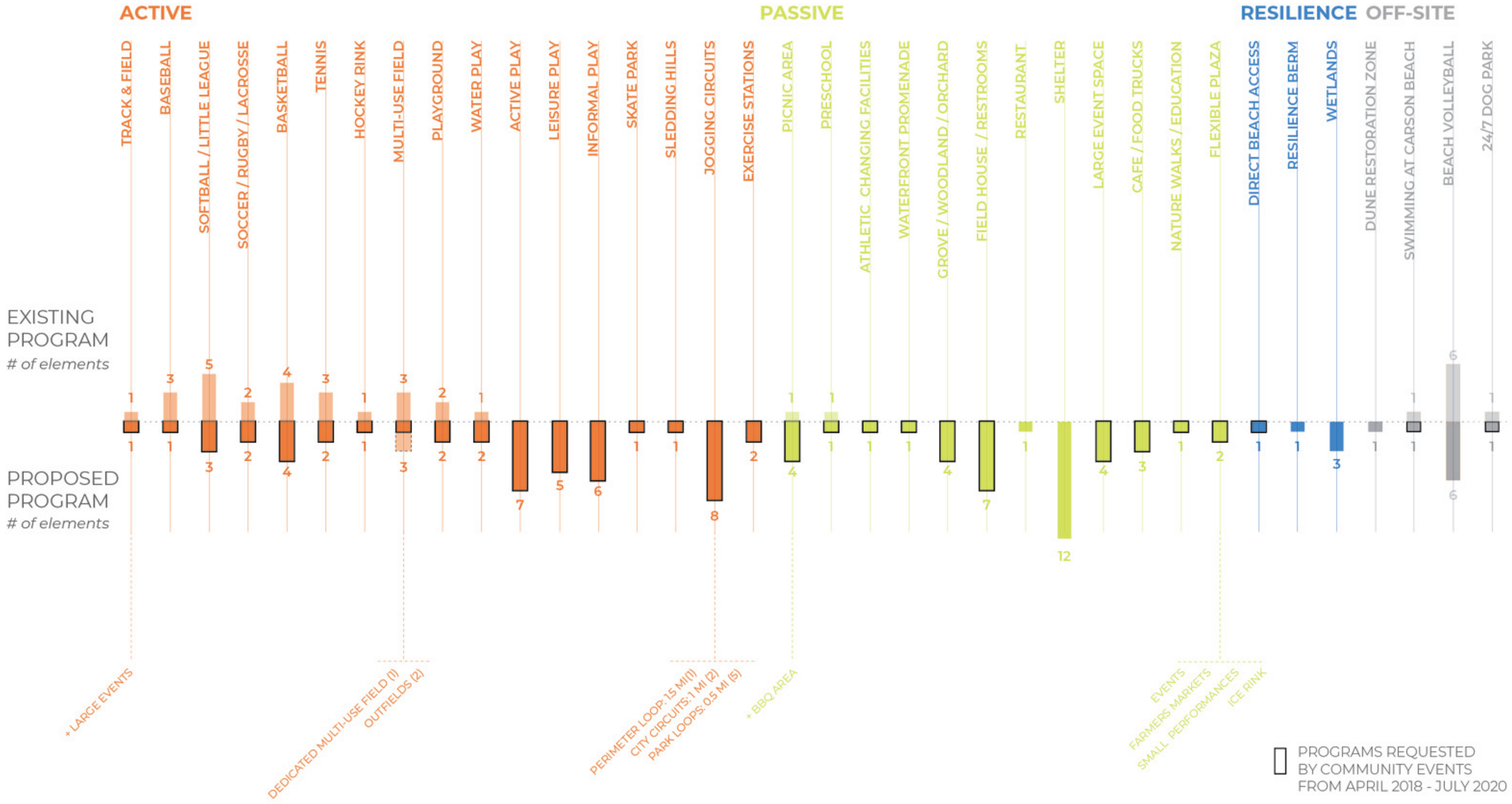
"Closing the road is a great idea and extending the park over to the beach."

"I really hope they put a water feature, preferably a pool, like most surrounding towns have and if not a pool, an actual functioning splash pad."

"Please build a skate park on Day Blvd side near police station! Accessible by T. Noise not an issue!"

COMMUNITY ENGAGEMENT

EXISTING + PROPOSED PROGRAM



DISTRICT-LEVEL CLIMATE RESILIENCY COORDINATION

STOSS LANDSCAPE URBANISM + WESTON & SAMPSON

- COORDINATION MEMO WITH AGENDAS, MEMORANDUMS, AND PRESENTATIONS

MOAKLEY PARK MEMORANDUM

TO: Allison Perlman, Boston Parks & Recreation Department

FROM: Marin Braco, Amy Whitesides (Stoss)

DATE: October 2, 2020

TASK: Sub-Task 3.1 District-level Climate Resiliency Coordination

SUBJECT: Climate Resiliency Coordination Memorandum

Overview

Resiliency design and implementation requires working at multiple scales – this means advancing site, district, as well as city-level approaches simultaneously. While the Moakley design team developed the park-level resiliency plan, conversations with stakeholders including city agencies, adjacent developments, and other city resiliency planning efforts occurred. From January through September 2020, nine meetings were held with the design team to support ongoing coordination between these entities. Boston Parks and Recreation Department (BPRD) held regular coordination meetings with many of the same agencies. The topics discussed included site-specific issues such as impacts to subsurface utilities, off-site improvements to the north and south of the park, as well as city-wide processes related to funding, construction, operations and maintenance for resiliency implementation. The following is a summary of the meetings held. Meeting agendas, one agency coordination memorandum, and one sample presentation are included in the appendix.

Meetings Held

1. **Flood Barrier Alignment Impact Mitigation on Existing Subsurface Infrastructure**

   Stakeholders: MWRA and BWSC

   Dates of Memorandum Submission
   In lieu of in-person meetings during the COVID-19 pandemic, memorandums were submitted to MWRA and BWSC to provide agencies with an update on the project, outline strategies for park-level and district-level flood management strategies, to illustrate north and south tieback alignments options, and ask questions related to mitigation impacts of the flood barrier system on the subsurface infrastructure.

   MWRA memorandum was submitted on June 22, 2020, BWSC was submitted in September of 2020. See page 11-17 in Appendix for BWSC memorandum.

June 10th, 2020

Goal: DCR, BPDA, and BPRD review of open space and resiliency strategy in conjunction with the Dorchester Bay City development.

July 8th, 2020

Goal: DCR and BPRD review of open space plan and off-site improvements.

September 24th, 2020

Goal: DCR, BPDA, and BPRD review of updates to the open space and resiliency strategy in conjunction with the Dorchester Bay City development.

2. Coordination with Adjacent Developments

Stakeholder: Accordia Partners, Dorchester Bay City Developers

January-September 2020

Goal: Biweekly meetings were held with BPRD as part of the BPDA review process.

January 29th, 2020

Goal: Introduce Moakley design team to Dorchester Bay City developer and design team. Dorchester Bay City team provided updates to current design, with a focus on tract of DCR property that connects the two projects.

September 9th, 2020

Goal: The purpose of this meeting was to discuss the connection between the Moakley Park and Dorchester Bay City project and coordinate each team's representation and approach with the need for this area to remain public and serve to increase active recreation opportunities. Moakley Park design team provided updates to current design, with a focus on the tract of DCR property that connects the two projects. Accordia's Design team shared their work on the same property and its connections through the Bay City site. See page 7 in Appendix for meeting agenda and 18 through 49 for presentation.

Stakeholder: BHA, Mary Ellen McCormack Housing Development

January 29th, 2020

Goal: Deepen the understanding of the value of a redesigned Moakley Park to neighboring sites and to the Mary Ellen McCormack and Old Colony communities and to understand how developments are insured from coastal flooding. See page 6 in Appendix for meeting agenda.

3. **Integration with City-wide Planning Efforts**

Stakeholder: Climate Ready Dorchester

October 2019-February 2020

Monthly coordination on southern tieback and engagement events occurred on the following dates (meetings in fall of 2019 covered under previous scope):

- October 1st, 2019
- November 5th, 2019
- December 3rd, 2019
- January 7, 2020
- February 4, 2020

September 11th

Goal: The goal of this meeting was to provide Climate Ready Dorchester an update on Moakley Park Preliminary Resilience Design and coordinate on north tieback options currently being explored. The design team sought input on key project narratives focusing on resiliency and the environment as well as how to approach to advocacy for issues related to equity and the environment. See page 9 in Appendix for meeting agenda and 18 through 49 for presentation.

Stakeholder: BPDA
January 29th, 2020

Goal: Discuss the opportunities and challenges of a Moakley Park redesign, including the project's ability to pilot new value capture models and resiliency investments. See page 8 in Appendix for meeting agenda
July 9th, 2020

Goal: Interdepartmental meeting to provide update and understand existing planning efforts and similar goals. Included discussions on Columbia Road and increased mode share goals, South Boston future developments, and infrastructure improvements.

Stakeholder: MassDOT
February – September 2020

Goal: Regularly scheduled coordination meetings were held to discuss Day Blvd planning study and to better understand the impacts of Day Blvd removal.

Conclusion

Based on the last 9 months of coordination, the Moakley design team has made significant progress in establishing project partners, engaging stakeholders, and establishing decision-making timelines. On the southern tieback, BPRD, Accordia, DCR, and the design team are aligned on the vision for this critical connection between Moakley Park and the Dorchester Bay City Development. Design proposals and design flood elevations have been shared and the

teams will continue to coordinate with each other and DCR via BPRD. On the northern tieback, two approaches remain. Costs, impacts to BWSC and MWRA utilities, and protection of MWRA building are the key factors in determining the final solution.

This project must be situated in the context of all surrounding development and future roadway improvement projects. Boston Planning and Development Agency (BPDA) plays a key role in leading the effort to ensure that the development of Moakley Park is considered with improvements to K-Circle, Bay Expo, JFK Station, UMass Boston, Mary Ellen McCormack, and Old Colony Housing. The issues that must be considered across these projects include coastal flood resiliency implementation sequencing and funding as well as strategies that promote multimodal transportation including walking, bicycling, and public transportation. These issues are critical to the success of the Moakley Park as a multi-faceted resiliency feature within the city.

Climate Ready Dorchester has embedded this proposal within their larger district-level plan. Over the course of the last year, the teams worked together to develop coordinated approach to representation of the Moakley Park vision, offsite alignments, engagement events and outreach, and refinement of key project narratives. Climate Ready South Boston will be engaged on location and elevation of the north tieback.

Continued coordination will be required to answer some of the project's biggest questions. The team is still awaiting feedback from MWRA and BWSC regarding proposed mitigation strategies to avoid impact to their utilities. Future coordination with Climate Ready South Boston and Dorchester will continue as the recommendations from those projects move forward. The conversations around the project’s ability to pilot new value capture models and resiliency investments are ongoing. In the next phase of work the team has identified a new list of stakeholders and next steps to advance the vision of Moakley Park. These include exploring the potential of an MOU with BWSC, working closely with Smart Utilities to further coordinate utility improvements in the area, and outreach to city-wide leaders and national organizations to promote the importance of resilient open space investments and multi-modal connections to Moakley Park.

APPENDIX

MEETING AGENDA

TITLE: Moakley Park Vision Plan - Boston Housing Authority

DATE: January 29, 2020

TIME: 10 – 11am

LOCATION: Stoss: 54 Old Colony Ave, Third Floor, Boston, MA

MEETING OBJECTIVES

Deepen understanding of the value of a redesigned Moakley Park to neighboring sites and to the Mary Ellen McCormack and Old Colony communities

DISCUSSION QUESTIONS

- Do Mary Ellen McCormack and Old Colony residents participate in organized sports at Moakley Park today? Do these communities desire dedicated programming on the field?
- How might neighborhood demographic composition change after the redevelopment of Mary Ellen McCormack?
- How can Moakley Park better connect and stitch together neighboring communities?
- How are the redevelopments at Mary Ellen McCormack and Old Colony being financed? What City funding and/or subsidy is at play?
- How are BHA developments insured from coastal flooding?

MEETING AGENDA

TITLE: Moakley Park Vision Plan - Accordia Partners

DATE: January 29, 2020

TIME: 2 – 3pm

LOCATION: Stoss: 54 Old Colony Ave, Third Floor, Boston, MA

MEETING OBJECTIVES

Deepen understanding of the value of a redesigned Moakley Park to neighboring sites and to the surrounding community

DISCUSSION QUESTIONS

- What are development plans for the Bayside Expo site? When might the development break ground?
- How is the project being financed? Are City or State incentives or financing mechanisms (e.g. PILOTs) involved?
- We've noticed a recent boom in residential construction throughout South Boston. What is it about development conditions that make construction more attractive today?
- How do most developers finance required flood protections in Boston (i.e. Article 37)? Are there other climate-related vulnerabilities that developers are concerned with?
- As property developers, how would you describe or quantify the value of flood protections?

MEETING AGENDA

TITLE: Moakley Park Vision Plan - Boston Planning and Development Agency

DATE: January 30, 2020

TIME: 9 – 10am

LOCATION: City Hall, 9th Floor, Room: BPDA-Conference Room 937A

MEETING OBJECTIVES

Discuss the opportunities and challenges of a Moakley Park redesign, including the project's ability to pilot new value capture models and resiliency investments

DISCUSSION QUESTIONS

- What do you see as the long-term benefits of this project?
- What are the biggest political and or structural challenges of this project?
- How can Moakley Park serve as a pilot for value-capture feasibility and resiliency investments in Boston?
- How would you describe or quantify the value of flood protections from the perspective of property owners or developers?
- Which value-capture mechanisms (e.g. DIF, Special Assessment, Stormwater Fees, Capitalized Insurance Savings) might be most feasible to implement, politically? Financially?
    - What lessons learned from studying district-level funding, financing, and delivery options for East Boston should Moakley Park most consider?
- What are pipeline real estate development projects in the Moakley Park area?
    - We've noticed a recent boom in residential construction throughout South Boston. What is it about development conditions that make construction more attractive today?
    - Have these projects leveraged, or plan to leverage, infrastructure bonds or PILOTs?
- What other stakeholders should we engage as we advance the project's design and implementation strategy?

MEETING AGENDA

TITLE: Climate Ready Dorchester Meeting

DATE: Friday**,** September 11, 2020

TIME: 11:30 AM – 12:30 PM

LOCATION: GoToMeeting

LINK: https://www.gotomeet.me/MarinBraco

PHONE: +1 (571) 317-3112

ACCESS CODE: 400-026-101

Goal

The goal of this meeting is to provide Climate Ready Dorchester an update on Moakley Park Preliminary Resilience Design and coordinate on north tieback options currently being explored. The design team seeks input on key project narratives focusing on resiliency and the environment as well as how to approach to advocacy for issues related to equity and the environment.

Agenda

- Introductions
- Climate Ready Update
- Moakley Park Design Overview
    - Conceptual Framework
    - Coastal and Stormwater Flood Management Strategies
    - 3 Part Park: City Edge, Core + Crest, Coastal Park
- Off-Site Tiebacks
    - Overview
    - North Tie Back
- Stakeholder and Community Engagement
    - Key Narratives
    - Engagement Schedule
    - Advocacy Groups Review

MEETING PRESENTATIONS

- BWSC INFRASTRUCTURE MEMORANDUM
- SAMPLE COORDINATION PRESENTATION

MEMO

TO: *John Sullivan, Chief Engineer, BWSC*
FROM: *Chris Cook, Chief of EEOS, City of Boston*
DATE: *August 27, 2020*
SUBJECT: *Resilient Moakley Park and BWSC infrastructure*

RESILIENT MOAKLEY PARK OVERVIEW

Moakley Park is a 60-acre community park in South Boston and adjacent to Carson Beach. The park floods regularly–even minimal rain events cause the playing fields to become unusable and unsafe. Most of the park is located within the current FEMA 1% floodplain, and the park is projected to become a major flood pathway inundating adjacent neighborhoods, including two low income housing developments, due to sea level rise starting in 2040. The City of Boston Parks and Recreation Department and the Environment Department along with Stoss Landscape Urbanism set forth a community–driven vision plan for the park that would not only address critical climate resiliency issues, but would turn Moakley Park into an exemplary 21st century open space with a focus on equity, diversity, and recreation. Specific to climate resiliency, the vision plan includes the following elements: a flood protection berm, above and below ground stormwater management, and a significant increase in urban tree canopy.

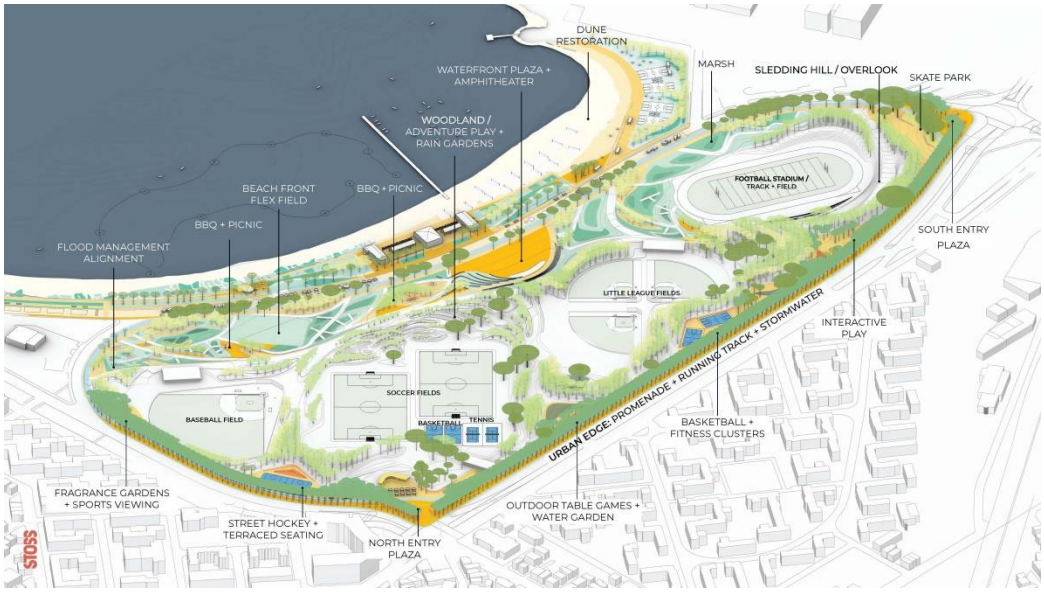


Figure 1 Resilient Moakley Park

This vision plan was released in 2019 and, thanks to funding from the Massachusetts Office of Environmental and Energy Affairs Municipal Vulnerability Preparedness (MVP) Action Grant program and the City of Boston Capital Improvement Program, the Moakley Park project is currently advancing the preliminary resilient design of the park. Given its heightened profile as the City's largest waterfront park and importance it serves as a critical link for regional flood protection in South Boston, careful consideration has been given to technical and spatial challenges of the site during the evaluation and update to the vision plan. Stoss along with their consultants (Weston & Sampson, Nitsch Engineering, and Woods Hole Group) prepared numerous baseline technical evaluations, including but not limited to survey, geotechnical, environmental, hydrologic and hydraulic, and coastal analyses. We understand that there are site challenges due to existing conditions, and we have held meetings with BWSC and MWRA to understand the existing utilities and easements, as well as respective operations and maintenance. The project team is in the process of updating the plan based on these challenges and constraints. These updates have included shifting the location of the highpoint of the flood management back from the waterfront in recognition of MWRA and BWSC below ground utilities. These changes are reflected in the current Resilient Moakley Park Plan, Figure 2. Continued refinement and advancement of this plan is a primary goal of coordination with BWSC moving forward.

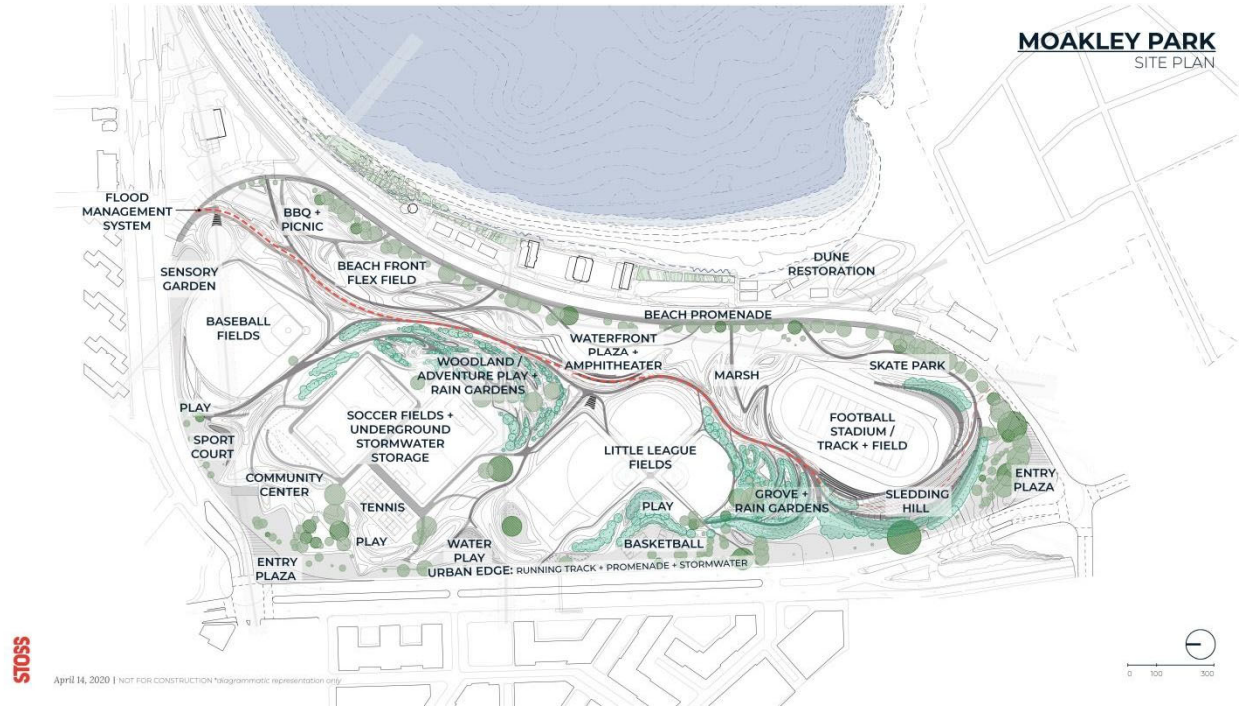


Figure 2 Resilient Moakley Park Plan

With our current understanding of the existing infrastructure complexity, our team has established the following goals to improve the feasibility of the Resilient Moakley Park Plan and Climate Ready Boston regional resilience plans.

The specific goals related to BWSC utilities within the site include:
1. Identify and reduce spatial conflicts with existing utilities and easements.

2. Design grading and evaluate earthwork strategies to mitigate settlement and result in low-to-no net increase in loading above utilities and within easements.

3. Reduce below grade penetrations along the barrier alignment to limit the risk of below ground flood pathways.

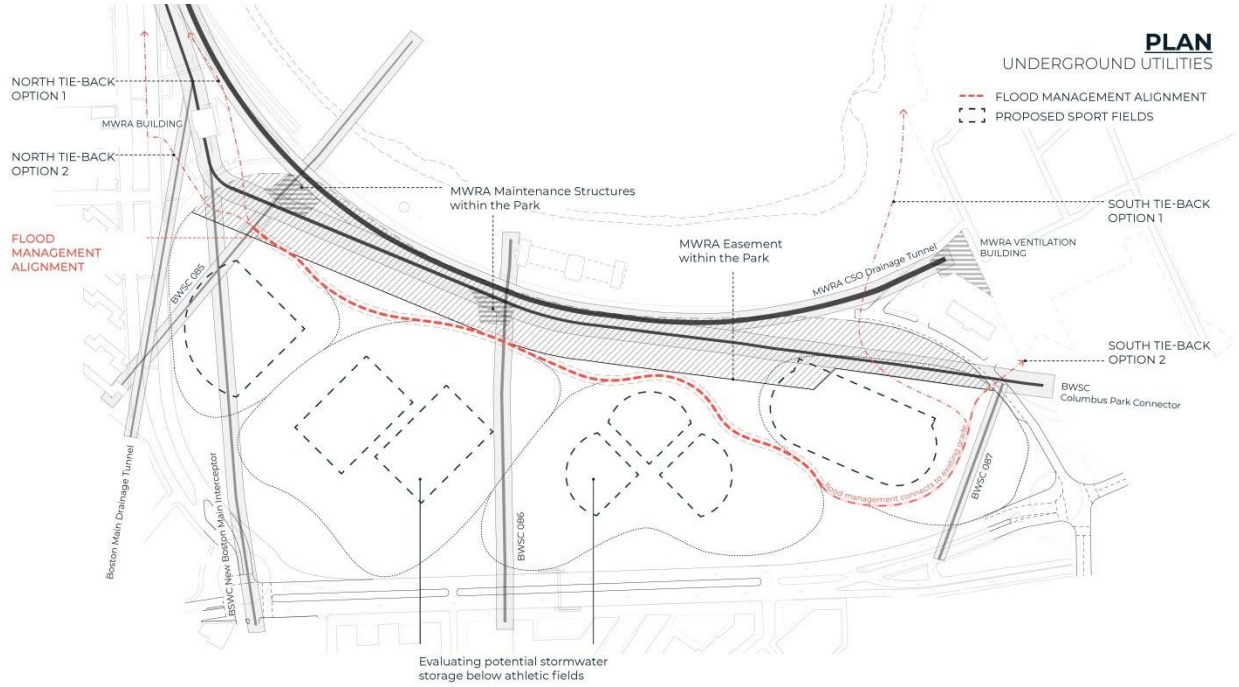


Figure 3 Resilient Moakley Park Plan with existing MWRA and BSWC utilities

FLOOD PROTECTION – PARK LEVEL

The existing stormwater and sewer systems have prompted numerous refinements of designed park features from the realignment of the flood barrier to significant regrading in an effort to meet the goals as outlined above. In order to provide critical coastal flood protection, the intersection of the flood protection alignment with existing utilities running perpendicular within the park is unavoidable. This includes crossing BWSC 085, BWSC 086, and the New Boston Main Interceptor,

and the consultant team is currently performing geotechnical analyses for these crossings to identify strategies to meet project goals.

Additionally, we are evaluating the potential for increased stormwater management on-site through surface and underground storage and detention. The consultant team is currently in the process of modelling several strategies and evaluating current and future stormwater management potential.

FLOOD PROTECTION – DISTRICT LEVEL

The future coastal flood pathway extends beyond the park boundary, and Moakley Park will be the first link in a critical chain of flood protection in South Boston. In order to prepare for future district integration, we have considered two viable options:

1. Connecting the park flood barrier alignment to provide protection for MWRA facilities, specifically the Columbus Park Headworks Building and the South Boston CSO Tunnel Ventilation Building as seen in Figures 4 and 6.
2. Connecting the park flood barrier alignment to existing higher grades that meet the target design flood elevation off-site as seen in Figures 5 and 7.

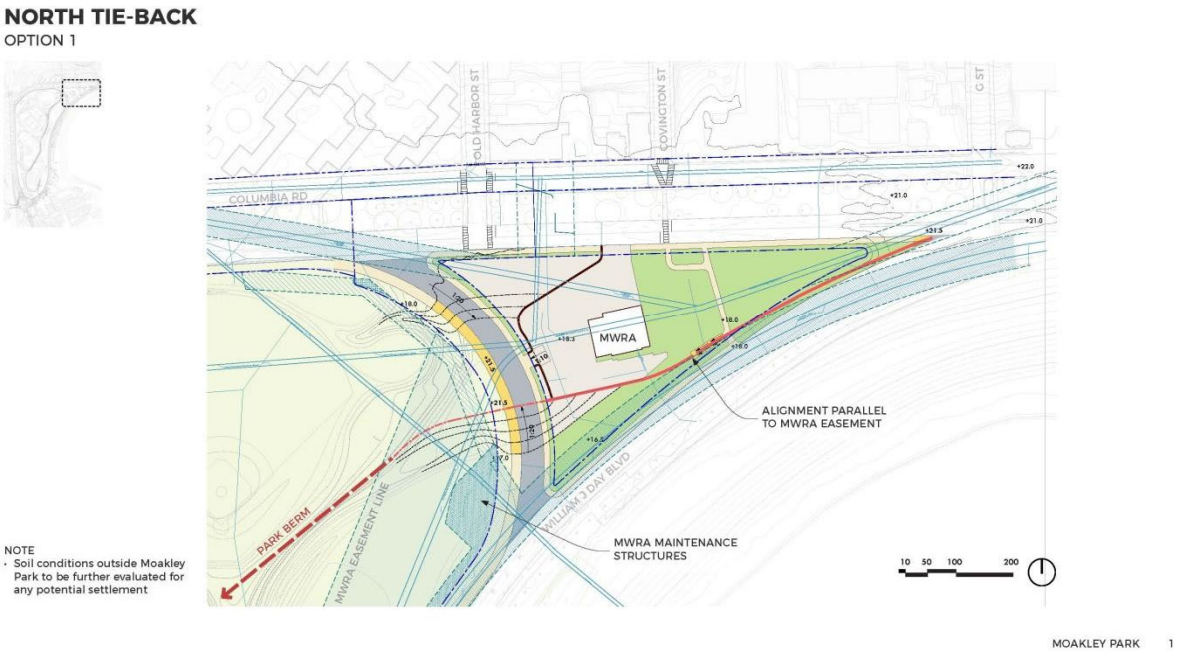


Figure 4 North berm alignment option 1

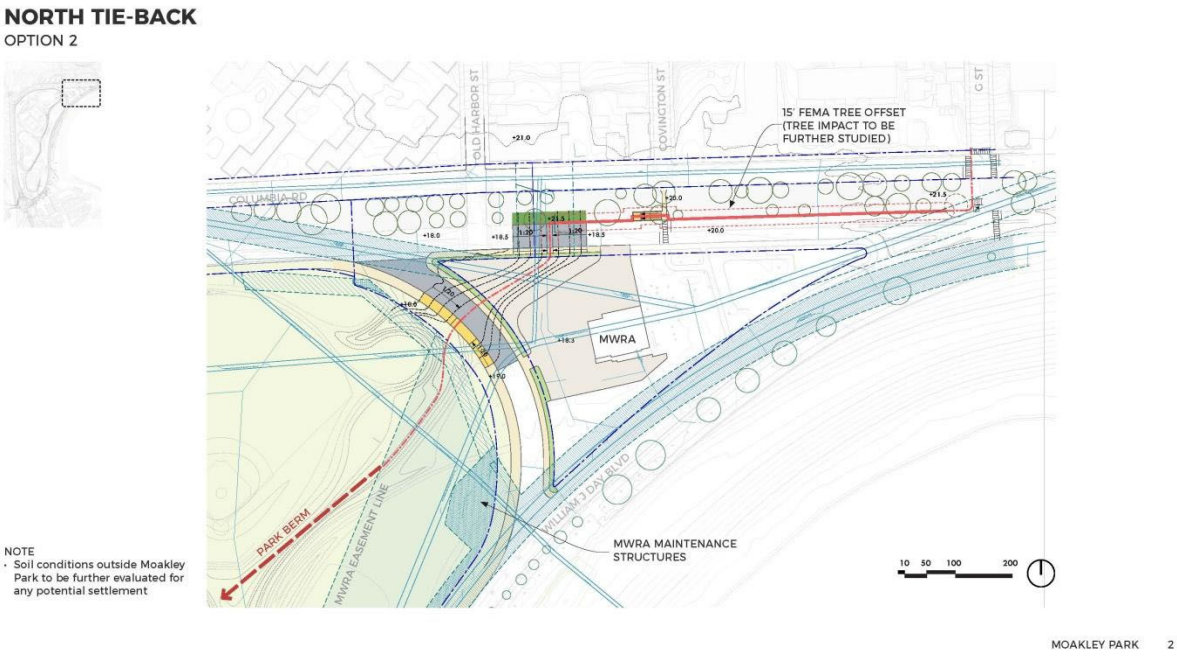


Figure 5 North berm alignment option 2

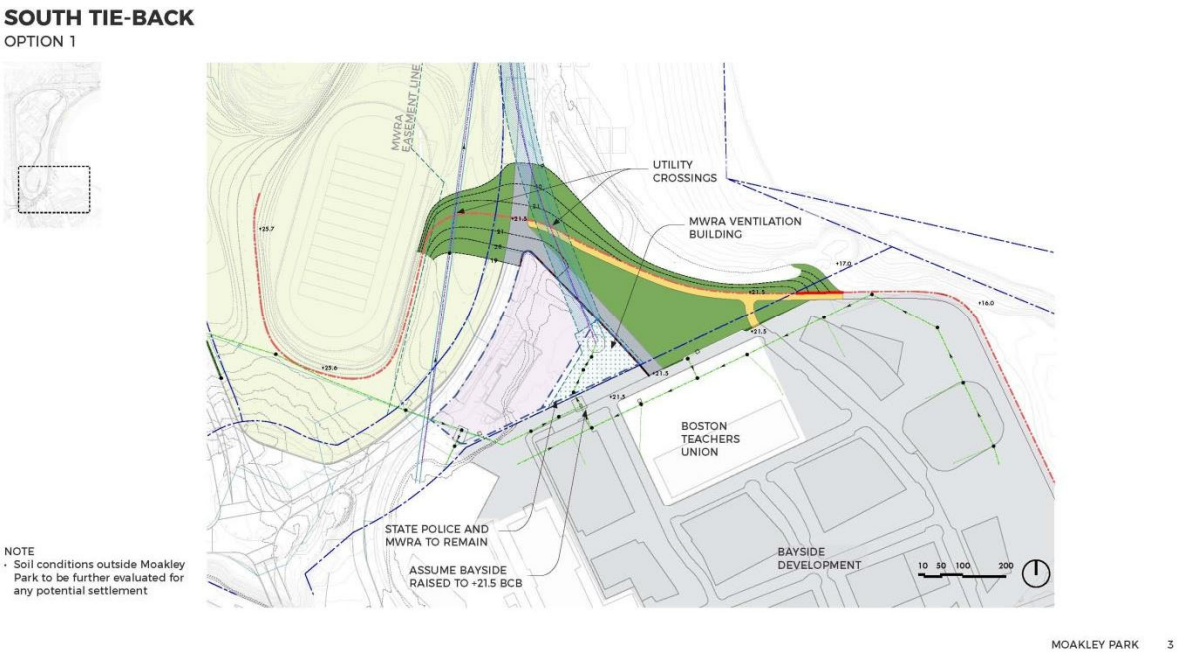


Figure 6 South berm alignment option 1

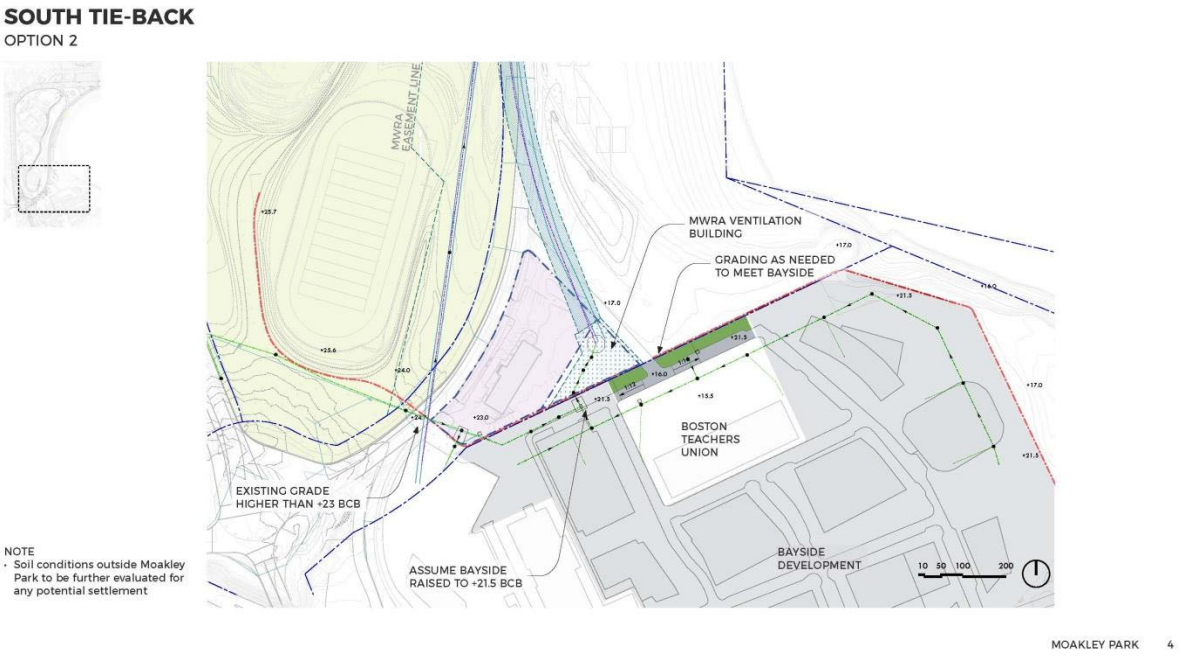


Figure 7 South berm alignment option 2

The proposed four alignment options involve crossing below ground infrastructure owned by BWSC and/or MWRA. We have summarized these new crossings in Table 1 below.

Table 1. Tie Back Alignment Options and Related New Utility Infrastructure Crossings	
Tie Back Alignment	**New Utility Infrastructure Crossing**
North Tie Back Option 1 (Figure 4)	Columbus Park connector (in park)
North Tie Back Option 2 (Figure 5)	New Boston Main Interceptor (in park), Boston Main Drainage Tunnel, Connector from South Boston Interceptor S. Branch
South Tie Back Option 1 (Figure 6)	Columbus Park connector (in park), CSO Drainage Tunnel
South Tie Back Option 2 (Figure 7)	N/A (Alignment is already greater than the Design Flood Elevation)

REQUESTED FEEDBACK AND NEXT STEPS

In the interest of advancing the Resilient Moakley Park project towards Phase 1 implementation, we are seeking your input on how to best protect critical infrastructure and meet larger district resiliency goals. The following questions are for your consideration.

Park-specific questions

1. Can you please provide the following information for our geotechnical analyses for BWSC utilities and easements within the park:
   - Settlement tolerances of the existing utilities
   - Acceptable load increases to the existing utilities

- Identification of any known existing deficiencies of the existing utilities
- Date of latest inspection & available condition reports for the existing utilities
- Confirmation of material type, size, date of installation, and invert depth of existing utilities
- Easement provisions (what is allowed to be placed within the easement)
- Level of detail required for preliminary cross-sections and analyses at flood protection crossings.

2. What are the current operations and maintenance practices and protocols within existing BWSC easements?

3. Where do you see opportunities to reduce conflicts between in-park resiliency efforts, programming, and below ground utilities?

District level questions

At both ends of the park, the interface of the flood protection berm with neighboring properties will require multi-party collaboration to achieve continuous protection. Our team is working closely with Accordia Partners as they advance their planning for the Bayside Expo site and with DCR on Carson Beach and Day Boulevard elements. Coordinating infrastructure crossings with BWSC and MWRA are critical in this collaborative effort.

4. The alignments shown in Figures 4 and 6, which connect off park property and complete the flood pathway while protecting MWRA assets, would require crossing of infrastructure as indicated in Table 1. Is BWSC interested in working with our team and MWRA to find a suitable and appropriately designed flood management barrier to provide this protection?

5. Are there additional sections or details we could provide that would help inform BWSC's evaluation of the preferred location for the district level flood protection?

Ideally, under other circumstances, we would have presented these materials in a workshop-style setting to gather your feedback on our proposed updated vision for the resilience measures within the park and off-site. Since it is uncertain when in-person meetings will happen again, we would be pleased to schedule a web conference call to dive into these questions and get your feedback on our progress at your earliest convenience.

MOAKLEY PARK

Subtask 3.1
Combined Resiliency Coordination Presentation
September 28th, 2020

Mayor Martin J. Walsh

AGENDA

- MOAKLEY PARK DESIGN
  - CONCEPTUAL FRAMEWORK
  - SITE SYSTEMS
- OFFSITE TIEBACKS
- COMMUNITY ENGAGEMENT
  - KEY NARRATIVES
  - ADVOCACY SCHEDULE
  - ADVOCACY GROUPS

MOAKLEY PARK REVISED VISION

VIEW FROM NORTHWEST - PROPOSED ENTRY PLAZAS

CONCEPTUAL FRAMEWORK

3-PART PARK

CITY EDGE

+

CREST + CORE

+

COAST

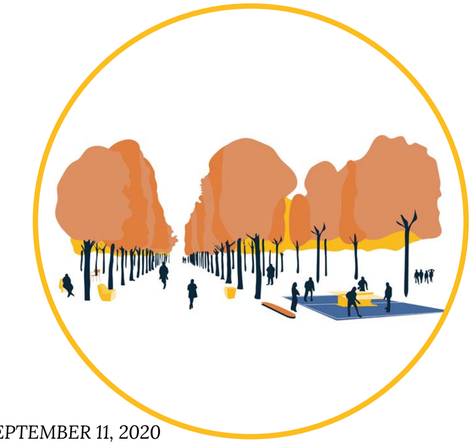
+

CONCEPTUAL FRAMEWORK

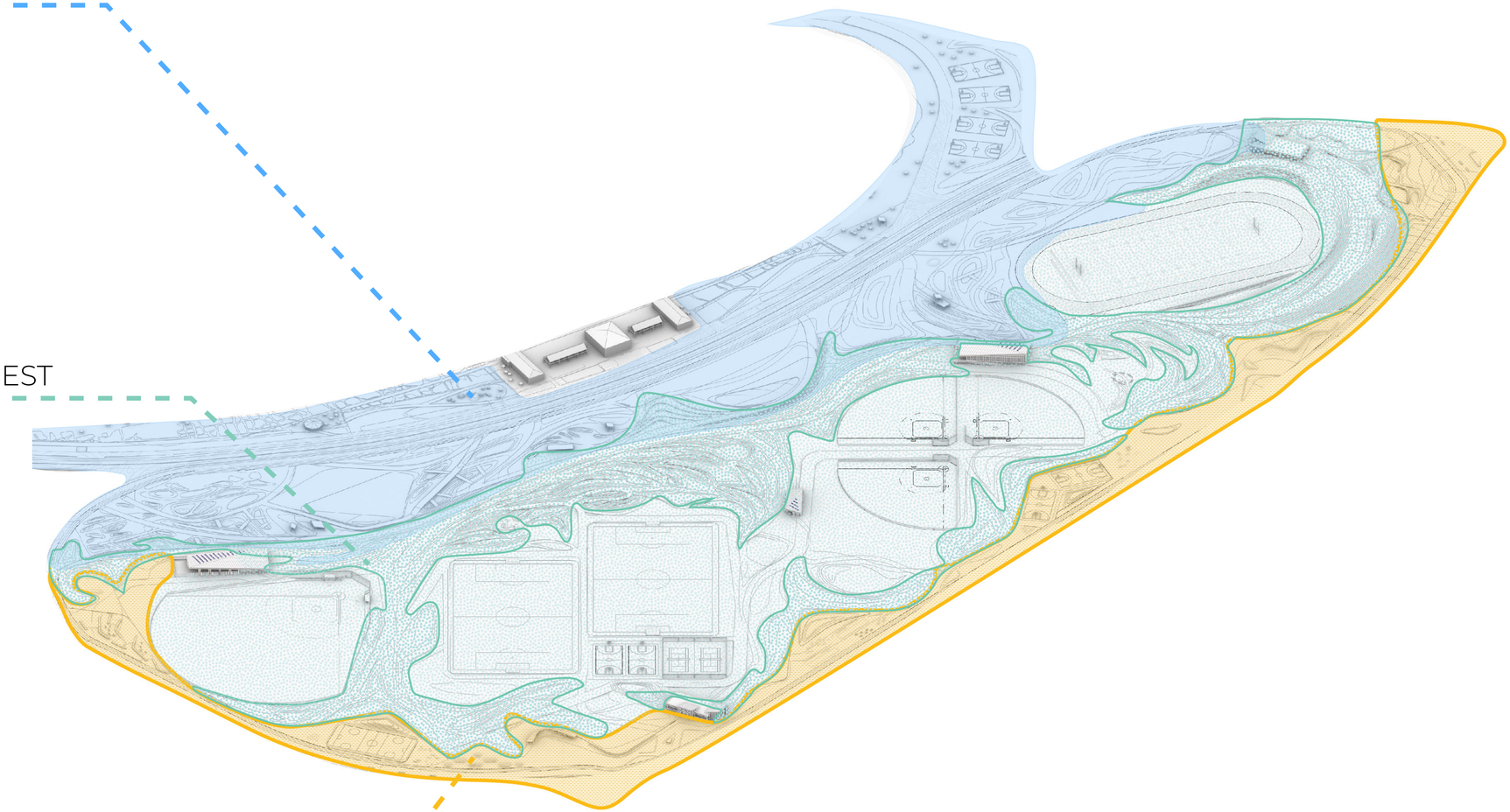
3-PART PARK

COAST

CORE + CREST



CITY



STOSS

MOAKLEY PARK
OVERVIEW

STOSS

SEPTEMBER 11, 2020

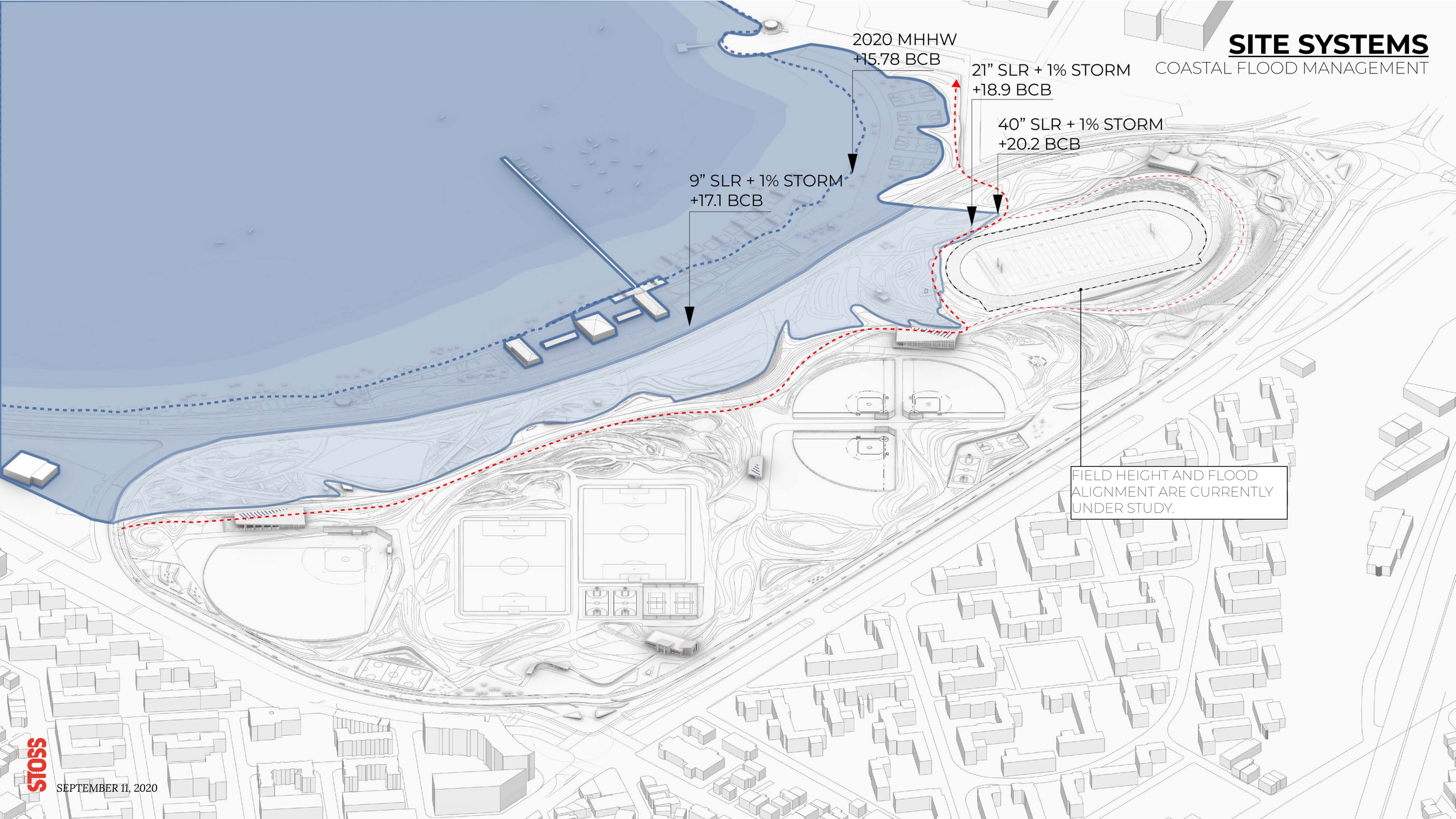
SITE SYSTEMS

STORMWATER : SURFACE

SEPTEMBER 11, 2020

SITE SYSTEMS

COASTAL FLOOD MANAGEMENT



3-PART PARK

- CITY EDGE
- CORE + CREST
- COASTAL PARK

CITY EDGE
OVERVIEW

SOUTH ENTRY PLAZA

SKATEPARK

INTERACTIVE PLAY

BASKETBALL + FITNESS CLUSTERS

LEISURE PLAY + WATER GARDENS

FRAGRANCE GARDENS + SPORTS VIEWING

STREET HOCKEY + TERRACED SEATING

NORTH ENTRY PLAZA

STOSS

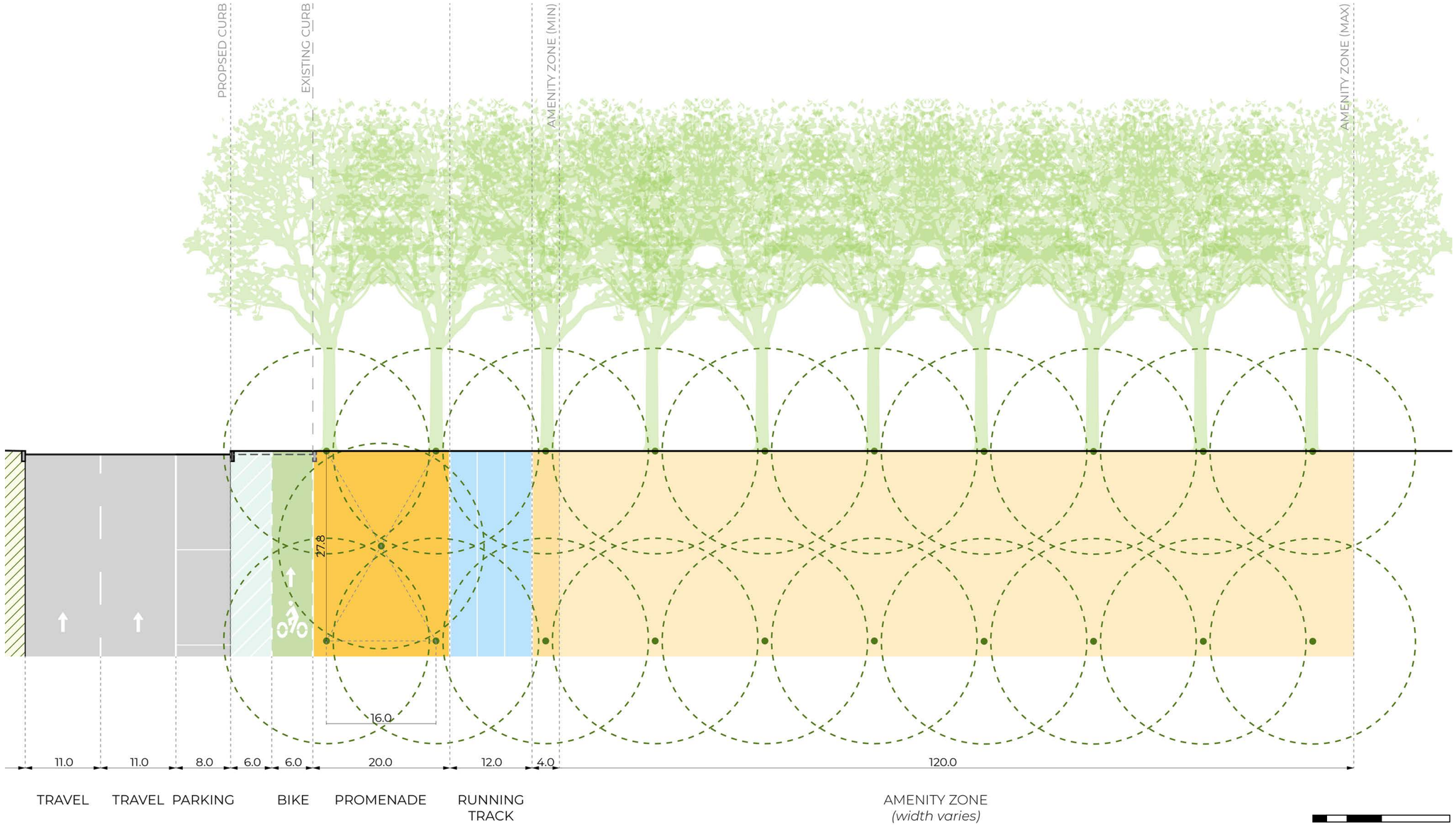
SEPTEMBER 11, 2020


CITY EDGE
SITE CONNECTIONS
HARBORWALK + BAY-SIDE MIXED USE DE-VELOPMENT
SOUTH ENTRY PLAZA
SKATEPARK
JFK/U MASS
INTERACTIVE PLAY
BASKETBALL + FITNESS CLUSTERS
HARBORWALK + M ST BEACH + CASTLE ISLAND
FRAGRANCE GARDENS + SPORTS VIEWING
LEISURE PLAY + WATER GARDENS
OLD COLONY ROAD
BRIDGE
COMPASS ON THE BAY
MEMORY SUPPORT ASSISTED LIVING
STREET HOCKEY + TERRACED SEATING
NORTH ENTRY PLAZA
COLUMBIA ROAD
MARY ELLEN MCCORMACK HOUSING
OLD COLONY HOUSING
ANDREWS
SEPTEMBER 11, 2020

CITY EDGE
TYPICAL CONDITION

PROMENADE: 20.0’
RUNNING TRACK: 12.0’

TREES: ~30’ DIAMETER
SPACING: 16’ ON CENTER



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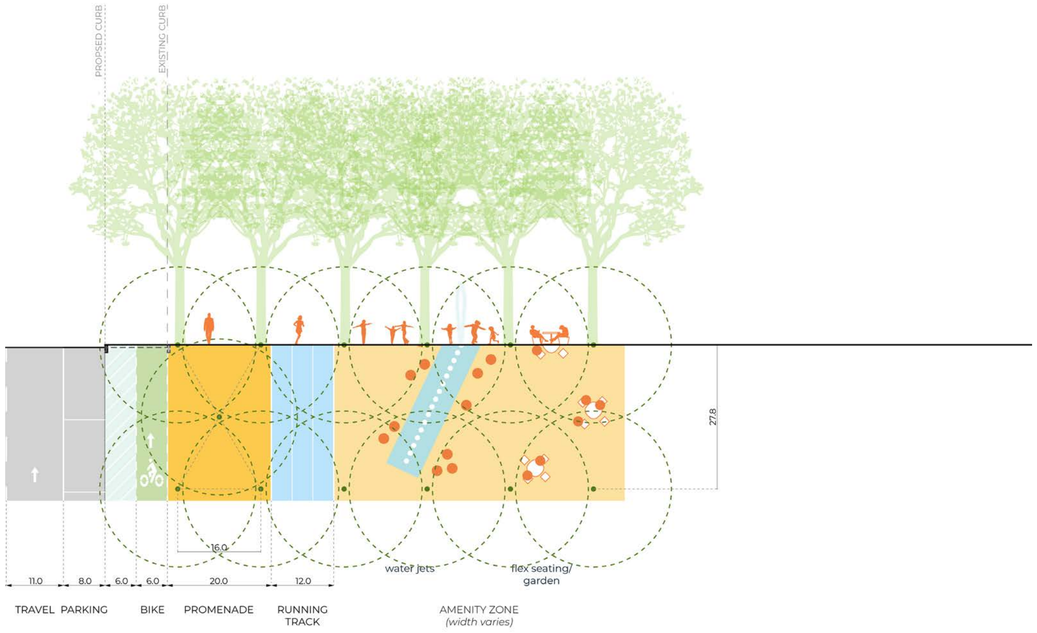
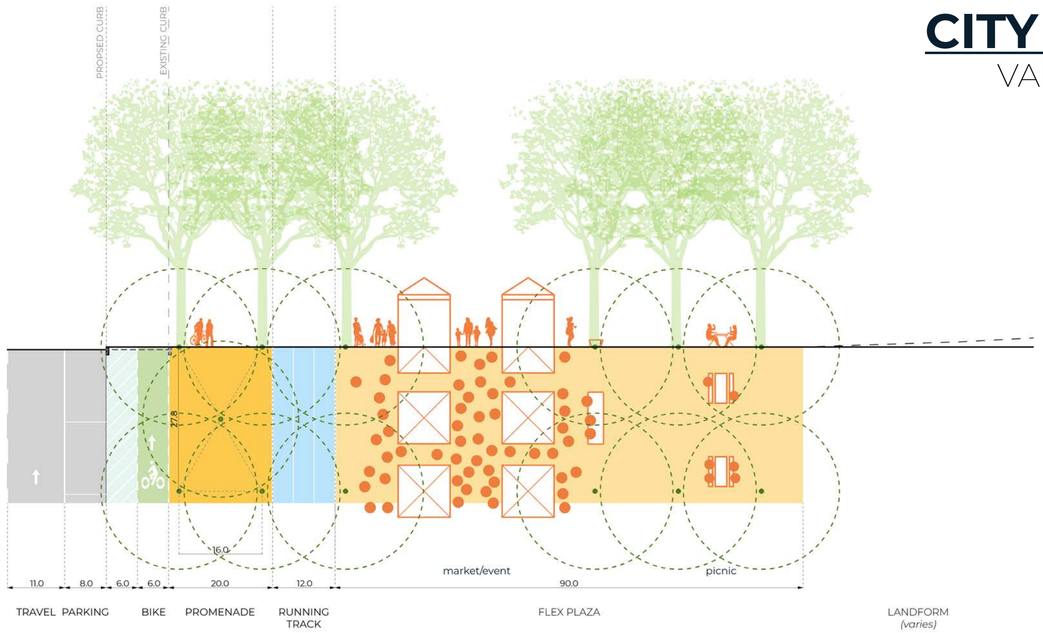
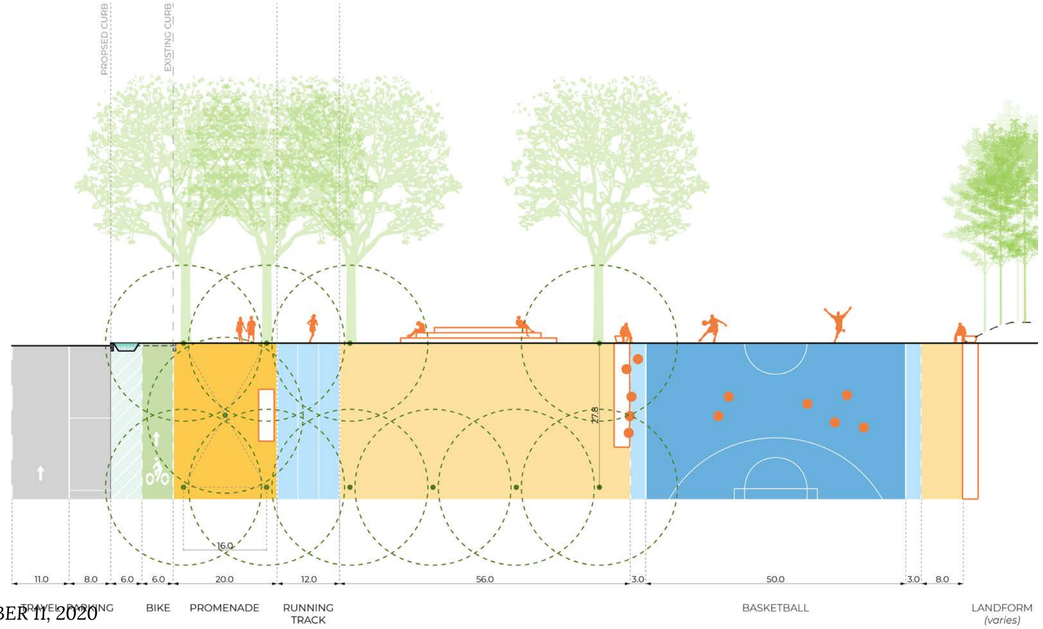
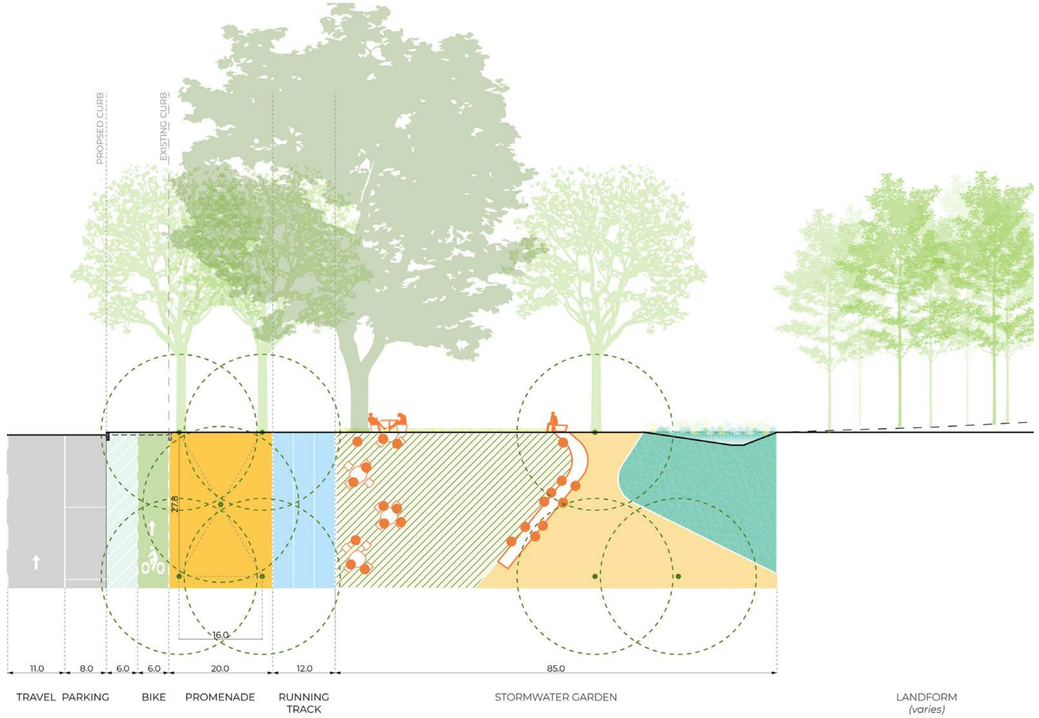
SEPTEMBER 11, 2020

CITY EDGE
VARIATIONS









CITY EDGE

STORMWATER MEADOWS / COURTS + FIELDS

STOSS

SEPTEMBER 11, 2020

CORE+CREST
OVERVIEW

STADIUM

INFO / VISITOR CENTER

SLEDDING HILL/ OVERLOOK

EVENTS BUILDING

LITTLE LEAGUE FIELDS

ADVENTURE PLAY

O&M BUILDING

SPORTS HQ

SOCCER FIELDS

BASEBALL FIELD

GROVE

SENSORY GARDEN

COMMUNITY BUILDING

SEPTEMBER 11, 2020

COASTAL PARK
OVERVIEW

HARBORWALK

MARSH + BOARDWALK

BEACH PROMENADE

WATERFRONT PLAZA

FITNESS

KIDS PLAY

LOW MARSH PICNIC

COASTAL DUNES

BABE RUTH
PARK DR. PARKING

FLEX-FIELD /
FAMILY PLAY

NATURE WALKS /
EDUCATIONAL AND
ENVIRONMENTAL CLASSES

AMPHITHEATER

HIGH MARSH
PICNIC

STOSS

SEPTEMBER 11, 2020

COASTAL PARK

DAY BLVD OPEN

STOSS

SEPTEMBER 11, 2020

COASTAL PARK

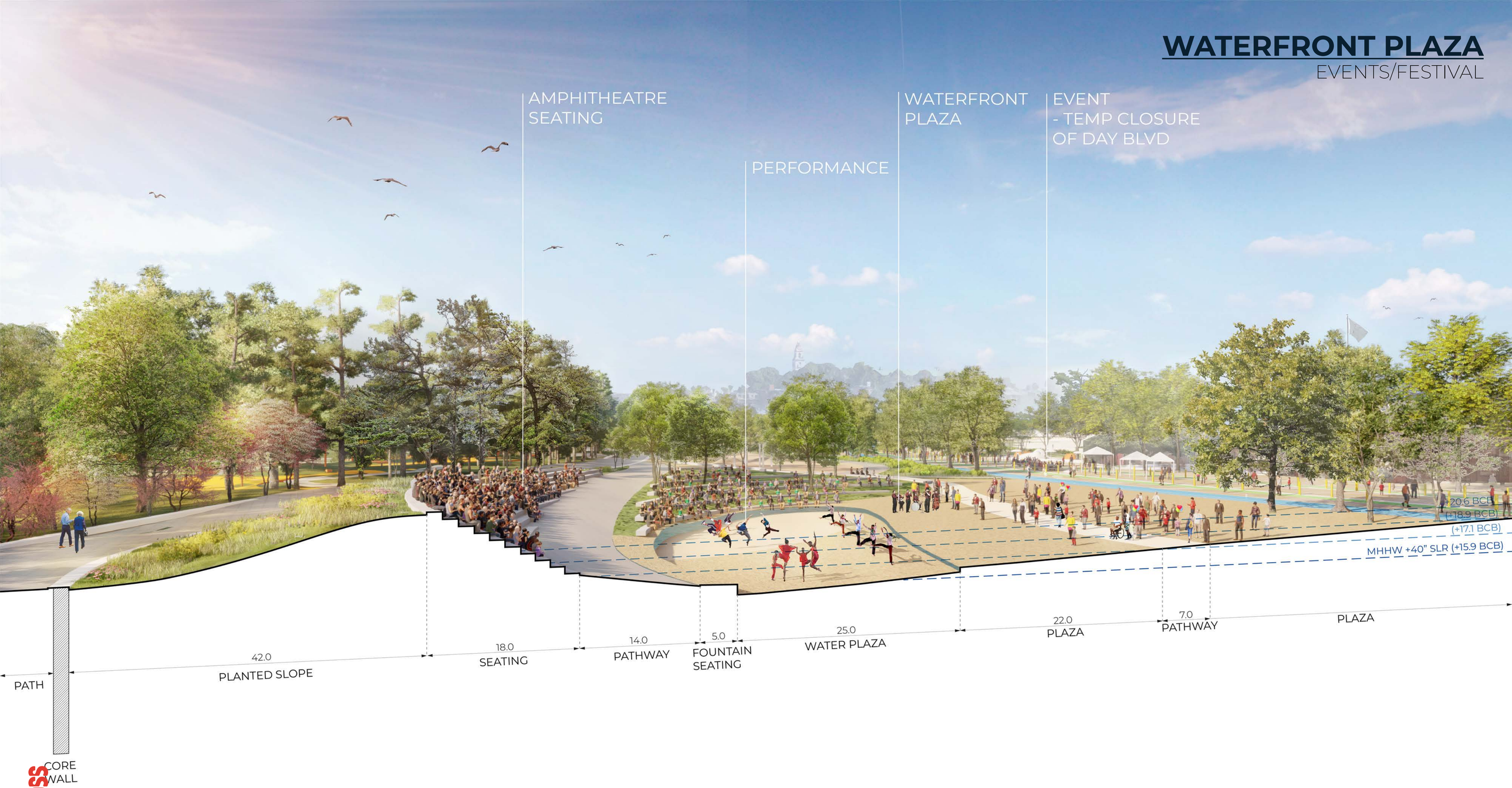
DAY BLVD CLOSED

STOSS

SEPTEMBER 11, 2020

WATERFRONT PLAZA

EVENTS/FESTIVAL



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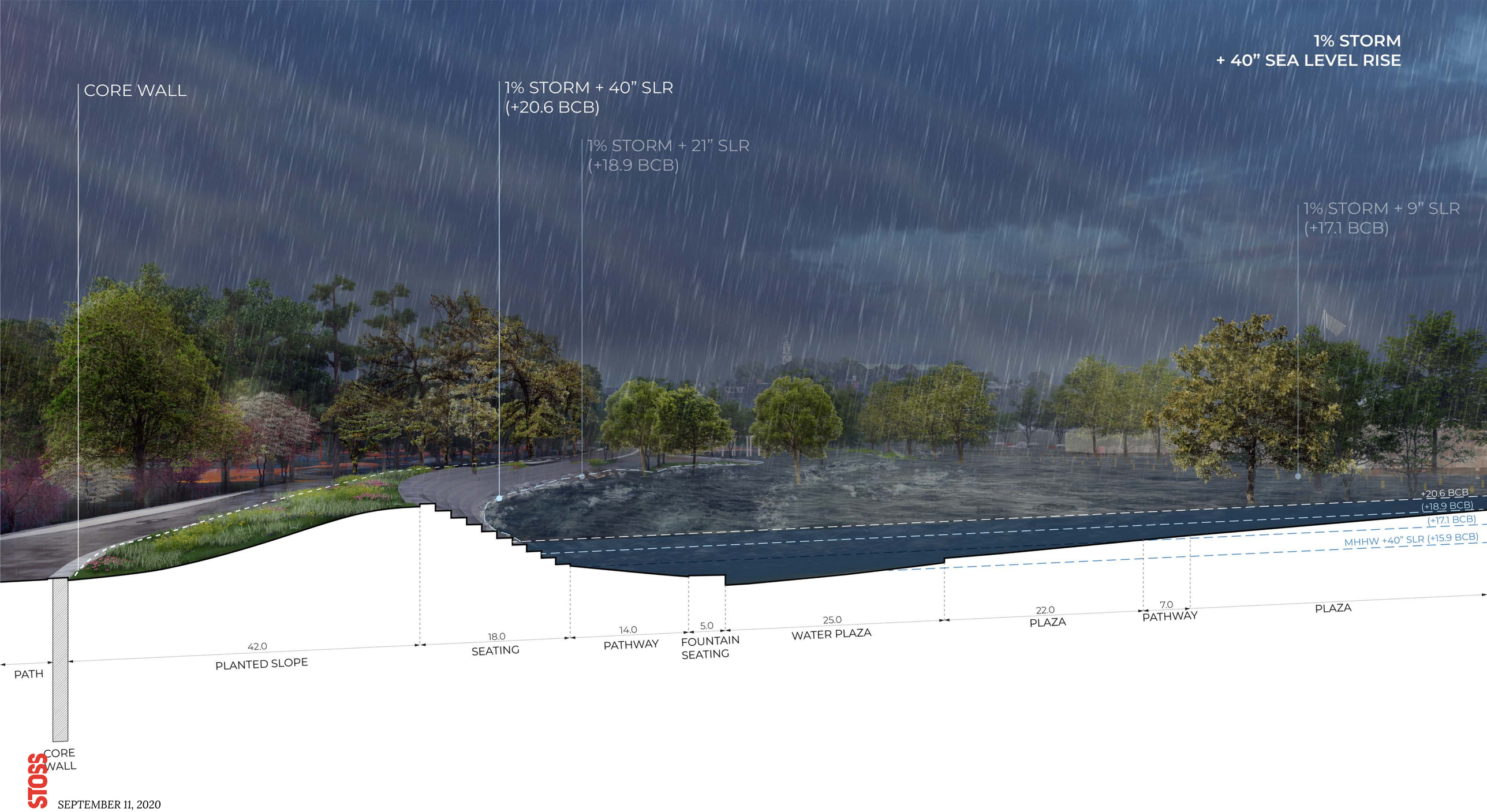

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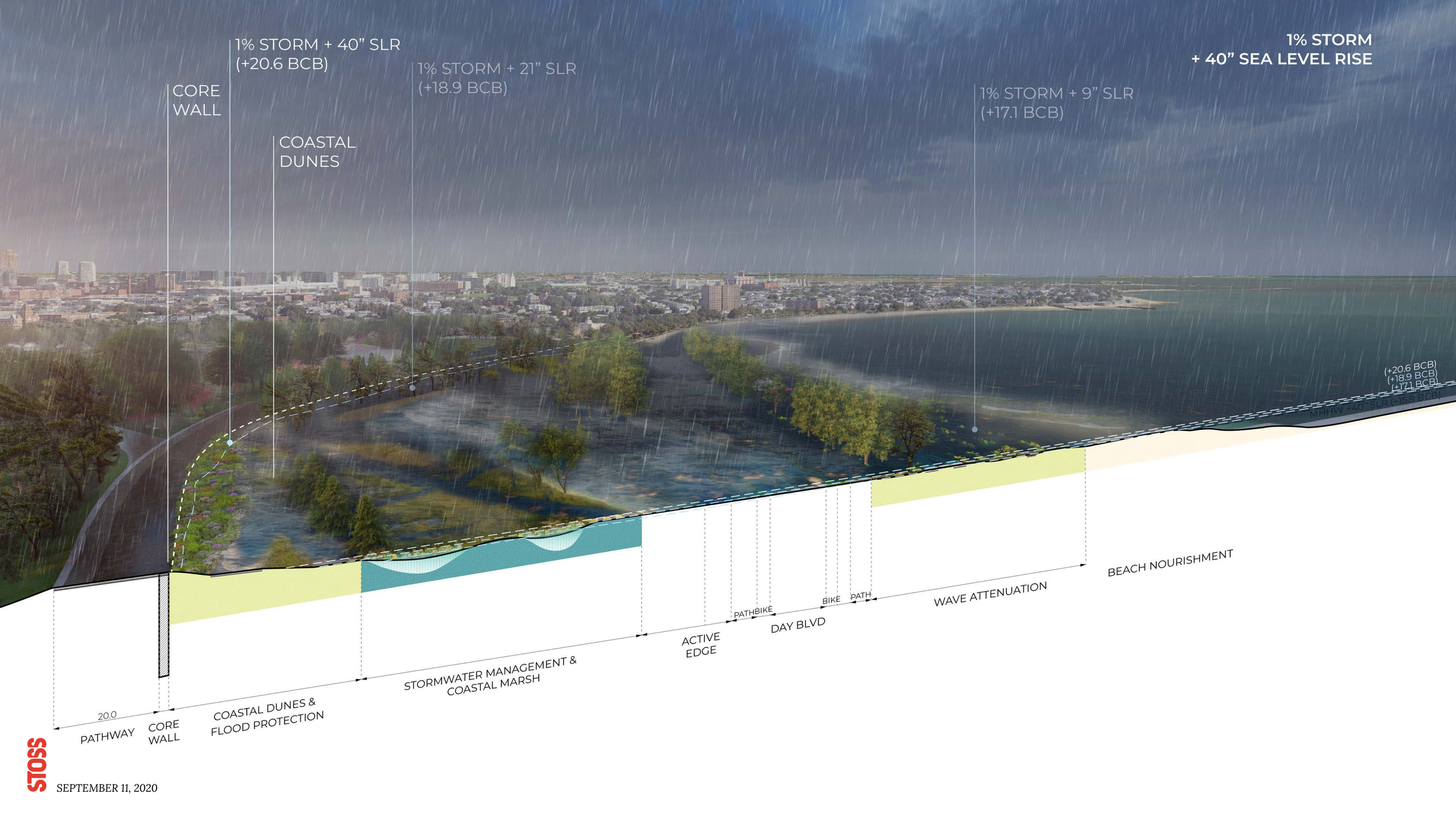
SEPTEMBER 11, 2020

COASTAL PARK
WATERFRONT

STOSS

SEPTEMBER 11, 2020



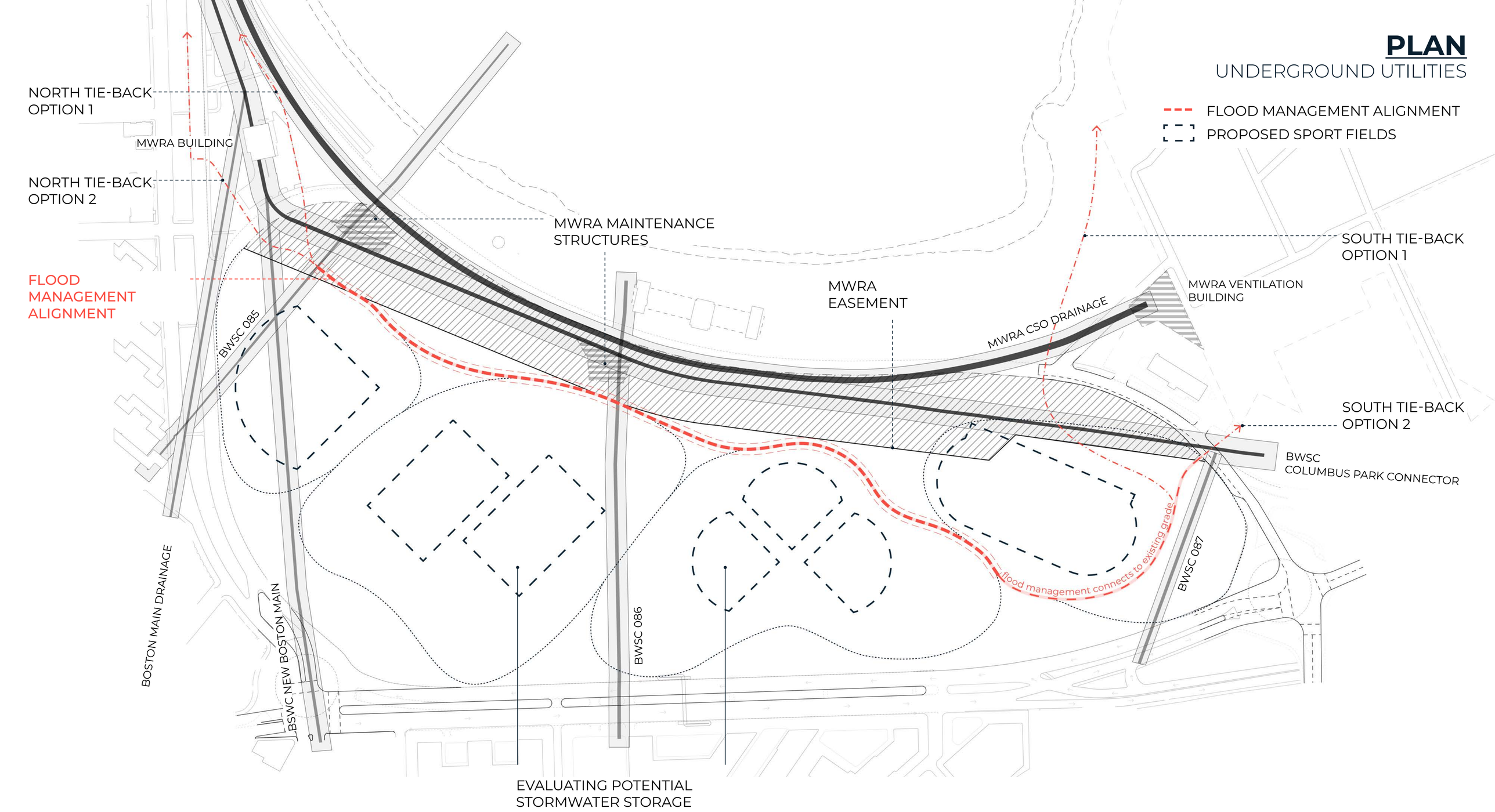
STOSS

SEPTEMBER 11, 2020

OFFSITE TIEBACKS

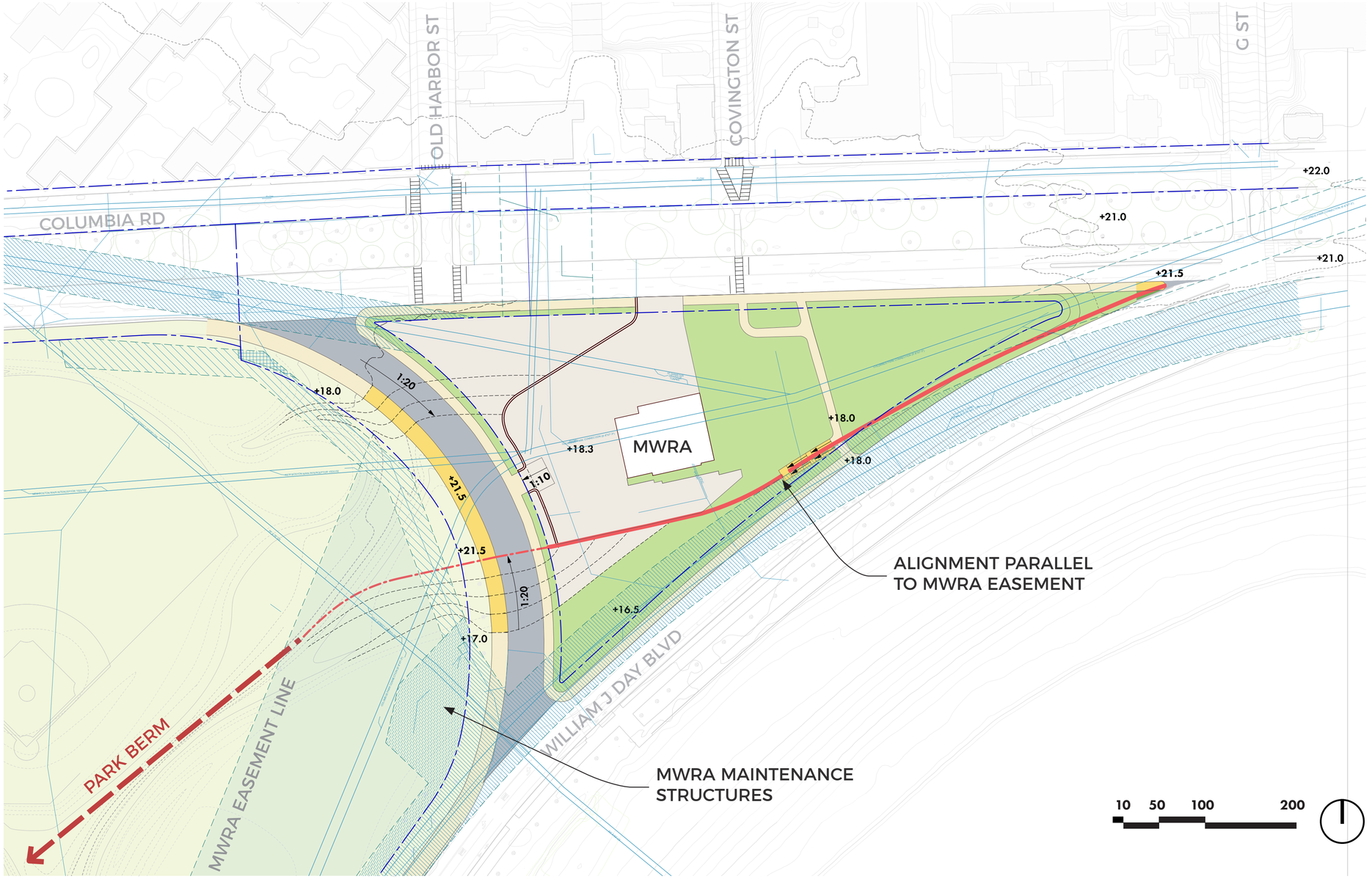
- OVERVIEW
- NORTH TIE BACK
- SOUTH TIE BACK

PLAN
UNDERGROUND UTILITIES



NORTH TIE BACK

OPTION 1

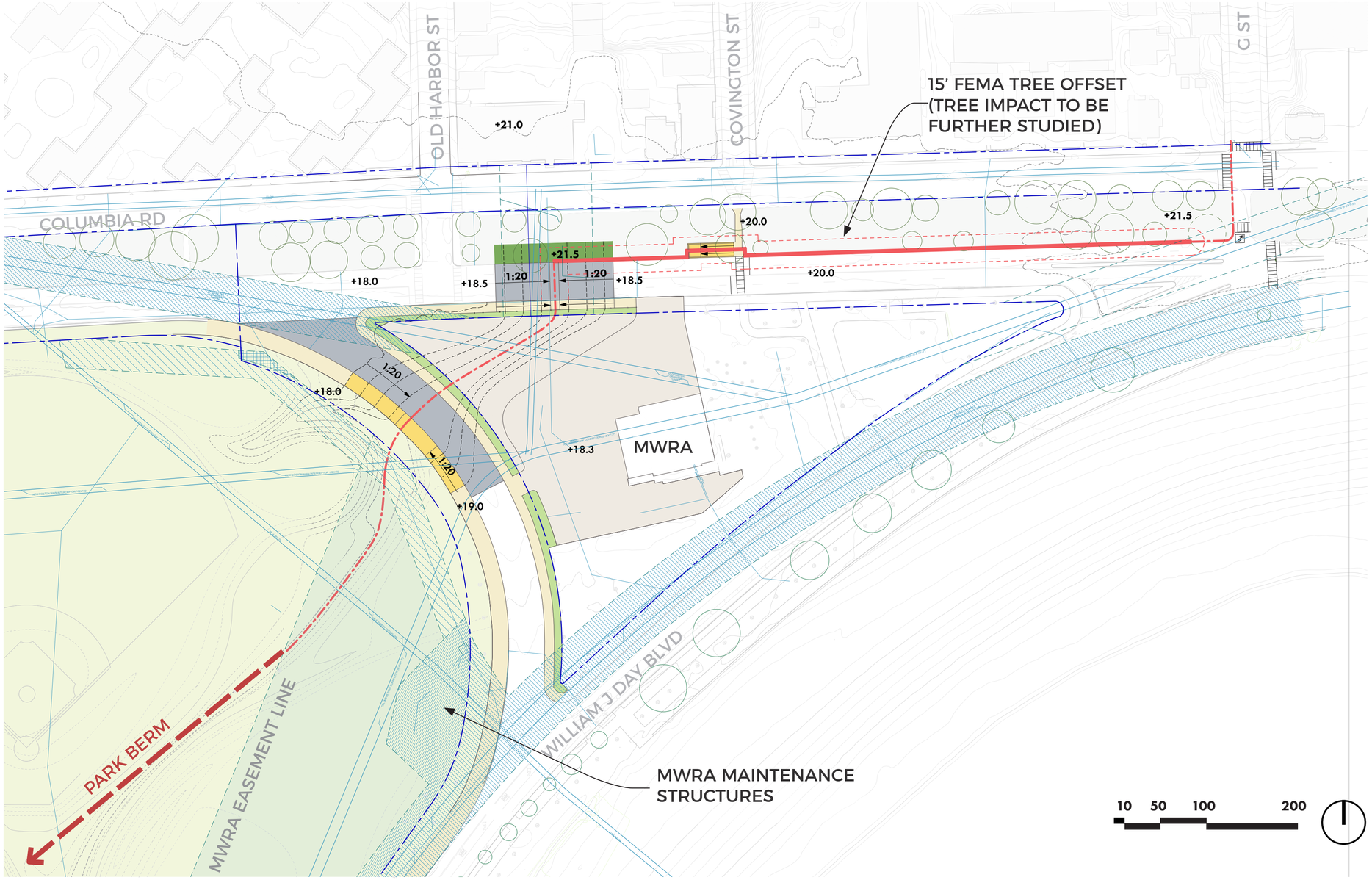


NOTE

- Soil conditions outside Moakley Park to be further evaluated for any potential settlement

NORTH TIE BACK

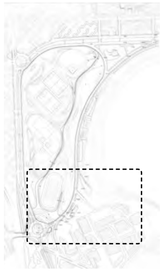
OPTION 2

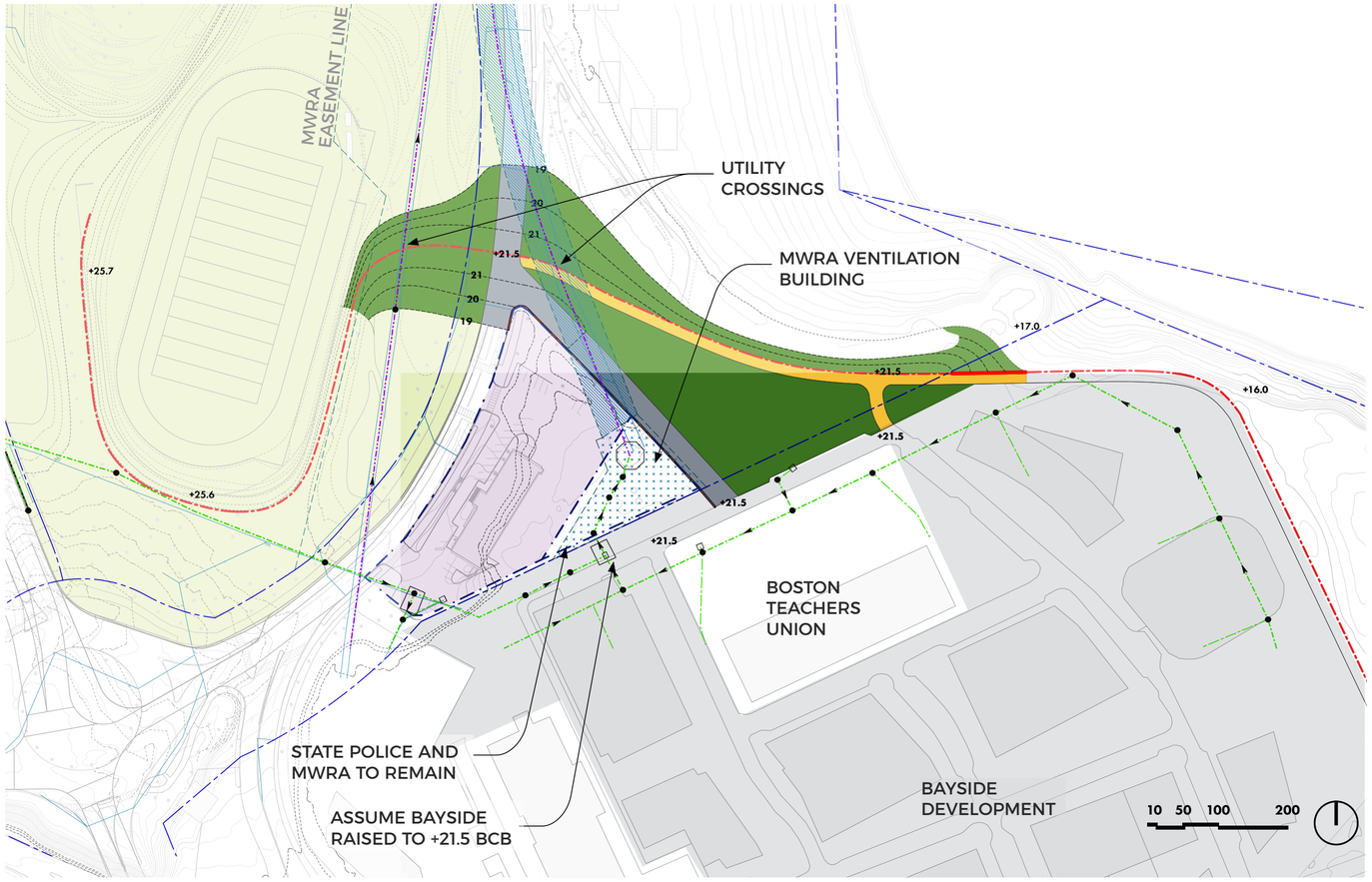


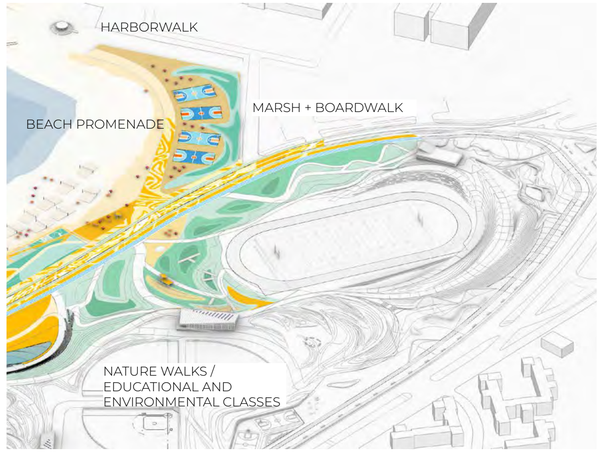
NOTE

- Soil conditions outside Moakley Park to be further evaluated for any potential settlement

SOUTH TIE BACK
PREFERRED OPTION







NOTE
- Soil conditions outside Moakley Park to be further evaluated for any potential settlement

RESILIENCY MOU MEMORANDUM

ONE ARCHITECTURE + URBANISM

- OUTLINE OF CONSIDERATIONS FOR IMPLEMENTING RESILIENCY MOU

Considerations for Boston Parks & Recreation regarding MOU's for Moakley Park & District-Level Resiliency Infrastructure

As part of the deliverables for the first phase of design for Moakley Park, Boston Parks & Recreation (Parks) has requested a high-level memo on the considerations Parks should be weighing when developing Memorandums of Understanding (MOUs) with potential partners for Moakley Park.

Such partners can be internal City partners, State partners (such as DCR, MWRA and MassDOT, which own adjacent assets), as well as private partners, such as the developers of the adjacent Bayside, with which Parks is exploring an agreement to build parts of the flood protection off-site.

Establishing agreements for roles and responsibilities with these partners are of relevance to Moakley Park for several reasons, including:

- The park is part of a district scale resilience plan and the flood barrier requires continuity across properties controlled by multiple parties.
- Collaboration on operations & maintenance (O&M) can provide a better served park and improved urban environment.
- Issues of liability and jurisdiction can be addressed prior to incidents.
- Potential to leverage the presence of nearby facilities and features of adjacent properties to maximize the programming within the park.

This memo is based on experiences with New York City's East Side Coastal Resiliency project (ESCR), which has been under development over the past 5 years, and in which similar issues have proven major challenges, mostly because the City did not have a framework in place for how to address these. The types of challenges fell into three broad categories:

- **Maintenance & Operations Activities**
- **Inter-Agency Coordination**
- **Private Entities**

RESILIENCY MOA/MOU PRECEDENTS

As introduced above, Resiliency Infrastructure projects in the City of New York have, to date, prompted the development of three basic types of Memorandum of Agreement (MOA)s or Memorandum of Understanding (MOU)s: those that delineate O&M responsibilities, those that resolve necessary coordination between different agencies, and those that involve private entities. However, before any of these agreements can be made, the City must make basic decisions about ultimate ownership and final jurisdiction.

At the outset of the East Side Coastal Resiliency project, the first major resiliency infrastructure design to progress in New York City, there was no identified agency to take either the nominal ownership or operational responsibility post-construction. In lieu of a designated entity (or the creation of a new, focused one), the Department of Design and Construction took contractual responsibility for the planning and implementation, and a series of "client agencies" was identified that would contribute to the process – with the potential that one, or a combination of agencies, would eventually be formally charged with responsibility for the finished work. During the five years over which the project development unfolded, the Department of Transportation (DOT) was identified as the Interim Operating Agency, and ownership would be largely divided according to the underlying lot. The majority of the project would be built on Department of Parks and Recreation (DPR) land, which meant an MOU would need to be parsed and negotiated between DPR and DOT to stipulate procedures and responsibilities for more than one linear mile of flood protection infrastructure.

1) MAINTENANCE AND OPERATION

The East Side Coastal Resiliency project's flood protection system will be within multiple city agency jurisdictions, namely NYC Parks and NYC DOT. Portions of the system within DOT right-of-way include 18 operable gates (both swing and rolling gates) and exposed floodwall, many times sited along the right-of-way edge. Portions of the flood protection system within NYC Parks jurisdiction consists of a buried levee or protected sea wall with very little exposed wall within the park. M+O of the flood protection generally falls under two main categories: 1) all routine inspections and repairs necessary for successful flood protection and FEMA certification, 2) visual maintenance of the flood wall (graffiti removal, non-structural chipping etc) and any hardware not vital to the flood protection itself (signage, fencing, etc).

As Interim Operating Agency, NYC DOT has assumed responsibility for all critical maintenance and operations for portions within the DOT R.O.W. and any element of exposed floodwall regardless of jurisdictional proximity. This includes all routine inspections and repairs as required for FEMA certification. Within East River Park however, much of the flood protection is fully buried and does not require the same level of routine visual inspection as elements that are exposed. *(see additional memo "FEMA Considerations Moakley Park & District-Level Resiliency Infrastructure" for more information on FEMA certification)*

Graffiti removal and other aesthetic maintenance responsibilities are split between agency by jurisdiction. For example, in cases where the floodwall will be between the highway (DOT) and East River Park (Parks), each respective agency is responsible for the aesthetic maintenance of the wall and any element attached to the wall that is not vital to the performance of the system. DOT will remove any graffiti and repair any signage on the roadway side of the wall. Similarly, Parks department will remove any graffiti on the park side of the wall. In this example, a fence will be mounted to the top of the wall. As determined though collaboration between Parks, DOT, and the Public Design Commission, the type of fence will be a "Parks Dep. standard" and will be maintained by Parks Department.

2) INTER-AGENCY COORDINATION

Utility Easements:
In addition to the ownership and jurisdiction questions raised above, a secondary level of coordination was required around utility easements. For ESCR (and subsequent resiliency projects in New York), the Department of Environmental Protection (DEP) was compelled to make certain specialized waivers or exceptions to existing easement restrictions in order for the project to proceed. In other instances, elements of the project were redesigned (multiple times, in some cases) to avoid potential excessive loading on aged sewer infrastructure that could not be replaced or relocated. Navigating these issues

and coming to formal, final agreements on each detail took several years of meetings, reviews, and design iterations. Such interagency coordination should be considered typical of any large project, and appropriately planned for in time and resources.

Complications of Integrated Systems:
Coordination with ConEdison, the city's energy utility, illustrated a unique set of additional friction points. High voltage oil-o-static power lines run coincidental with the proposed flood protection alignment for nearly two miles. The original design schematic for ESCR (borne of nearly 3 years of inter-agency meetings and co-design efforts) would have constructed an integrated infrastructure solution, combining a new, fully accessible underground utility tunnel (housing all of the electrical works and leaving room for future system expansion) with an above-ground flood wall, and shared deep foundations. On paper, the solution was both more cost-beneficial and future-flexible than other alternative approaches, and had secured broad consensus. Over the course of a year, the legal teams of ConEd and DOT worked extensively to craft an appropriate MOA which would delineate responsibility and ownership of the different elements of the structure, as well as informing any necessary design revisions to ensure compatibility across both agency's maintenance regimes. In late 2018, more than four years into the process, the MOA (and the combined tunnel) were scrapped, because the two sides could not adequately address liability within the negotiated format.

Changes to Ownership/Jurisdiction:
A third scenario which arose during the ESCR planning process was a potential change in dispensation of land. A recreational area which was park-like but controlled by the Economic Development Corporation (and owned by the Small Business Administration of New York) was targeted to be rebuilt as an approximately 0.5 mile section of the overall project. Negotiations were initiated to either A) Retain EDC ownership but turnover responsibility to DPR, or B) transfer ownership and responsibility to DPR. Each was seen as a way to simplify the jurisdictional issues for the overall project, and while these options were on the table, DPR became heavily involved in the design process for the area, in anticipation of such a transfer. In the end, EDC leadership decided against relinquishing the land to DPR in any fashion, and proceeded to develop its own, separate, MOU with DOT for maintenance and operations in the near-term. There is now a long-term potential that EDC would create its own division for the unified management of coastal flood protection systems, which would necessitate a revisit of nearly all of the previously discussed agreements.

3) MOAS WITH PRIVATE ENTITIES

Despite its great length, the ESCR project will be built entirely on publicly-owned land. This, however, did not exclude the project from coordination with private property owners. There were two cases ultimately requiring the negotiation and issuance of MOA's between the City of New York and private Co-ops.

Navigating Design and Liability Concerns for Adjacent Properties:
At the southern terminus of the flood protection compartment, the flood wall turns inland, running perpendicular to the waterfront along a city block. This roughly 500 foot segment of wall, ranging from 5' to 1' in height, will be built entirely in the City-owned right of way, alongside an existing sidewalk, and directly adjacent to an income-protected residential Co-op. The project will require both a construction easement and a later maintenance easement on the Co-op's land, the stipulations for which have been outlined in a MOA. An extensive amount of stakeholder engagement was conducted with the residents and the Co-op board, including approximately 20 meetings over the course of the 5 year planning process, to ensure that

all design-related concerns could be addressed and integrated into the final project. After consensus was reached on the project itself, the language-parsing for the MOA dragged on for more than 2 years. The Co-op's main sticking point throughout the contentious negotiation process with the City's legal department was that of liability. Years before, a pedestrian had slipped on an icy sidewalk in front of the building and sued the Co-op; they were now fearful of a reprise, with someone falling off the City's new floodwall. The access agreement has still not been finally resolved.

Project-related Concessions to Affected Properties:
In another area of the project, footings for a new pedestrian bridge required adjustments to the parking lot of a large, middle-income Co-op, including a new curb cut and relocated entrance. In a series of concessions, the City pledged to repave the entire parking lot, replace the aged fencing, and provide a new parking gate arm as part of the reconstructed entrance. Despite becoming unavoidably enmeshed in the Co-op's complicated internal parking-related politics (there is a multi-year waitlist for a spot), these concessions ultimately smoothed the path to acceptance and adoption of the MOA.

CONSIDERATIONS SPECIFIC TO JOE MOAKLEY PARK

OWNERSHIP vs JURISDICTION

When beginning to plan for Moakley Park's eventual set of MOUs and MOAs, it is critical to first clearly delineate ownership and jurisdiction distinctly, knowing that these will in all likelihood not overlap 100% (given the considerations both the park operations and the flood protection). Splits in this division are likely to occur in two general ways: 1) the protection system or flood compartment crosses multiple lots with different ownership. One entity must have oversight of the whole piece of infrastructure, even though the land beneath is controlled by multiple entities. 2) the agency that owns the primary land on which the infrastructure is to be built is not the agency best-suited to perform the specialized O&M required of the system. Both of these divergences appear to apply to Moakley Park.

Fig 1. Property Ownership in the Moakley Park Vicinity

ESTABLISHING AN O&M PROGRAM

The Operation and Maintenance of the flood protection has a number of requirements and activities in addition to the physical construction and presence of the infrastructure. The O&M activities will be ongoing throughout the service life of the flood protection and necessitate a range of impacts on the neighboring properties and related entities. The following list of activities, as adapted from the *BPWD Climate Resilient Design Standards and Guidelines*, provides an outline of the types of actions that will take place and for which MOU's will need to identify responsibilities and expectations between all relevant parties:

- **Deployment**:
    - Active components of the flood protection (e.g. flood gates, pumps, generators, etc.) will need to be deployed in a timely fashion ahead of a storm event and may be performed by a range of personnel from various departments and entities that will need supervised and coordinated deployment plan.
    - These activities will have additional impacts on surrounding areas, including access req's, provision of staging areas, impacts on circulation routes and emergency ingress/egress.
    - O&M plans will also identify emergency repair protocols and contingency plans that will require further consultation with partners
- **Inspection**:
    - Annual inspections of the flood protection and adjacent areas, as well as inspections before and after a storm event, will require access for personnel and equipment.
- **Maintenance & Repair**:
    - General maintenance responsibilities are critical to the performance of the flood protection and will be an ongoing occurrence for the service life of the flood protection.
    - Aside from general maintenance, more acute repairs to the flood protection should be planned for that have the potential for sizable and extended disruption to adjacent areas and activities.
    - Disruption to adjacent areas may be significant, especially as the flood protection will most likely be integrated with adjacent recreation or privately controlled spaces.
- **Adaptation**:
    - The potential need to incrementally raise the flood protection in the future will also impact neighboring properties and entities as the increased height will generally require a substantial increase in the flood protection's footprint (particularly for a vegetative berm type barrier) as well as impacts on views and access
- **Management**:
    - The above activities will also require significant and ongoing management and coordination responsibilities between parties, including, but not limited to:
        - Record keeping
        - Communication protocols
        - Public outreach
        - Updates and evaluations
        - Specialized training and emergency deployment drills

To successfully implement the O&M activities, input and buy-in will be required from a broad range of affected and interested parties. As the specific O&M activities are refined and detailed throughout the design process, expected roles, participation, and responsibilities of all parties will need to be negotiated and clearly identified. To clarify these roles, a first series of questions to consider include:

- Whose budget does it come from to fix a problem?
- Who is responsible for the deployment of the flood protection?
- Who can access what areas?
- Can these roles be divided?

The above questions regarding O&M are especially important when the flood protection infrastructure is being designed for future FEMA certification. FEMA certification demands a strict protocol in place for O&M, including a highly specific inspection schedule. Considerations for visibility, inspectability, and access must be articulated in both the design and the corresponding MOU. *(see additional memo "FEMA Considerations Moakley Park & District-Level Resiliency Infrastructure" for more information on FEMA certification and process)*

INTER-AGENCY COORDINATION - BUILDING A RESILIENT MOU

A critical element that is important to address in the MOUs is how conflicts get resolved. There needs to be some place (whether in City or State government) where conflicts can be escalated to. To begin answering these questions in the MOUs requires a deeper analysis of the possible challenges and options through a scenario driven approach with all involved agencies and owners.
For example, in the scenario that Parks manages and operates the barrier on top of MWRA infrastructure, then under what conditions can MWRA access those facilities, both above and below grade? What are their obligations towards disrupting and maintaining park activities? When the infrastructure intersects, what are their obligations for maintenance?

In a series of working sessions, issues and positions can be further identified, and possible directions can be explored. Executing such a process early in the design phase can result in identification of challenges that can still be solved in design, build trust, and lay the groundwork for the eventual MOU.

PRIVATE ENTITIES - BAYSIDE

Continuity of the flood protection between Moakley and the Bayside development will be critical to the protection of the entire flood compartment. Multiple scenarios for the responsibility for the flood protection where is sits on Bayside's property can be considered, ranging from full Park/City acquisition and responsibility to incentives for private responsibility, and should be considered in the context of the following questions:

- What concessions are appropriate to Bayside: tax relief? Additional FAR? Reduced open space requirements per chapter 91?
- Who will finance construction?
- Who manages the design process?
- Who maintains the flood protection and adjacent areas?
- Who is liable for damages?
- Can Bayside's buildings receive relief from flood zone req's if located behind a continuous berm?

NEXT STEPS

As the design for Moakley and the associated flood protection progresses, the following next steps should seek to align the roles and responsibilities of all partners w/ the developed design:

O&M - Governance:
- Define the Park's O&M with the anticipated governance strategy
- Define the flood protection's O&M with the anticipated governance strategy

Inter-Agency - MWRA / DCR:
- Review existing City/State agreements for precedent
    - E.g. City/DCR relationship at Spectacle Island
- Coordinate jurisdiction and O&M responsibilities as they related to the developed design

Private Entities - Bayside:
- Outline initial agreement options for discussion:
    - Easement strategy (Gillette model)
    - Private ownership with collaboration on Moakley design
    - Hybrid model
- O&M responsibilities
- Issues of liability
- Funding

SCHEMATIC DESIGN FOR FLOOD PROTECTION

STOSS LANDSCAPE URBANISM + WESTON & SAMPSON

- TWO DESIGN STRATEGIES SHOWING CRITICAL RESILIENCE ALIGNMENTS ON-SITE AND OFF-SITE, BERM DETAILING, AND INTERIM FLOOD STRATEGIES
- GEOTECHNICAL MEMORDANDUM
- PRE-SCHEMATIC FLOOD MANAGEMENT BARRIER SET

**SOME OF THIS WORK WAS FUNDED THROUGH ADDITIONAL SCOPE AND FEE FROM BPRD*

Stoss Landscape Urbanism
Weston & Sampson Project No. 2190828

September 21, 2020

Stoss Landscape Urbanism
c/o Ms. Cheri Ruane, RLA
Weston & Sampson
85 Devonshire Street, 3rd Floor
Boston, Massachusetts 02109

RE: Geotechnical Engineering Services
Subtask 3.2: Schematic Design Flood Protection & Relevant Earthwork
Proposed Moakley Park Improvements
Boston, Massachusetts

INTRODUCTION

Weston & Sampson Engineers, Inc. (Weston & Sampson) is pleased to present this design memorandum summarizing our schematic level geotechnical engineering services for the proposed improvements at Moakley Park in Boston, Massachusetts. Our work was completed as part of Subtask 3.2 of our proposal dated June 1, 2020.

Weston & Sampson previously completed a feasibility-level geotechnical evaluation for the project. The findings of our feasibility-level assessment are summarized in our report titled "Geotechnical Feasibility Study, Proposed Moakley Park Improvements, Boston, Massachusetts," dated December 11, 2019, which was submitted under separate cover as part of Subtask 1.1A: Preliminary Geotechnical Recommendations Report. Additionally, Weston & Sampson has provided environmental and hydrogeologic design services for the project that have been summarized in reports provided under separate cover.

This design memorandum advances our feasibility-level study to preliminarily evaluate flood protection barrier design alternatives that were included as part of the project Construction Toolkit (Subtask 1.3A) and to progress project design. Additional explorations, laboratory testing, analyses, and geotechnical engineering design recommendations are required as design progresses, and will be conducted as part of the next phase of the project.

Information on the use of this memorandum is provided in the document titled "Important Information about this Geotechnical Engineering Report," by Geoprofessional Business Association (GBA), Inc., included as *Attachment C*.

BACKGROUND

Moakley Park is an approximately 60-acre, waterfront park (hereinafter the "Site") located in the "South Boston" neighborhood of Boston, Massachusetts, as shown in ***Figure 1 – Locus Map.*** Most of the Site is filled land, claimed from Dorchester Bay in the late 1800s and early 1900s. The Site is predominately grass-covered with trees partially outlining the athletic fields and playground areas.

Existing site grades are relatively level throughout most of the Site and generally range in elevation (El.) from about El. 12 ft. to El. 16 ft, except at the southern end of the Site, where grades range from about El. 18 ft. to El. 28 ft. Elevations provided in this report are in feet and reference the Boston City Base Datum (BCB).

Proposed Site improvements include generally modernizing the park. As part of resiliency planning for the area, a flood protection barrier (i.e., a levee) will be constructed parallel to the waterfront (in a generally north to south direction) along the eastern portion of the Site. The proposed barrier crest will have a minimum design elevation of El. 21.5 ft. based on a 1% annual chance flood event in design year 2070 as defined in the Massachusetts Coastal Flood Risk Model (MC-FRM) (prepared by others) and including 1-ft. of freeboard. The proposed barrier will be incorporated into park improvements as undulating small hills, and sledding hills. Proposed grade increases at the centerline of the barrier will range from 3.5 to 10 feet above existing grades. Refer to ***Attachment A*** for preliminary design plans and sections for proposed conditions.

There are several large underground utilities that traverse the Site including the following:

- 78-inch by 78-inch Vale Street Overflow,
- 102-inch by 102-inch Main Interceptor,
- 124-inch by 75-inch Kemp Street Overflow,

which are generally oriented in an east-west direction (perpendicular to the barrier), and

- a 116-inch by 87-inch Columbus Park Connection,
- a 17 ft diameter Dorchester Bay CSO Storage tunnel,

which are oriented in a north-south direction (parallel to and near the barrier).

Per our feasibility study, which recommended that grade increases near existing utility lines should be outside of an influence zone defined by a plane extending a distance of 5 ft. horizontally away from the bottom outside edge of a utility, then up and away at 1H:1V (Horizontal:Vertical) slope to limit settlement of the utility, the current design of the proposed barrier is generally out of this zone, except, necessarily, where the barrier crosses over the utilities oriented in an east-west direction.

Subsurface Conditions

Weston & Sampson previously conducted a preliminary subsurface exploration program at the Site consisting of test borings and test pits. Based on the conditions encountered in the explorations, subsurface conditions at the park generally consist of urban fill overlying organics, native soils and bedrock. A brief summary of soil, bedrock and groundwater conditions is provided below and a detailed description of the preliminary exploration program and subsurface conditions is provided

in our Geotechnical Feasibility Study. Refer to *Figure 2 – Site Plan* for the approximate locations of the explorations.

All explorations encountered a surficial layer of topsoil overlying urban fill consisting of soil mixed with debris to depths ranging between approximately 8 to 22 feet. The fill was variable and included debris consisting of slag, ash, wood, glass, concrete, asphalt, metal, pottery, leather, brick, coal and organics. A layer of fine-grained organic soils was encountered in several borings below the fill and was generally up to about 4 feet thick.

Native soils encountered below the fill and organic soils to the depths explored generally consisted of sand, silt, clay and glacial till overlying bedrock. The clay layer was very soft to very stiff and ranged in thickness from approximately 36.5 to 196 feet. Glacial Till was encountered below the clay layer in two borings at depths ranging from 164 to 218 feet. In one boring, bedrock was encountered at a depth of 62 feet. Based on the explorations completed to date, the depth to bedrock varies significantly across the Site and decreases from north to south.

Groundwater was generally encountered during drilling at depths ranging from about 4 to 7 feet based on the observation of wet samples and observations during drilling. Stabilized water levels in groundwater monitoring wells installed for the project were measured by Weston & Sampson's civil engineering representatives during the 3-month period between October 4, 2019 and January 3, 2020. During the referenced monitoring period, depth to groundwater ranged between approximately 2 and 13 feet below existing grade but were generally between about 4 and 9 feet below existing grade.

PRELIMINARY FLOOD PROTECTION BARRIER DESIGN

The Site is underlain by compressible soils (loose/soft fill, organic soils and clays) of variable thickness and composition, which are prone to settlement under new loads. Therefore, the proposed flood protection barrier design must consider settlement of the barrier and new and existing area structures, utilities, and roadways.

Provided that the completion of future maintenance along the proposed flood protection barrier is acceptable to the Owner, we recommend that sections of the barrier, where there are no existing utilities in the area, proposed fill thicknesses are approximately 4 feet or less, and where hardscape is not proposed, be constructed with regular soil fill and to an elevation slightly greater than El. 21.5 ft, and be allowed to settle over time. For sections where this is not possible due to the presence of utilities or proposed structures, several design alternatives, including the use of deep foundations, lightweight fill, cut-off walls, and a combination of these methods were considered to provide flood protection to the Site, while limiting the impacts of settlement. Three of these alternatives are described below.

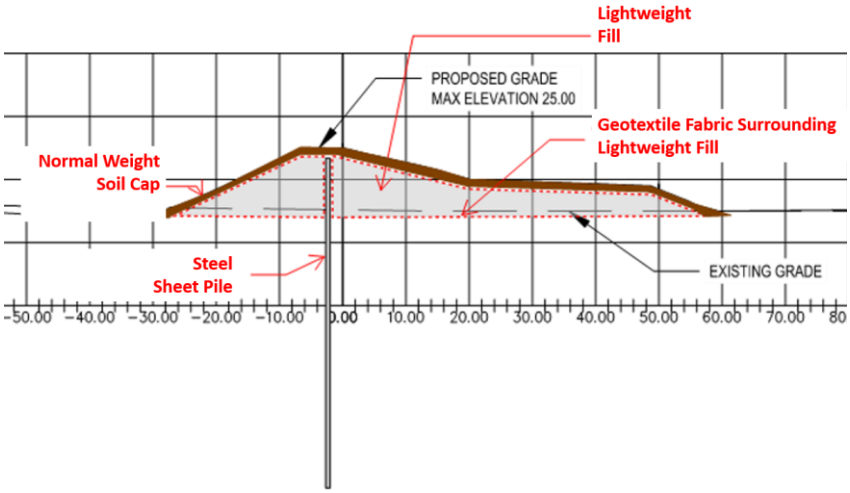
Flood Protection Barrier Design Alternatives

The design alternatives considered for the flood protection barrier are summarized below. It is noted that these alternatives are pre-schematic level options, and detailed design including further

slope and seepage stability analyses, as well as settlement estimates will be required for each section of barrier alignment.

Cut-off Wall with Lightweight Fill

This alternative includes an interior cut-off wall consisting of steel sheet piles that would be installed to reduce the potential for seepage through the flood protection barrier. To reduce settlement due to the weight of the embankment fill required to achieve proposed grades, lightweight fill would be used with a normal-weight soil cap to provide uplift resistance of the lightweight fill during a flooding event.

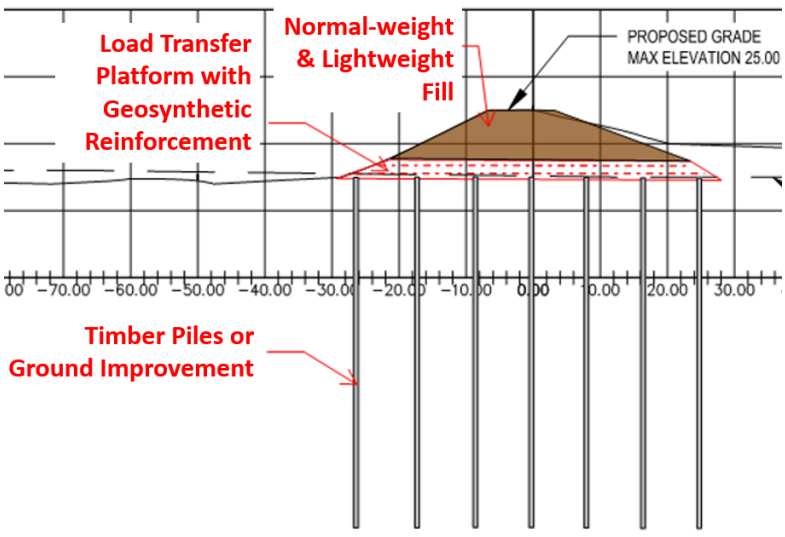


Typical Cut-off Wall & Lightweight Fill Alternative

The primary advantages of this alternative are the proven ability of sheet piling cut-off wall to serve as an effective seepage barrier and the high durability of the flood barrier and core wall during a flooding event. The disadvantages of this alternative are potential modifications at the existing utility crossings, large quantities of lightweight fill required to reduce settlement adjacent to the cut-off wall, and the relatively high cost for the sheet piling and equipment mobilization along with the high cost of lightweight fill.

Column Supported Embankment

This alternative includes supporting a combination of lightweight and normal-weight fill on a column supported embankment (CSE) consisting of timber piles or other deep foundations. The CSE would include embankment fill, a geosynthetic reinforced load transfer platform, and vertical columns (i.e., timber piles, or deep foundations) transferring the embankment loads to more competent bearing conditions below.

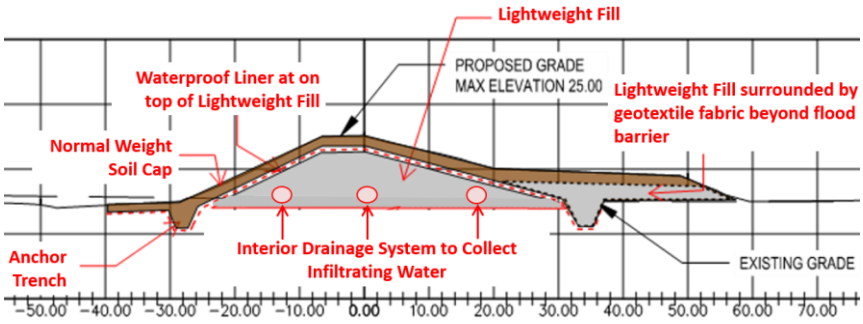


Typical Column Supported Embankment Alternative

The primary advantages of this alternative are the ability to support the barrier above existing utilities without major modifications and the ability to use a combination of normal-weight and lightweight fill to reduce the buoyancy effects during a flood event. The disadvantages of this alternative are an increased potential for seepage through the embankment, potential vibrations during foundation installation and the relatively high cost for the large quantity of foundation support elements required, as well as the high cost for lightweight fill. A cut-off wall can be added to this alternative if necessary, for seepage considerations, which will increase the cost for this alternative.

Lightweight Fill with Waterproof Membrane

This alternative includes the use of lightweight fill covered with a waterproof liner that extends into an anchor trench as a cut-off wall to reduce the potential for seepage through the barrier. The lightweight fill and liner would be covered with normal-weight soil cap to reduce the potential for uplift of the lightweight fill during a flood event. This system will require a toe drain to collect infiltrating surface or seepage water.



Typical Lightweight Fill with Waterproof Membrane Alternative

The primary advantages of this alternative are the ability to support the barrier above existing utilities without modifications and deep foundations (e.g., timber piles). The primary disadvantages of this alternative are an increased potential for seepage through the embankment, potential damage to the waterproof membrane which could cause leaks, uplift potential of the lightweight fill during a flood event, potential erosion of the soil cap, as well as the high cost for lightweight fill.

Preliminary Analyses

Weston & Sampson completed slope stability, seepage, and settlement analyses for each of these alternatives to evaluate their performance during a flood event.

Six (6) locations along the proposed flood protection barrier alignment were selected to complete preliminary settlement, slope stability and seepage analyses for some of the alternatives. The locations represent typical cross-sections along the flood protection barrier alignment as well as various subsurface conditions (including utilities) along the alignment. Refer to *Attachment A* for preliminary design plans and locations of the design sections.

Settlement for each of the 6 sections and various alternative design options were estimated using the computer program Settle3D by Rocscience, Inc. Material properties used in the analyses were based on laboratory testing results of samples collected during the feasibility study as well as typical values for similar materials in the area.

Slope stability and seepage analyses were completed using the computer program SLIDE version 8.0 by RocScience, which includes seepage forces in its slope stability computations. Spencer, limit state, and equilibrium analyses were used to estimate the minimum factor of safety against slope instability. The factor of safety (FOS) against slope instability is defined as the sum of resisting forces divided by the sum of driving forces along a given failure surface. A factor of safety of 1.0 therefore indicates impending slope instability. Soil permeabilities for preliminary seepage analyses were based on published permeability data from the Bureau of Reclamation.

The slope and seepage stability analyses were modeled assuming that the flood stage will continue for 10 days, which is anticipated to be a conservative estimate. A 10-day transient seepage at the surcharge pool of El. 20.5 ft. was modelled. Based on this assumption, all three of the alternatives, as shown, were shown to be able to provide flood protection to the Site. However, due to insufficient subsurface data, and pending design development and changes, we recommend that the project move forward with the reliable seepage barrier option, the cut-off wall and lightweight fill alternative, for preliminary design. Further evaluation of the alternatives, with regards to environmental considerations and future groundwater levels will be required as design progresses. The six design sections modeled with this option are included as *Attachment B.*

Vegetation Along Flood Protection Barrier

In accordance with guidance provided in the U.S. Army Corps of Engineers, Levee Vegetation Design Manual ETL 1110-2-583, “Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures,” dated April 30, 2014, vegetation growth along earth embankment structures needs to be controlled to avoid compromising the reliability of the structure. Therefore, vegetation-free zones are required to provide access, allow visual inspection of the structure, and to reduce the potential for detrimental impacts resulting from root growth and overtopping vegetation.

For preliminary design purposes, a vegetation-free zone 20 ft. wide is recommended on both sides of the flood protection barrier toe, or from an interior core wall (i.e., sheet pile cut-off wall). In the undulating hills that will become the flood barrier, the barrier can be defined by a plane extending from the barrier crest edge down and away at a 2H:1V (Horizontal:Vertical slope).

Additional Explorations and Analyses

Our explorations were completed at widely spaced locations in accessible areas in the general vicinity of the proposed site development. Design layouts are still being evaluated and the locations of other site features have not been finalized. Additional explorations and geotechnical analyses will be required to develop final design geotechnical recommendations for the Site.

LIMITATIONS

We have completed this design memorandum for use by Stoss Landscape Urbanism and the Boston Parks and Recreation Department for this site and project only. The information herein may be used for preliminary cost estimating and/or alternative analyses but is not considered sufficient for design or bidding and should not be construed as a warranty of subsurface conditions.

Additional geotechnical explorations and analyses are required for schematic and final design. We have made observations only at the locations and only to the stated depths. These observations do not reflect soil types, strata thicknesses, water levels or seepage that may exist between or below preliminary observations. Our recommendations are not applicable to other areas of the site.

If any changes are made to the anticipated locations, loads, grading, configurations, or construction timing, the conclusions and recommendations contained herein may not be applicable, and we should be consulted. Within the limitations of scope, schedule and budget, our services have been executed in accordance with the generally accepted practices in this area at the time this memorandum was prepared. No warranty, expressed or implied, is given. Additional information about interpretation and use of this memorandum is included in *Attachment C*.

It has been a pleasure assisting you with this project and we look forward to our continued involvement. Please call if you have any questions.

Very truly yours,
WESTON & SAMPSON, INC.

Stephen T. Spink, PE
Geotechnical Team Leader

Tulin H. Fuselier, PE
Geotechnical Engineering Practice Leader

ATTACHMENTS

Figures
Attachment A - Preliminary Design Plans & Sections (Provided by Stoss)
Attachment B - Preliminary Foundation Design Alternatives – Flood Protection Barrier
Attachment C - Important Information about your Geotechnical Engineering Report

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FIGURES

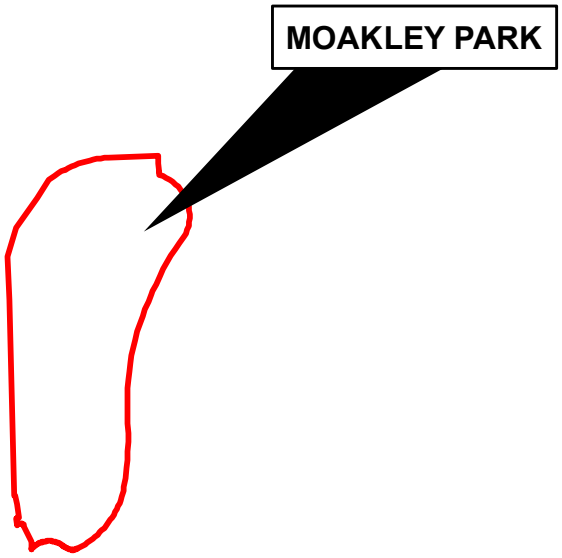

FIGURE 1
CITY OF BOSTON, MASSACHUSETTS
MOAKLEY PARK

LOCUS MAP

0 2,000 4,000 **Feet**

[redacted]

GEOTECHNICAL SITE PLAN

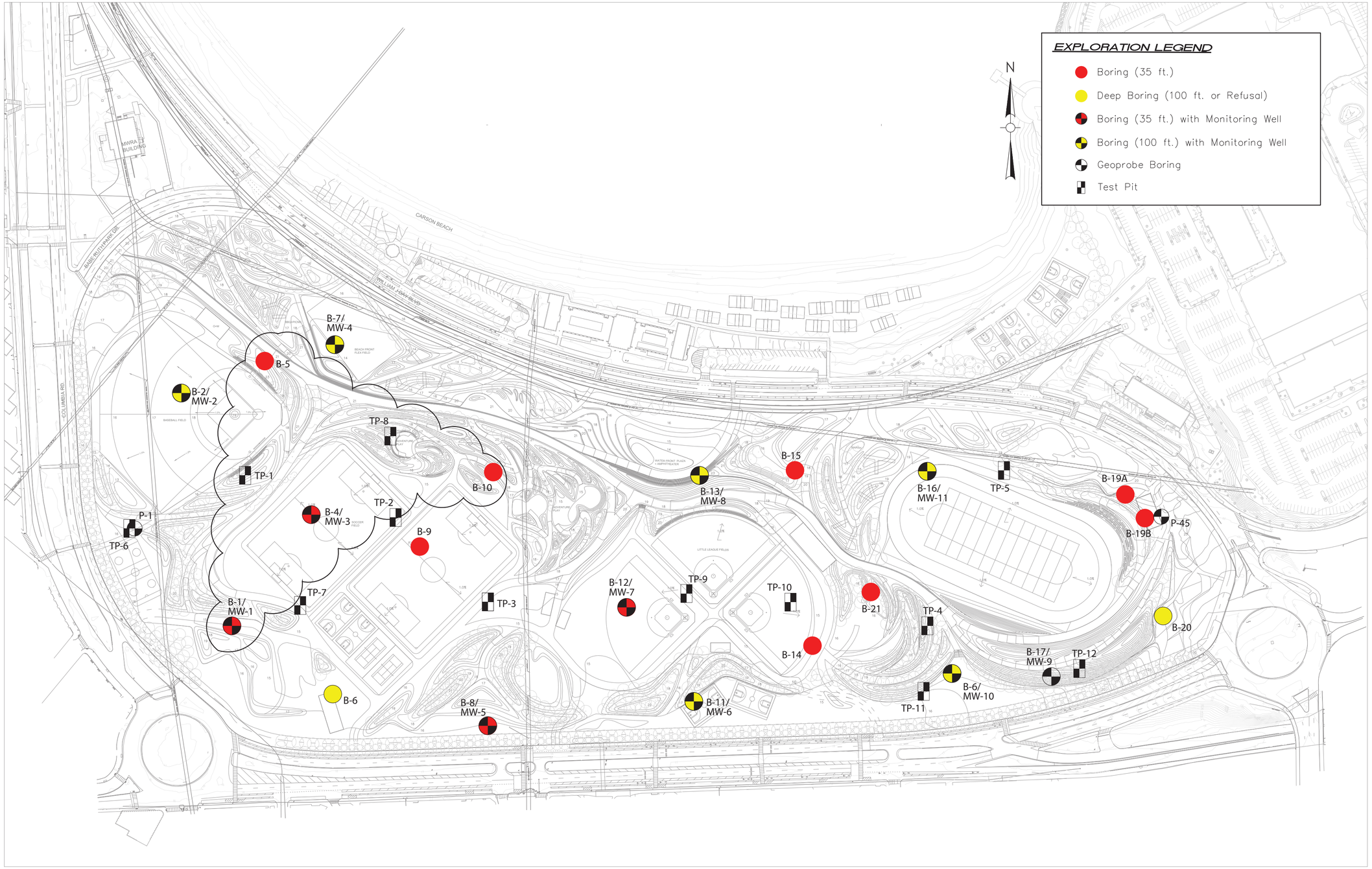

FIGURE 2
MOAKLEY PARK
BOSTON, MA

SITE PLAN

JULY 2020 SCALE: 1" = 100'

Weston & Sampson
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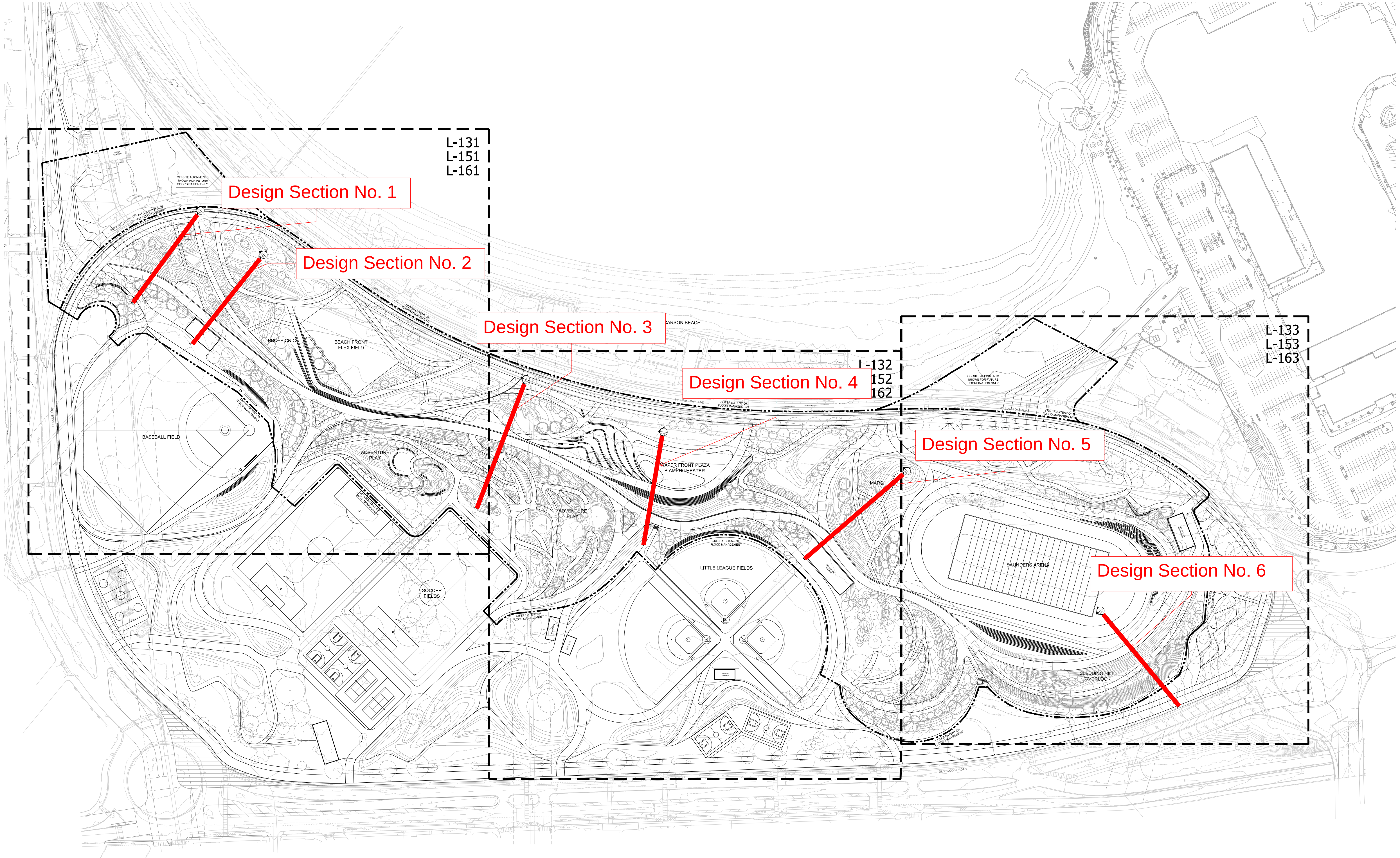
55 Walkers Brook Drive, Reading, MA 01867

ATTACHMENT A

Preliminary Flood Protection Barrier Design Plans & Sections
(Provided by Stoss)



SHEET INDEX

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L-201 LANDSCAPE SECTIONS
L-202 LANDSCAPE SECTIONS
L-203 LANDSCAPE SECTIONS

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L-205 EARTHWORK SECTIONS
L-206 EARTHWORK SECTIONS

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MOAKLEY PARK

PROJECT NUMBER: BPR1901

BOSTON PARKS AND RECREATION DEPARTMENT

revision history:

No.	Date	Revision
01	08.21.20	3.2 PRE-SD ISSUANCE

consultants stamp:

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date: 08/31/2020
scale: 1:80
format: 48" x 36"
drawn: MN, HY
checked: SS

title: KEY MAP

sheet: L-100

LEGEND

- PATHWAY
- BOARDWALK
- PLAZA
- AMPHITHEATER SEATING
- CORE WALL EXTENDING ABOVE GRADE
- CORE WALL FLUSH TO THE GRADE
- CORE WALL BELOW GRADE
- ELEVATED LEVELS OF CONTAMINATION
- MAJOR CONTOUR LINE
- MINOR CONTOUR LINE
- EXISTING CONTOUR LINE
- EXISTING TREE AND CRITICAL ROOT ZONE

NOTE:
ALL PATHS HAVE CROSS-SLOPE OF 1% MIN - 1.5% MAX.

N

SCALE 1:30
0 30' 60' 120'

STOSS
54 OLD COLONY RD 3RD FL
BOSTON, MA 02127
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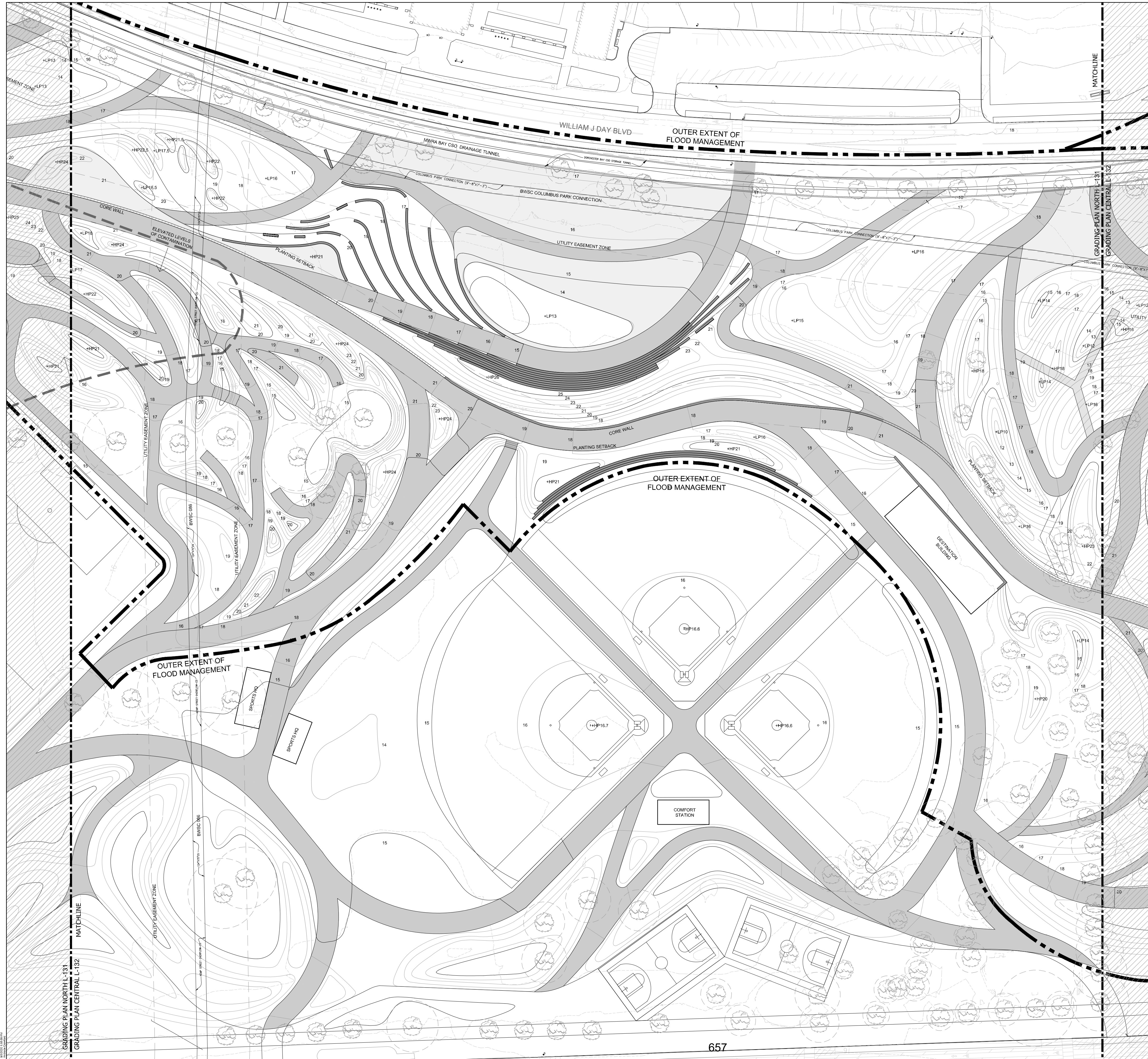
NOT FOR CONSTRUCTION

date: 08/31/2020
scale: 1:30
format: 48" x 36"
drawn: MN, HY
checked: SS

title: GRADING PLAN NORTH

sheet: L-131



LEGEND

- PATHWAY
- BOARDWALK
- PLAZA
- AMPHITHEATER SEATING
- CORE WALL EXTENDING ABOVE GRADE
- CORE WALL FLUSH TO THE GRADE
- CORE WALL BELOW GRADE
- ELEVATED LEVELS OF CONTAMINATION
- MAJOR CONTOUR LINE
- MINOR CONTOUR LINE
- EXISTING CONTOUR LINE
- EXISTING TREE AND CRITICAL ROOT ZONE

NOTE:
ALL PATHS HAVE CROSS-SLOPE OF 1% MIN - 1.5% MAX.

N

SCALE 1:30
0 30' 60' 120'

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NOT FOR CONSTRUCTION

date: 08/31/2020
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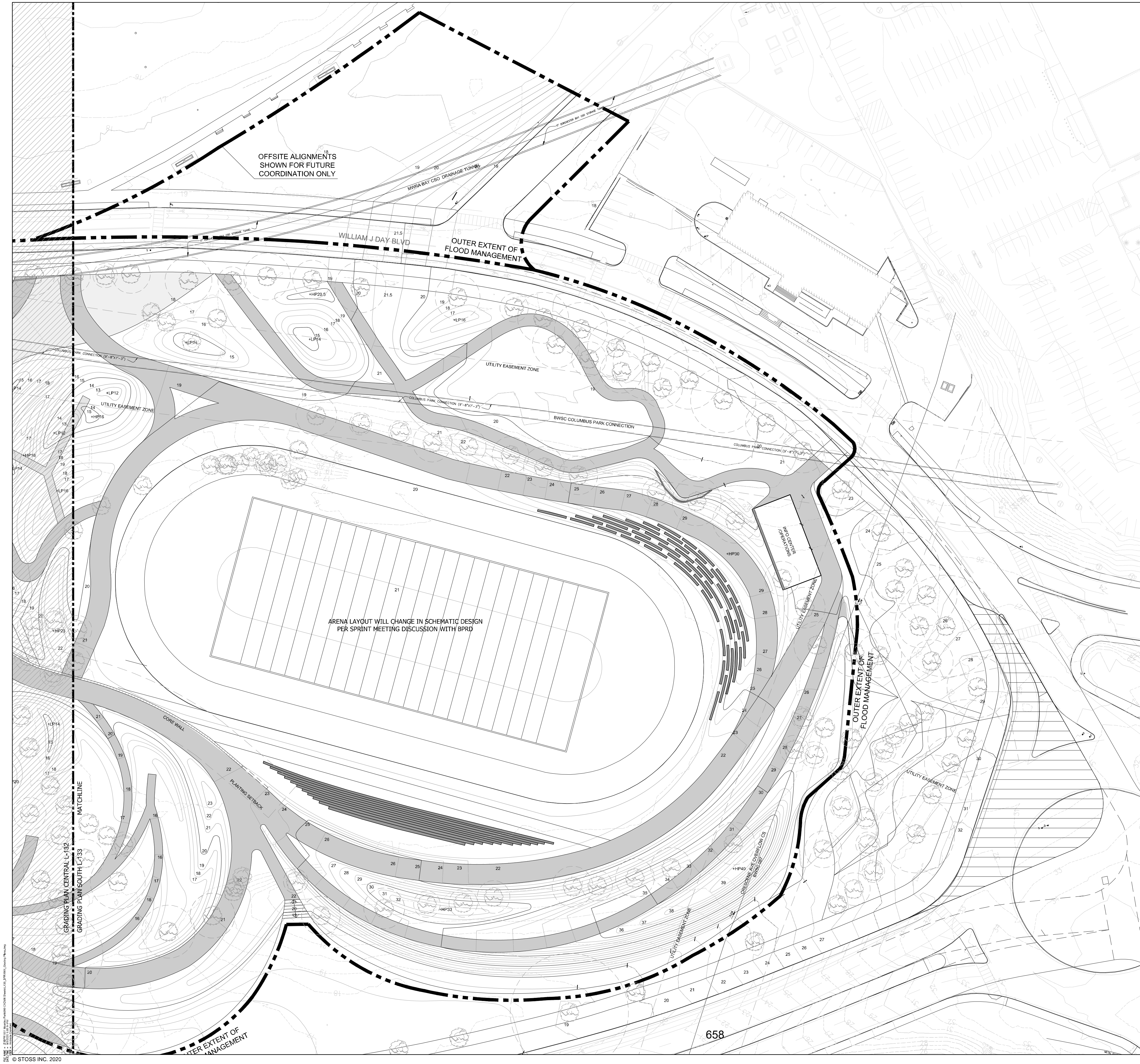
format: 48" x 36"
drawn: MN, HY
checked: SS

title:
GRADING PLAN CENTRAL

sheet:
L-132



LEGEND

- PATHWAY
- BOARDWALK
- PLAZA
- AMPHITHEATER SEATING
- CORE WALL EXTENDING ABOVE GRADE
- CORE WALL FLUSH TO THE GRADE
- CORE WALL BELOW GRADE
- ELEVATED LEVELS OF CONTAMINATION
- MAJOR CONTOUR LINE
- MINOR CONTOUR LINE
- EXISTING CONTOUR LINE
- EXISTING TREE AND CRITICAL ROOT ZONE

NOTE:
ALL PATHS HAVE CROSS-SLOPE OF 1% MIN - 1.5% MAX.

N

SCALE 1:30
0 30' 60' 120'

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date: 08/31/2020
scale: 1:30
format: 48" x 36"
drawn: MN, HY
checked: SS

title:
GRADING PLAN SOUTH

sheet:
L-133

LEGEND

- EXISTING TREE TO REMAIN
- CANOPY TREE TYPE 1 DECIDUOUS
- CANOPY TREE TYPE 2 EVERGREEN
- UNDERSTORY
- LAWN
- HERBACEOUS
- STORMWATER AREA/PLANTING
- PLANT COMMUNITY
- UNDERGROUND STORAGE

N

SCALE 1:30

0 30' 60' 120'

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date: 08/31/2020
scale: 1:30
format: 48" x 36"
drawn: MN, HY
checked: SS

title: PLANTING PLAN NORTH

sheet: L-151

LEGEND

- EXISTING TREE TO REMAIN
- CANOPY TREE TYPE 1 DECIDUOUS
- CANOPY TREE TYPE 2 EVERGREEN
- UNDERSTORY
- LAWN
- HERBACEOUS
- STORMWATER AREA/PLANTING
- PLANT COMMUNITY
- UNDERGROUND STORAGE

N

SCALE 1:30
0 30' 60' 120'

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54 OLD COLONY RD 3RD FL
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consultants stamp:

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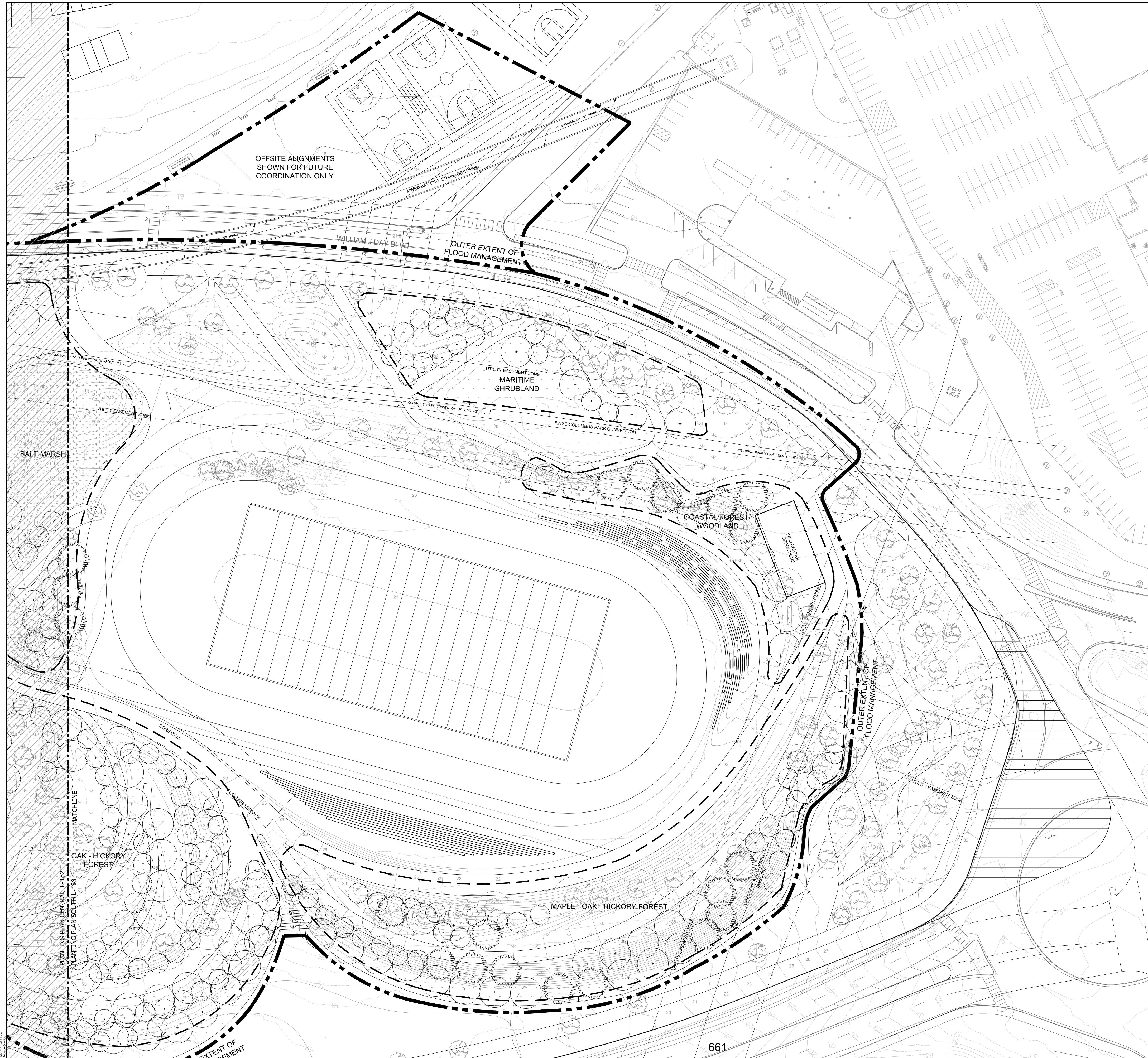
title:
PLANTING PLAN CENTRAL

sheet:
L-152



LEGEND

- EXISTING TREE TO REMAIN
- CANOPY TREE TYPE 1 DECIDUOUS
- CANOPY TREE TYPE 2 EVERGREEN
- UNDERSTORY
- LAWN
- HERBACEOUS
- STORMWATER AREA/PLANTING
- PLANT COMMUNITY
- UNDERGROUND STORAGE

N

SCALE 1:30

0 30' 60' 120'

STOSS

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date: 08/31/2020
scale: 1:30
format: 48" x 36"
drawn: MN, HY
checked: SS

title:

PLANTING PLAN SOUTH

sheet:

L-153

LEGEND

- SOIL AT TREES 3-6' PLANTING SOIL
- SOIL IN SHRUB AREA 2-3' PLANTING SOIL
- SOIL IN HERBACEOUS AREA 1' PLANTING SOIL
- SOIL AT TREES IN PAVED AREA 3-6' STRUCTURAL SOIL
- SOIL AT TREES IN STORMWATER MEADOW AREA 3-6' INFILTRATION SOIL
- SOIL IN STORMWATER MEADOW AREA 1' INFILTRATION SOIL
- APPROX. FILL AREA

N

SCALE 1:30

0 30' 60' 120'

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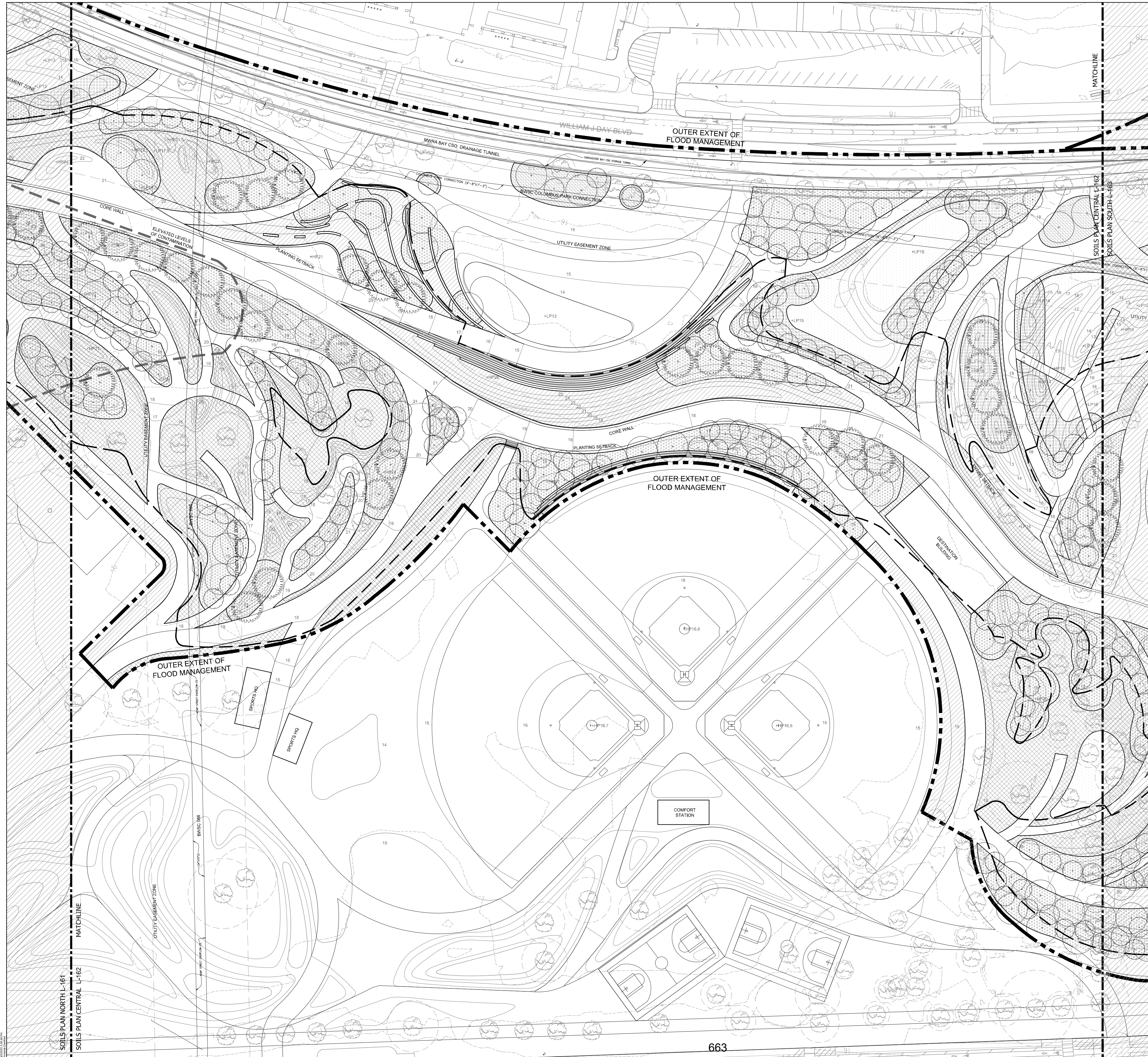
NOT FOR CONSTRUCTION

date: 08/31/2020
scale: 1:30
format: 48" x 36"
drawn: MN, HY
checked: SS

title: SOILS PLAN NORTH

sheet: L-161



LEGEND

- SOIL AT TREES 3-6' PLANTING SOIL
- SOIL IN SHRUB AREA 2-3' PLANTING SOIL
- SOIL IN HERBACEOUS AREA 1' PLANTING SOIL
- SOIL AT TREES IN PAVED AREA 3-6' STRUCTURAL SOIL
- SOIL AT TREES IN STORMWATER MEADOW AREA 3-6' INFILTRATION SOIL
- SOIL IN STORMWATER MEADOW AREA 1' INFILTRATION SOIL
- APPROX. FILL AREA

N

SCALE 1:30

0 30' 60' 120'

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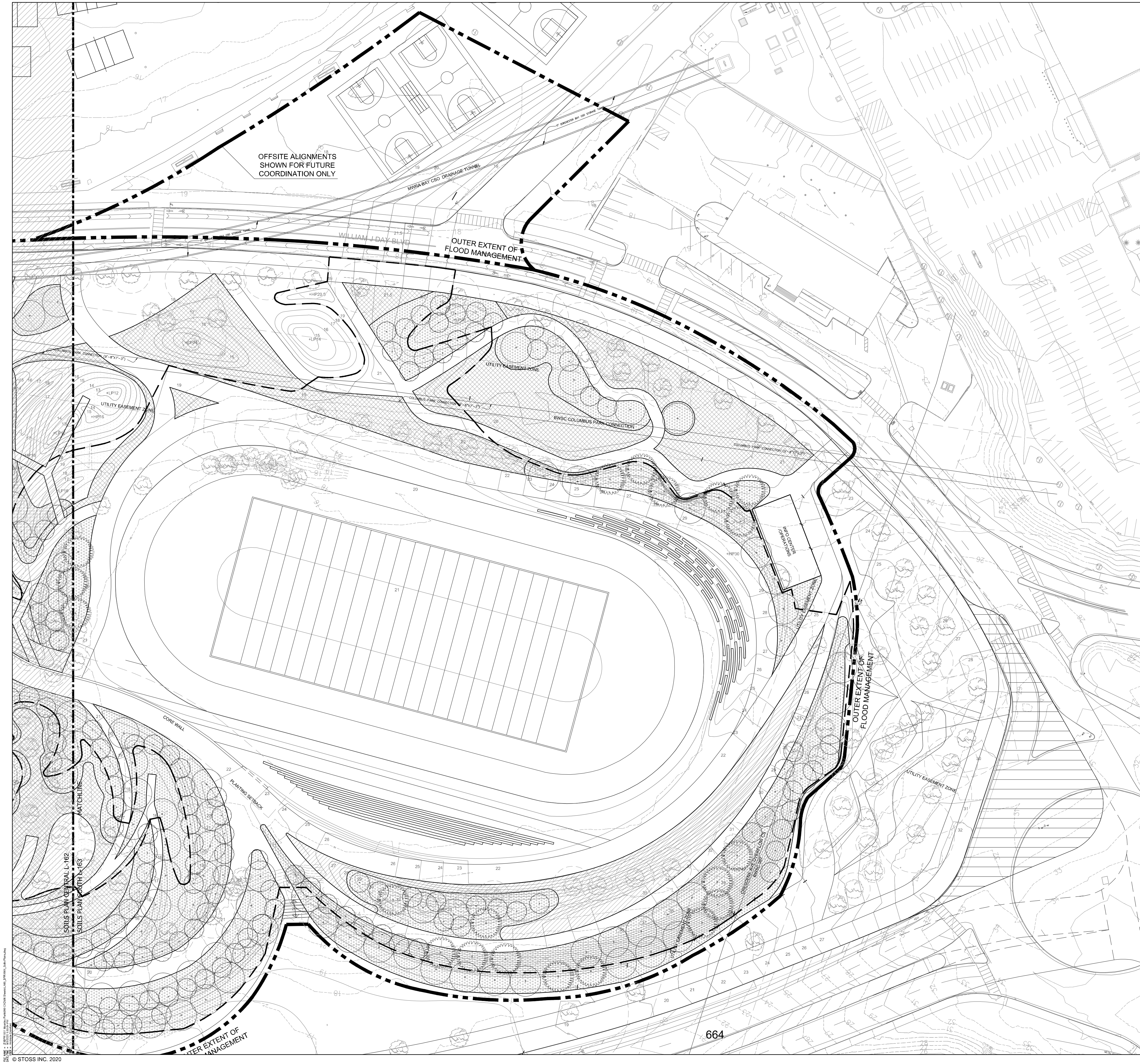
title: SOILS PLAN CENTRAL

sheet: L-162



664

LEGEND

- SOIL AT TREES 3-6' PLANTING SOIL
- SOIL IN SHRUB AREA 2-3' PLANTING SOIL
- SOIL IN HERBACEOUS AREA 1' PLANTING SOIL
- SOIL AT TREES IN PAVED AREA 3-6' STRUCTURAL SOIL
- SOIL AT TREES IN STORMWATER MEADOW AREA 3-6' INFILTRATION SOIL
- SOIL IN STORMWATER MEADOW AREA 1' INFILTRATION SOIL
- APPROX. FILL AREA

N

SCALE 1:30
0 30' 60' 120'

STOSS
54 OLD COLONY RD 3RD FL
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date: 08/31/2020
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format: 48" x 36"
drawn: MN, HY
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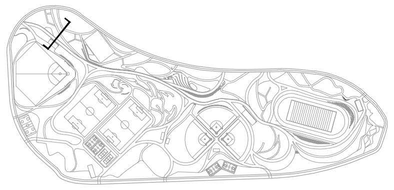
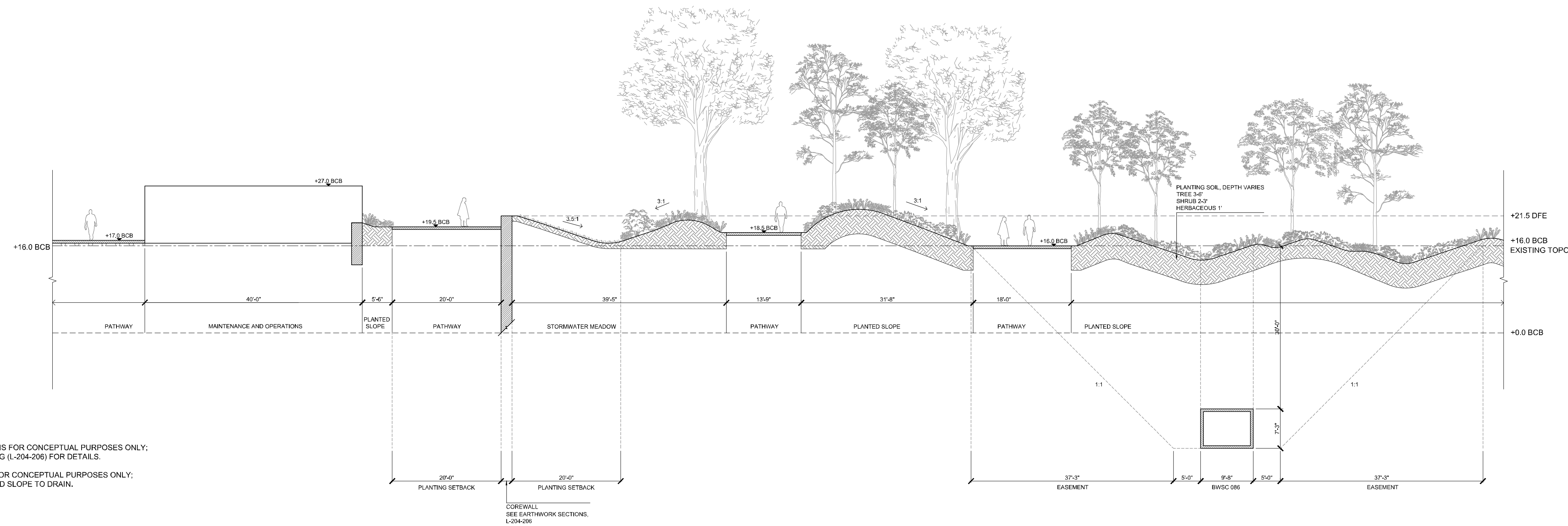
title: SOILS PLAN SOUTH

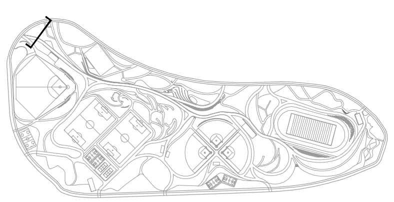
sheet: L-163

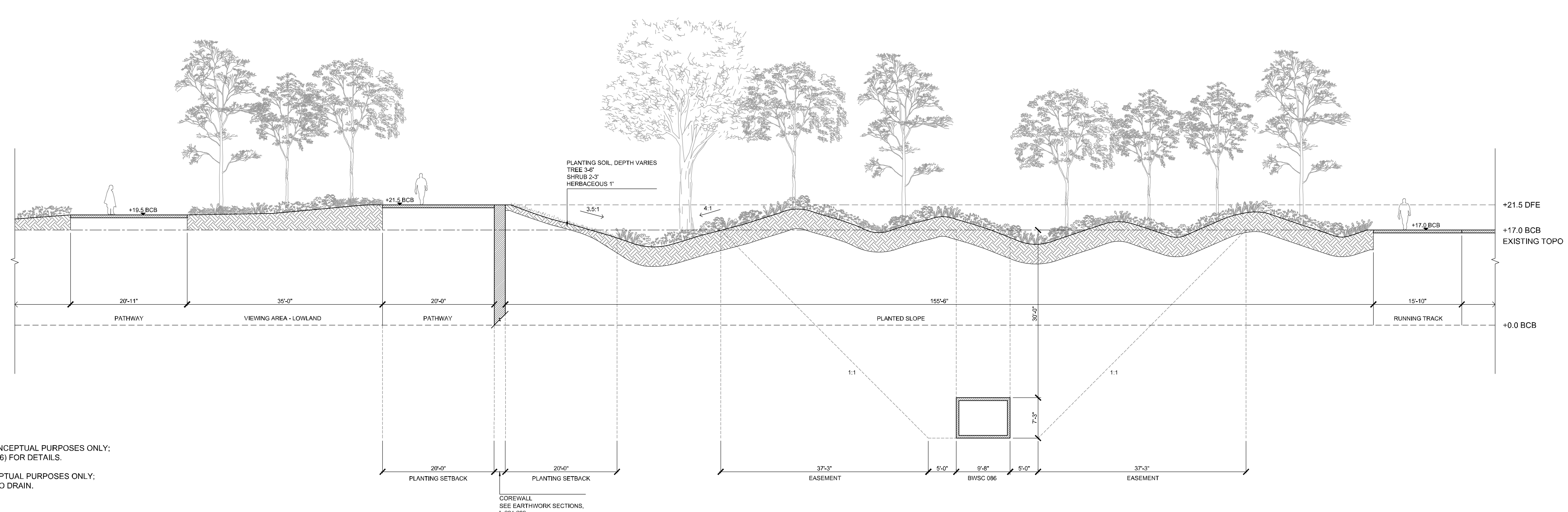




NOTE:
1. SUBGRADE CONDITIONS FOR CONCEPTUAL PURPOSES ONLY; SEE ENGINEERING DWG (L-204-206) FOR DETAILS.
2. ALL SLOPES SHOWN FOR CONCEPTUAL PURPOSES ONLY; ALL SURFACES SHOULD SLOPE TO DRAIN.

SECTION 2 - MAIN BASEBALL (2 / L201)
1/8" = 1'-0"





NOTE:
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2. ALL SLOPES SHOWN FOR CONCEPTUAL PURPOSES ONLY; ALL SURFACES SHOULD SLOPE TO DRAIN.

SECTION 1 - LOW-MARSH PICNIC (1 / L201)
1/8" = 1'-0"

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consultants stamp:

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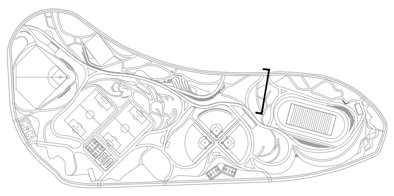
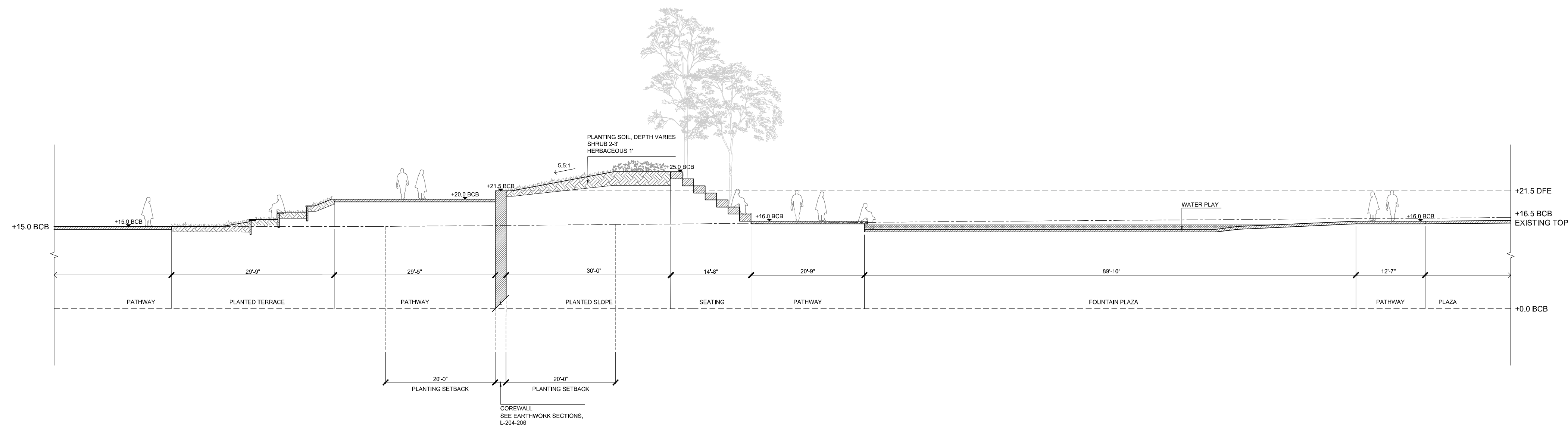
title:
SECTIONS

sheet:
L-201

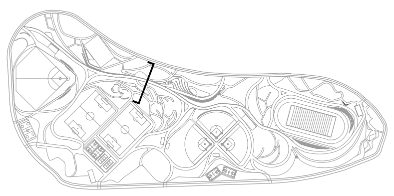


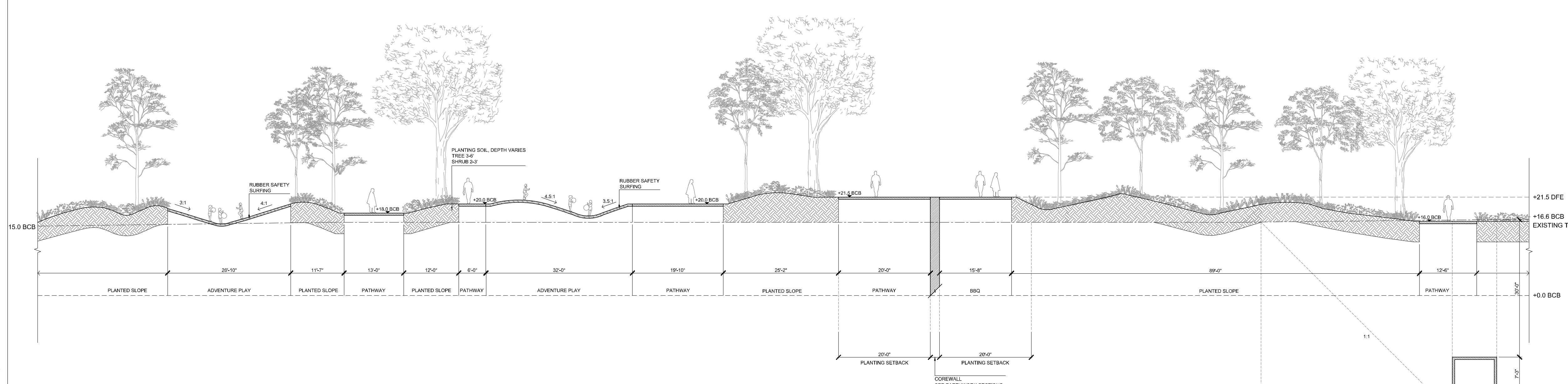


NOTE:
1. SUBGRADE CONDITIONS FOR CONCEPTUAL PURPOSES ONLY; SEE ENGINEERING DWG (L-204-206) FOR DETAILS.
2. ALL SLOPES SHOWN FOR CONCEPTUAL PURPOSES ONLY; ALL SURFACES SHOULD SLOPE TO DRAIN.

SECTION 4 - WATERFRONT PLAZA (2 / L202)

1/8" = 1'-0"





NOTE:
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2. ALL SLOPES SHOWN FOR CONCEPTUAL PURPOSES ONLY; ALL SURFACES SHOULD SLOPE TO DRAIN.

SECTION 3 - ADVENTURE PLAY (1 / L202)

1/8" = 1'-0"

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date: 08/31/2020
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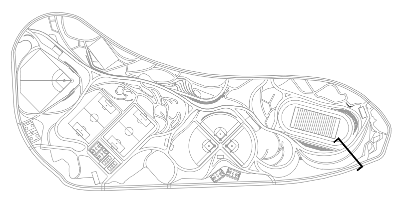
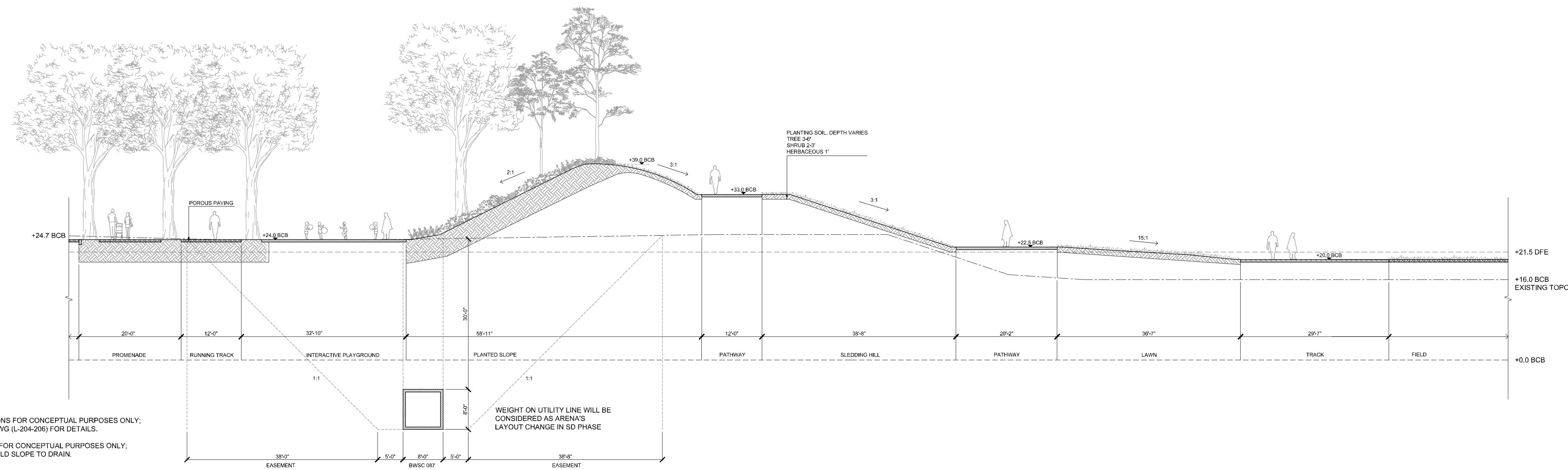
title: SECTIONS

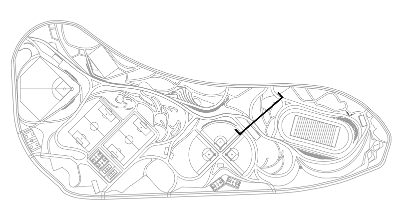
sheet: L-202

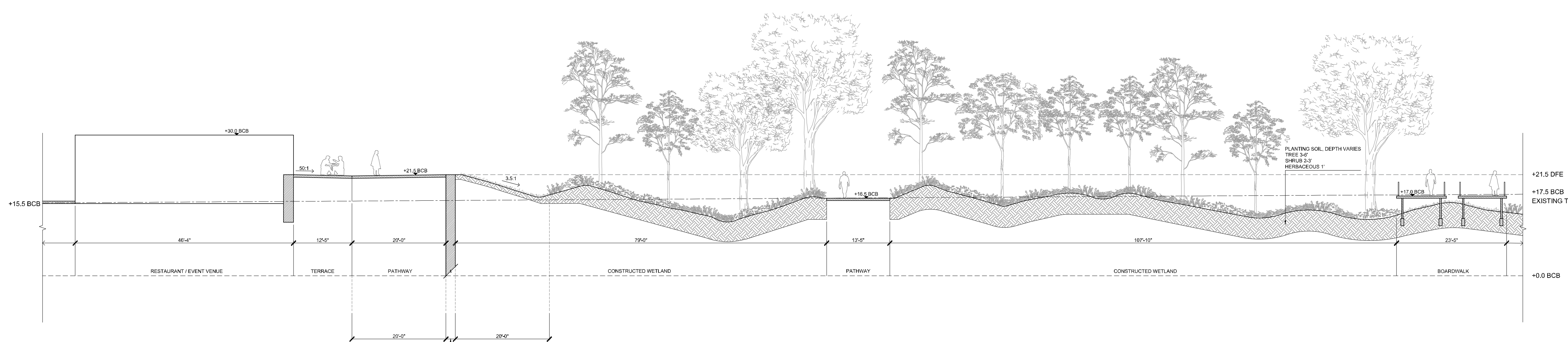




NOTE:
1. SUBGRADE CONDITIONS FOR CONCEPTUAL PURPOSES ONLY; SEE ENGINEERING DWG (L-204-206) FOR DETAILS.
2. ALL SLOPES SHOWN FOR CONCEPTUAL PURPOSES ONLY; ALL SURFACES SHOULD SLOPE TO DRAIN.

SECTION 6 - SLEDDING HILL - ARENA 2 L203
1/8" = 1'-0"





NOTE:
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SECTION 5 - BASEBALL-MARSH 1 L203
1/8" = 1'-0"

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consultants stamp:

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date: 08/31/2020
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format: 48" x 36"
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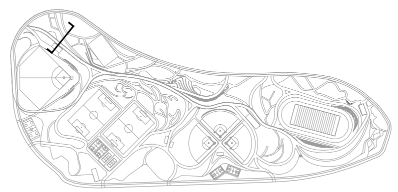
checked: SS

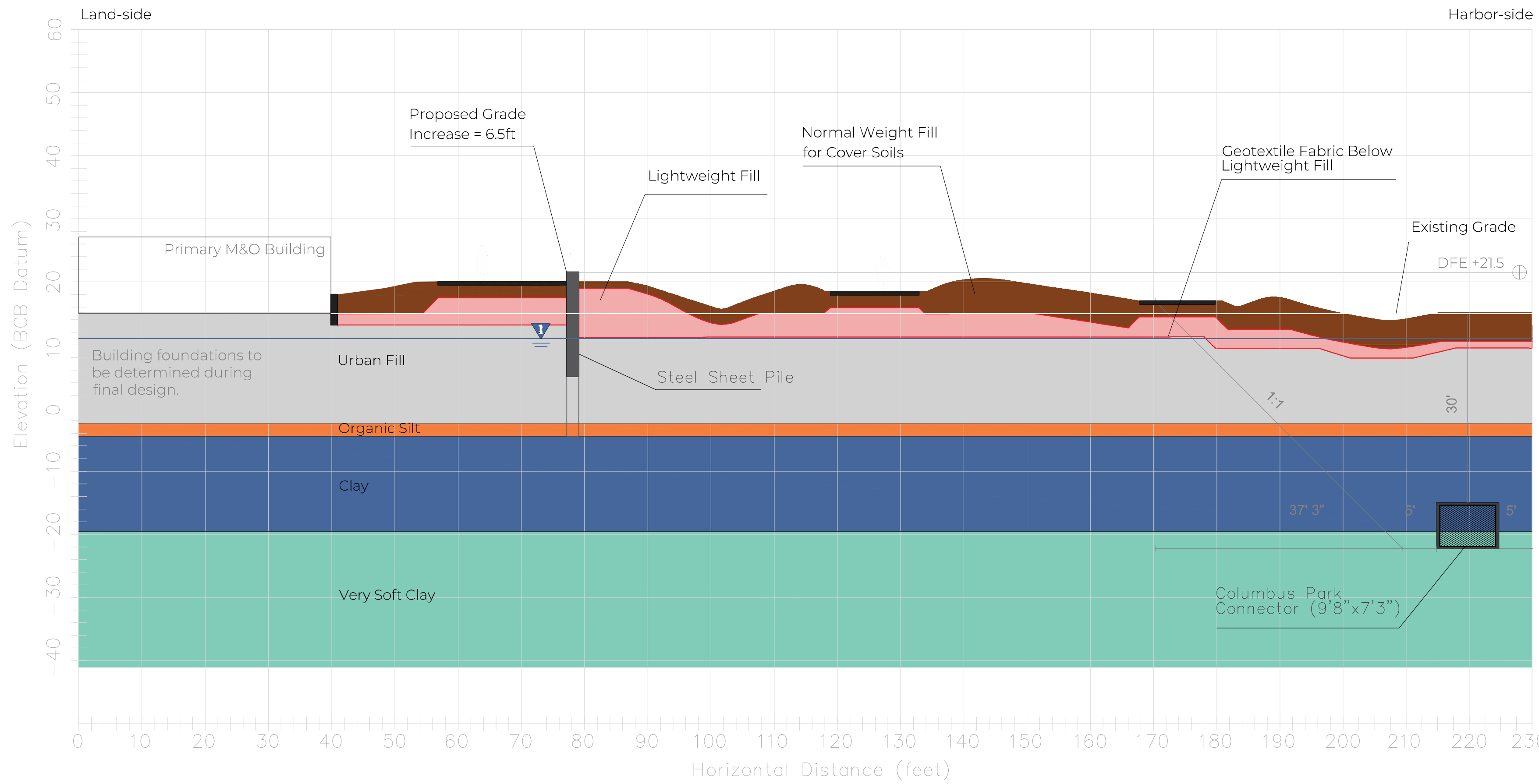
title: SECTIONS

sheet: L-203

ATTACHMENT B

Preliminary Foundation Design Alternatives -
Flood Protection Barrier



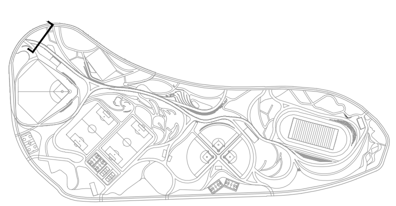


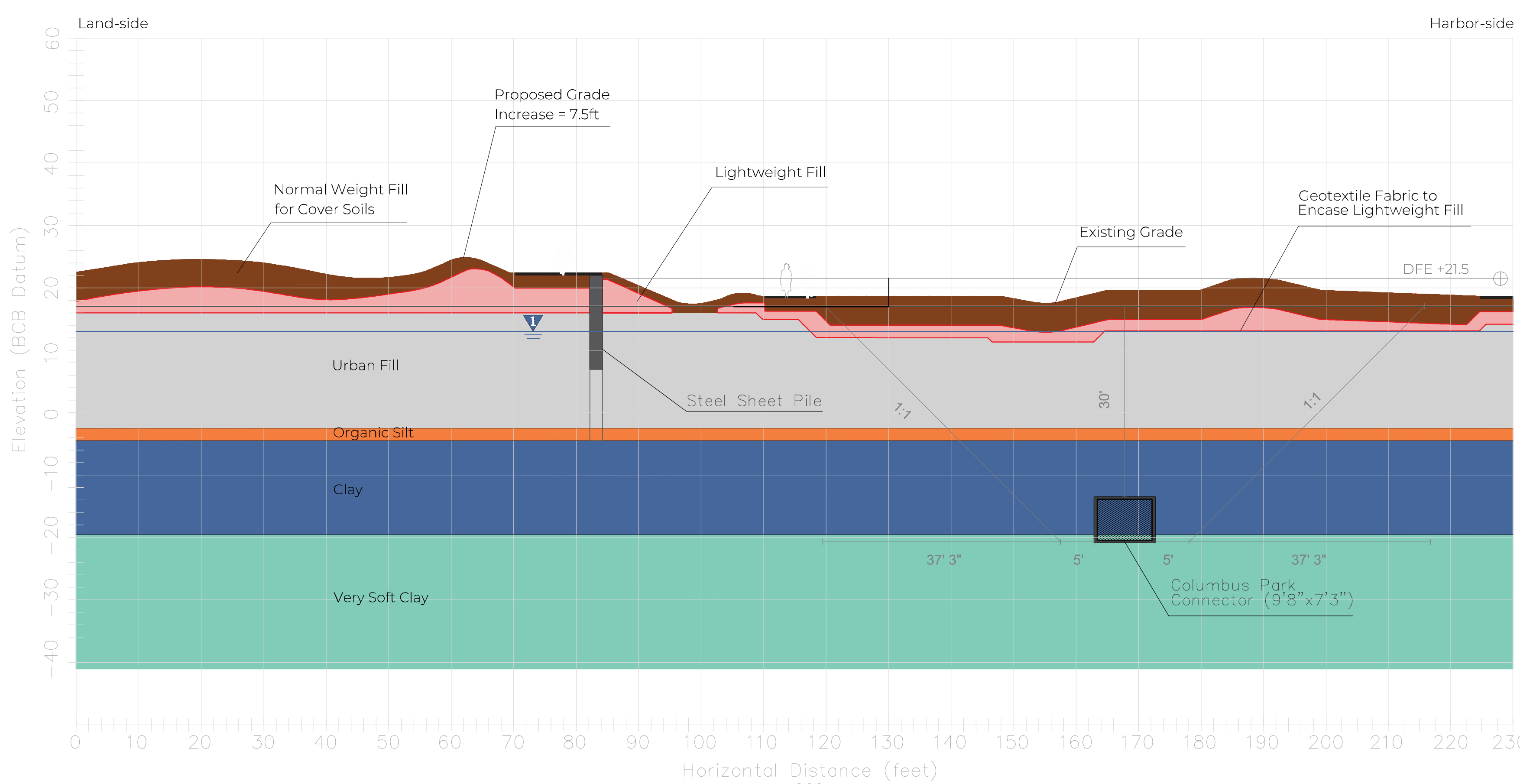
Notes:

1. The flood protection barrier geometry that is shown is based on cross-sections prepared by Stoss and received by Weston & Sampson on June 26, 2020.
2. Subsurface soil and groundwater conditions shown have been based on a limited number of subsurface explorations completed as part of the geotechnical feasibility evaluation and should be considered approximate. Actual subsurface soil and groundwater conditions may vary. Subsurface soil and groundwater conditions at Section 1 are based on B-2.
3. Groundwater elevations shown are based on conditions encountered during drilling. Groundwater conditions shown do not reflect potential changes that may occur to groundwater levels due to installation of a sheet pile wall or due to sea level rise.
4. Existing utility location, size and depth are based on available design plans. Actual locations to be confirmed prior to construction.
5. The Design Flood Elevation (DFE) of El. 21.5 is based on El. 20.5 ft plus one foot of freeboard
6. Refer to Landscape Section 2 - Main Baseball on Sheet L-201

EARTHWORK SECTION 2 - MAIN BASEBALL (2 / L201)

1/8" = 1'-0"





Notes:

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3. Groundwater elevations shown are based on conditions encountered during drilling. Groundwater conditions shown do not reflect potential changes that may occur to groundwater levels due to installation of a sheet pile wall or due to sea level rise.
4. Existing utility location, size and depth are based on available design plans. Actual locations to be confirmed prior to construction.
5. The Design Flood Elevation (DFE) of El. 21.5 is based on El. 20.5 ft plus one foot of freeboard

6. Refer to Landscape Section 1 - Low Marsh Picnic on Sheet L-201

EARTHWORK SECTION 1 - LOW-MARSH PICNIC (1 / L201)

1/8" = 1'-0"

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format: 48" x 36"
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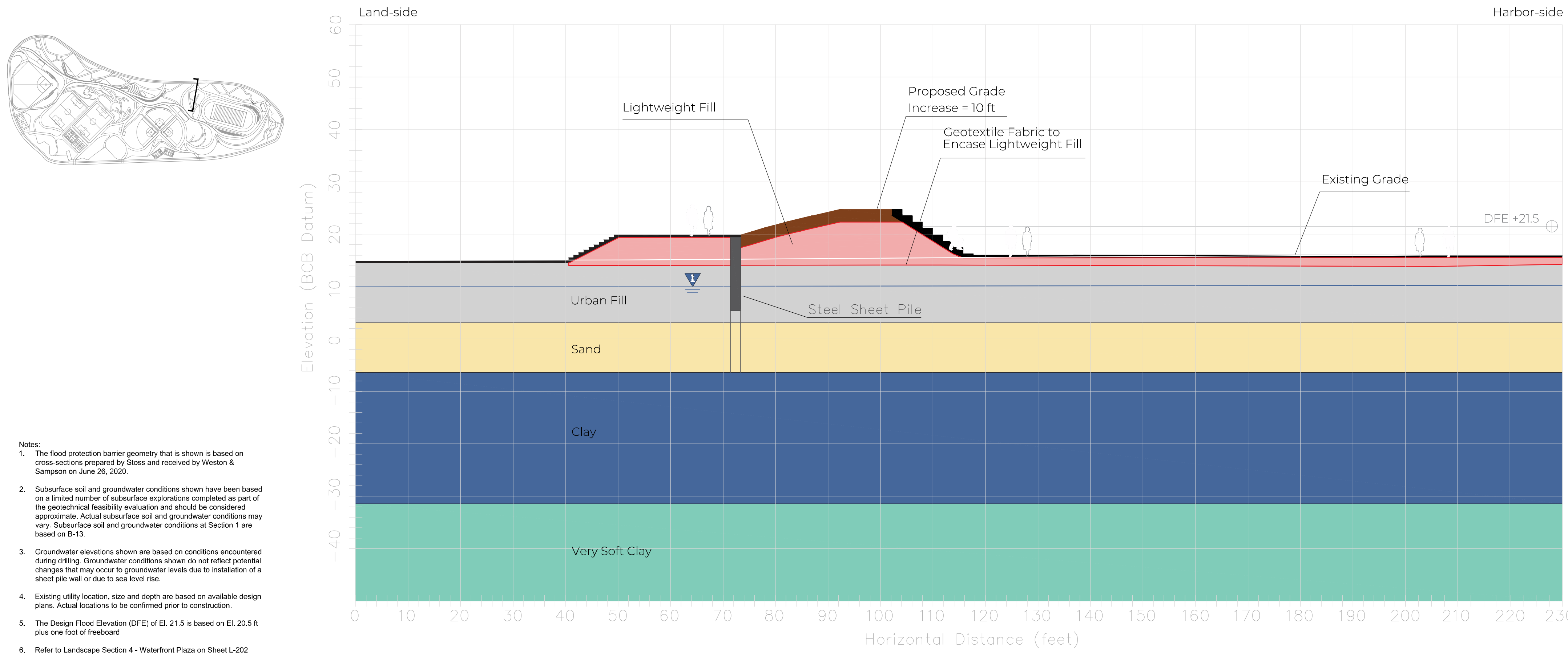
checked: JL, SS

title:
SECTIONS

sheet:
L-204



Notes:
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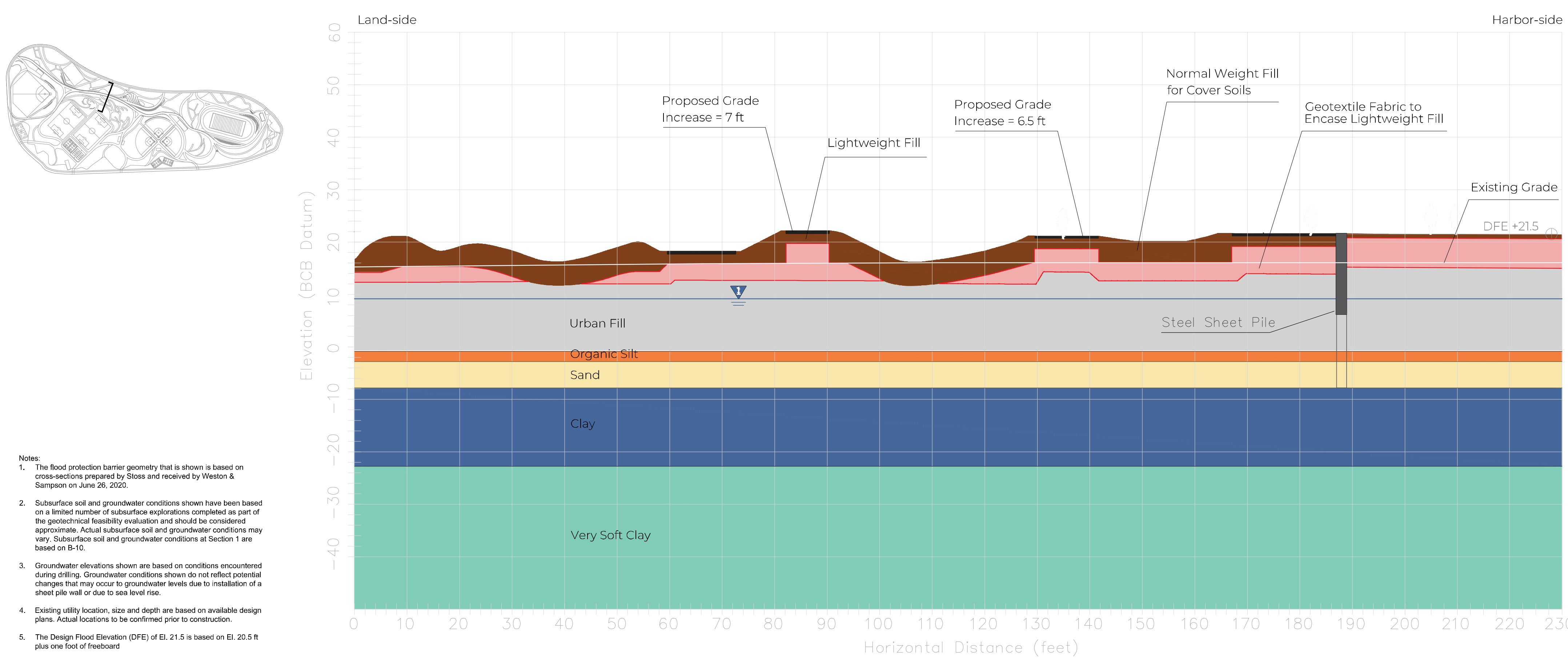
2. Subsurface soil and groundwater conditions shown have been based on a limited number of subsurface explorations completed as part of the geotechnical feasibility evaluation and should be considered approximate. Actual subsurface soil and groundwater conditions may vary. Subsurface soil and groundwater conditions at Section 1 are based on B-13.
3. Groundwater elevations shown are based on conditions encountered during drilling. Groundwater conditions shown do not reflect potential changes that may occur to groundwater levels due to installation of a sheet pile wall or due to sea level rise.
4. Existing utility location, size and depth are based on available design plans. Actual locations to be confirmed prior to construction.
5. The Design Flood Elevation (DFE) of El. 21.5 is based on El. 20.5 ft plus one foot of freeboard
6. Refer to Landscape Section 4 - Waterfront Plaza on Sheet L-202

EARTHWORK SECTION 4 - WATERFRONT PLAZA 2 / L202



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3. Groundwater elevations shown are based on conditions encountered during drilling. Groundwater conditions shown do not reflect potential changes that may occur to groundwater levels due to installation of a sheet pile wall or due to sea level rise.
4. Existing utility location, size and depth are based on available design plans. Actual locations to be confirmed prior to construction.
5. The Design Flood Elevation (DFE) of El. 21.5 is based on El. 20.5 ft plus one foot of freeboard
6. Refer to Landscape Section 3 - Adventure Play on Sheet L-202

EARTHWORK SECTION 3 - ADVENTURE PLAY 1 / L202

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MOAKLEY PARK
PROJECT NUMBER: BPR1901
BOSTON PARKS AND RECREATION DEPARTMENT

revision history:

consultants stamp:

NOT FOR BID
NOT FOR CONSTRUCTION

date: 08/26/2020
scale: AS SHOWN
format: 48" x 36"
drawn: JF
checked: JL, SS

title: SECTIONS

sheet: L-205

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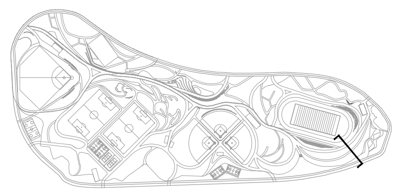

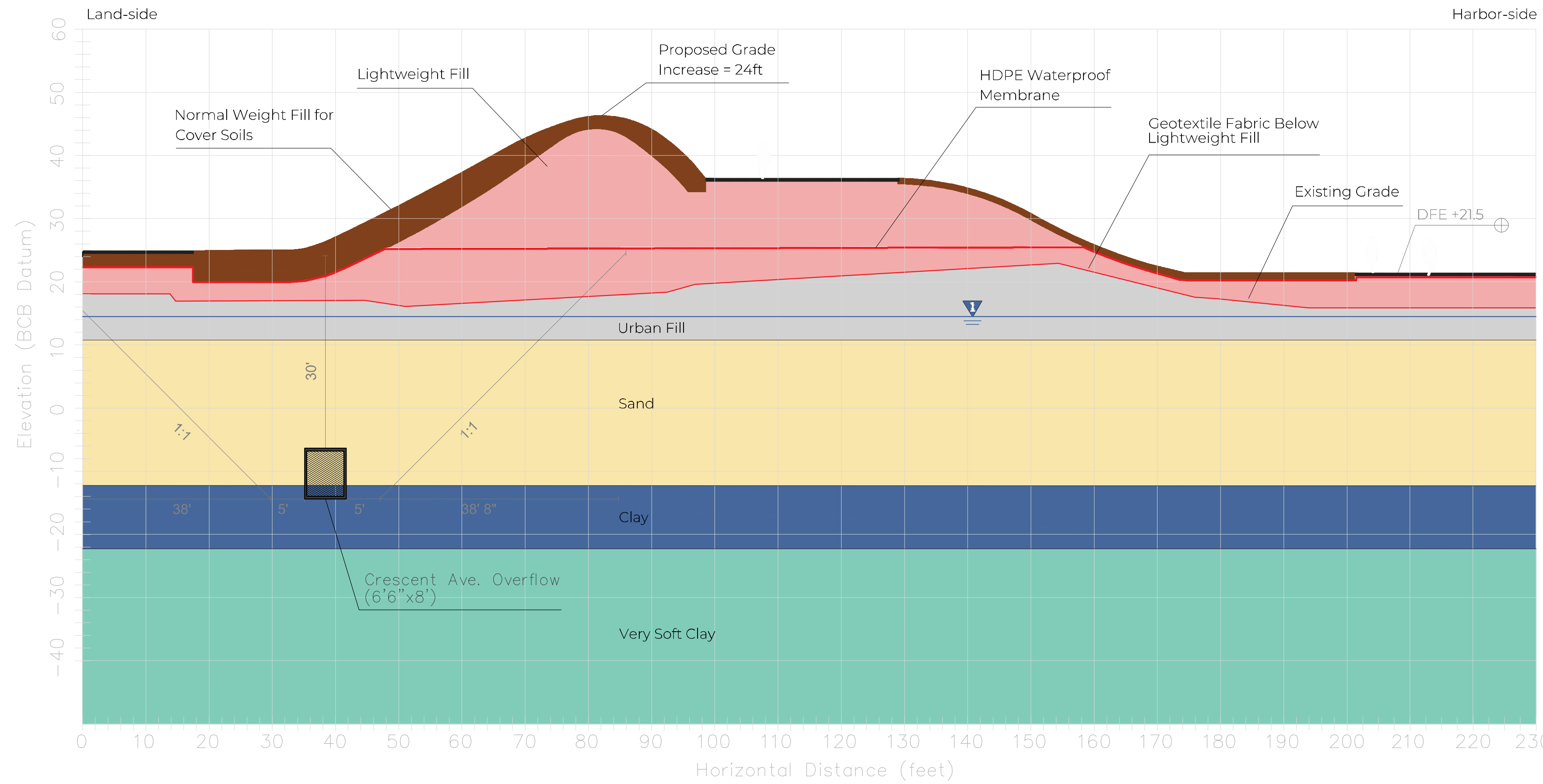

Notes:

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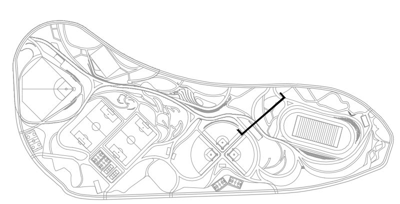
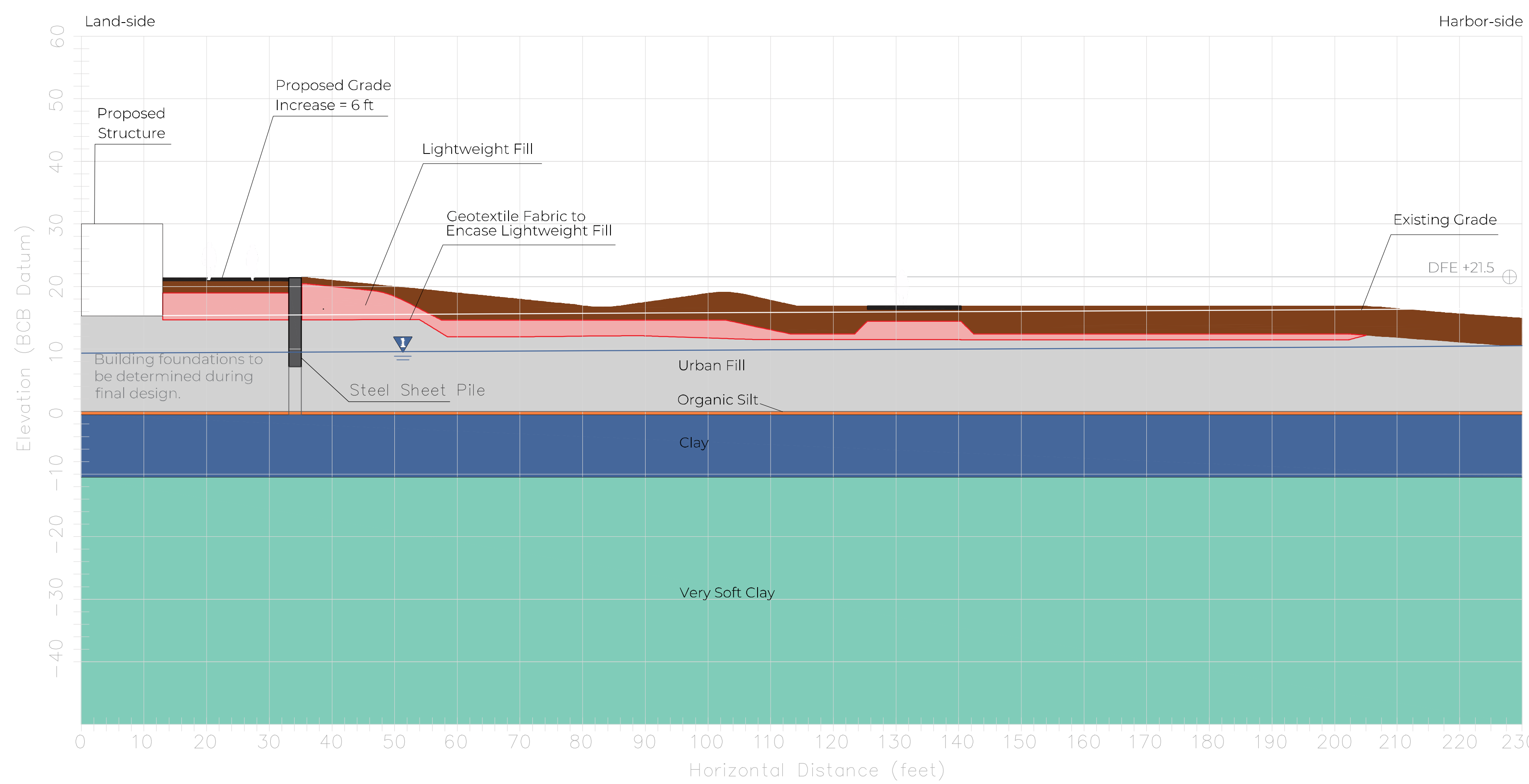
3. Groundwater elevations shown are based on conditions encountered during drilling. Groundwater conditions shown do not reflect potential changes that may occur to groundwater levels due to installation of a sheet pile wall or due to sea level rise.
4. Existing utility location, size and depth are based on available design plans. Actual locations to be confirmed prior to construction.
5. The Design Flood Elevation (DFE) of El. 21.5 is based on El. 20.5 ft plus one foot of freeboard
6. Refer to Landscape Section 6 - Sledding Hill on Sheet L-203

EARTHWORK SECTION 6 - SLEDDING HILL - ARENA 2/L203





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2. Subsurface soil and groundwater conditions shown have been based on a limited number of subsurface explorations completed as part of the geotechnical feasibility evaluation and should be considered approximate. Actual subsurface soil and groundwater conditions may vary. Subsurface soil and groundwater conditions at Section 1 are based on B-15.
3. Groundwater elevations shown are based on conditions encountered during drilling. Groundwater conditions shown do not reflect potential changes that may occur to groundwater levels due to installation of a sheet pile wall or due to sea level rise.
4. Existing utility location, size and depth are based on available design plans. Actual locations to be confirmed prior to construction.
5. The Design Flood Elevation (DFE) of El. 21.5 is based on El. 20.5 ft plus one foot of freeboard
6. Refer to Landscape Section 5 - Baseball-Marsh on Sheet L-203

EARTHWORK SECTION 5 - BASEBALL-MARSH 1/L203

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MOAKLEY PARK
PROJECT NUMBER: BPR1901
BOSTON PARKS AND RECREATION DEPARTMENT

revision history:

No.	Date	Revision

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NOT FOR CONSTRUCTION

date: 08/26/2020
scale: AS SHOWN
format: 48" x 36"
drawn: JF
checked: JL, SS

title: SECTIONS

sheet: L-206

ATTACHMENT C

"Important Information About This Geotechnical Engineering Report" by GBA

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled*. No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be*, and, in general, *if you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying it. A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed*. The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely*. Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old.*

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration.*** Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

PRE-PERMITTING APPLICATION MEETING

WESTON & SAMPSON

- MEETING AGENDA

Moakley Park Improvements Project

Pre Permitting Discussion with Environmental Reviewing Agencies

June 16, 2020

AGENDA

I. Introductions
II. Overall Project Discussion
III. Phase I Project Discussion
IV. Project Schedule
V. Environmental Resources
VI. Phase I Permitting Strategy
VII. Overall Permitting Strategy

Expected Attendees:

Review Agency	**Contact Person**
Boston Parks and Recreation Department	Allison Perlman
Boston Parks and Recreation Department	Liza Meyer
Weston & Sampson	Mel Higgins
Stoss	Amy Whitesides
Weston & Sampson	Julie Eaton
MassDEP – Ch 91	Daniel Padien
MassDEP - 401 WQC	David Wong
MassDEP	Heidi Davis
MassDEP - Ch 91	Chrissie Hopps
ACOE	Christine Jacek
MEPA - ENF	Paige Czepiga
MA CZM	Bob Boeri
MA CZM's Boston Harbor Regional Coordinator	Erikk Hokenson
MA CZM's Boston Harbor	Rebecca Haney
Boston conservation commission	Nick Moreno

PERMITTING REVIEW AND REVISION MEMOS

WESTON & SAMPSON

- REVIEW AND REVISION MEMORANDUM

55 Walkers Brook Drive, Suite 100, Reading, MA 01867
Tel: 978.532.1900

M E M O R A N D U M

TO: Allison Perlman – Boston Parks and Recreation Department

FROM: Mel Higgins, PWS

DATE: August 13, 2020

SUBJECT: Moakley Park Inter-Agency Pre-Permitting Meeting Summary

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On June 16, 2020, members from the Moakley Park improvement project team met online with environmental reviewing agencies from Massachusetts Department of Environmental Protection (MassDEP), Massachusetts Environmental Policy Act (MEPA) office, and Coastal Zone Management (CZM) office to discuss the Moakley Park improvement project. Attendees included:

- Allison Perlman (Boston Parks and Recreation Department (BPRD)
- Amy Whitesides (Stoss)
- Julie Eaton (Weston & Sampson)
- Mel Higgins (Weston & Sampson)
- Daniel Padien (MassDEP)
- Heidi Davis (MassDEP)
- Paige Czepiga (MEPA office)
- Tori Kim (MEPA office)
- Erikk Hokenson (CZM)
- Rebecca Haney (CZM)

Additionally, on June 24, 2020, this same discussion took place with Nicholas Moreno of the Boston Conservation Commission.

Discussion Summary

A brief discussion of the many different future components of this project were presented that included:

- Park improvement
- Flood management barrier
- Promenade (off-site)
- Beach nourishment (off-site)

Beach Nourishment and Promenade

The promenade and beach nourishment components fall within Massachusetts Department of Conservation & Recreation (DCR) property; therefore, both would be considered separate projects independent from the BPRD Moakley Park improvements project. DCR would file any permits related to the promenade and beach nourishment. This information was provided so the reviewing agencies understood that related projects may be coming their way in the future.

Park Improvements and Berm

Project discussion focused on the overall park improvements project in general (including flood management barrier) and Phase I work specifically. A map showing the proposed Phase I work area is provided at the end of this memorandum (Figure 1). Work presented under Phase I included the following:

- Low marsh picnic area
- Flex-field/family play area
- BBQ and picnic area
- Operations and maintenance facility
- Coastal dune creation
- Fragrance garden and sports viewing area
- Baseball playing field

Impacts to Environmental Resources

The only mapped environmental resource at the site at this time is Land Subject to Coastal Storm Flowage (LSCSF) based on current FEMA mapping. The team believes that the park is not within LSCSF based on recent modeling results and that future discussions with the FEMA office will occur in an effort to remove the park from the flood zone. This effort will include the submission of a Letter of Map Revision (LOMR) to the FEMA office.

Permitting strategies were discussed using two different scenarios:

1. construction activity would be in the flood zone, and
2. construction activity would be outside the flood zone.

MEPA Response to Discussion

Several different approaches to permitting through the MEPA office were discussed, including a Special Review Procedures (SRP), Expanded Environmental Notification Form (EENF) with Phase I waiver, and EIR submission.

The SRP process is tailor made for each project that is reviewed through this process. The MEPA permitting team meets with the project proponent to determine which specific information will be required for submission and review timelines based on the project's complexity and information that will need to be reviewed. This is considered a good option for non-traditional permitting projects such as the Moakley project where final design may not be realized for several years.

The EENF with Phase I waiver Is a more complex version of the ENF where additional information (studies/reports/laboratory information, etc.) would need to be submitted on a specific part of the project. The specific part of the project would be approved and work allowed to start while the rest of the project is being reviewed with additional submittals.

The EIR submission first requires the submission and review of an ENF. Once the ENF has been reviewed, the MEPA office will provide direction on the focus of the EIR. A Draft EIR will be submitted for MEPA review with a Final EIR being submitted which includes responses to comments provided as part of the DEIR review. The EIR is the most complex review process through the MEPA office with the longest review time.

Ultimately, it was decided that the SRP would be the most efficient way to move forward rather than having to undergo other options which are more cumbersome and involved. Additional details concerning discussions of these MEPA permit review options are presented, below.

Additional MEPA Information Not Discussed During the Inter-Agency Meeting

After the inter-agency meeting, BPRD had questioned whether the Moakley Park improvements project might be considered a "prototype" project. Prototype projects are mentioned in the MEPA regulations and are considered during the Special Review Procedures (SRP) process (301 CMR 11.09(4)(d)). A prototype project is defined in the MEPA regulations as a project that can be approved "that will be replicated in substantially similar form at one or more future times or locations." As part of the MEPA approval, MEPA will adopt specific guidelines to ensure environmental impacts of future projects are substantially similar to the prototype project. While making this a prototype project may not facilitate the permitting process for this specific project, it will streamline the permitting approach for future, similar coastal resiliency projects for the City of Boston.

Future discussions with the MEPA office will be required to determine if this could be a prototype project.

Permitting Approaches:

Special Review Procedures

While the MEPA representatives noted that there are several potential paths to permit this project, the most favorable option would likely be to use the Special Review Procedures (SRP) as noted in 301 CMR 11.09. By using this option, an Environmental Notification Form (ENF) and Environmental Impact Review (EIR) would not be required. For the SRP, a phasing master plan would need to be developed. Very specific information would be provided for the Phase I work, with more general information being provided for the remaining phases. The MEPA office would approve the Phase I work only. Additional submittals would be provided to the MEPA office for review and approval for each of the remaining phases.

Expanded Environmental Notification Form

MEPA representatives discussed the possibility of submitting an Expanded Environmental Notification

Form (EENF) with Phase I waiver. The MEPA representative explained that the proponent would need to make a compelling argument for project hardship and why Phase I work needed to be approved before the other phased designs were complete. MEPA representatives did not believe that there would be a strong hardship case to be made for this project, so did not feel the EENF with Phase I waiver would be the appropriate permitting path to follow. The MEPA representatives suggested additional communications between the proponent and their office as the project design progresses to more formally determine the best permitting path with the MEPA office.

Additional Considerations:

Project Segmentation

The MEPA office was concerned with project segmentation. The MEPA representative requested a better understanding of the entire park project phasing schedule. It was explained that the timeline for the remaining phases is not yet known, but that it could take 10 – 30 years to obtain funds and finish construction of the entire park improvement project. The MEPA representative noted that because of this long timeline, they likely wouldn't consider the Phase I work as project segmentation.

Public Benefit Determination

MEPA representatives explained that part of their review would be focused on public benefit determination. This is required for projects located on tidelands, including landlocked tidelands. Much of Moakley Park is on landlocked filled tidelands. Any MEPA submission will have to have an in-depth explanation of the project's impact on the public's right to have access to, use, and enjoy tidelands. The discussion should also identify measures to avoid, minimize, or mitigate any adverse impact on those public rights. The MEPA representatives reacted positively to the creation of coastal resources and more diversified species plantings at the site.

CZM Response to Discussion

Below is a summary from the CZM representatives. They are most interested in learning: whether flooding issues at the site would result from this project and if flood waters would negatively impact neighboring parcels. Also, they would like data (model results) showing where flood waters would be directed upon project completion.

CZM explained that they could review the project under two different processes, including:

- Federal consistency review: this would be triggered is there were any federal permits or funding involved with the project. At this point, CZM is assuming no federal permits or funding, so this reviewing procedure would likely not be implemented.
- MEPA review – as part of the MEPA review process, CZM would be sent a copy of the MEPA submission. CZM would review and send comments to the MEPA office. This would be the most likely review process for the CZM office.

MassDEP Response to Discussion

MassDEP was present at the discussion and had no comments or concerns presented during the meeting. It is anticipated that all performance standards listed in the Massachusetts Wetlands Protection Act (310 CMR 10.00) will be adhered to for this project. Additional discussions with MassDEP will occur as needed.

Boston Conservation Commission Response to Discussion

Flood Zone Discussion

The conservation commission agent informed us that even if it is determined that the project is outside the LSCSF flood zone, the Boston wetlands ordinance extends protection into a mapped coastal flood resiliency zone. This will be areas projected to be in the flood zone in the future. The commission is in the middle of finalizing the maps and performance standards associated with this zone, but by the time this project is ready to submit permits (2021) this protection zone and performance standards should be in place. As the project gets closer to permit development and submission, the project team will reach back out to the conservation commission for more clarity on what they will want submitted to them.

Project Segmentation Discussion

The agent explained that the commission will be concerned with project segmentation. The agent indicated that commission members concerns may be alleviated with the submission of a phasing master plan, similar to the one that would be submitted to the MEPA office (discussed above). The agent would like to see as much detail as possible in the future phasing descriptions. The goal is to be able to gain approval for Phase I first, and then gain approval for the other phases as they are ready to be permitted. The agent noted that it will be more obvious when the project nears the permitting stage what information will be available for the other stages and how the commission will want to see the project permitted.

Next Steps

The agent suggested that a future, informal discussion with the commission may be helpful before submitting permits so the commission can voice their opinions on how to permit this project.

Future Actions

LOMR:

Timeline: Schematic Design

Lead Consultant: Woods Hole Group

At this point in time, the most important action item for the environmental permitting process will be obtaining FEMA determination of the flood zone. The project team (specifically Woods Hole Group)

will work with the FEMA office to submit and gain approval for a letter of map revision (LOMR). A permitting strategy can be finalized once the flood zone limits have been determined.

MEPA Follow up Meeting

Timeline: After Flood Zone Limit is determined

Lead Consultant: Weston & Sampson

Additional discussions with the MEPA office will be needed to determine the appropriate permitting path through the MEPA office. FEMA determination of flood zone limit should be obtained first to better inform these discussions.

Flood Pathway Modeling

Timeline: Schematic Design

Consultant:

Modeling results showing post construction floodwater pathways and impacts, if any, to neighboring properties, will be required for all environmental permit submissions. The project will need to show that there are no negative impacts to neighboring properties.

Boston Conservation Commission Follow up Meeting

Timeline: After Flood Zone Limit is determined, pre-permitting

Additional discussions with the Boston Conservation Commission should be held after determining the extent of the flood zone when closer to submitting permits. At that point in time, more information will also be available on the future phases of the project and a more formal permitting path through the conservation commission can be developed.

Required/Recommended Environmental Permits

Timeline: Dependent on LOMR submission and response by FEMA office. After Flood Zone Limit is determined and Phase 1 permitting plans finalized, there are two likely timelines:

1. If FEMA determines that Moakley Park is not in the flood zone, it should take approximately 3 – 4 months to gain approval from the environmental reviewing agencies, including:
    a. Coastal Zone Management review
    b. Boston conservation commission review (Notice of Intent)

2. If FEMA determines that Moakley Park is in the flood zone, the environmental permitting review timeline may take up to twelve months to review. This is a worst-case scenario since the MEPA SRP process will be required and the review timeline is set at the beginning of the process. The recommended permits for this this project if FEMA determines that work is in the flood zone

includes:

a. Coastal Zone Management review
b. Boston conservation commission review (Notice of Intent)
c. MEPA SRP

Lead Consultant: Weston & Sampson