Public Open Spaces and Public-Serving Uses Studies

Financial District and Seaport Climate Resilience Master Plan

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1. Overview & Objectives

This appendix is intended to supplement the Financial District and Seaport Climate Resilience Master Plan – Chapter 5: A Resilient 21st-Century Waterfront. The Master Plan needs to provide enough space along the Financial District and Seaport waterfront to replace and enhance the existing public destinations and incorporate new, additional open space and community programming. This appendix provides additional detail on the research, design studies, and recommendations put forward for the Master Plan as it relates to open space and program.

1.1 Goals of the Master Plan

To achieve the Master Plan's goal of enhancing the public waterfront, the Master Plan set out to:

a) preserve and enhance existing public destinations,
b) create multi-level waterfront open space,
c) and provide community serving uses.

Meeting these goals required in-depth studies of the existing open space, research on applicable projects and programs of interest, testing of different design scenarios, and ensuring the design was responsive to community and stakeholder feedback. In addition, the Master Plan seeks to "[i]ntegrate climate resilience infrastructure into the city by ensuring universal accessibility and emergency vehicular connections to the waterfront and along the shoreline, and a continuous bikeway." The Master Plan defines Universal Access as: "An environment designed to be usable by all people to the greatest extent possible; design that is focused on providing equitable access and experiences for people with disabilities." Universal access is an element of the Master Plan that extends to open space so to ensure universal access to the waterfront and through open space, the Master Plan proposes pathways and slopes over which people are moving that are no steeper than 5% or 1:20 to keep movement as comfortable as possible. The Americans with Disabilities Acts stipulates that movement routes with slopes steeper than 1:20 (5%) are considered ramps and require handrails and railings.

i. Incorporating Open Space & Program

The Project Team had to ensure that any proposed open space or potential program did not interfere with the project's primary goal of providing continuous and reliable flood defense. The new flood defense requires building both outwards and upwards, the main consideration was how to balance city and water facing open space and programmatic opportunities on either side of the flood defense. This required careful consideration of the existing urban fabric on the city-side of the flood defense structure and being responsive to the destinations and adjacencies of the re-envisioned public waterfront on the waterside of the structure. While the following appendix captures the Project Team's recommendation for the siting of open space and the preferred options for sitewide programming, these recommendations will require further study as the project moves towards implementation.

ii. Incorporating Community Serving Buildings

While the Project Team found that incorporating residential and large-scale commercial development into the project would not sufficiently align with the project's goals, the Master Plan integrates community buildings and small amenity buildings such as restaurants and comfort stations. Including community serving buildings helps enliven gateway entrances, enhance and activate upper-level open space, and create more usable interior and outdoor space in constrained areas. At the gateways such as Old Slip, small buildings create inviting corners framing the entrance to the waterfront on South Street. Where the flood defense alignment is pulled in between the Wall Street and Maiden Lane access points, the insertion of a community building along South Street allows the Master Plan to site a large relatively flat open space at the upper level and a substantial amount of interior space along the street.

1.2 Approach

The Project Team's approach to integrating open space, program and community buildings into the design was as follows:

1. Understand existing and surrounding program opportunities
    a. Including the need to replace and enhance existing programs and open spaces where possible
    b. Study the land use, density, and zoning of the built environment of the site and its immediate context
2. Study projects of a similar scale and context within New York City
3. Gather feedback and prioritize program recommendations from the community
4. Test two design scenarios for incorporating program into the Financial District and Seaport Waterfront with the same flood defense footprint
5. Prioritize programs based on stakeholder input and agency feedback
6. Create Hybridized Scheme that balances these priorities
7. Provide preferred and alternate program recommendations for individual spaces across the site

2. Existing conditions

The Master Plan establishes a plan for new space along the Financial District and Seaport waterfront to replace the public destinations people use today with enhanced new, additional open spaces and community programming.

To inform the design, the Project Team documented every feature of the existing waterfront and asked community members what they hope to see along the waterfront in the future. Based on these inputs, the Project Team tested a wide variety of open space typologies and public serving uses to assess what could work in the study area. The Project Team found that most of the community's ideas—including new open and green spaces, recreational spaces, restaurants, and community centers—can be integrated into the Master Plan. However, larger recreational opportunities such as full-scale soccer fields are unlikely to fit in the study area. The Project Team also tested residential and large-scale commercial uses and found that the Master Plan's footprint significantly limits the viability of these uses.

2.1 Open Space & Program

The Project Team began by posing key questions to help form urban design principles, draw key takeaways, and form recommendations for open space and program across the project site.

1. What are the qualities of the existing open space?
2. What is the user experience?
3. What programs does the open space provide?

i. What are the qualities of the existing open space?

Waterfront open space was defined as the area from the outer edge of the FDR Drive Viaduct to the edge of the shoreline and was categorized in two primary ways: 1) that which sits beneath the FDR Drive Viaduct and 2) that which sits outside of the viaduct. The following graphics demonstrate in plan and section the categorization.

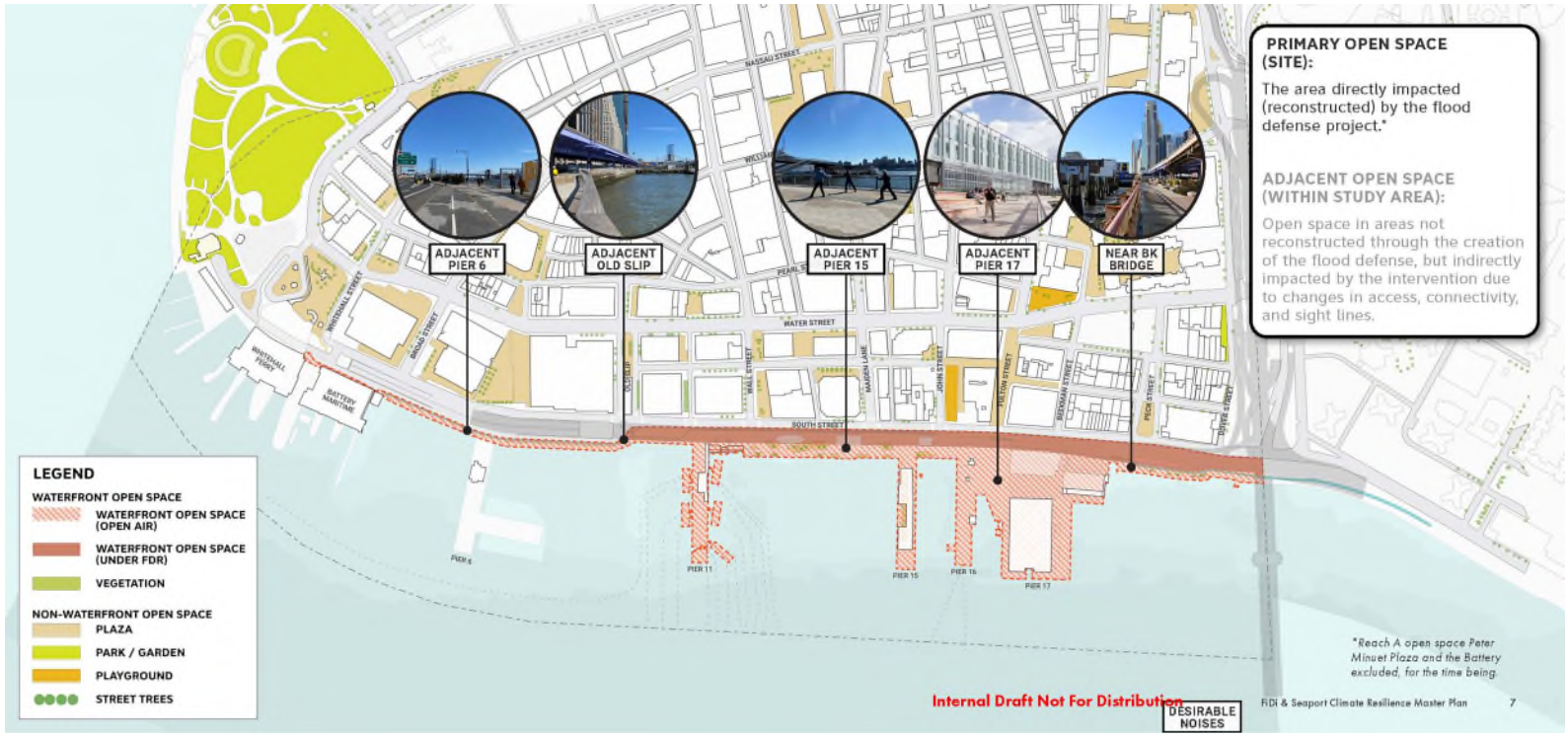


Figure 1: Waterfront open space

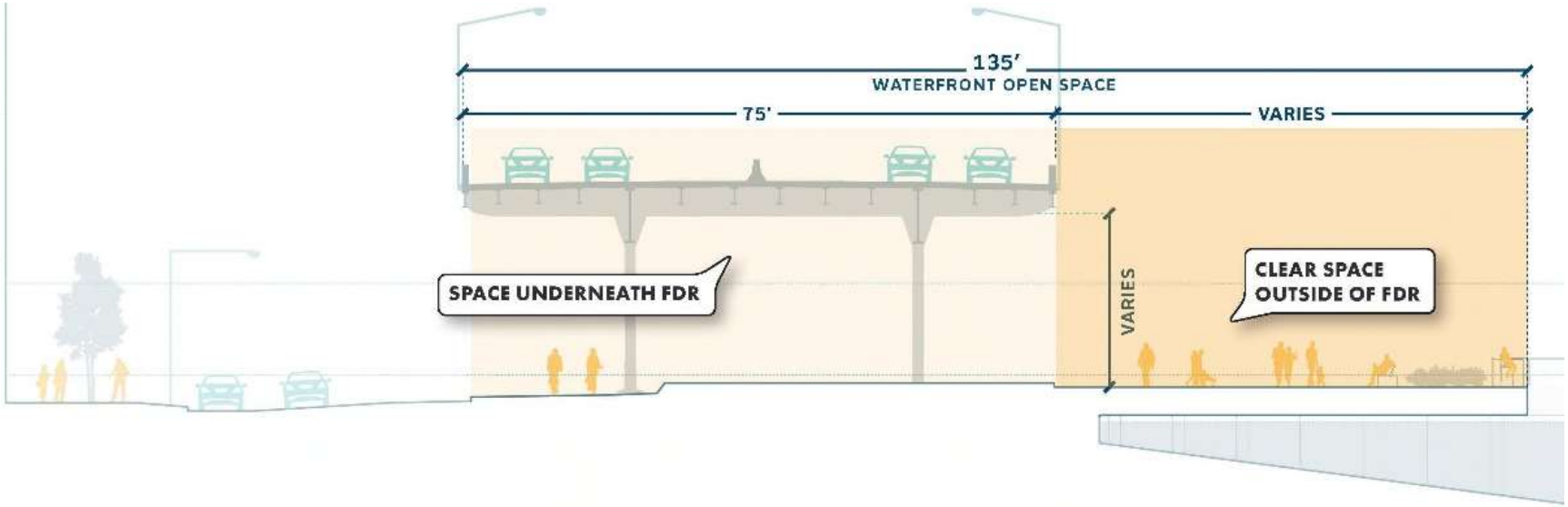


Figure 2: Open space under the FDR Drive viaduct (section cut representative of waterfront between Old Slip and Brooklyn Bridge)

The existing open space is primarily composed of the waterfront esplanade, the East River Greenway, and vegetation (see Figure 3). The existing vegetation is dispersed across the entire length of the site and includes trees, above ground planters, and elevated lawns on Pier 15.

Across South Street, the existing open space is met with other city open spaces including plazas, parks, and playgrounds. Together, these create a network of open spaces extending back into the Financial District and Seaport neighborhoods. The connection between waterfront open spaces and upland open spaces was an important consideration for the development of open space and potential programming east of the FDR Drive viaduct.

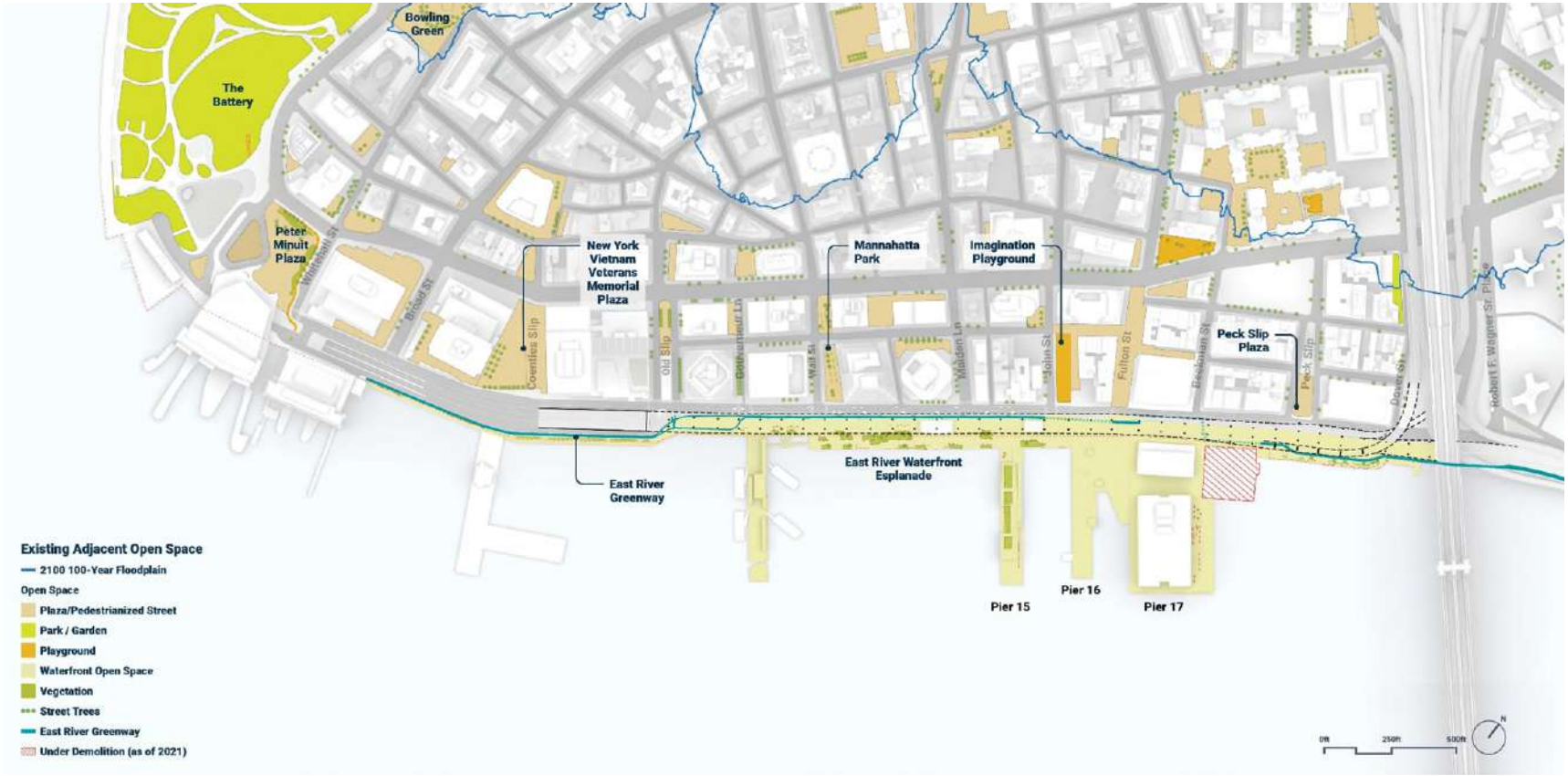


Figure 3: Existing open space in and adjacent to the study area

There are roughly 10 acres of existing total open space across the study area. In addition, there are roughly 160,000 square feet of structures and 45,000 square feet of greenway. When analyzing the existing open space, the Project Team also divided the site into four regions by their different site characteristics. In Region 1, open space adjacent the FDR Drive viaduct underpass is narrow and disconnected from the urban fabric, in Region 2, it widens and is met with 1-2 story structures, in Region 3, it is connected to structures around Pier 17 and in Region 4, it is bifurcated by the greenway.

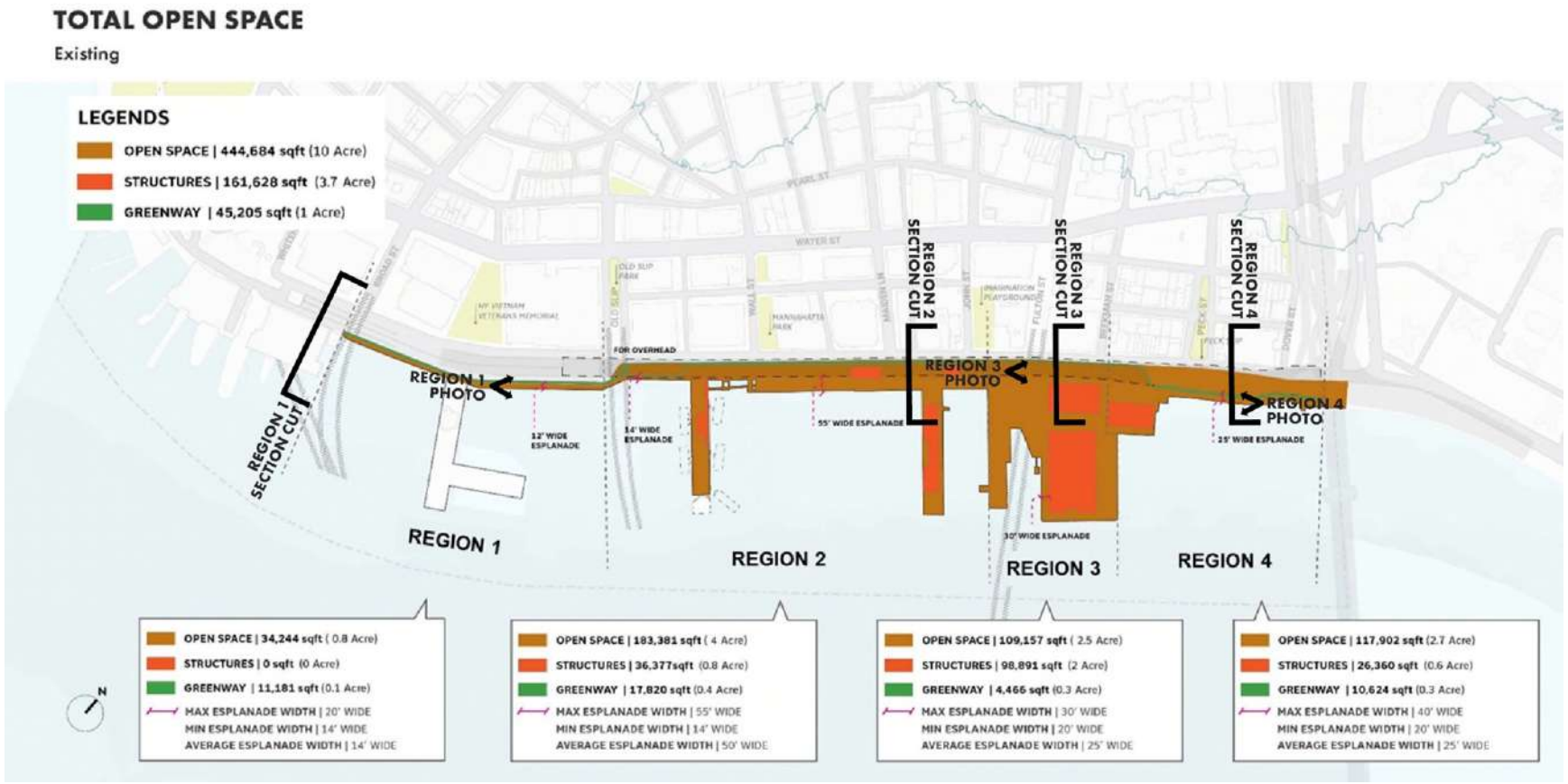
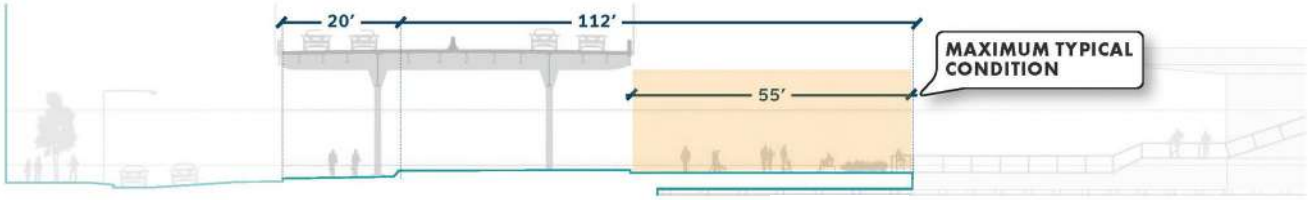


Figure 4: Total open space

The following images and diagrams represent waterfront conditions from the Battery Maritime Building to the Brooklyn Bridge. The Project Team characterized the area by unique waterfront conditions, represented by four regions, as a way of understanding the varying conditions across the site. An overview of the site is provided below, with corresponding section cuts following.

Region 2

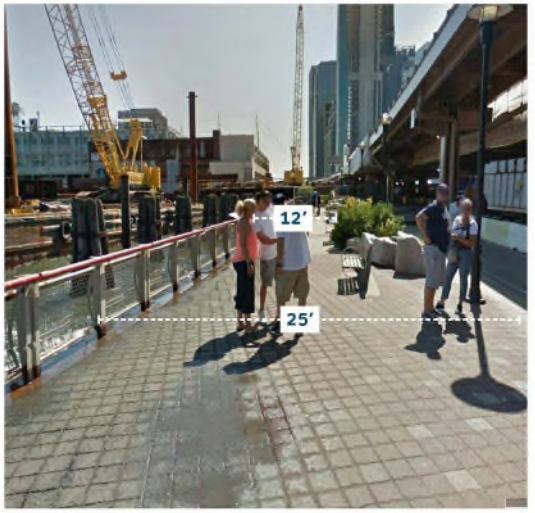
Varying esplanade condition interspersed with planters, seating, and maritime access



Region 1

Region 3

Region 4



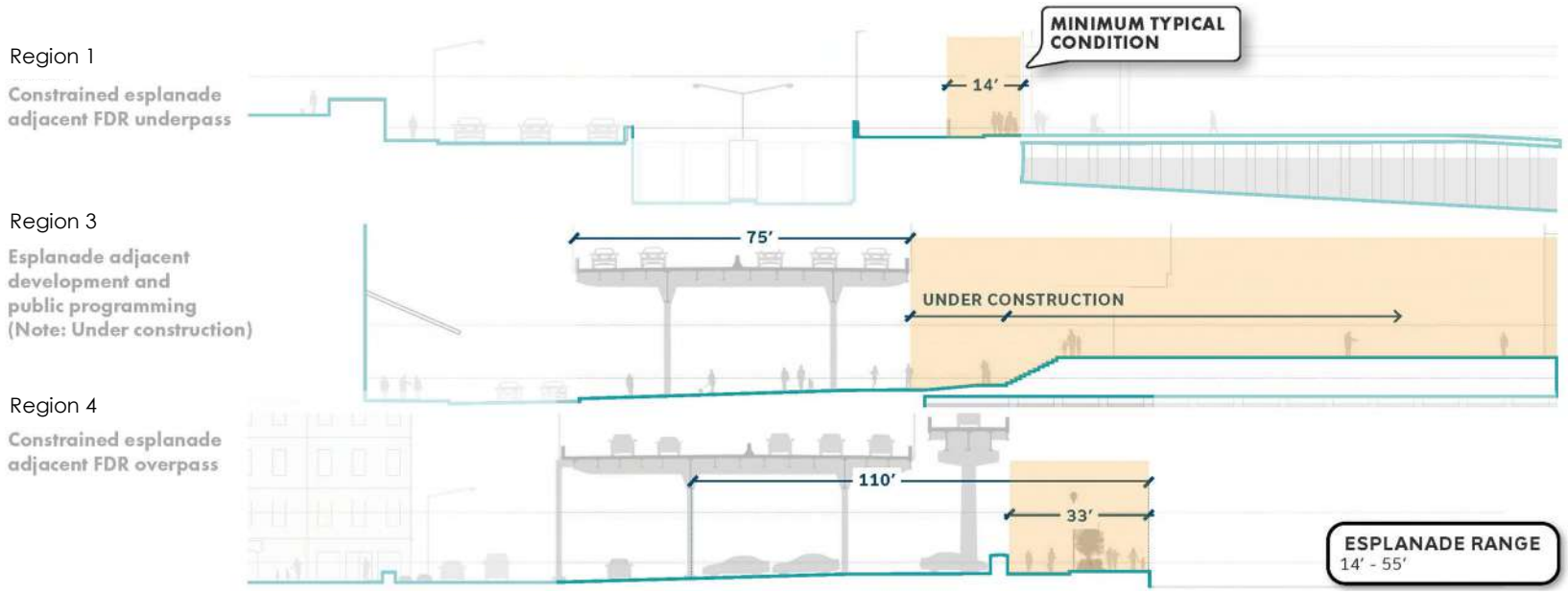


Figure 5: Waterfront conditions from Battery Maritime Building to Brooklyn Bridge (4 zones)

Open space was characterized as water-facing or non-water facing. In water-facing open space, one has unobstructed views out towards the East River. In non-water facing open space views are blocked

Almost the entirety of the open space is water facing, or roughly 97%. Thus, the Master Plan maintains and maximizes direct waterfront views.

Figure 6: Existing waterfront facing vs non-waterfront facing open space

Open space was also characterized as usable or inaccessible. Usable open space can be accessed with ease. Inaccessible open space consists of planters, vegetation, and other place unnavigable by foot.

Almost the entirety of the existing open space, or roughly 94%, is usable. Thus, the Master Plan minimizes steep or inaccessible slopes that cannot be used for recreation or alternative purposes. This was particularly important when considering the future grade change and need to raise the esplanade to the project's design flood elevation.

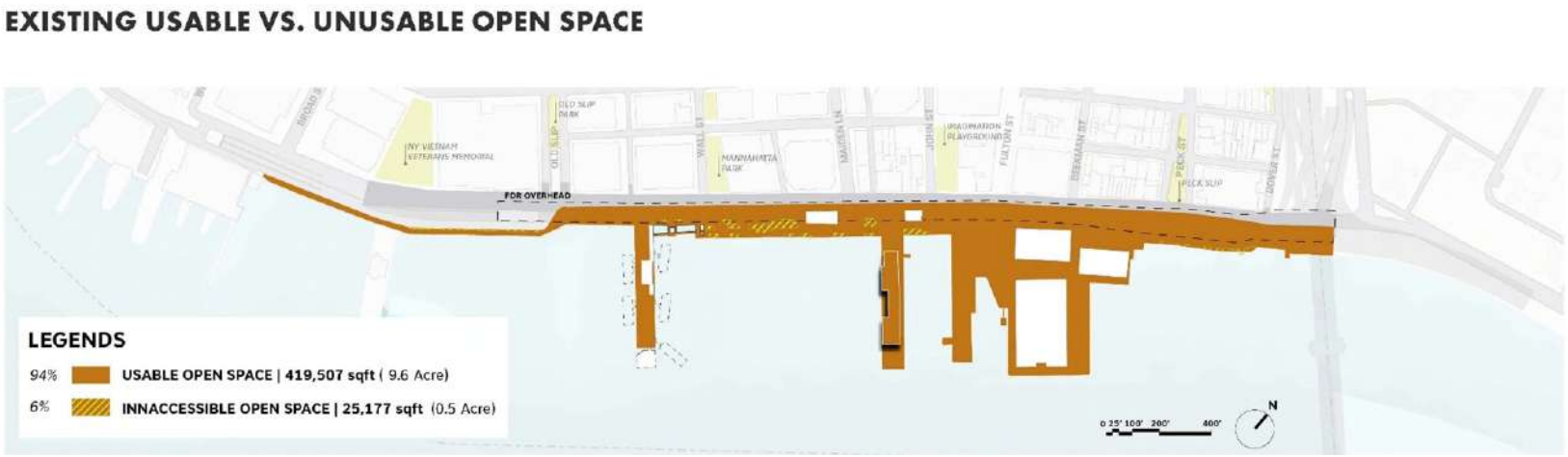


Figure 7: Existing usable vs unusable open space

Open space was characterized as open to the sky or under structure. Open space open to the sky has direct sky and sun exposure. Areas under structure fall under the footprint of the FDR drive viaduct.

Just over two-thirds of the existing open space, or roughly 70%, is open to the sky. While the Master Plan does not preclude the FDR Drive viaduct coming down in the future, it was important to propose a plan that considers the potential of future open space both underneath the FDR Drive viaduct, in the shade of the FDR Drive viaduct or new structures, and what the removal of the FDR Drive viaduct would mean for future open space across the site.

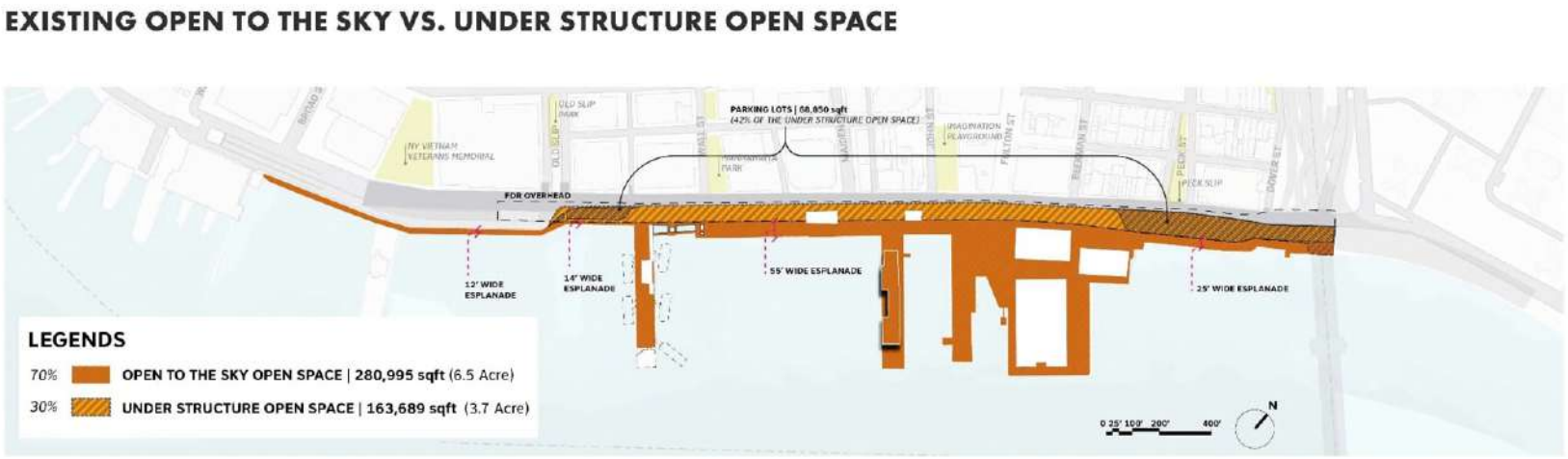


Figure 8: Existing open to the sky vs under structure open space defined within the project

ii. What is the user experience?

The Project Team analyzed the user experience across the site and concluded the following:

- The waterfront has intentional users (those with specific needs) vs. users passing through by nature of the site's connectedness to the city's transportation networks.
- The waterfront's maritime transportation serves different users' needs and activates public space differently based on who the user is.
- Certain program types (e.g., dog run) are not used by all user groups and replacement programming should be developed in conjunction with community input.
- User groups regard the site as a distribution of scattered destinations that are connected by mobility infrastructure.
- No user groups should be precluded from future site access and use.

The following figures document the key considerations analyzed and the user profiles.

CRITICAL CONSIDERATIONS

What is our methodology? What are our different user groups?

RESIDENT | COMMUTER | WORKER | RECREATIONAL USER | NYC VISITOR | TOURIST | POTUS?

Who are they?
Why do they go?
Where do they go?
When do they go?
What do they do?
How long do they stay?
+
Are there inhibitors?

Figure 9: User profiles

RESIDENT

User Profiles

Who are they?

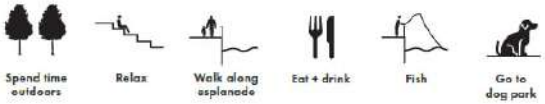
New Yorkers who live in the Financial District or Seaport neighborhoods, or more broadly, live in nearby in Lower Manhattan. These are likely the individuals most familiar with the site.

Why do they visit?

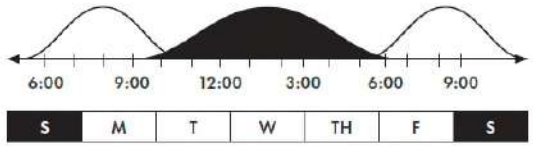
As one of the most flexible user groups, residents go to the waterfront for a variety of reasons including the experience of being outdoors, day-to-day needs, movement, dining, and more.

What do they do?

Residents activities can vary from "local" amenities, such as the dog park or outdoor seating, to dwelling, exercise, and leisure, to occasional commercial activity and dining.



What is the primary time of use?



How long do they stay?

Varies

Brief (dog park) vs. extended (dwelling, dining, etc.)

Are there inhibitors that discourage them from using the waterfront open space?

- Lacks lush park-like spaces and active recreation program.
- Weather is not consistently favorable.

Where do they go?

Figure 10: User profile: resident

COMMUTER

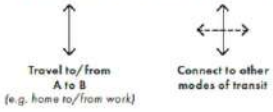
User Profiles

Who are they?

Commuters who either live or work nearby (Lower Manhattan), or pass through the FiDi-Seaport neighborhoods as part of a larger, multi-modal commute. These are individuals whose familiarity with the site could vary.

Why do they visit?

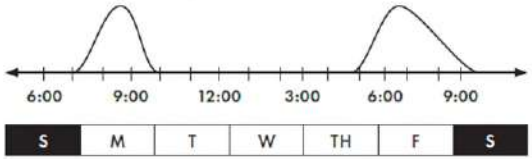
As the most intentional user group, commuters either move to or from the waterfront to access maritime and/or upland transit, as well as pass through the site by foot, bike, or to connect to other modes of transit.



What do they do?

Commuters are likely on the go, getting on or off ferry vessels, traveling north-south by bike or foot, or making connections to upland nodes of transit to access the subway or buses.

What is the primary time of use?



How long do they stay?

Brief periods

Passing through at various speeds

Are there inhibitors that discourage them from using the waterfront open space?

- Limited connectivity to subway system and public transit.

Where do they go?

Figure 11: User profile: commuter

WORKER

User Profiles

Who are they?

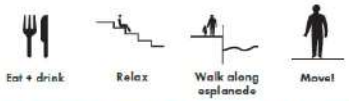
Individuals who work in either the Financial District or Seaport and are likely familiar with the neighborhood and waterfront.

Why do they visit?

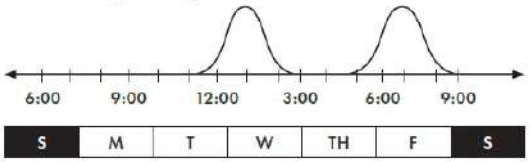
Workers likely visit the site to take a break from their work environments, to take in the experience waterfront, and to relax and socialize among the commercial dining establishments.

What do they do?

Workers are likely a passive user group, either relaxing along the waterfront or sitting to dine at restaurants. Alternatively, they seek active uses such a walking along the esplanade to move and take a break from work.



What is the primary time of use?



How long do they stay?

Varies

Brief (lunchtime walk) vs. extended (dinner with coworkers)

Are there inhibitors that discourage them from using the waterfront open space?

- Distance from offices.
- Limited food and beverage facilities
- Weather is not consistently favorable.

Where do they go?

Figure 12: User profile: worker

RECREATIONAL USER

User Profiles

Who are they?

Individuals who enjoy exercising (walking, running, or biking) along the waterfront esplanade or East River Greenway. These are individuals whose familiarity with the site could vary.

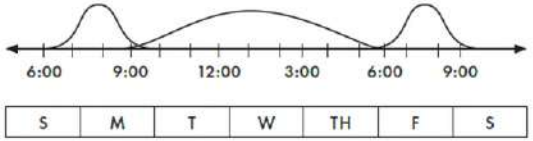
Why do they visit?

Recreational users visit the site by way of the East River Greenway to exercise along the Manhattan waterfront.

What do they do?

Recreational users typically walk, run, or bike along the East River Greenway. Occasionally, people utilize the waterfront for other forms of recreation such as tai chi or stretching.

What is the primary time of use?



How long do they stay?

Brief periods

Passing through at various speeds

Are there inhibitors that discourage them from using the waterfront open space?

-
- Lack of clear wayfinding to site and site destinations/amenitiWeather is not consistently favorable.

Where do they go?

Figure 13: User profile: recreational user

NYC VISITOR

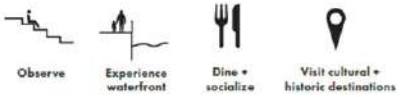
User Profiles

Who are they?

Individuals who are from the New York City area, but likely do not live or work nearby, and are coming to explore. These are people who are likely somewhat familiar or not at all with the site.

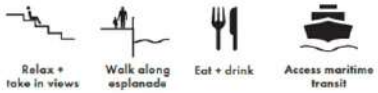
Why do they visit?

NYC visitors may visit the site for a variety of reasons including the desire for a waterfront experience, to visit cultural, commercial, or historic destinations, or less intentionally by way of maritime transit.

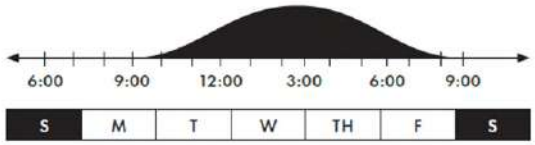


What do they do?

Regional visitors from NYC typically come to the site for the waterfront restaurants, to attend a concert at Pier 17, or to visit the historic ships. People will also come to access ferries and stroll along the water.



What is the primary time of use?



How long do they stay?

Periods vary

Brief (specific destination) vs. extended (dwell and experience for extended periods)

Are there inhibitors that discourage them from using the waterfront open space?

- Limited connectivity between public transit and waterfront.
- Lack of clear wayfinding to site and site destinations/amenities.
- Weather is not consistently favorable.

Where do they go?

Figure 14: User profile: New York City visitor

iii. What programs does the open space provide?

The Project Team first considered programmatic distribution across the site. Certain programs, such as the waterfront esplanade and East River Greenway, are continuous, maintaining a north-south connection that allows people – both pedestrians and cyclists – to move easily across the site. Other programs, such as specific destinations, vegetation, and public amenities, are distributed across the site and enhance the overall waterfront experience. The following graphic illustrates an overview of the programs that exist along the waterfront today.

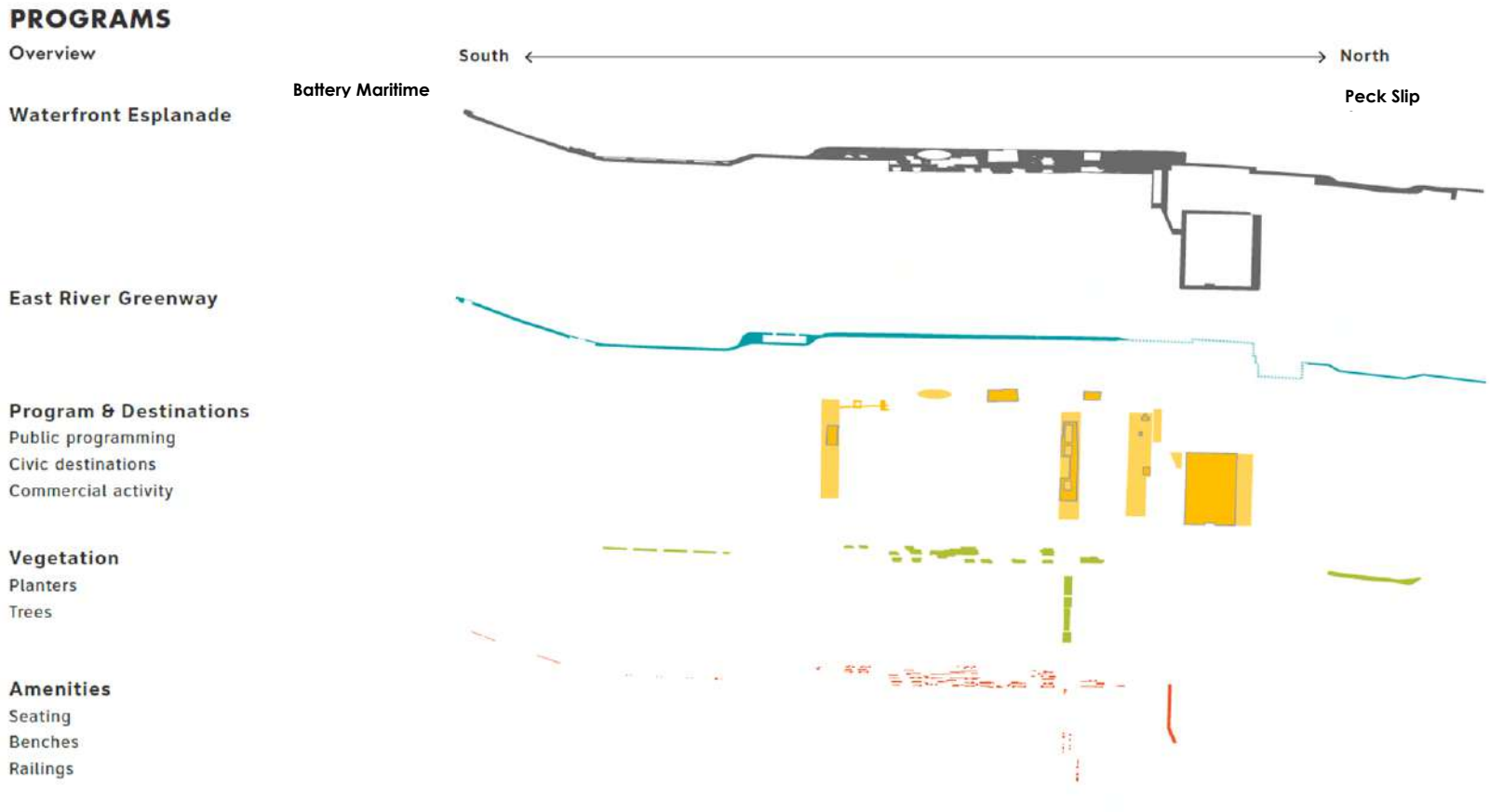
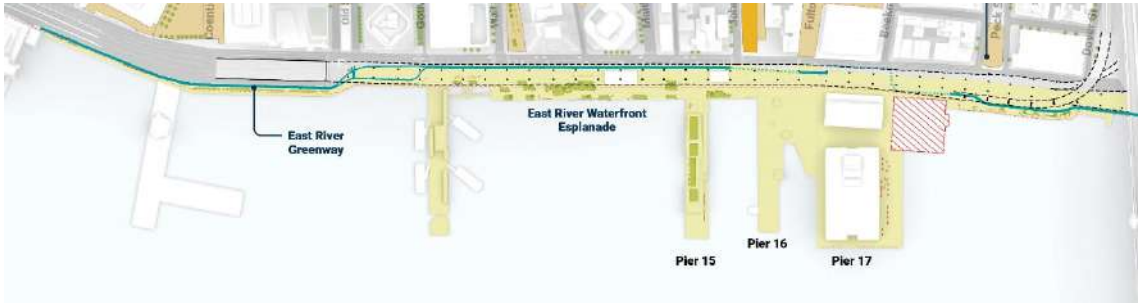


Figure 15: Program overview

The waterfront esplanade is a defining feature of the site – it is the neighborhood's "edge" and the direct interface between upland conditions and the East River. As stated in the East River Waterfront Plan, *"a vibrant edge will generate year-round activity and provide new amenities for residents, workers and visitors alike."* Thus, it was crucial that the Master Plan maintain an active and continuously navigable edge (Figure 16).



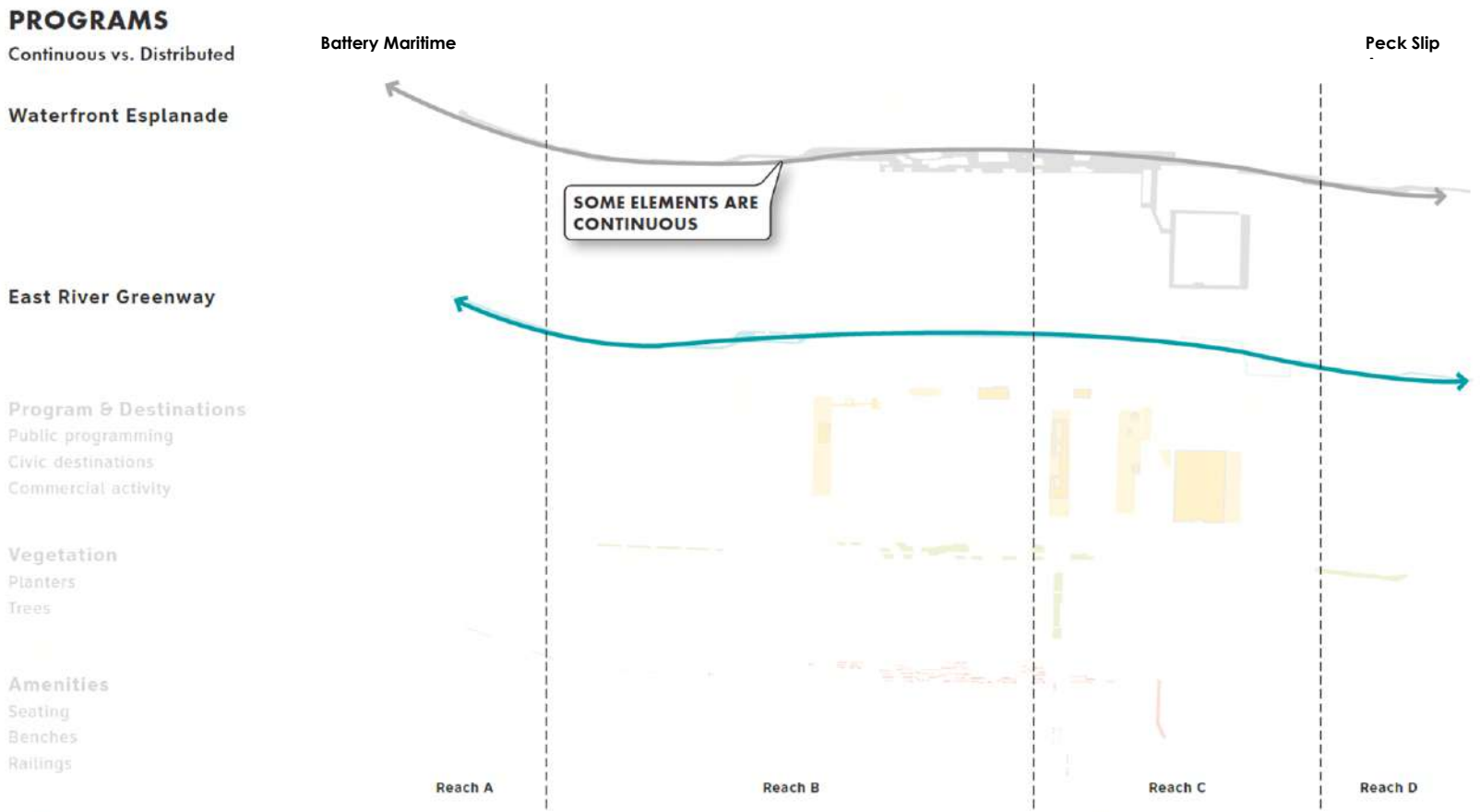
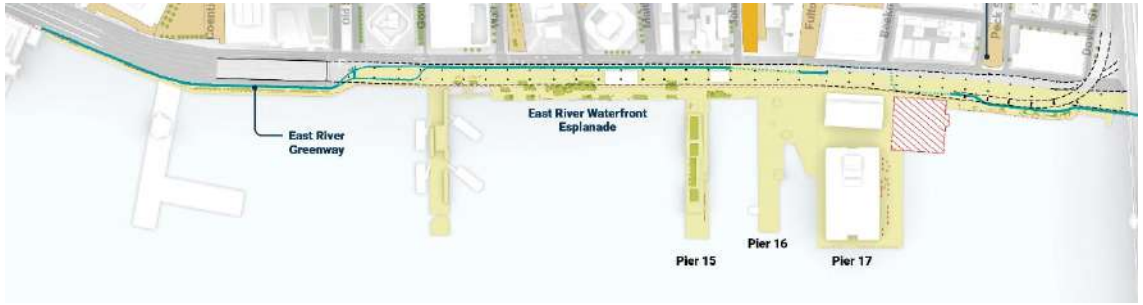


Figure 16: Continuous programs

The Project Team considered how the distributed elements are placed, if and where they're clustered, and how this relates to the neighborhood connections. Larger-scale public programs, civic destinations, and commercial activity are centered around Pier 11 to Pier 17, while elements such as vegetation, seating, and benches are more evenly distributed across the entire waterfront esplanade (Figure 17).



PROGRAMS

Continuous vs. Distributed

Waterfront Esplanade

East River Greenway

Program & Destinations

Public programming

Civic destinations

Commercial activity

Vegetation

Planters

Trees

Amenities

Seating

Benches

Railings

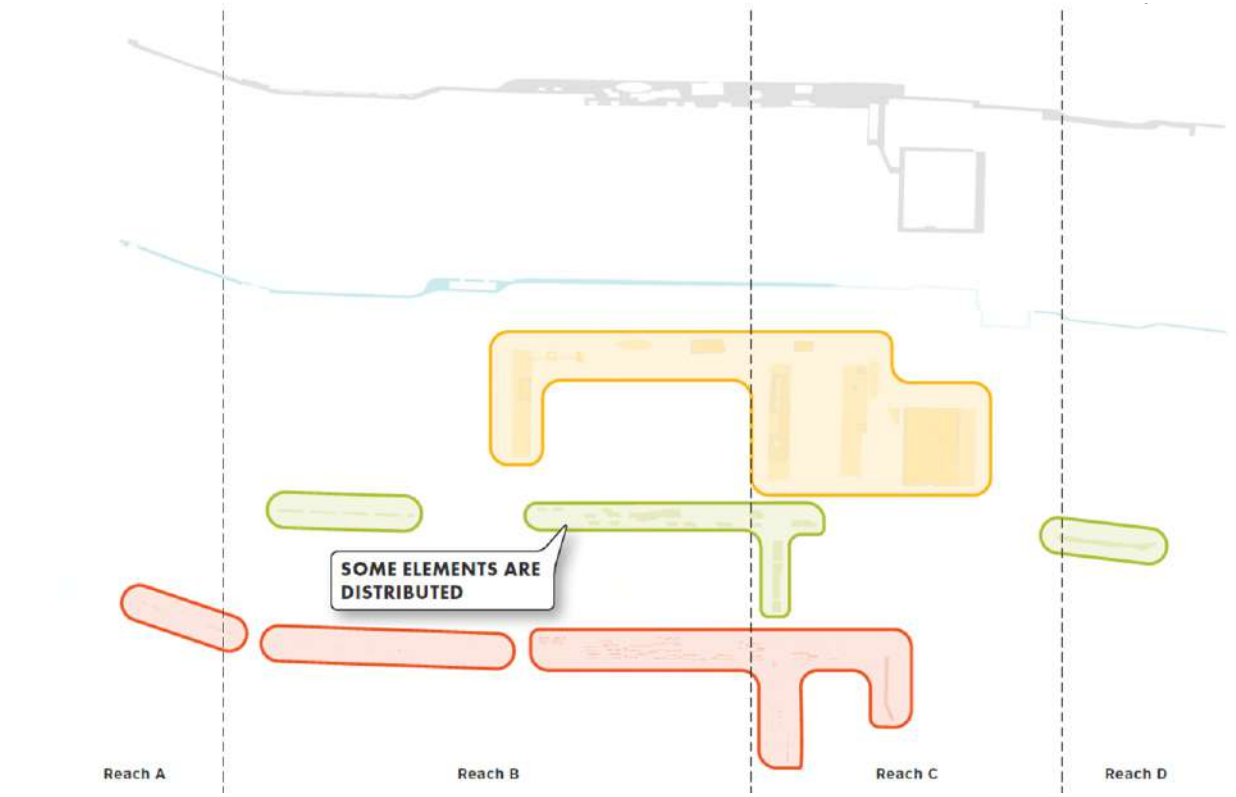


Figure 17: Distributed programs across the study area

Existing program types were mapped and categorized, as shown in Figure 18 and Figure 19.

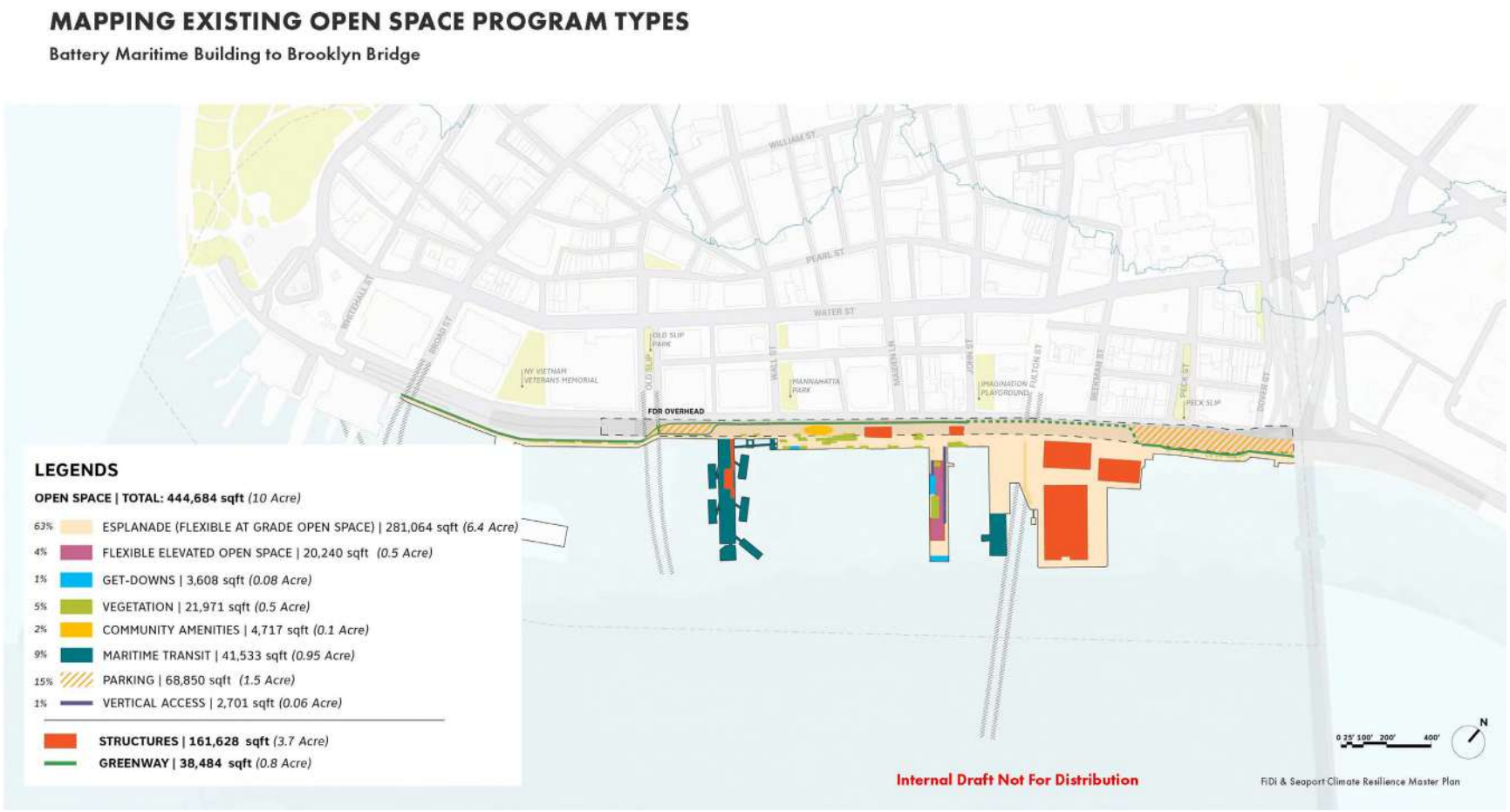


Figure 18: Map of existing open space program types

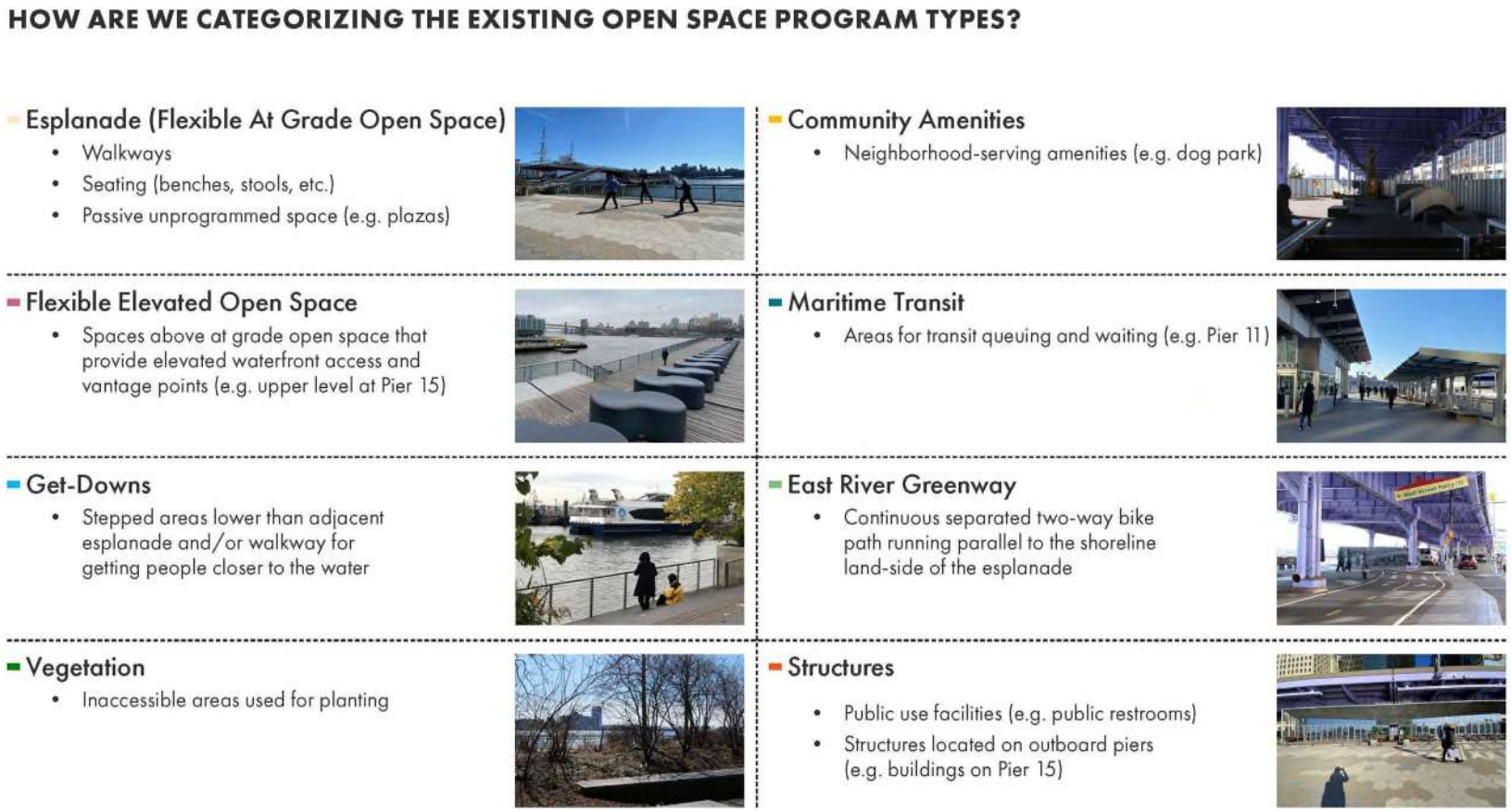


Figure 19: Existing program type categories

iv. Design Recommendations

The following recommendations were integrated into the Master Plan:

1. Sustain or enhance the presence and relationship with the water provided by the existing esplanade.
2. Provide public realm programs that activate the public realm and serve existing and projected users.
3. Provide planting.
4. Provide public realm amenities.
5. Integrate existing historic assets and make legible important site histories.

2.2 Built Environment

The Project Team analyzed the built environment in Lower Manhattan, including the study area. This included density, land use, and zoning. These studies informed appropriate program and scale of building for the Master Plan.

i. Area land use and density

The Financial District is characterized by higher density and taller buildings while the Seaport, which contains the South Street Seaport Historic District, is much less dense and much shorter (Figure 20).

Figure 20: Density analysis

The built fabric abutting the study area changes from south to north. In the southern portion of the site (Area 1) is characterized by wide and low massing buildings such as the US Coast Guard Site, Whitehall Ferry Terminal, and Battery Maritime Building. The middle portion of the study area (Areas 2 and 3), from roughly Whitehall Street to Maiden Lane, is characterize by high density and medium to large massing buildings. From Maiden Lane to the Brooklyn Bridge (Areas 4 and 5), the built fabric is less dense and more diverse (Figure 21).

Figure 21: Total building area (sq ft)

The following figures provide additional detail on the density and open space analysis.

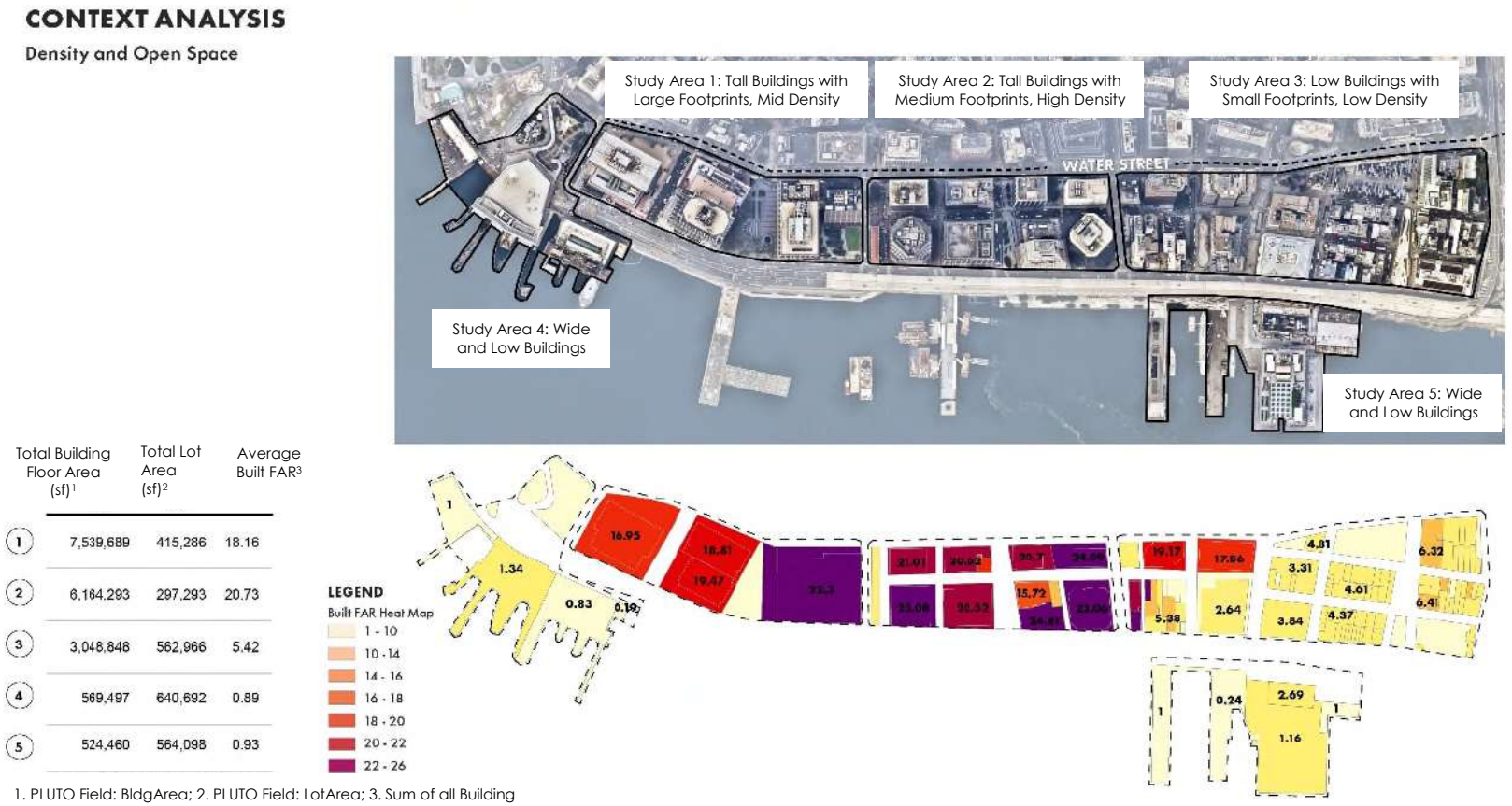


Figure 22: Density and open space

CONTEXT ANALYSIS

Study Area 1 - Ferry Terminals

	Building	Building Height [1] (ft)	Building Class[2]	Program Distribution & Building Area[3] (sf)
				Residential, Retail, Office, Other, Garage, Storage, Factory
1	**USCG / 1 South Street**	35	**O2** - Office Buildings - Office Only – 2-6 Stories	123,800*
2	**Whitehall Ferry Terminal / 4 South Street**	89	**Y7** - Selected Government Installations (Excluding Office Buildings, Training Schools, Academic, Garages, Warehouses, Piers, Air Fields, Vacant Land, Vacant Sites, and Land Under Water and Easements) - Department of Ports and Terminals	280,000
3	**Battery Maritime Building/ 10 South Street**	72	**Y7** - Selected Government Installations (Excluding Office Buildings, Training Schools, Academic, Garages, Warehouses, Piers, Air Fields, Vacant Land, Vacant Sites, and Land Under Water and Easements) - Department of Ports and Terminals	158,197*

1. DOITT NYC Open Data Building Footprints/Heights; 2. PLUTO field: BldgClass; 3. PLUTO fields: ComArea, ResArea, OfficeArea, RetailArea, GarageArea, StrgeArea, FactryArea, OtherArea; All sourced from PLUTO 20v7

CONTEXT ANALYSIS

Study Area 1 - Ferry Terminals

	Building	Total Building Floor Area (sf)[1]	Lot Area[2] (sf)	Built FAR[3]	Zoning[4]
1	USCG / 1 South Street	123,800*	123,800	1.00	M1-4
2	Whitehall Ferry Terminal / 4 South Street	280,000	209,215	1.34	M1-4
3	Battery Maritime Building/ 10 South Street	158,197*	191,502	0.83	C4-6

1. PLUTO field: BldgArea; 2. PLUTO field: LotArea; 3. PLUTO field: BuiltFAR; 4. PLUTO field: ZoneDist1; All sourced from PLUTO 20v7; *Denotes where PLUTO data may be out of date, to be verified.

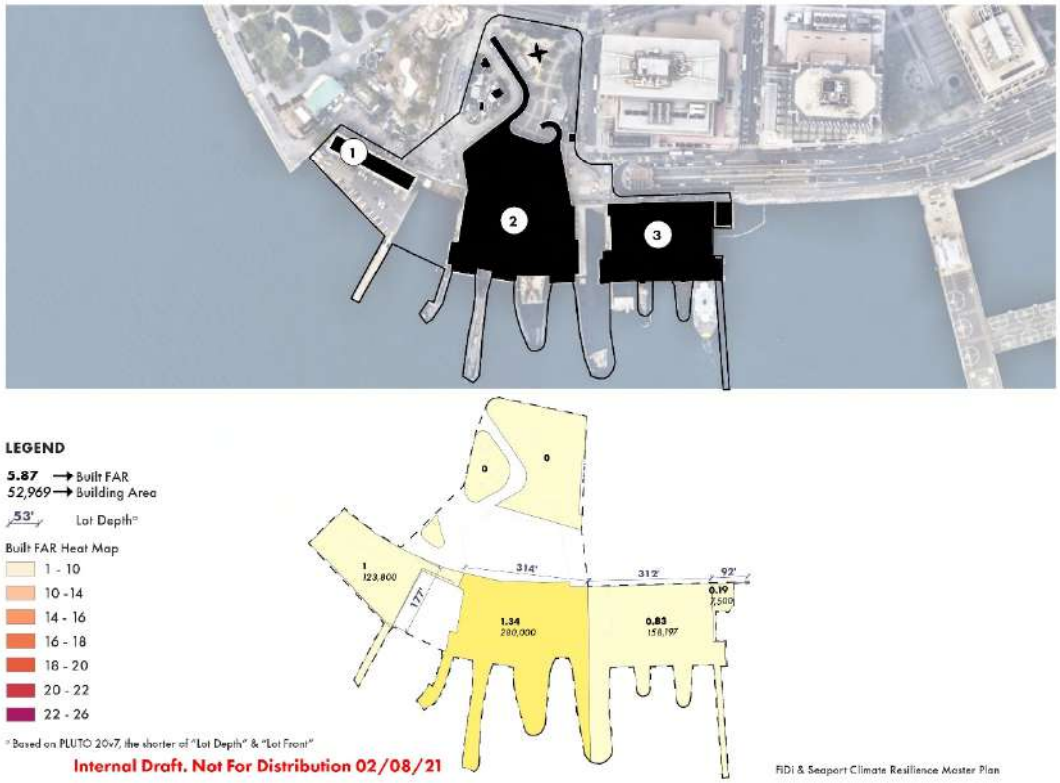


Figure 23: Area land use and density distribution of open space in Study Area 1 – Ferry Terminals

CONTEXT ANALYSIS

Study Area 2 - Whitehall Street to Old Slip

	Building	Building Height [1] (ft)	Building Class[2]
4	One New York Plaza/ 1 Water Street	656	RC - Condominiums - Commercial Building (Mixed Commercial Condo Building Classification Codes)
5	125 Broad Street	505	RB - Condominiums - Office Space
6	4 New York Plaza/ 115 Broad Street	294	O4 - Office Buildings - Office Only or Office with Comm – 20 Stories or More
7	55 Water Street	705	RB - Condominiums - Office Space

Program Distribution & Building Area[3] (sf)

1. DOITT NYC Open Data Building Footprints/Heights; 2. PLUTO field: BldgClass; 3. PLUTO fields: ComArea, ResArea, OfficeArea, RetailArea, GarageArea, StrgeArea, FactryArea, OtherArea; All sourced from PLUTO 20v7

CONTEXT ANALYSIS

Study Area 2 - Whitehall Street to Old Slip

	Building	Total Building Floor Area (sf)[1]	Lot Area[2] (sf)	Built FAR[3]	Zoning[4]
4	One New York Plaza/ 1 Water Street	1,888,126	111,382	16.95	C5-5
5	125 Broad Street	1,051,990	54,023	19.47	C5-5
6	4 New York Plaza/ 115 Broad Street	1,016,406*	54,023	18.81	C5-5
7	55 Water Street	3,583,167	160,692	22.30	C6-9

1. PLUTO field: BldgArea; 2. PLUTO field: LotArea; 3. PLUTO field: BuiltFAR; 4. PLUTO field: ZoneDist1; All sourced from PLUTO 20v7; *Denotes where PLUTO data may be out of date, to be verified.

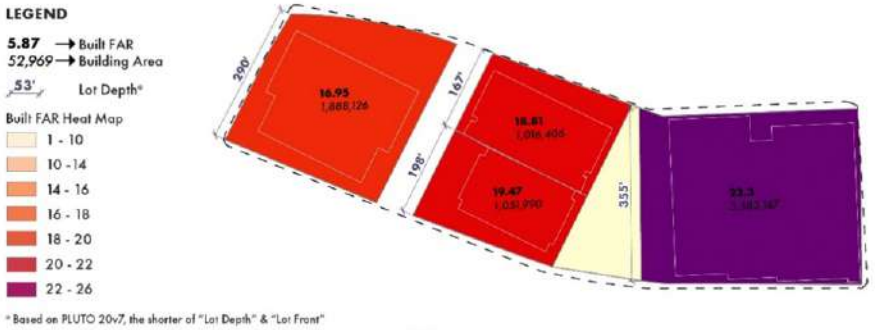


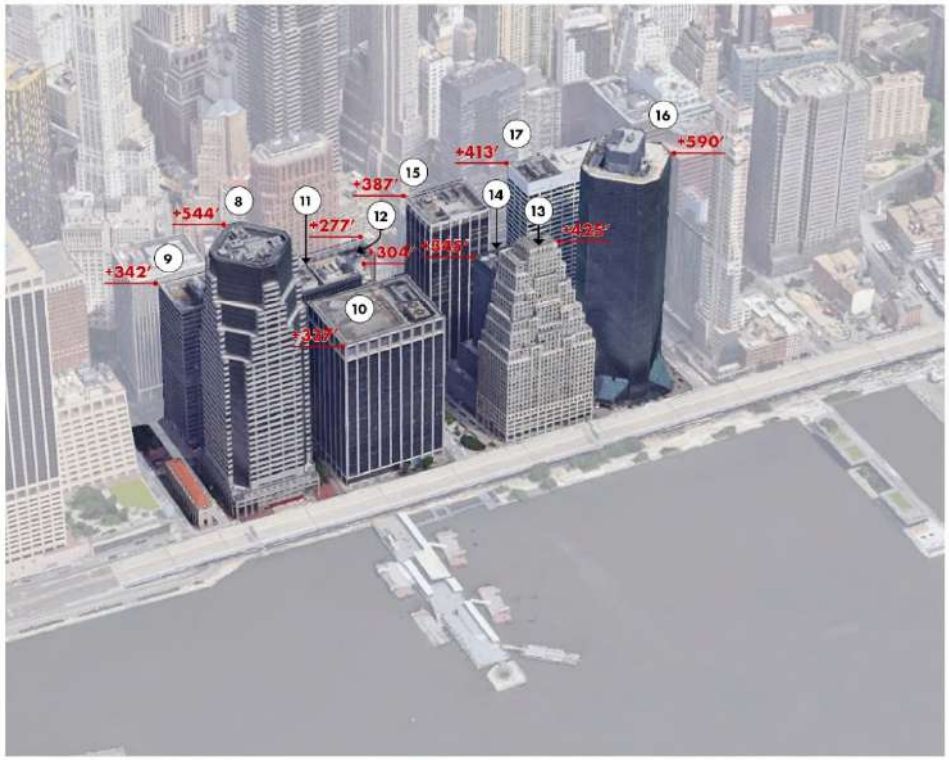
Figure 24: Area land use and density distribution of open space in Study Area 2 – Whitehall Street to Old Slip

CONTEXT ANALYSIS

Study Area 3 - Old Slip to Maiden Lane

	Building	Building Height [1] (ft)	Building Class[2]	Program Distribution & Building Area[3] (sf)
				Residential, Office, Retail, Other, Garage, Storage, Factory
8	77 Front Street	544	O4 - Office Buildings - Office Only or Office with Comm – 20 Stories or More	973,587
9	77 Water Street	342	O4 - Office Buildings - Office Only or Office with Comm – 20 Stories or More	541,568
10	111 Wall Street	337	O4 - Office Buildings - Office Only or Office with Comm – 20 Stories or More	990,250
11	95 Wall Street	277	D5 - Elevator Apartments - Converted	473,460
12	99 Wall Street	304	RM - Condominiums - Mixed Residential & Commercial Building (Mixed Residential & Commercial)	73,250
13	120 Wall Street	425	O4 - Office Buildings - Office Only or Office with Comm – 20 Stories or More	582,412
14	110 Wall Street	345	H9 - Hotels - Miscellaneous	267,570
15	100 Wall Street	387	O4 - Office Buildings - Office Only or Office with Comm – 20 Stories or More	463,664
16	180 Maiden Lane	590	O4 - Office Buildings - Office Only or Office with Comm – 20 Stories or More	1,079,361
17	88 Pine Street	413	O4 - Office Buildings - Office Only or Office with Comm – 20 Stories or More	664,990

1. DOITT NYC Open Data Building Footprints/Heights; 2. PLUTO field: BldgClass; 3. PLUTO fields: ComArea, ResArea, OfficeArea, RetailArea, GarageArea, StrgeArea, FactryArea, OtherArea; All sourced from PLUTO 20v7

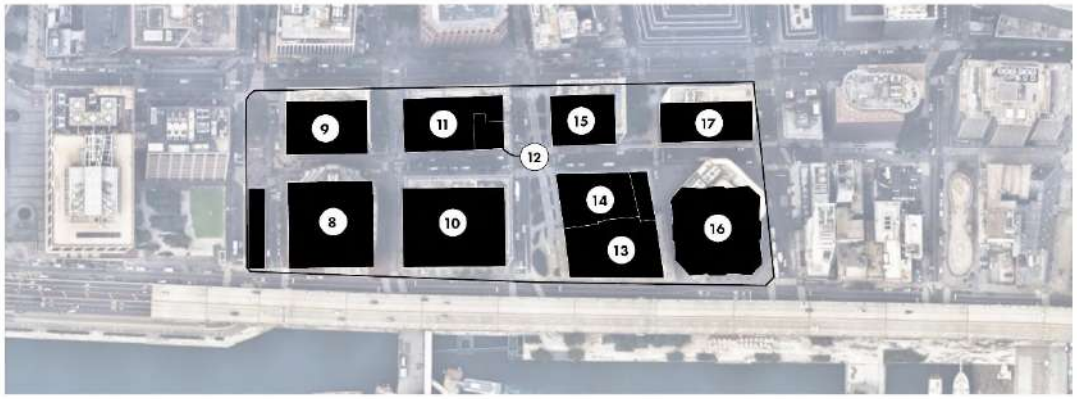


CONTEXT ANALYSIS

Study Area 3 - Old Slip to Maiden Lane

	Building	Total Building Floor Area (sf)[1]	Lot Area[2] (sf)	Built FAR[3]	Zoning[4]
8	77 Front Street	973,587	42,176	23.08	C6-9
9	77 Water Street	541,568	25,779	21.01	C6-9
10	111 Wall Street	990,250	48,741	20.32	C6-9
11	95 Wall Street	473,460	22,957	20.62	C6-9
12	99 Wall Street	73,250	4,319	16.96	C6-9
13	120 Wall Street	562,412	23,475	24.81	C6-9
14	110 Wall Street	267,570	17,017	15.72	C6-9
15	100 Wall Street	463,664	22,399	20.70	C6-9
16	180 Maiden Lane	1,079,361	46,799	23.06	C5-3
17	88 Pine Street	664,990	27,600	24.09	C5-3

1. PLUTO field: BldgArea; 2. PLUTO field: LotArea; 3. PLUTO field: BuiltFAR; 4. PLUTO field: ZoneDist1; All sourced from PLUTO 20v7; *Denotes where PLUTO data may be out of date, to be verified.



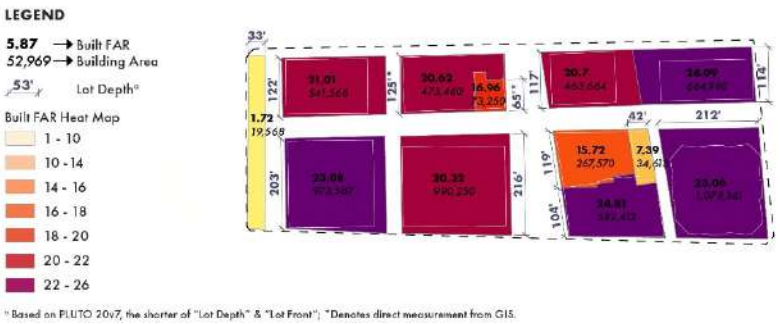


Figure 25: Area land use and density distribution of open space in Study Area 3 – Old Slip to Maiden Lane

CONTEXT ANALYSIS

Study Area 4 - Maiden Lane to Dover Street

	Building	Building Height [1] (ft)	Building Class[2]	Program Distribution & Building Area[3] (sf)
				Residential, Retail, Office, Other, Garage, Storage, Factory
18	**Seaport Residences 161 Maiden Lane**	641	**R4** - Condominiums - **Residential** Unit in Elevator Bldg	116,680
19	**151 Maiden Lane**	294	**H2** - **Hotels** - Full Service Hotel	139,891
20	**156 Front Street**	117	**D7** - Elevator **Apartments** - Semi-Fireproof With Stores	52,969
21	**170 John Street**	59	**RM** - Condominiums - **Mixed** Residential & Commercial Building (Mixed Residential & Commercial)	20,675
22	**175 Water Street**	401	**RC** - Condominiums - **Commercial** Building (Mixed Commercial Condo Building Classification Codes)	462,377
23	**One Seaport Plaza 199 Water Street**	436	**RC** - Condominiums - **Commercial** Building (Mixed Commercial Condo Building Classification Codes)	744,146
24	**Fulton Market 11 Fulton Street**	66	**K6** - Store Buildings (Taxpayers Included) - **Shopping Centers** With or Without Parking	128,123
25	**117 Beekman Street**	94	**RM** - Condominiums - **Mixed** Residential & Commercial Building (Mixed Residential & Commercial)	31,176
26	**119 South Street**	66	**D7** - Elevator **Apartments** - Semi-Fireproof With Stores	14,053
27	**P.S. 343 1 Peck Slip**	65*	**W1** - **Educational** Structures - Public Elementary, Junior or Senior High	112,362

1. DOITT NYC Open Data Building Footprints/Heights; 2. PLUTO field: BldgClass; 3. PLUTO fields: ComArea, ResArea, OfficeArea, RetailArea, GarageArea, StrgeArea, FactryArea, OtherArea; All sourced from PLUTO 20v7

CONTEXT ANALYSIS

Study Area 4 - Maiden Lane to Dover Street

	Building	Total Building Floor Area (sf)[1]	Lot Area[2] (sf)	Built FAR[3]	Zoning[4]
18	Seaport Residences 161 Maiden Lane	118,680	4,836	24.13	C5-3
19	151 Maiden Lane	139,891	6,700	20.88	C5-3
20	156 Front Street	52,969	9,026	5.87	C5-3
21	170 John Street	20,675	5,082	4.07	C5-4
22	175 Water Street	462,377	24,121	19.17	C5-3
23	One Seaport Plaza 199 Water Street	744,146	41,656	17.86	C5-3
24	Fulton Market 11 Fulton Street	128,123	33,348	3.84	C6-2A
25	117 Beekman Street	31,175	6,481	4.81	C6-2A
26	119 South Street	14,053	2,630	5.34	C6-2A
27	P.S. 343 1 Peck Slip	112,362	17,789	6.32	C6-2A

1. PLUTO field: BldgArea; 2. PLUTO field: LotArea; 3. PLUTO field: BuiltFAR; 4. PLUTO field: ZoneDist1; All sourced from PLUTO 20v7; *Denotes where PLUTO data may be out of date, to be verified.

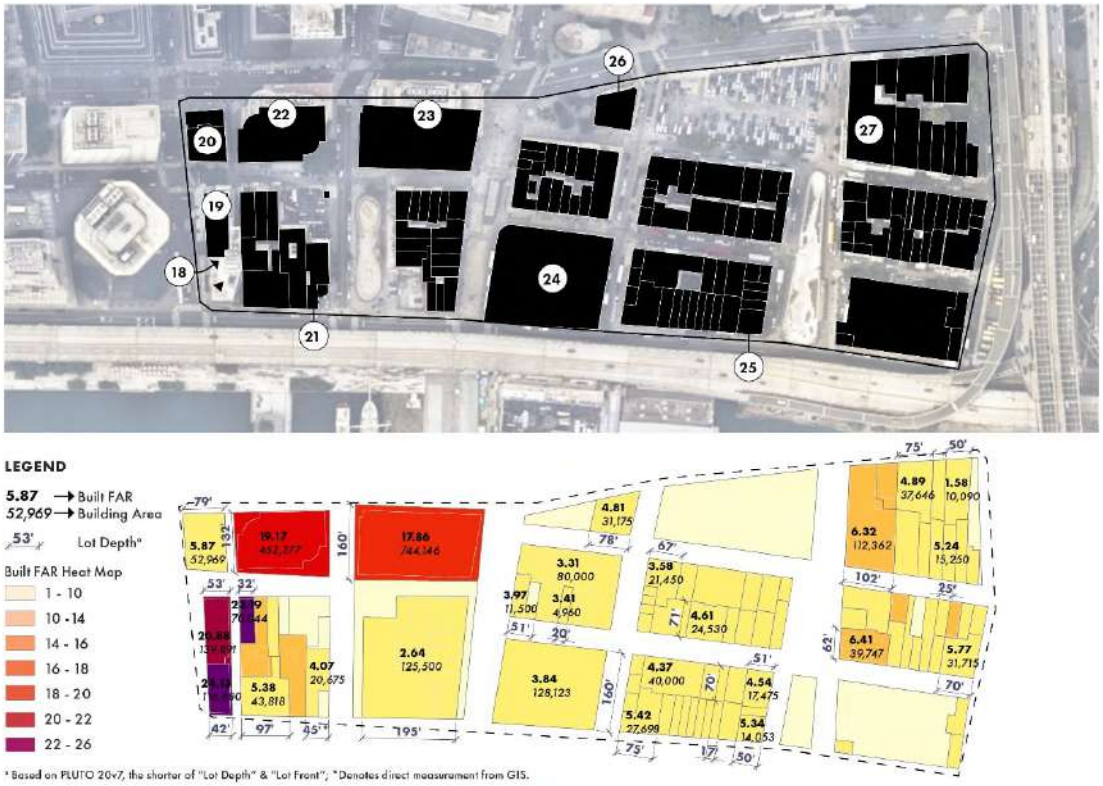


Figure 26: Area land use and density distribution of open space in Study Area 4 – Maiden Lane to Dover Street

CONTEXT ANALYSIS

Study Area 5 - Pier 15 to Pier 17

	Building	Building Height [1] (ft)	Building Class[2]	Program Distribution & Building Area[3] (sf)
28	**Pier 15** **South Street**	11*	**T2** - Transportation Facilities (Assessed in ORE) - Pier, Dock, Bulkhead	164,325
29	**Pier 17** **95 South Street**	102*	**K6** - Store Buildings (Taxpayers Included) - **Shopping Centers** With or Without Parking	242,074
30	**Tin Building** **95 Marginal Street**	49*	**K2** - Store Buildings (Taxpayers Included) - Multi-Story **Retail** Building	59,020*

Residential | Retail | Office | Other, Garage, Storage, Factory

1. DOITT NYC Open Data Building Footprints/Heights; 2. PLUTO field: BldgClass; 3. PLUTO fields: ComArea, ResArea, OfficeArea, RetailArea, GarageArea, StrgeArea, FactryArea, OtherArea; All sourced from PLUTO 20v7

Figure 27: Building Height in feet of Study Area 5 - Pier 15 to 17

CONTEXT ANALYSIS

Study Area 5 - Pier 15 to Pier 17

	Building	Total Building Floor Area (sf)[1]	Lot Area[2] (sf)	Built FAR[3]	Zoning[4]
28	Pier 15 South Street	164,325	164,325	1.00	C4-5
29	Pier 17 95 South Street	242,074	208,475	1.16	C4-6
30	Tin Building 95 Marginal Street	59,020*	21,923	2.69	C4-6

1. PLUTO field: BldgArea; 2. PLUTO field: LotArea; 3. PLUTO field: BuiltFAR; 4. PLUTO field: ZoneDist1; All sourced from PLUTO 20v7; *Denotes where PLUTO data may be out of date, to be verified.

Figure 28: Area land use and density distribution of open space in Study Area 5 – Pier 15 to Pier 17

ii. Zoning Analysis

The Project Team conducted zoning analyses for the study area to help inform what type, size, and scale of buildings and uses might be proposed for the Master Plan. The following figures present information on the existing zoning in Lower Manhattan, including overall zoning site analyses and research on subdistricts, as well as detailed information on what different zones correspond to. Lastly, the regulations for different zones throughout the study area are presented.

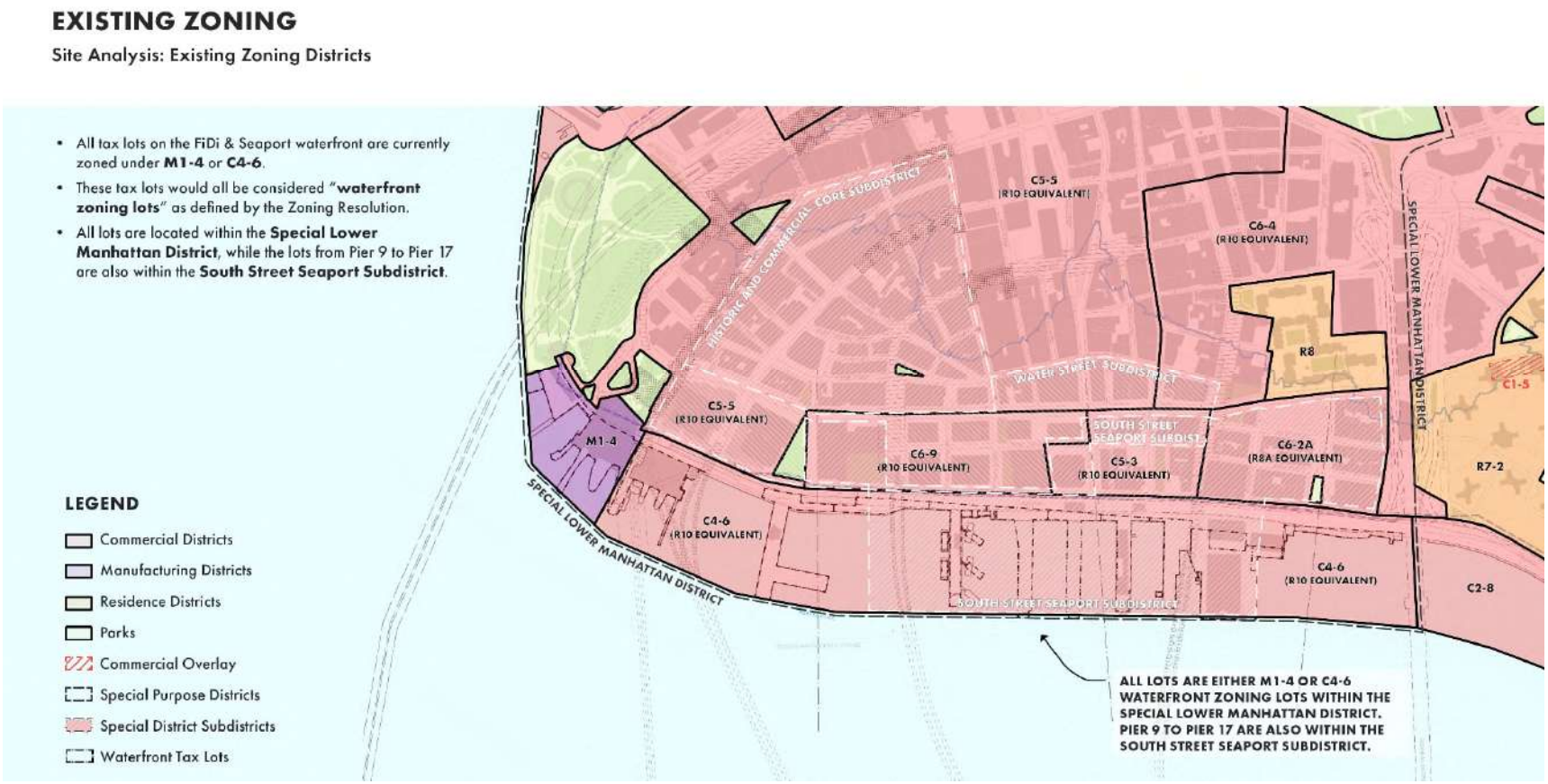


Figure 29: Existing Zoning Districts

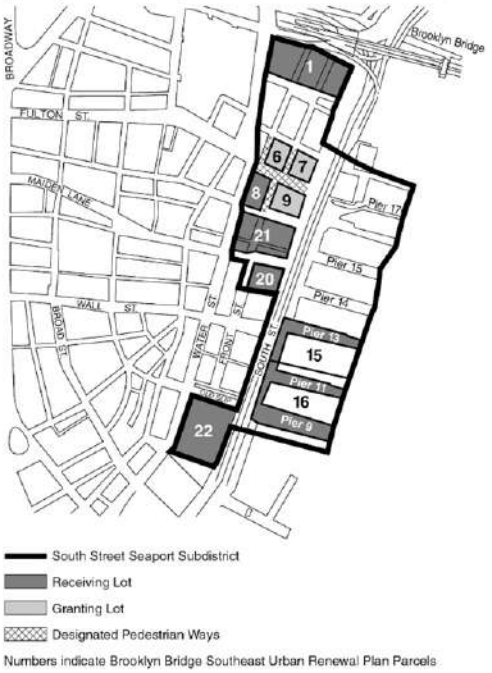
ZONING DISTRICT

South Street Seaport Subdistrict

Note: Passages or texts that refer to the Zoning Resolution (ZR) are either excerpts or paraphrases as deemed appropriate by the project team. For the full text, please consult the ZR.

- The South Street Seaport Subdistrict protects the scale and character of 18th and 19th century mercantile buildings by allowing the transfer of development rights to designated receiving lots.
  (www1.nyc.gov/site/planning/zoning/districts-tools/special-purpose-districts-manhattan.page#LM)
- The South Street Seaport Subdistrict contains certain provisions that do not apply to other areas of the Special District. Except as otherwise provided in the Subdistrict regulations, the Subdistrict is subject to all other regulations of the Special Lower Manhattan District and the underlying districts. (ZR 91-04)
- Within the area bounded by South Street, the southerly edge of Pier 9, the U. S. Pierhead Line and the northerly edge of Pier 14, which, for the requirements of this Section, shall be deemed to be a single zoning lot, the City Planning Commission may, by special permit, permit modification of the bulk regulations, other than floor area ratio. (ZR 91-69)
- Within the South Street Seaport Subdistrict, all or any portion of the development rights transferred from a granting lot may be added to the floor area of all or any one of the receiving lots in an amount not to exceed the ratio of 10 square feet of development rights to each square foot of lot area of such receiving lot, except that with respect to a receiving lot having a lot area of less than 30,000 square feet, the total floor area ratio shall not exceed 21.6. However, if a receiving lot is located in a C4-6 District, the total floor area ratio shall not exceed 3.4. In no event shall the residential floor area ratio exceed 12.0. (ZR 91-65)

The South Street Seaport Subdistrict transfer areas map shows each granting lot and receiving lot within the Subdistrict. (ZR 91-63):



Numbers indicate Brooklyn Bridge Southeast Urban Renewal Plan Parcels

Source: ZR 91-22

Figure 30: South Street Seaport subdistrict zoning

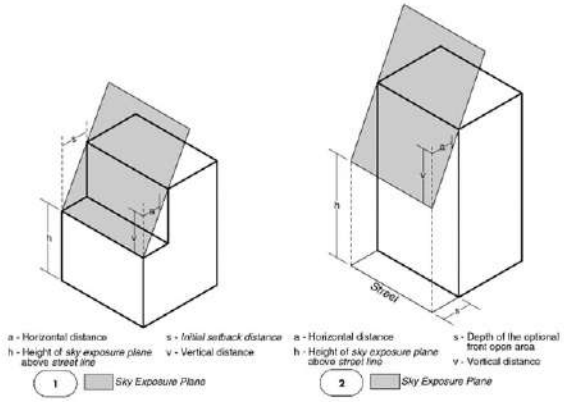
ZONING DISTRICT

M1-4

- M1 districts are often buffers between M2 or M3 districts and adjacent residential or commercial districts.
- M1 districts typically include light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities.
- Nearly all industrial uses are allowed in M1 districts if they meet the stringent M1 performance standards.
- Offices, hotels and most retail uses are also permitted.
- Certain community facilities, such as hospitals, are allowed in M1 districts only by special permit, but houses of worship are allowed as-of-right.
- Residence not permitted in M1-4 unless paired with residence districts in Special Mixed Use Districts
- Building height and setbacks are controlled by a sky exposure plane which may be penetrated by a tower in certain districts[1]
- Parking is not required in M1-4.

Source: www1.nyc.gov/site/planning/zoning/districts-tools/M1.page

1. In M1-4, buildings or portions thereof which in the aggregate occupy not more than 40 percent of the lot area of a zoning lot or, for zoning lots of less than 20,000 square feet, up to 50% of the lot area, may penetrate an established sky exposure plane. (ZR 43-45)



Note: Passages or texts that refer to the Zoning Resolution (ZR) are either excerpts or paraphrases as deemed appropriate by the project team. For the full text, please consult the ZR.

Front Setback Requirements

1

Initial Setback Distance		Maximum Height of a front wall or other portion of a building or other structure within the initial setback distance	Sky Exposure Plane		
				Slope over Zoning Lot	
Narrow Street (s)	Wide Street (s)		Height above the Street Line (h)	Narrow Street (v:a)	Wide Street (v:a)
20′	15′	60′ or 4 stories, whichever is less	60′	2.7:1	5.6:1

Alternate Front Setback Requirements

2

Depth of Optional Front Open Area			Sky Exposure Plane		
				Slope over Zoning Lot	
Narrow Street (s)	Wide Street (s)		Height above the Street Line (h)	Narrow Street (v:a)	Wide Street (v:a)
15′	10′		60′	3.7:1	7.6:1

Source: ZR 43-43

Base Maximum FAR (Not modified by any bonuses and/or waterfront/special district regulations)

Zoning District	Equivalent Residential District	Manufacturing FAR	Commercial FAR	Community Facility FAR	Residential FAR	Maximum FAR
M1-4	N/A	2	2	6.5	0	6.5

Source: ZR 43-12

Permitted Use Groups

	Residential		Community Facility		Retail and Commercial											General Service	Manufacturing	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Manufacturing Districts																		
M1				•	•	•	•	•	•	•	•	•	•	•		•	•	

Source: NYC DCP Zoning Handbook, p.151

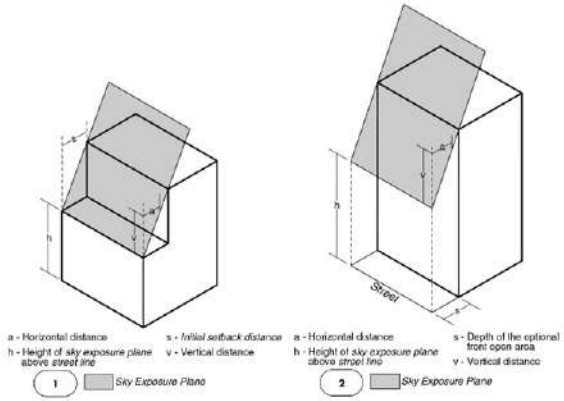
Figure 31: M1-4 zoning districts

ZONING DISTRICT

C4-6

- C4 districts are mapped in regional commercial centers that are located outside of the central business districts.
- In these areas, specialty and department stores, theaters and other commercial and office uses serve a larger region and generate more traffic than neighborhood shopping areas
- Use Groups 5, 6, 8, 9, 10 and 12, which include most retail establishments, are permitted in C4 districts.
- C4-6 districts are mapped in densely built areas in Manhattan

Source: www1.nyc.gov/site/planning/zoning/districts-tools/c4.page



Note: Passages or texts that refer to the Zoning Resolution (ZR) are either excerpts or paraphrases as deemed appropriate by the project team. For the full text, please consult the ZR.

Front Setback Requirements

1

Initial Setback Distance		Maximum Height of a front wall or other portion of a building or other structure within the initial setback distance	Sky Exposure Plane		
				Slope over Zoning Lot	
Narrow Street (s)	Wide Street (s)		Height above the Street Line (h)	Narrow Street (v:a)	Wide Street (v:a)
20′	15′	85′ or 6 stories, whichever is less	85′	2.7:1	5.6:1

Alternate Front Setback Requirements

2

Depth of Optional Front Open Area			Sky Exposure Plane		
				Slope over Zoning Lot	
Narrow Street (s)	Wide Street (s)		Height above the Street Line (h)	Narrow Street (v:a)	Wide Street (v:a)
15′	10′		85′	3.7:1	7.6:1

Source: ZR 33-43

Base Maximum FAR (Not modified by any bonuses and/or waterfront/special district regulations)

Zoning District	Equivalent Residential District	Manufacturing FAR	Commercial FAR	Community Facility FAR	Residential FAR	Maximum FAR
C4-6	R10	0	3.4	10	10	10

Source: ZR 33-122; 33-123; 34-112

Permitted Use Groups

Source: NYC DCP Zoning Handbook, p.127

Figure 32: C4-6 zoning district analysis

Figure 33: Current land use of project site using PLUTO

The following figures demonstrate regulations by lot.

REGULATIONS BY LOT

Site Analysis: Lot Profile

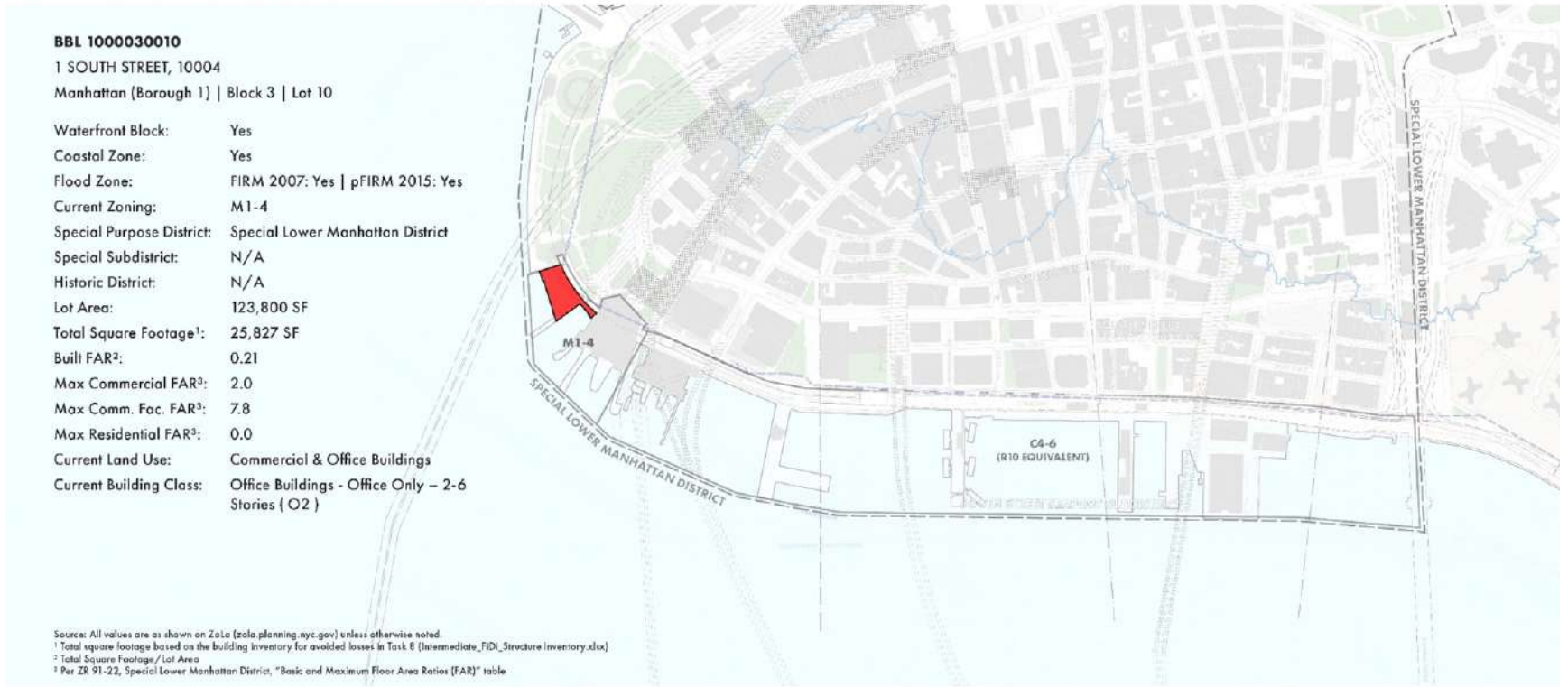


Figure 34: Lot profile and lot regulations for 1 South Street | Block 3, Lot 10 – US Coast Guard Site

REGULATIONS BY LOT

Site Analysis: Lot Profile

BBL 1000020001

4 SOUTH STREET, 10004

Manhattan (Borough 1) | Block 2 | Lot 1

Waterfront Block:	Yes
Coastal Zone:	Yes
Flood Zone:	FIRM 2007: Yes | pFIRM 2015: Yes
Current Zoning:	M1-4
Special Purpose District:	Special Lower Manhattan District
Special Subdistrict:	N/A
Historic District:	N/A
Lot Area:	209,215 SF
Total Square Footage[1]:	280,000 SF
Built FAR[2]:	1.34
Max Commercial FAR[3]:	2.0
Max Comm. Fac. FAR[3]:	7.8
Max Residential FAR[3]:	0.0
Current Land Use:	Transportation & Utility
Current Building Class:	Selected Government Installations (Excluding Office Buildings, Training Schools, Academic, Garages, Warehouses, Piers, Air Fields, Vacant Land, Vacant Sites, and Land Under Water and Easements) - Department of Ports and Terminals (Y7)

Source: All values are as shown on ZoLa (zola.planning.nyc.gov) unless otherwise noted.
[1] Total square footage based on the building inventory for avoided losses in Task 8 (Intermediate_FiDi_Structure Inventory.xlsx)
[2] Total Square Footage / Lot Area
[3] Per ZR 91-22, Special Lower Manhattan District, "Basic and Maximum Floor Area Ratios (FAR)" table

Figure 35: Lot profile and lot regulations for 4 South Street | Block 2, Lot 1 – Whitehall Ferry Terminal

REGULATIONS BY LOT

Site Analysis: Lot Profile

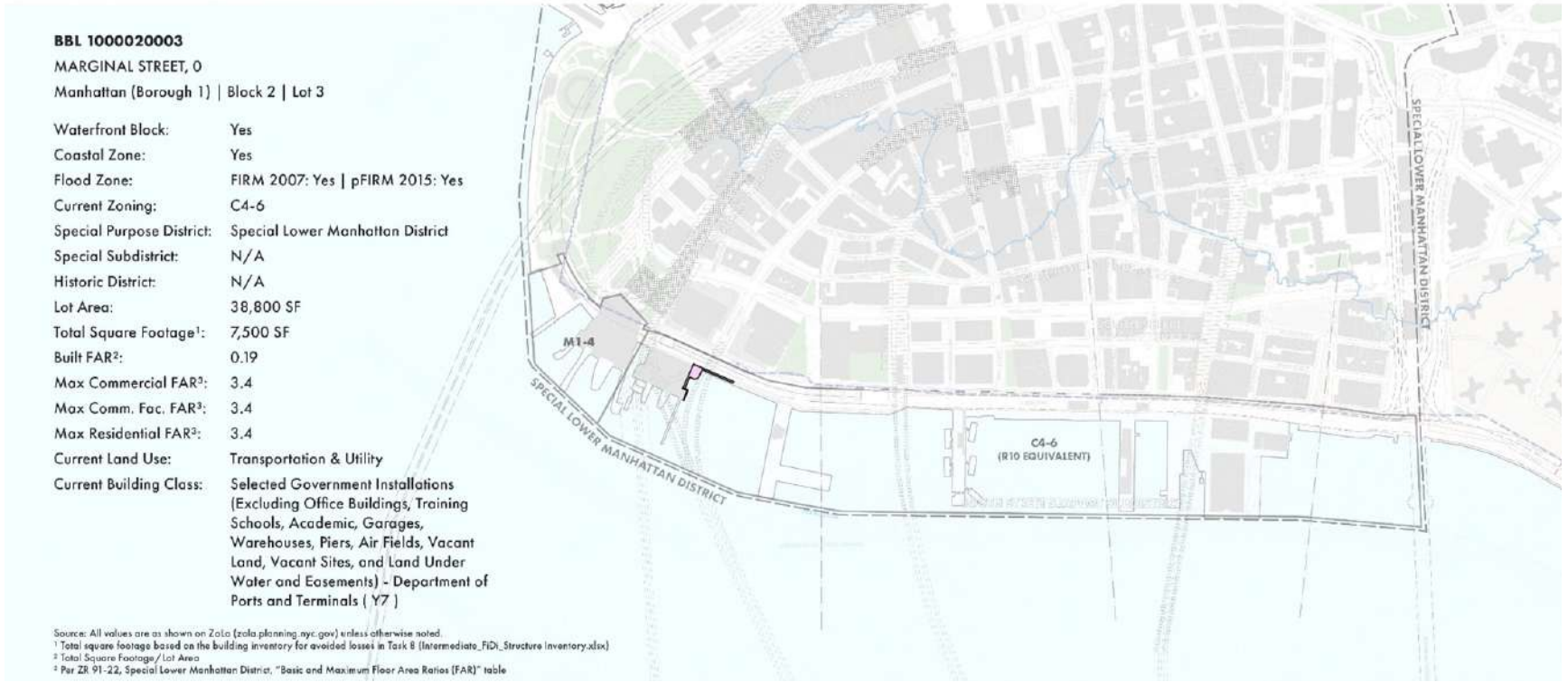


Figure 36: Lot profile and lot regulations for Marginal Street | Block 2, Lot 3

REGULATIONS BY LOT

Site Analysis: Lot Profile

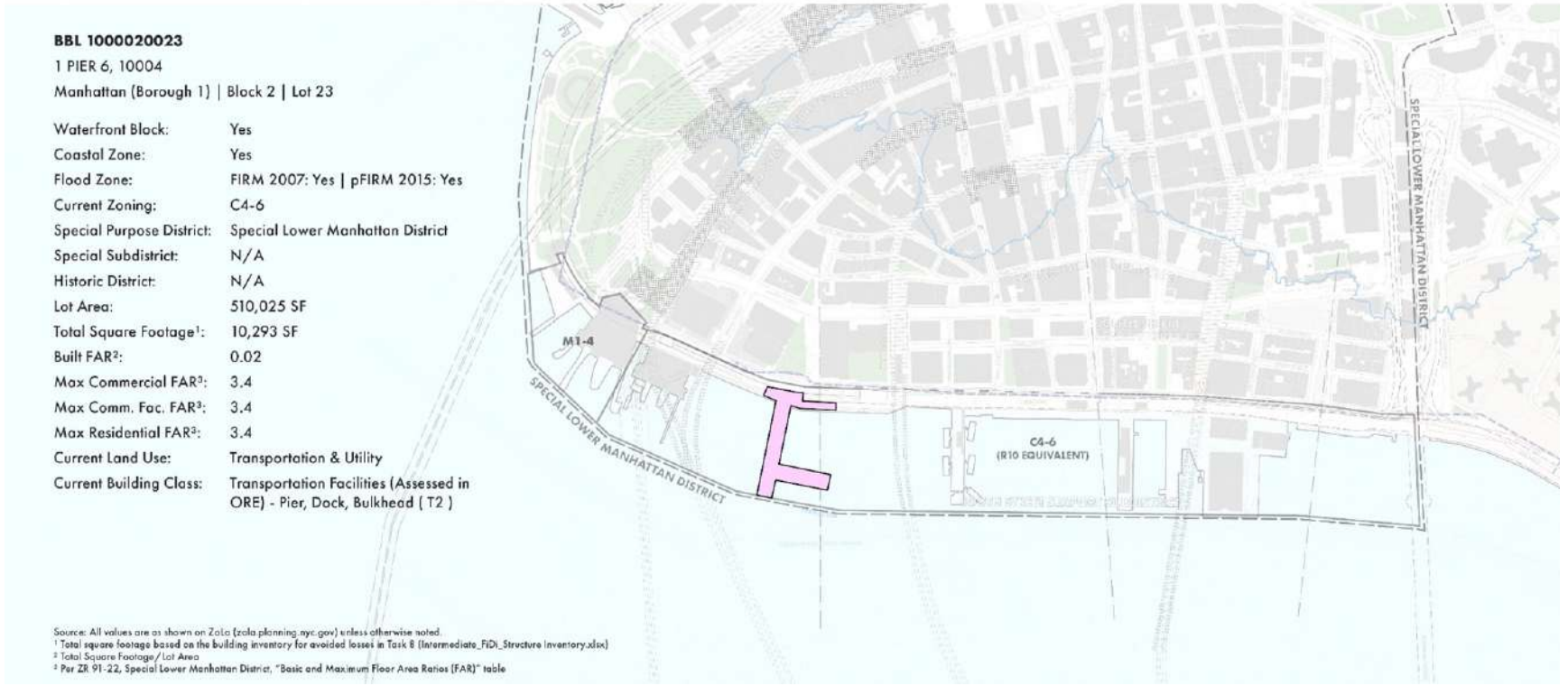


Figure 37: Lot profile and lot regulations for 1 Pier 6 | Block 2, Lot 23

REGULATIONS BY LOT

Site Analysis: Lot Profile

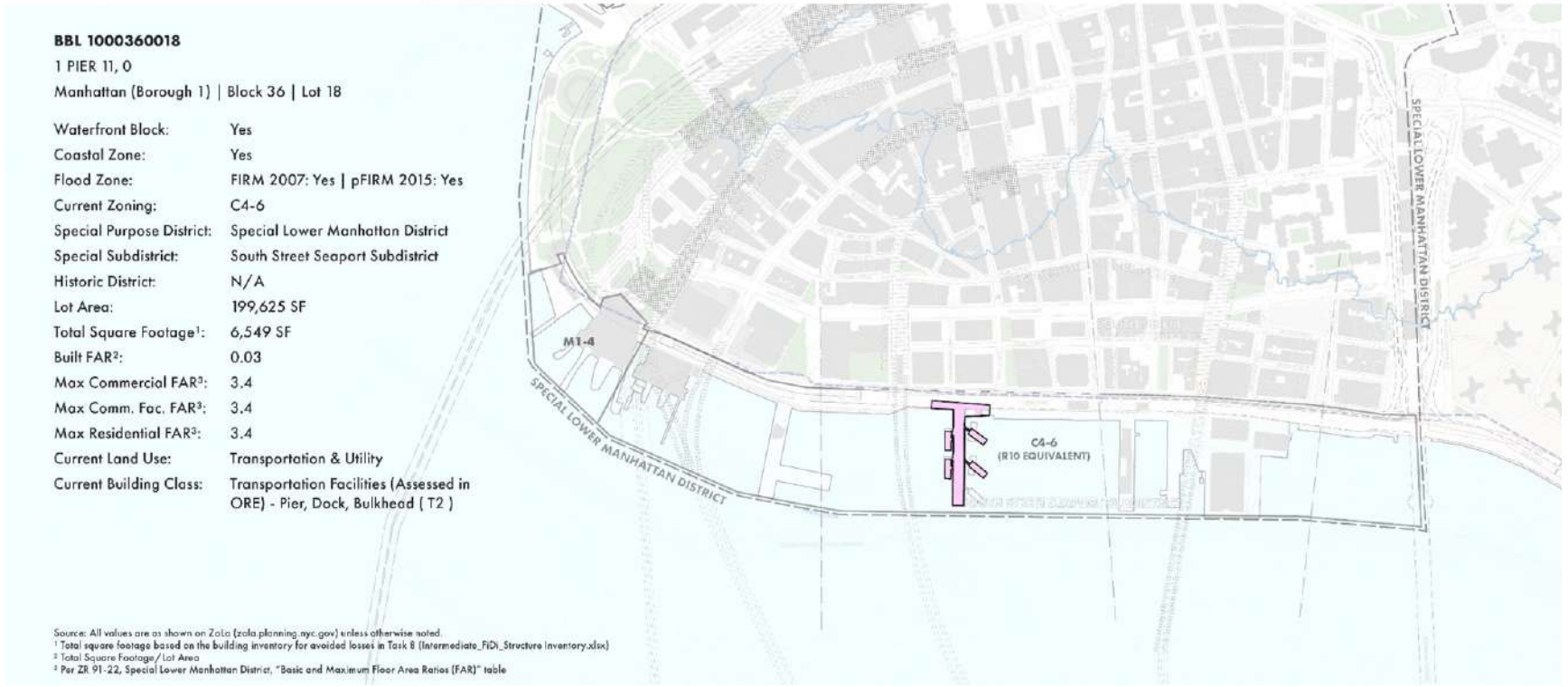


Figure 38: Lot profile and lot regulations for 1 Pier 11 | Block 36, Lot 18

REGULATIONS BY LOT

Site Analysis: Lot Profile

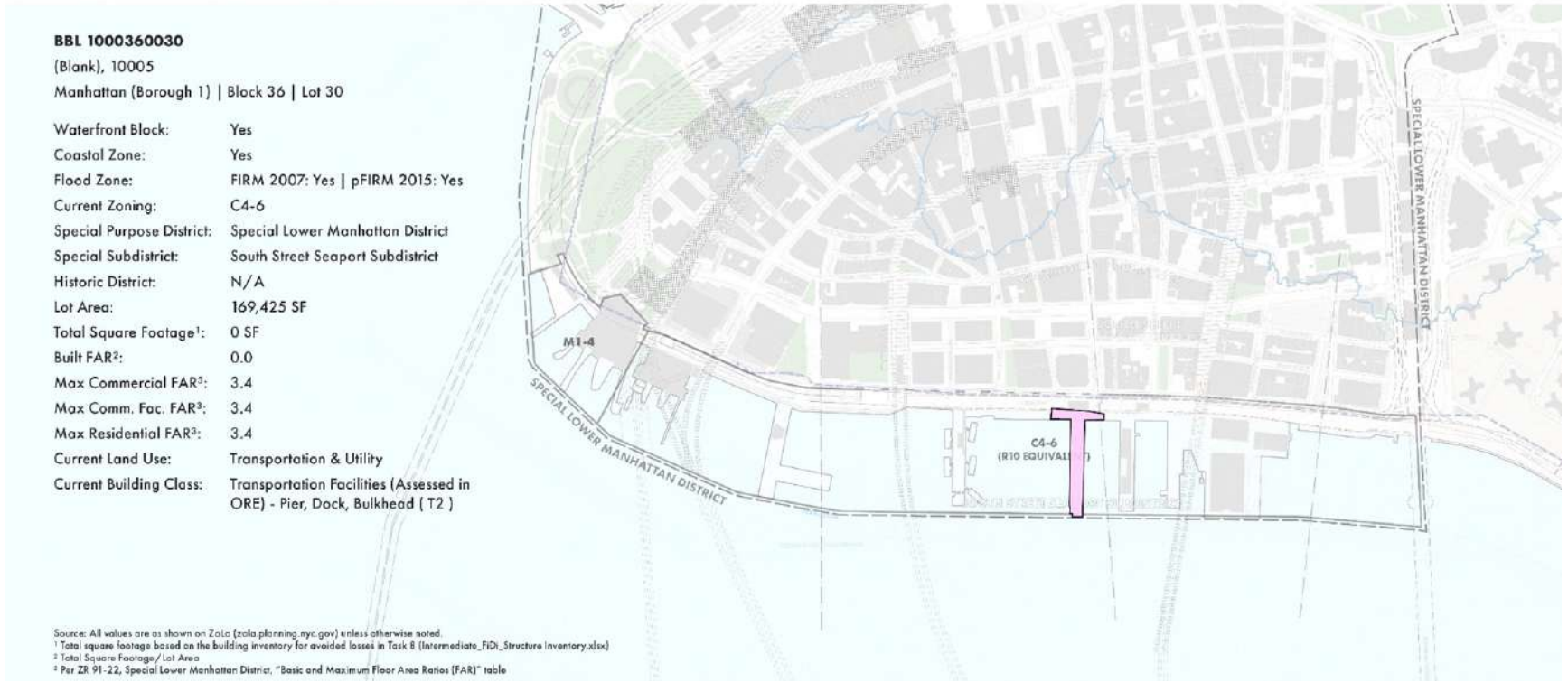


Figure 39: Lot profile and lot regulations for (Blank) | Block 36, Lot 30

REGULATIONS BY LOT

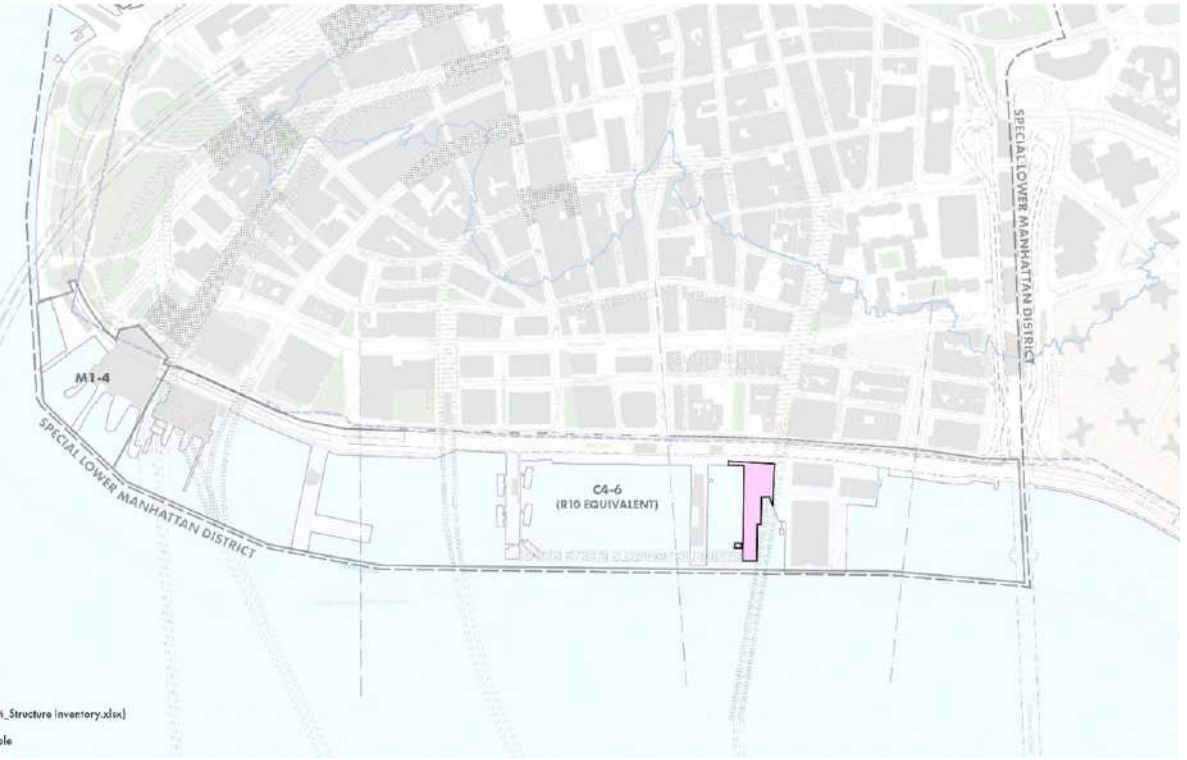
Site Analysis: Lot Profile

BBL 1000730008

PIER-16 SOUTH STREET, 10038

Manhattan (Borough 1) | Block 73 | Lot 8

Waterfront Block:	Yes
Coastal Zone:	Yes
Flood Zone:	FIRM 2007: Yes | pFIRM 2015: Yes
Current Zoning:	C4-6
Special Purpose District:	Special Lower Manhattan District
Special Subdistrict:	South Street Seaport Subdistrict
Historic District:	South Street Seaport Historic District
FRESH Zone:	Discretionary Tax Incentives
Lot Area:	146,025 SF
Total Square Footage[1]:	2082 SF
Built FAR[2]:	0.01
Max Commercial FAR[3]:	3.4
Max Comm. Fac. FAR[3]:	3.4
Max Residential FAR[3]:	3.4
Current Land Use:	Transportation & Utility
Current Building Class:	Transportation Facilities (Assessed in ORE) - Pier, Dock, Bulkhead (T2)



Source: All values are as shown on ZoLa (zola.planning.nyc.gov) unless otherwise noted.
[1] Total square footage based on the building inventory for avoided losses in Task 8 (Intermediate_FiDi_Structure Inventory.xlsx)
[2] Total Square Footage / Lot Area
[3] Per ZR 91-22, Special Lower Manhattan District, "Basic and Maximum Floor Area Ratios (FAR)" table

Figure 40: Lot profile and lot regulations for Pier-16 South Street | Block 73, Lot 8

REGULATIONS BY LOT

Site Analysis: Lot Profile

BBL 1000730010

95 SOUTH STREET, 10038

Manhattan (Borough 1) | Block 73 | Lot 10

Waterfront Block:	Yes
Coastal Zone:	Yes
Flood Zone:	FIRM 2007: Yes | pFIRM 2015: Yes
Current Zoning:	C4-6
Special Purpose District:	Special Lower Manhattan District
Special Subdistrict:	South Street Seaport Subdistrict
Historic District:	South Street Seaport Historic District
FRESH Zone:	Discretionary Tax Incentives
Lot Area:	208,475 SF
Total Square Footage[1]:	242,074 SF
Built FAR[2]:	1.16
Max Commercial FAR[3]:	3.4
Max Comm. Fac. FAR[3]:	3.4
Max Residential FAR[3]:	3.4
Current Land Use:	Commercial & Office Buildings
Current Building Class:	Store Buildings (Taxpayers Included) - Shopping Centers With or Without Parking (K6)

Source: All values are as shown on ZoLa (zola.planning.nyc.gov) unless otherwise noted.
[1] Total square footage based on the building inventory for avoided losses in Task 8 (Intermediate_FiDi_Structure Inventory.xlsx)
[2] Total Square Footage / Lot Area
[3] Per ZR 91-22, Special Lower Manhattan District, "Basic and Maximum Floor Area Ratios (FAR)" table

Figure 41: Lot profile and lot regulations for 95 South Street | Block 73, Lot 10

REGULATIONS BY LOT

Site Analysis: Current Lot Profile

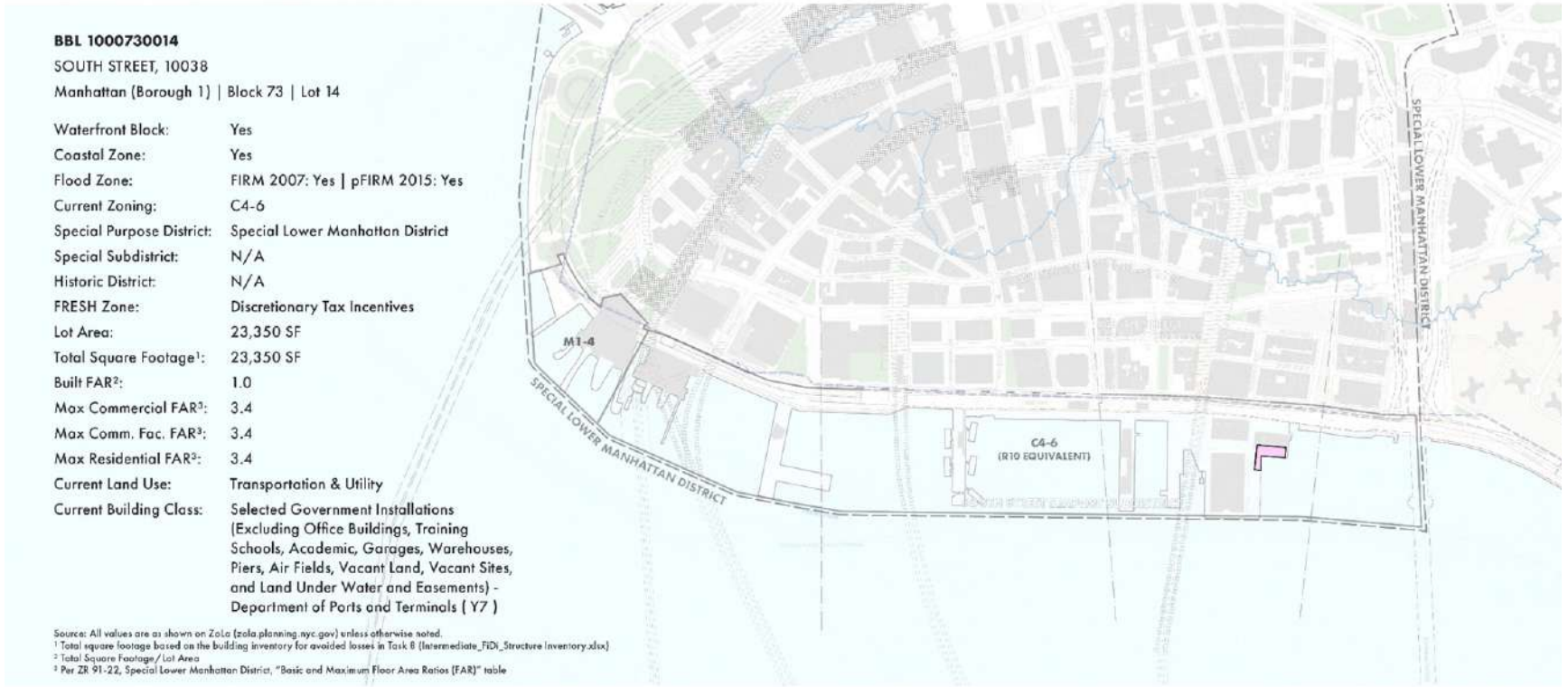


Figure 42: Lot profile and lot regulations for South Street | Block 73, Lot 14

REGULATIONS BY LOT

Site Analysis: Current Lot Profile

BBL 1000730017

PIER 19, 0

Manhattan (Borough 1) | Block 73 | Lot 17

Waterfront Block:	Yes
Coastal Zone:	Yes
Flood Zone:	FIRM 2007: Yes | pFIRM 2015: Yes
Current Zoning:	C4-6
Special Purpose District:	Special Lower Manhattan District
Special Subdistrict:	N/A
Historic District:	N/A
FRESH Zone:	Discretionary Tax Incentives
Lot Area:	404,450 SF
Total Square Footage[1]:	0 SF
Built FAR[2]:	0.0
Max Commercial FAR[3]:	3.4
Max Comm. Fac. FAR[3]:	3.4
Max Residential FAR[3]:	3.4
Current Land Use:	Transportation & Utility
Current Building Class:	Transportation Facilities (Assessed in ORE) - Pier, Dock, Bulkhead (T2)

Source: All values are as shown on ZoLa (zola.planning.nyc.gov) unless otherwise noted.
[1] Total square footage based on the building inventory for avoided losses in Task 8 (Intermediate_FiDi_Structure Inventory.xlsx)
[2] Total Square Footage / Lot Area
[3] Per ZR 91-22, Special Lower Manhattan District, "Basic and Maximum Floor Area Ratios (FAR)" table

Figure 43: Lot profile and lot regulations for Pier 19 | Block 73, Lot 17

3. Considerations for Program on the Shoreline Extension

3.1 Structures and Open Space

The Project Team studied the relationship between the FDR Drive viaduct and the upland side of the flood defense to understand suitable program and necessary offsets from the viaduct for emergency access, noise, light, and air. The Project Team also studied siting buildings in relation to the flood defense system and FDR Drive viaduct. The Master Plan maintains a setback of 24 feet from the FDR Drive viaduct before siting an access point or significant grade change. This setback is intended to allow flexible emergency access and space for light and air to reach the underside of the FDR Drive viaduct. As the design is advanced, this setback may become wider or narrower to reflect the specific spatial requirements of a particular area. Specific site program, safety and access requirements, and local light and air needs under the FDR will be key factors in refining this offset.

i. City Side Program and Buildings in Relation to the FDR Drive viaduct

The Project Team tested scenarios for program at the at current waterfront grade, terraced along the grade change, and at the upper level. The scenarios were tested using a stretch of the study area adjacent to the Maiden Lane access point.

The following figures are from the series of studies that were conducted.

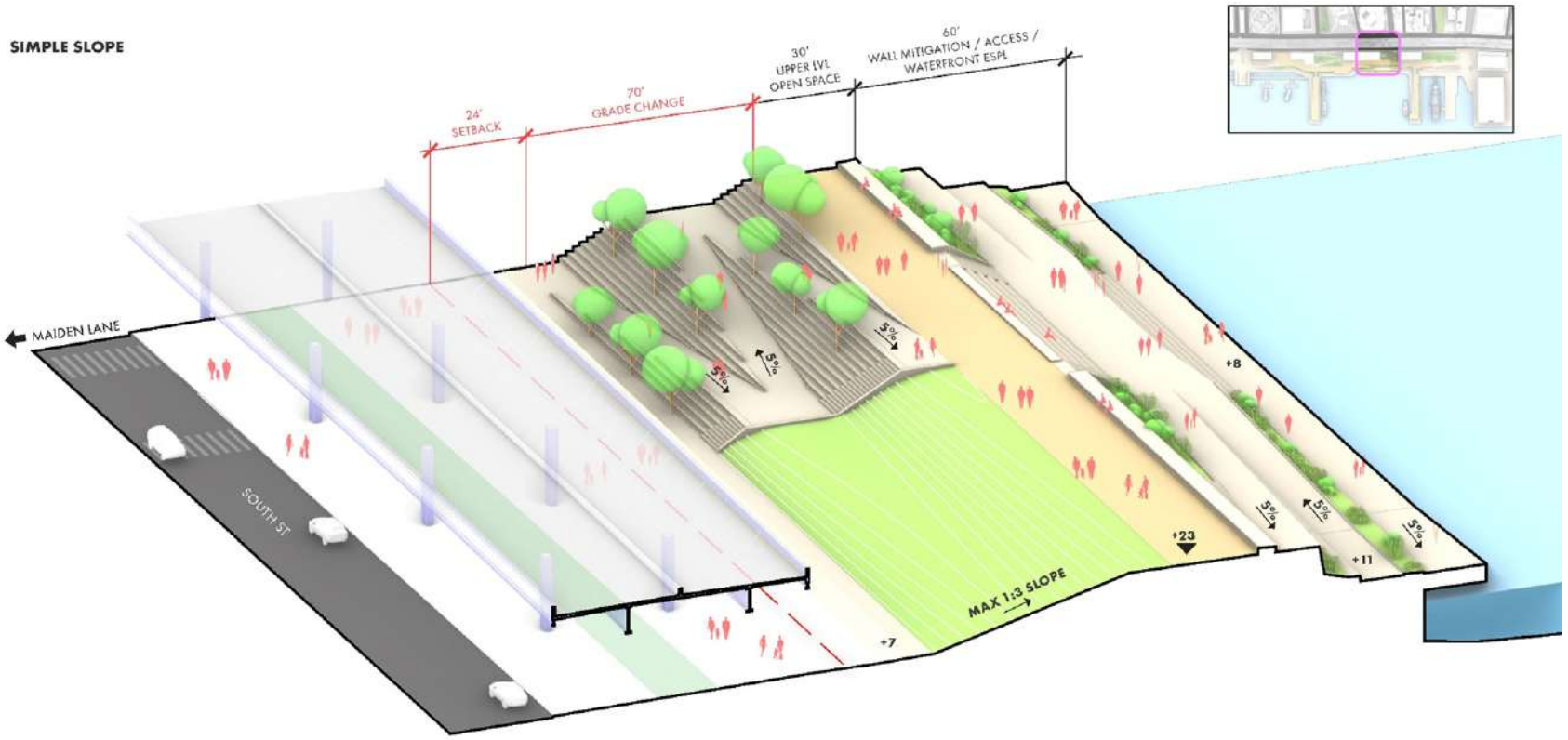


Figure 44: Scenario testing area

Programming the lower level could take advantage of the space under the FDR Drive viaduct for a more expansive footprint, similar to the way the current East River Esplanade works today (Figure 46).

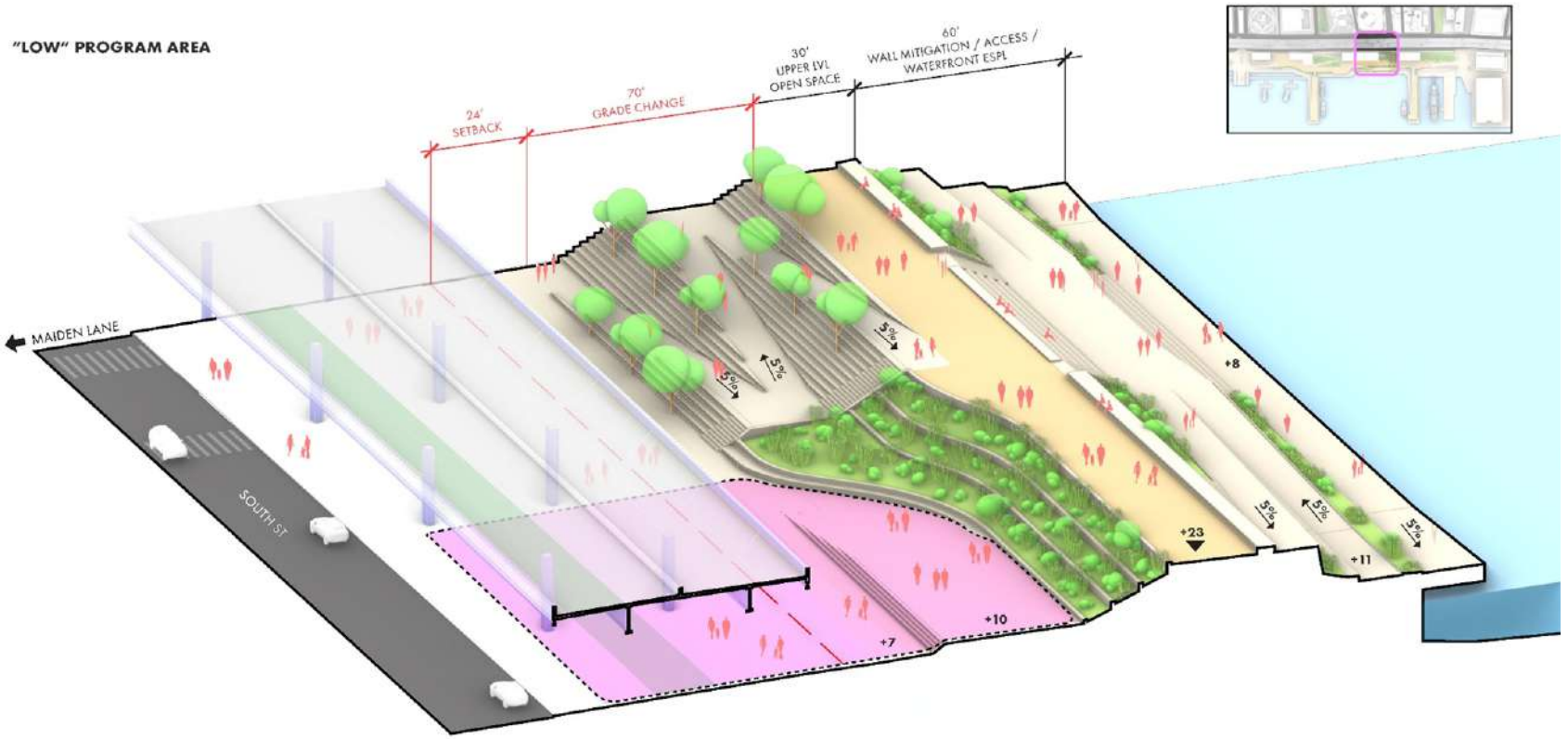


Figure 45: Programming the lower level

Programming terraces adjacent to access points enhances the access points and locates program further from the noise and fumes of the FDR Drive viaduct (Figure 47).

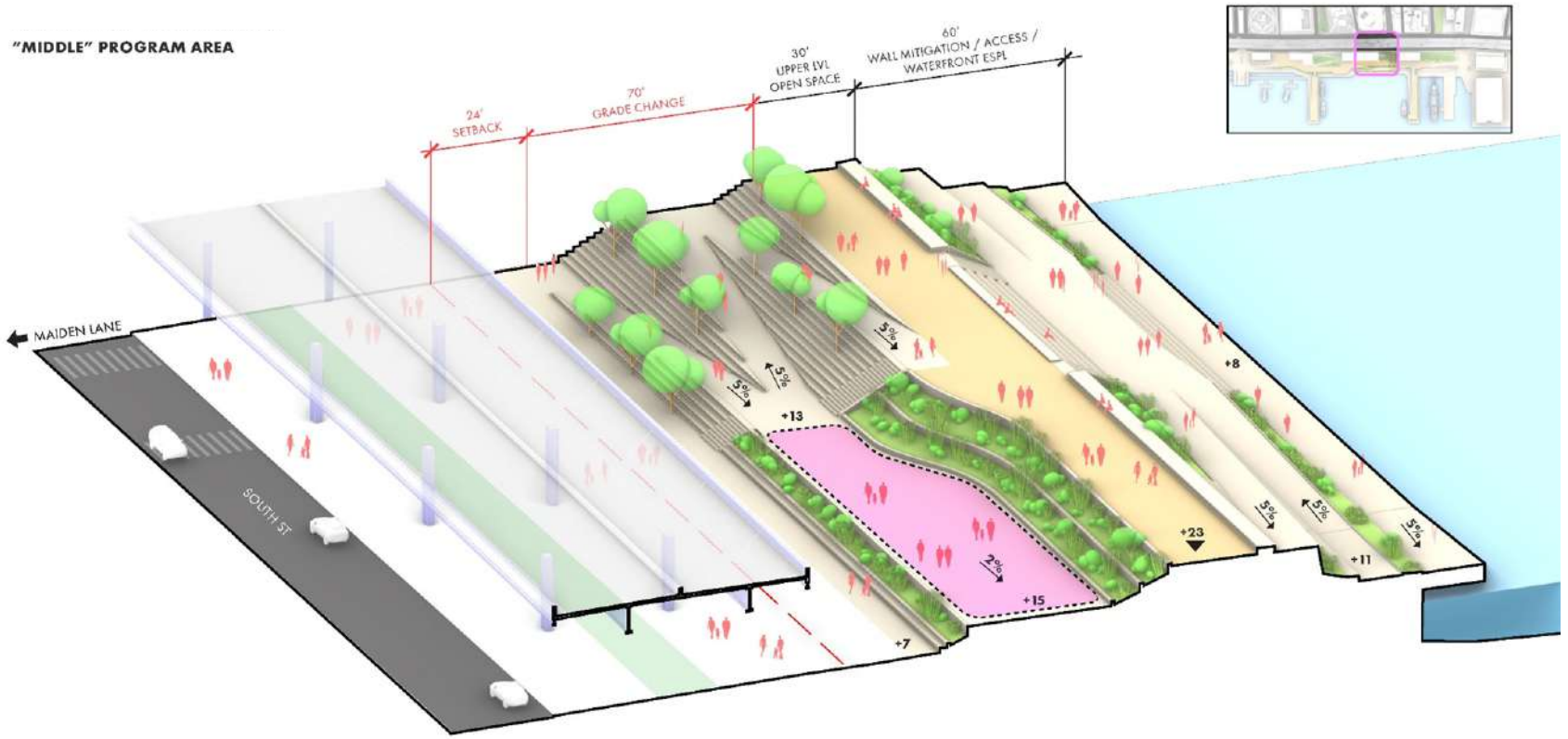


Figure 46: Programming the middle level

Programming the upper level provides opportunities to locate additional open space along the upper-level pathways and give further distance from the FDR Drive (Figure 48).

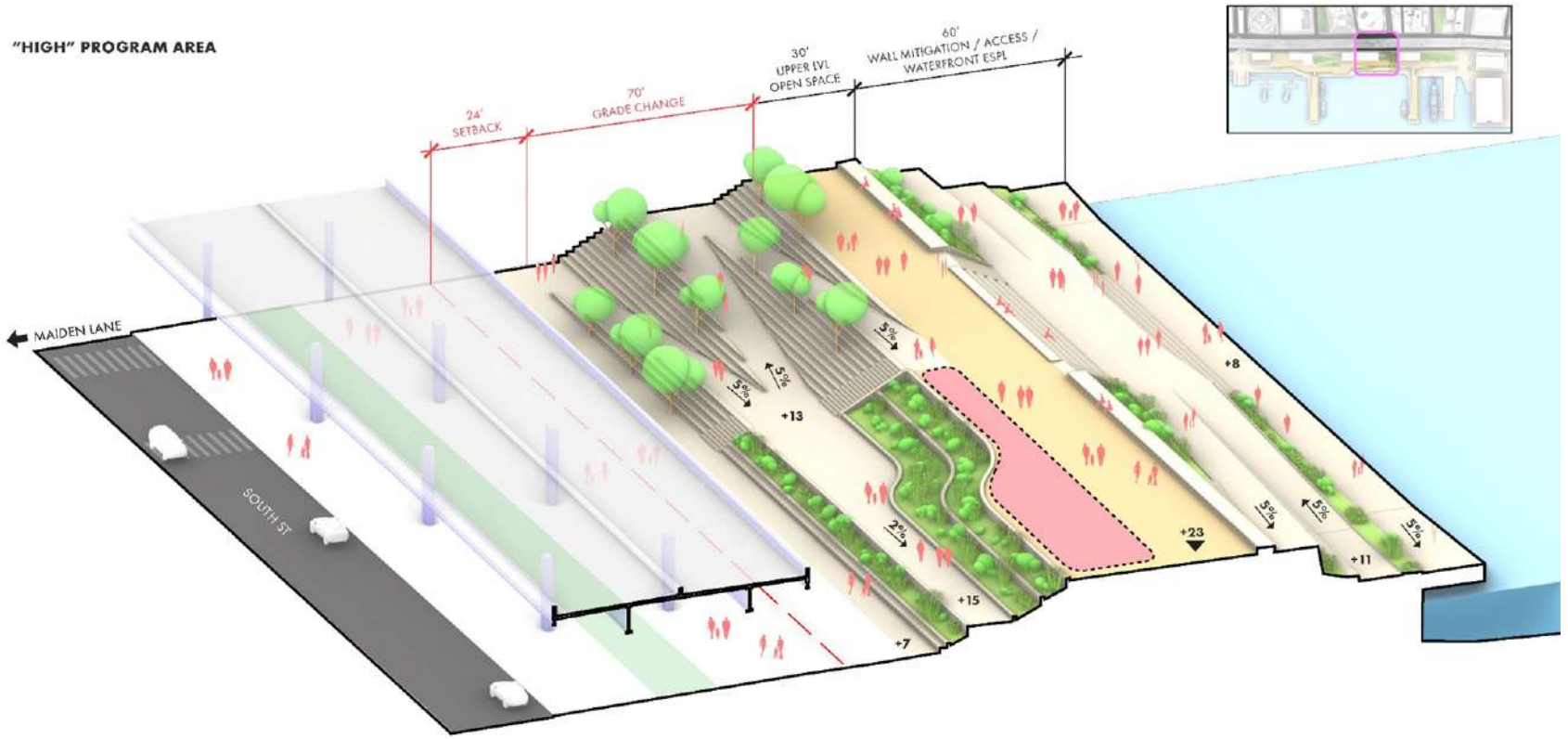


Figure 47: Programming the upper level

Strategically locating single story buildings along South Street creates a street wall and a large upper-level space that can be flexibly programmed as open space or with a mix of small or large buildings (Figures 49 through 51).

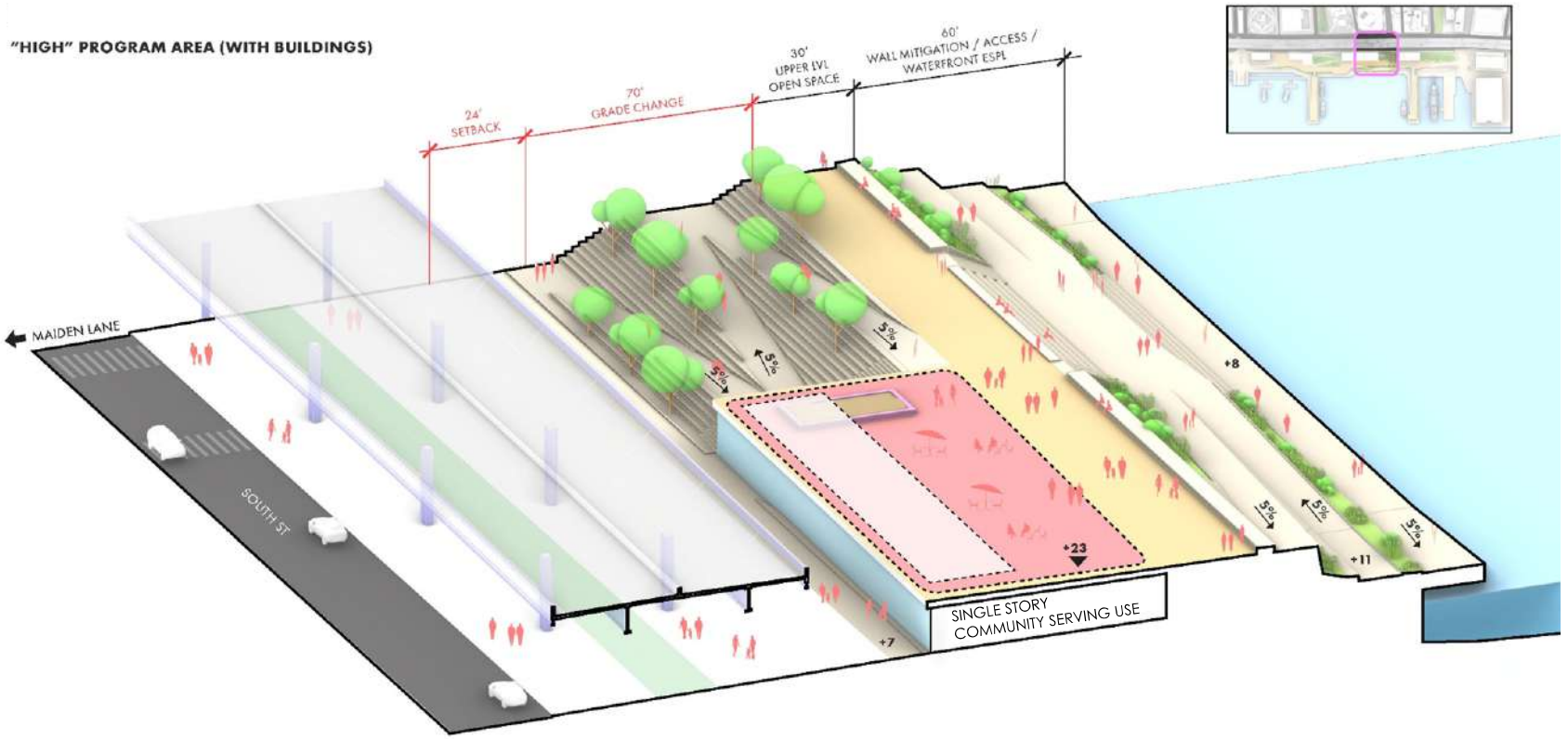


Figure 48: Programming the upper level with strategically located buildings

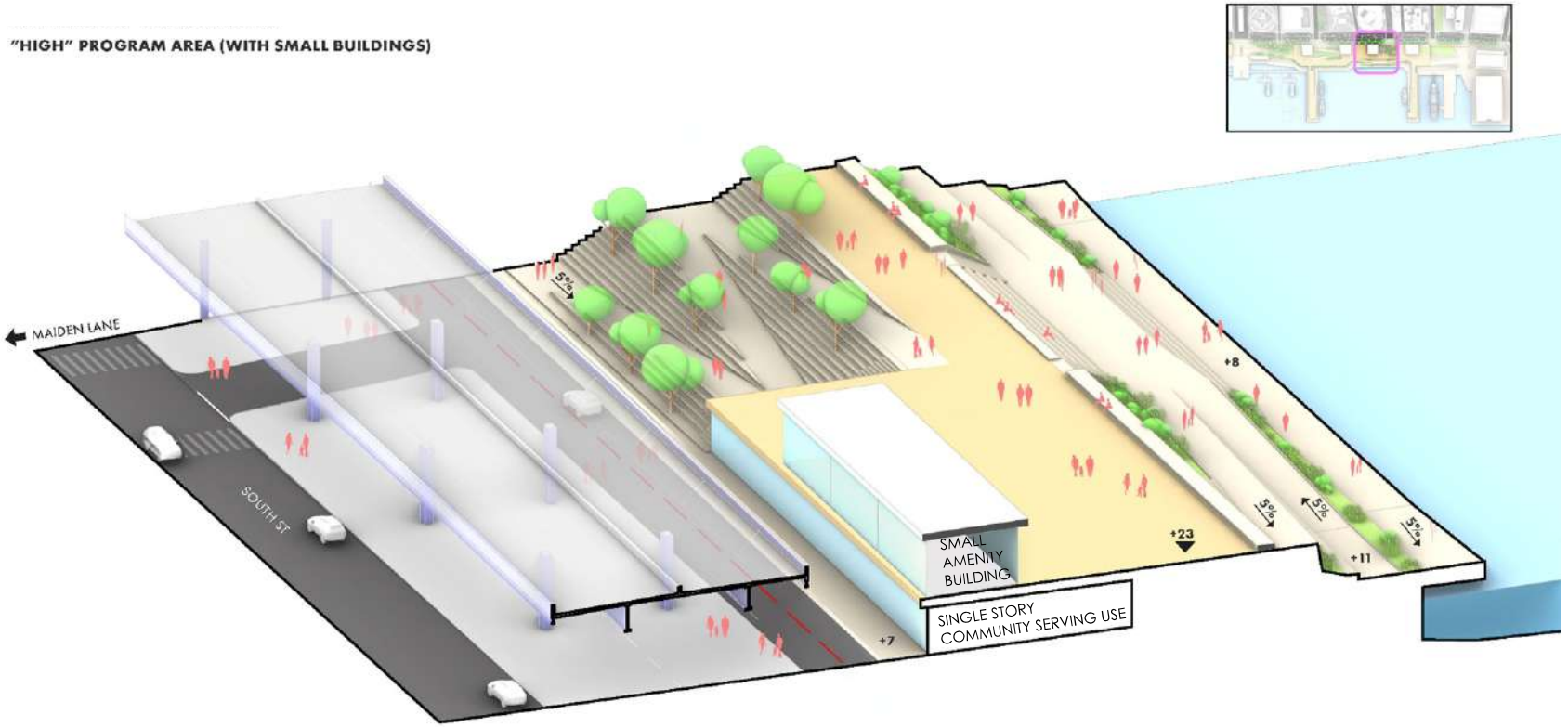


Figure 49: Programming the upper level with strategically located buildings (small)

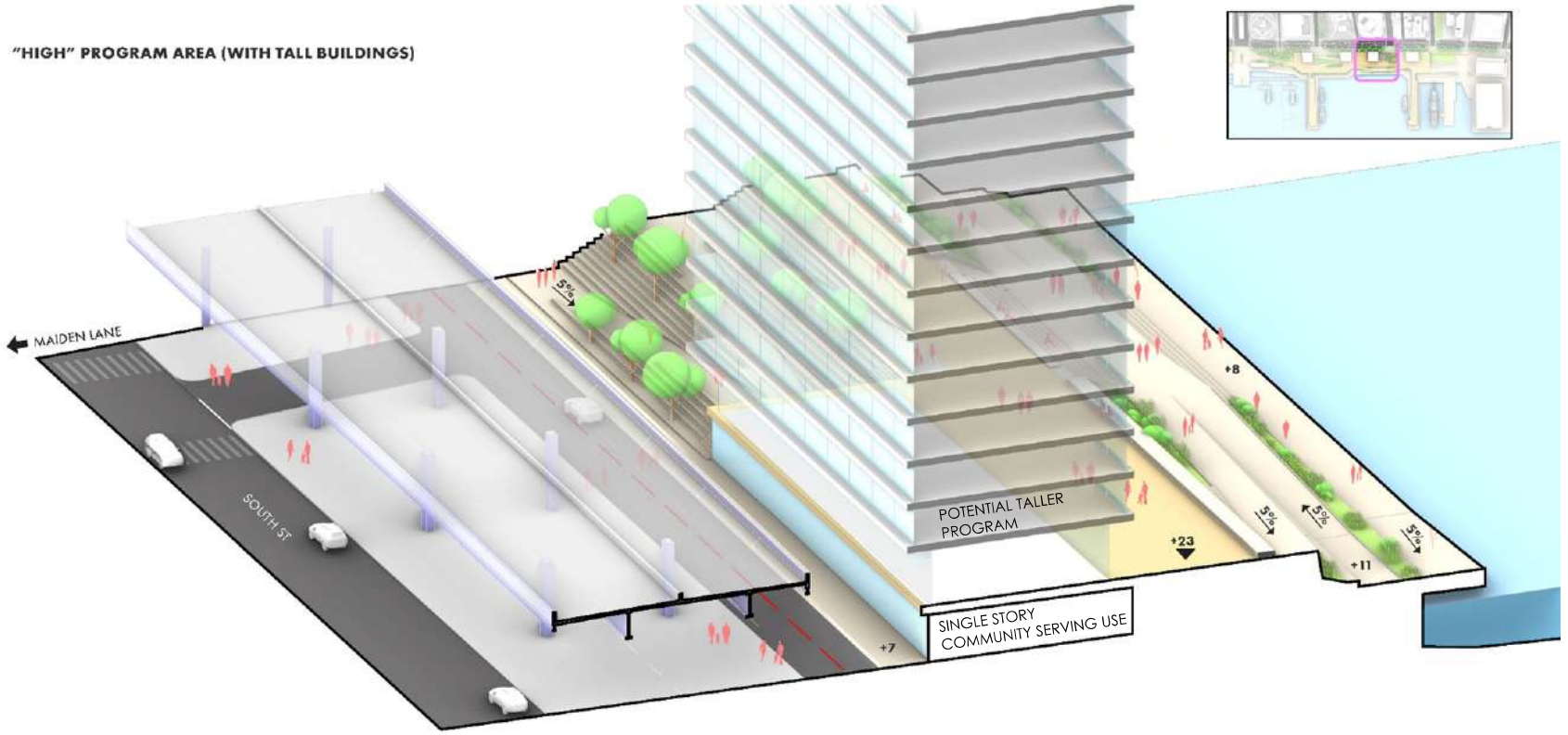


Figure 50: Programming the upper level with strategically located buildings (tall)

ii. Considerations for Siting Medium and Large Buildings

As part of studying whether development could help offset project costs, the Project Team studied how larger buildings could be sited in relation to the flood defense, the FDR Drive viaduct, and open space. Ultimately, large-scale buildings were not consistent with project goals and the Project Team concluded that development would not significantly offset project costs.

The Project Team tested variables including building height, footprint depth, floor plate depth, base height, massing setbacks, and relation of building and adjacent open space and esplanade (Figure 52).

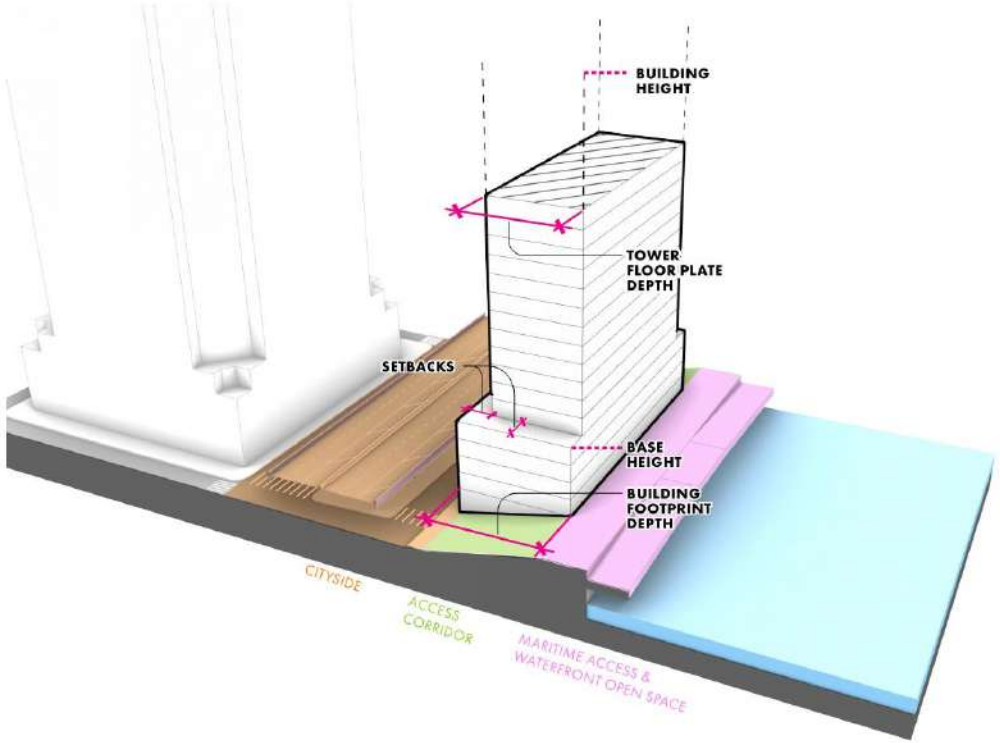


Figure 51: Building variables tested

iii. Public Waterfront Open Space

Public waterfront open space is central to the Master Plan. The Project Team looked at development precedents in New York City and elsewhere to understand scale and strategies to maintain waterfront open space adjacent to buildings. The following figures illustrate the footprint studies the Project Team completed.

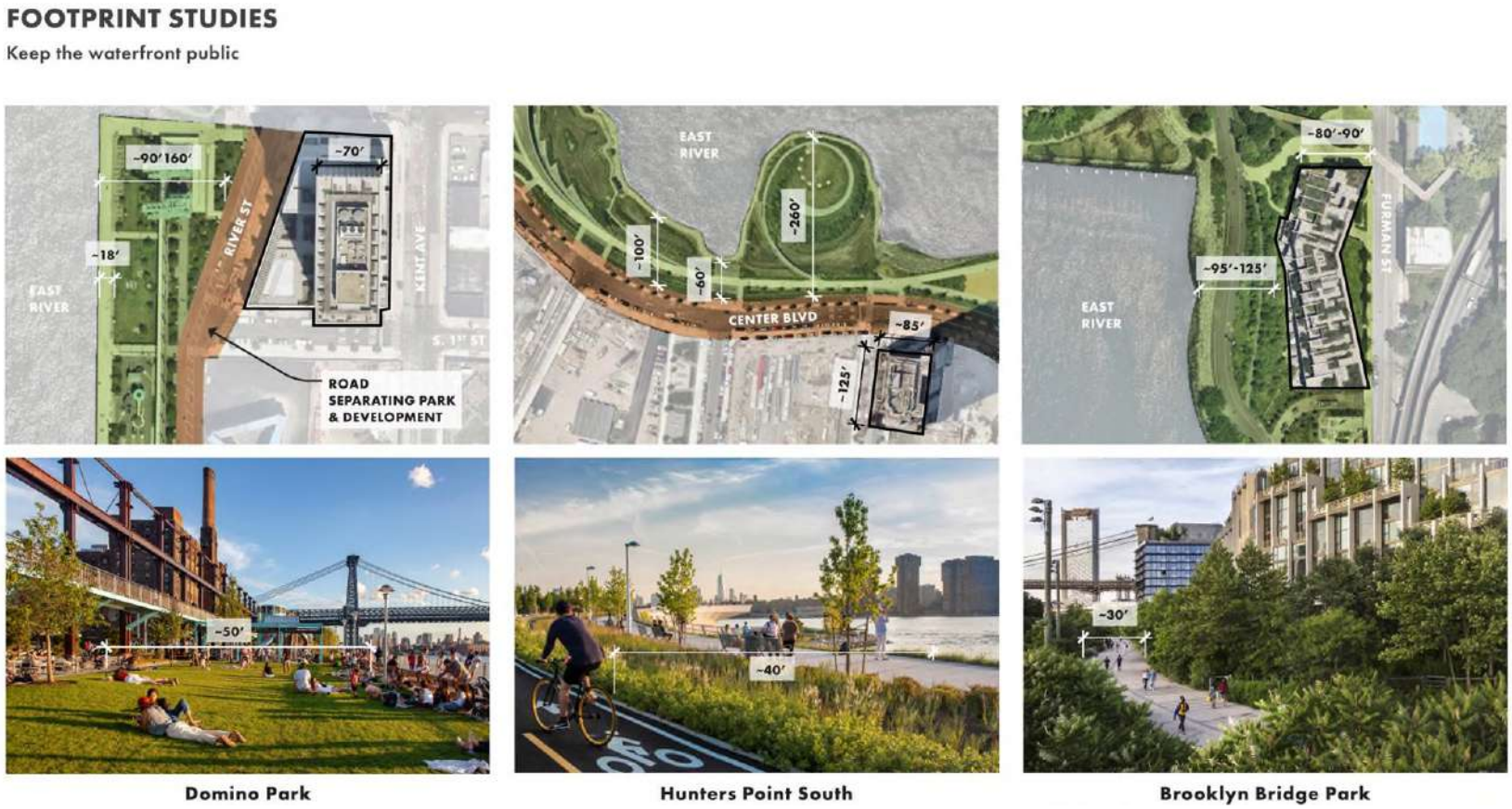


Figure 52: Footprint examples of public waterfront open space adjacent to mixed use development

FOOTPRINT STUDIES

Keep the waterfront public

Austin Nichols House | Williamsburg, NY **Institute of Contemporary Art | Boston, MA** **Royal Danish Playhouse | Copenhagen, DK**

Figure 53:Precedents that bring waterfront open space through or under the massing of waterfront buildings

The Project Team looked at precedents of buildings sited next to elevated highways in the study area and elsewhere in New York City to understand to offset dimensions and how proximity might affect light, air, and spatial experience for pedestrians under the highway.

Figure 54: Footprint examples of buildings adjacent to FDR

FOOTPRINT STUDIES

Adjacent to Elevated Highway

American Copper Buildings **One Brooklyn Bridge Park** **Industry City**

Figure 55: Footprint examples of buildings adjacent to the elevated highway

Precedent analysis informed a series of studies that looked at building footprint depth with the FDR Drive viaduct in place on a uniform shoreline extension of 150 feet. Siting buildings larger than single story buildings and pavilions adjacent to the FDR Drive viaduct would require a supplemental access road for drop off, operations, and emergency access, further reducing the potential footprint depth of buildings next to the FDR Drive viaduct.

The following figures demonstrate the summary of the footprint studies.

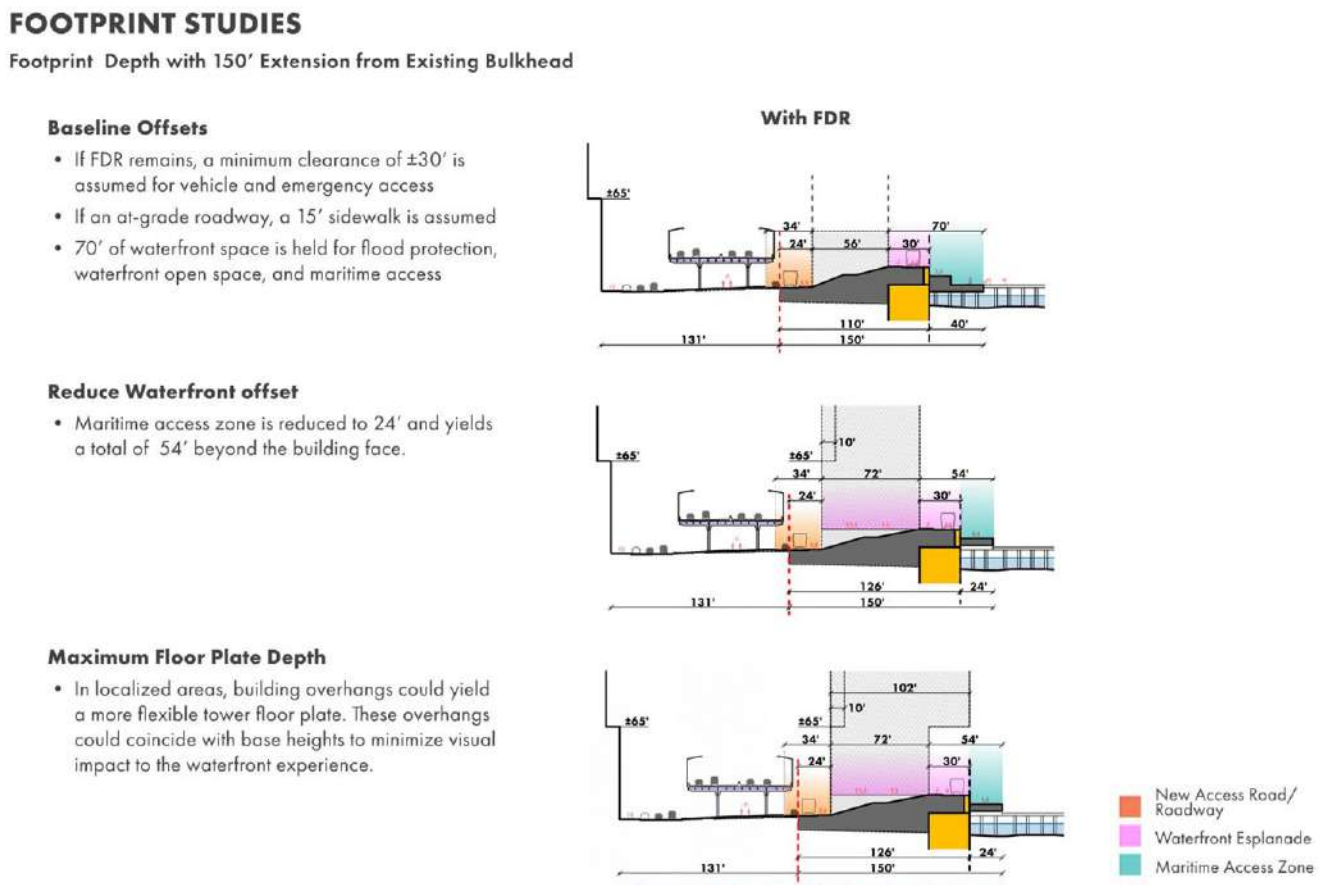
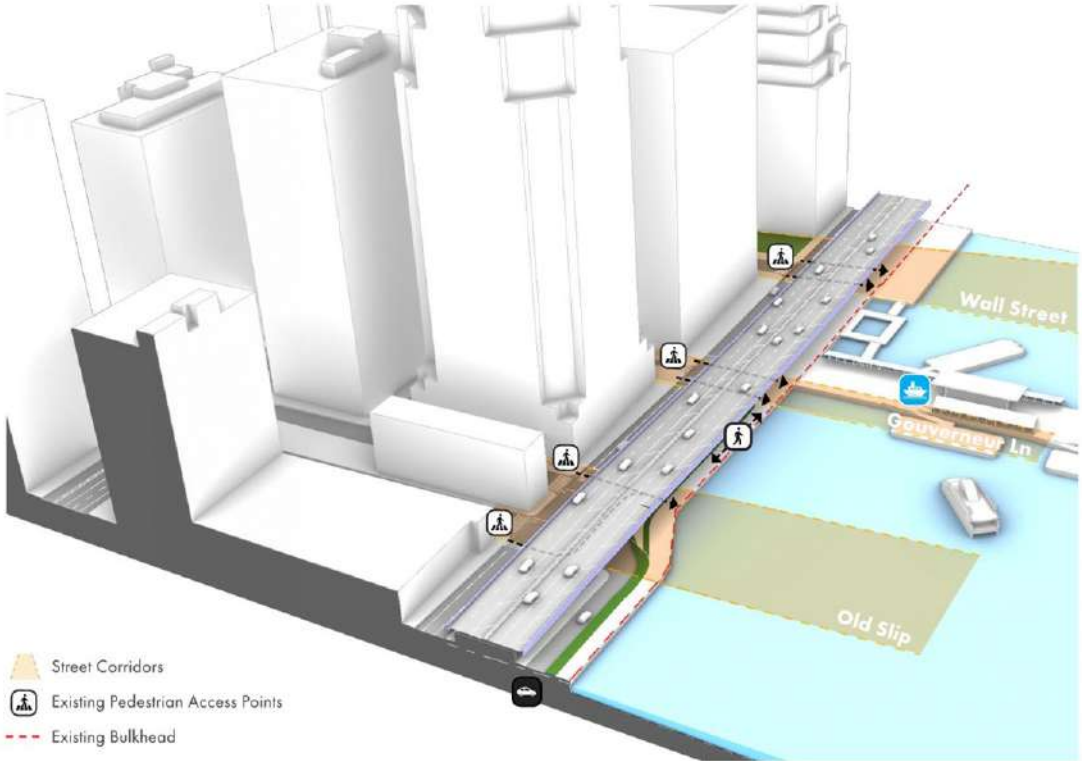


Figure 56: Footprint studies summary

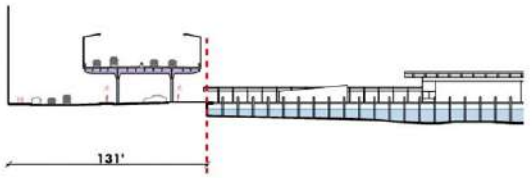
FOOTPRINT STUDIES

Old Slip to Wall Street, Existing Conditions



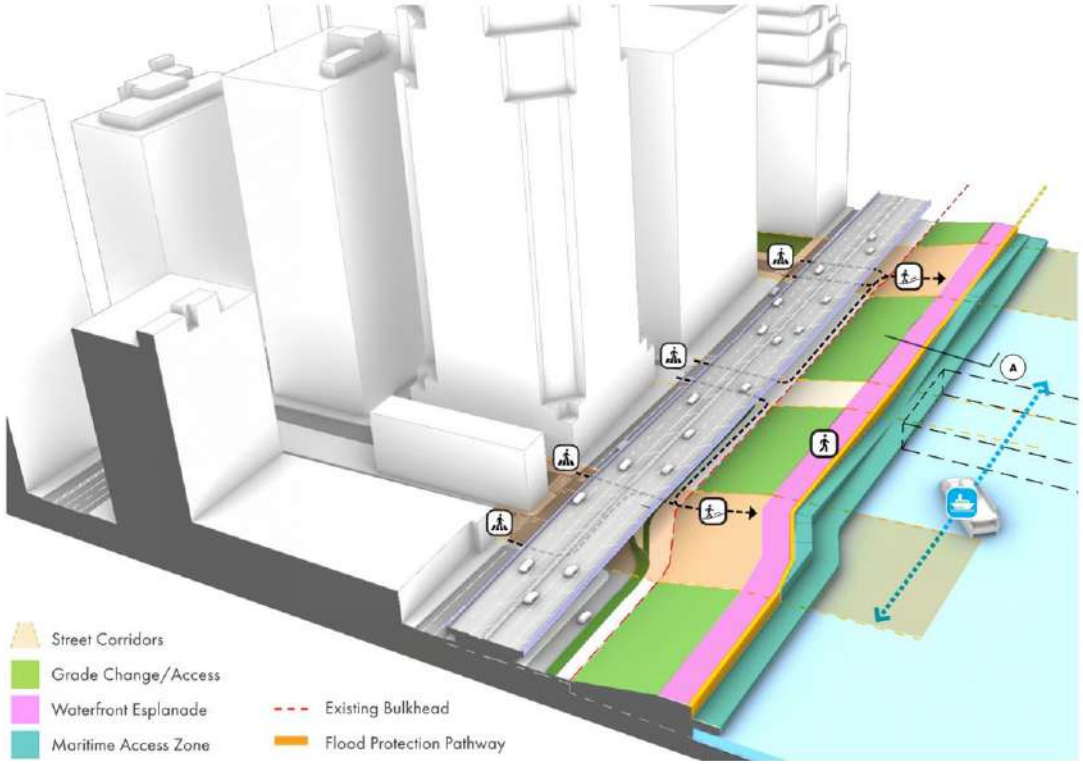
Existing Conditions

- FDR NB exit passes outboard of highway abutment and passes under viaduct at old slip
- Crosswalks exist at Old Slip, Gouverneur Ln, and Wall Street
- Esplanade ranges from ±20-50', and North of Old Slip, the space is contiguous with area under the highway
- Ferry Service at Pier 11



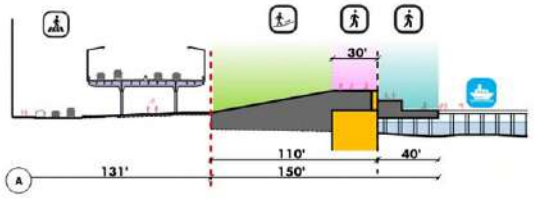
FOOTPRINT STUDIES

Baseline 150′ Shoreline Extension



Baseline 150′ w/ FDR

- No change to roadway configuration
- No change to crosswalks
- Priority access points identified at Old Slip and Wall Street
- 30′ Waterfront esplanade above flood protection structure
- 40′ flexible maritime access zone



FOOTPRINT STUDIES

Potential Building Footprints, With FDR

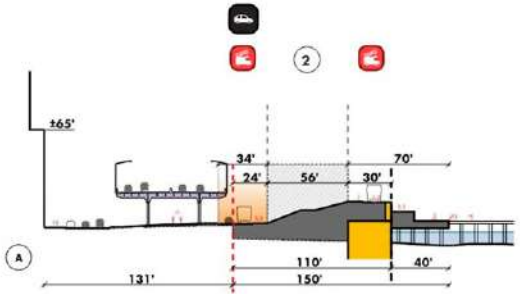
Baseline 150' w/ FDR

Buildings more than a pavilion will require vehicular access

In addition to city facing frontage, space for emergency access along the waterfront is held.

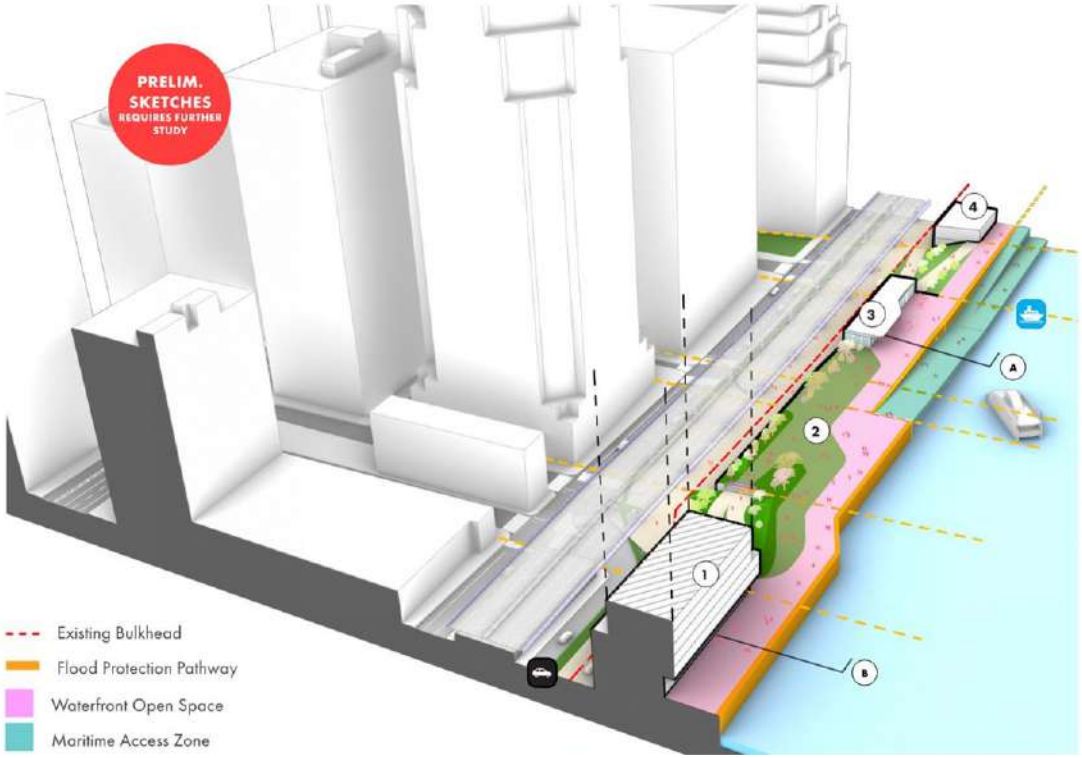
(1) Near FDR exit, roadway may need to be widened or reconfigured to allow safe access and cirulation

(2) Building floor plates are narrow and may only be suitable for residential



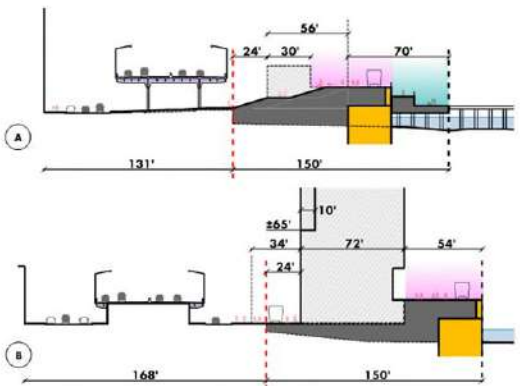
FOOTPRINT STUDIES

Potential Building Types, FDR Remains



Potential Building Types

1. Thin mixed-use residential tower, with commercial and amenities on lower level
2. Single story (south St. facing) commercial and amenity structure with open space on top
3. Waterfront pavilion (like industry kitchen) opening toward an elevated esplanade
4. Small multi-story commercial and entertainment (like the Tin building)

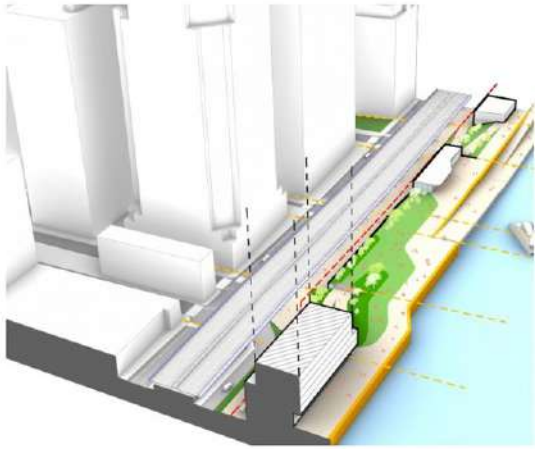


FOOTPRINT STUDIES

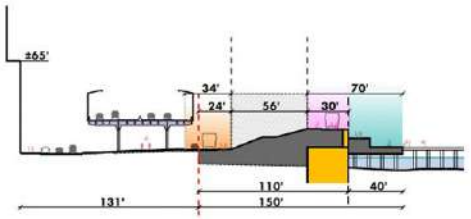
Adjacent to Elevated Highway

FDR Remains

- Tower programs beyond residential will be a challenge
- Elevated highway separates the buildings from the upland urban fabric



PRELIM. SKETCHES REQUIRES FURTHER STUDY



Existing Bulkhead

Flood Protection Pathway

Figure 57: Footprint examples for implementing different building types and open space strategies

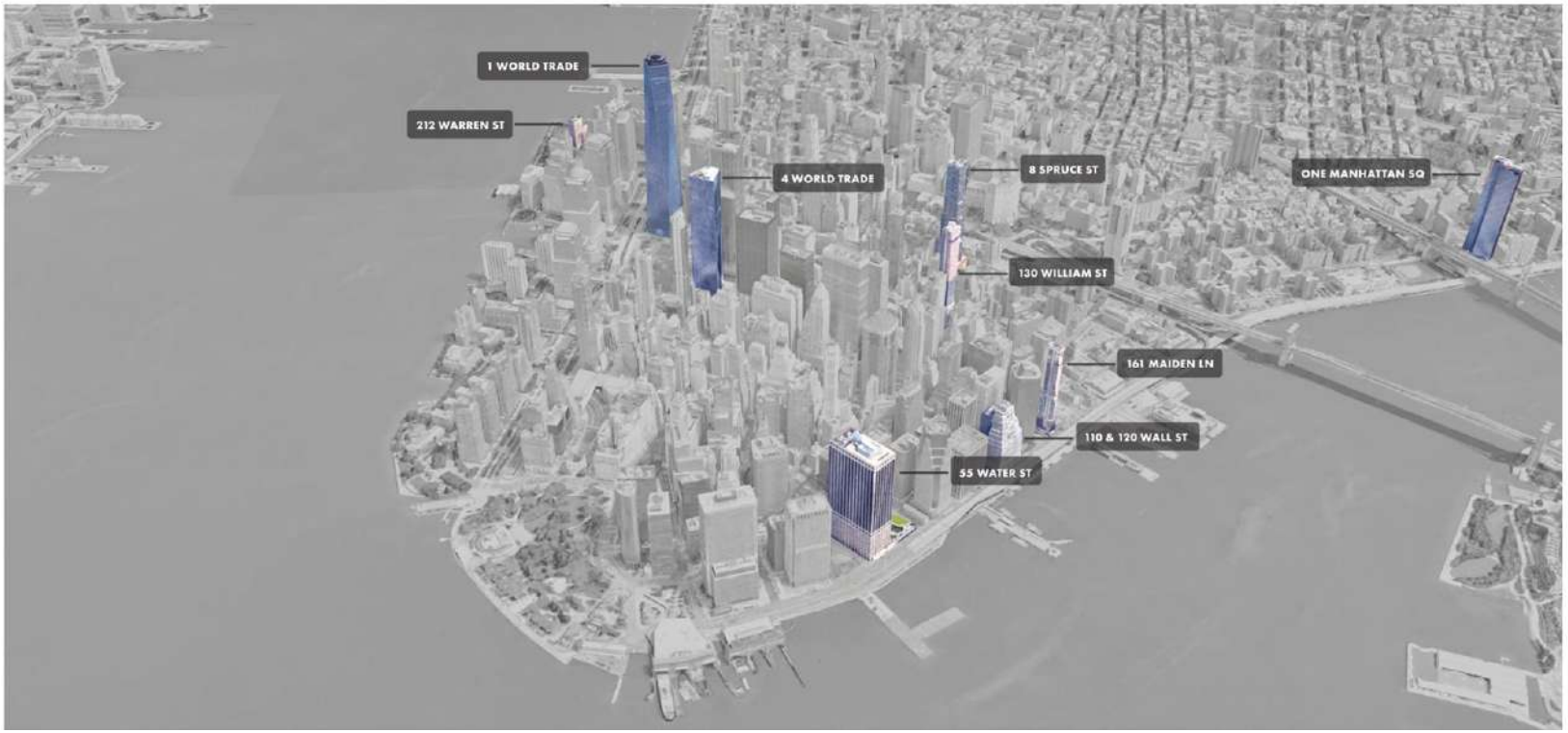
3.2 Floor Plate and Program Flexibility Case Studies

The Project Team looked to a variety of building precedents with mixed uses to understand the range of dimensions and floorplate sizes suitable for office, retail, residential, civic/cultural/institutional, and hotel programs. The Project Team developed a matrix of precedent buildings, program, and floor plate sizes that could be compatible with a 150-foot shoreline extension and with a more expansive shoreline extension.

The following figures present the results of the precedent studies.

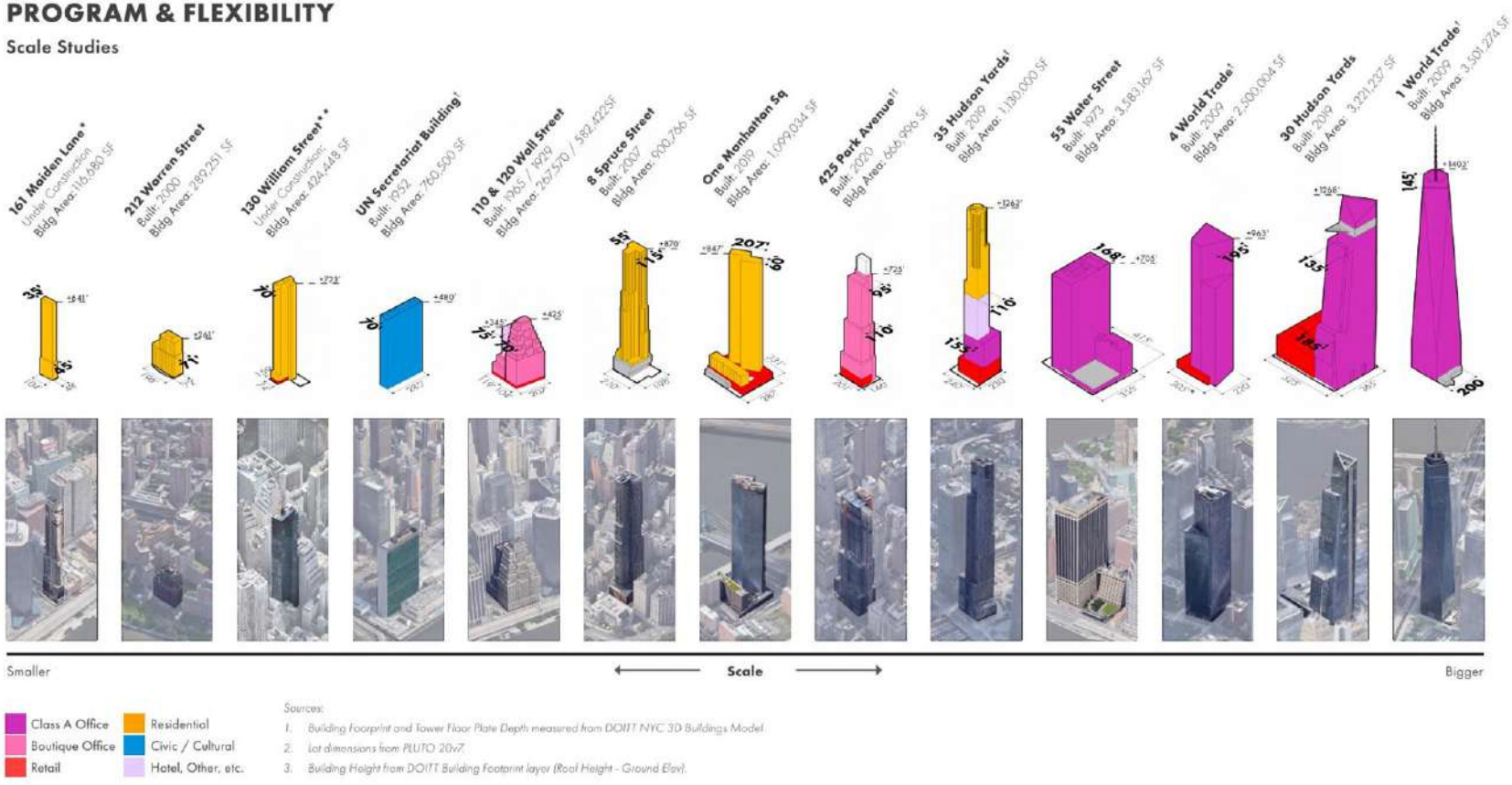
PROGRAM & FLEXIBILITY

Case Studies



PROGRAM & FLEXIBILITY

Scale Studies



Class A Office
Boutique Office
Retail
Residential
Civic / Cultural
Hotel, Other, etc.

Sources:

1. *Building Footprint and Tower Floor Plate Depth measured from DOITT NYC 3D Buildings Model*
2. *Lot dimensions from PLUTO 20v7.*
3. *Building Height from DOITT Building Footprint layer (Roof Height - Ground Elev).*

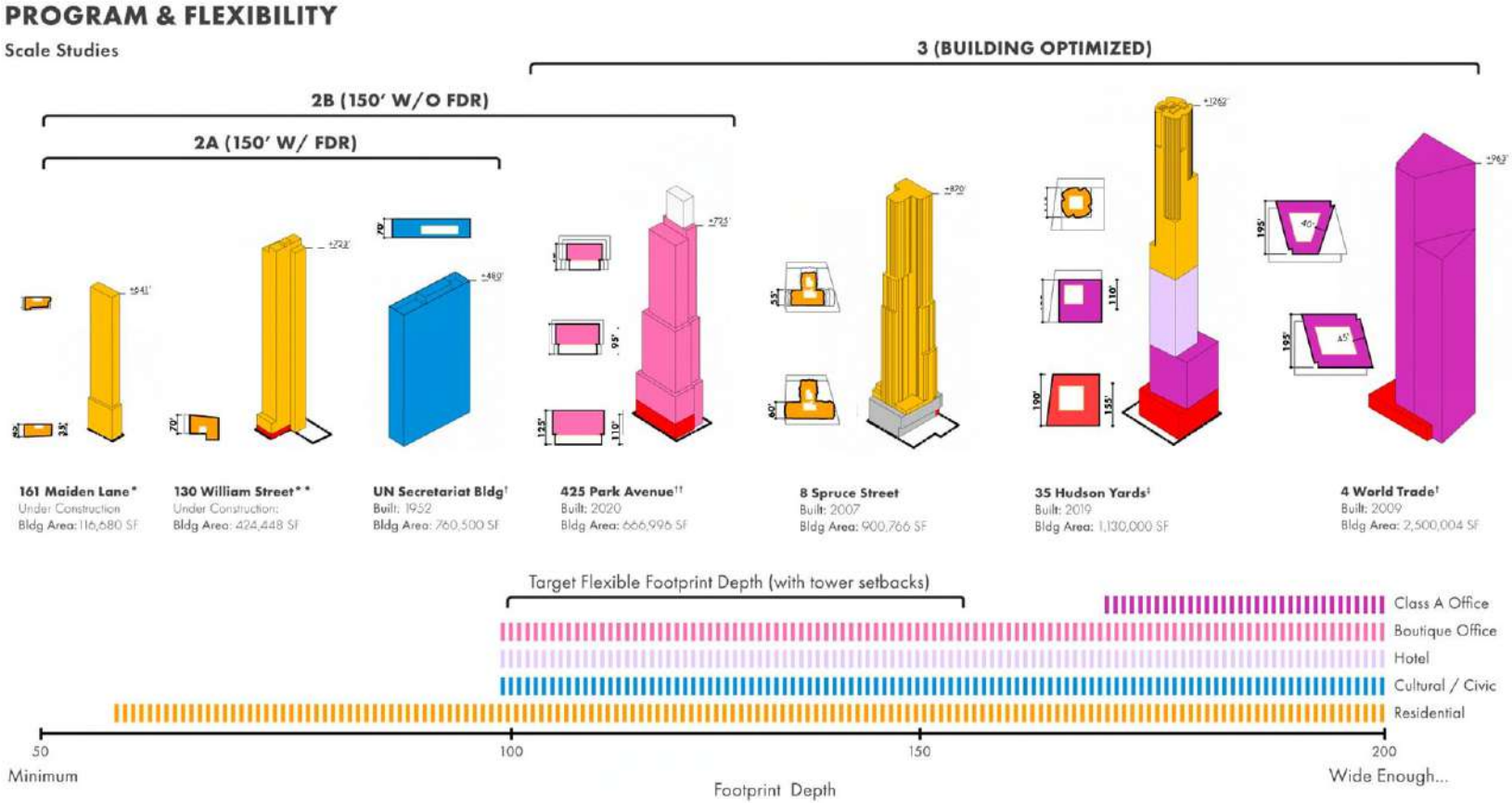


Figure 58: Floor plate and program flexibility case studies

4. Research & Programmatic Feedback

The Project Team looked to other, similar waterfront spaces, primarily in New York City, to understand the forms of new program, open space, and community buildings that would be feasible to integrate into the Master Plan. The Project Team documented precedent spaces that could easily be compared to the existing project footprint and developed prototypical program spaces that would also navigate the grade change associate with flood defense. The Project Team received and integrated feedback on these program studies from stakeholders, agencies, and the community.

4.1 Precedent & Scale Studies

The Project Team studied small, medium, and large precedent programs within the vicinity of the Financial District and Seaport waterfront and considered larger comparative projects beyond the project vicinity. The Project Team grouped programs together by type to understand the range in spatial requirements within each type.

The following figures represent the scale studies.

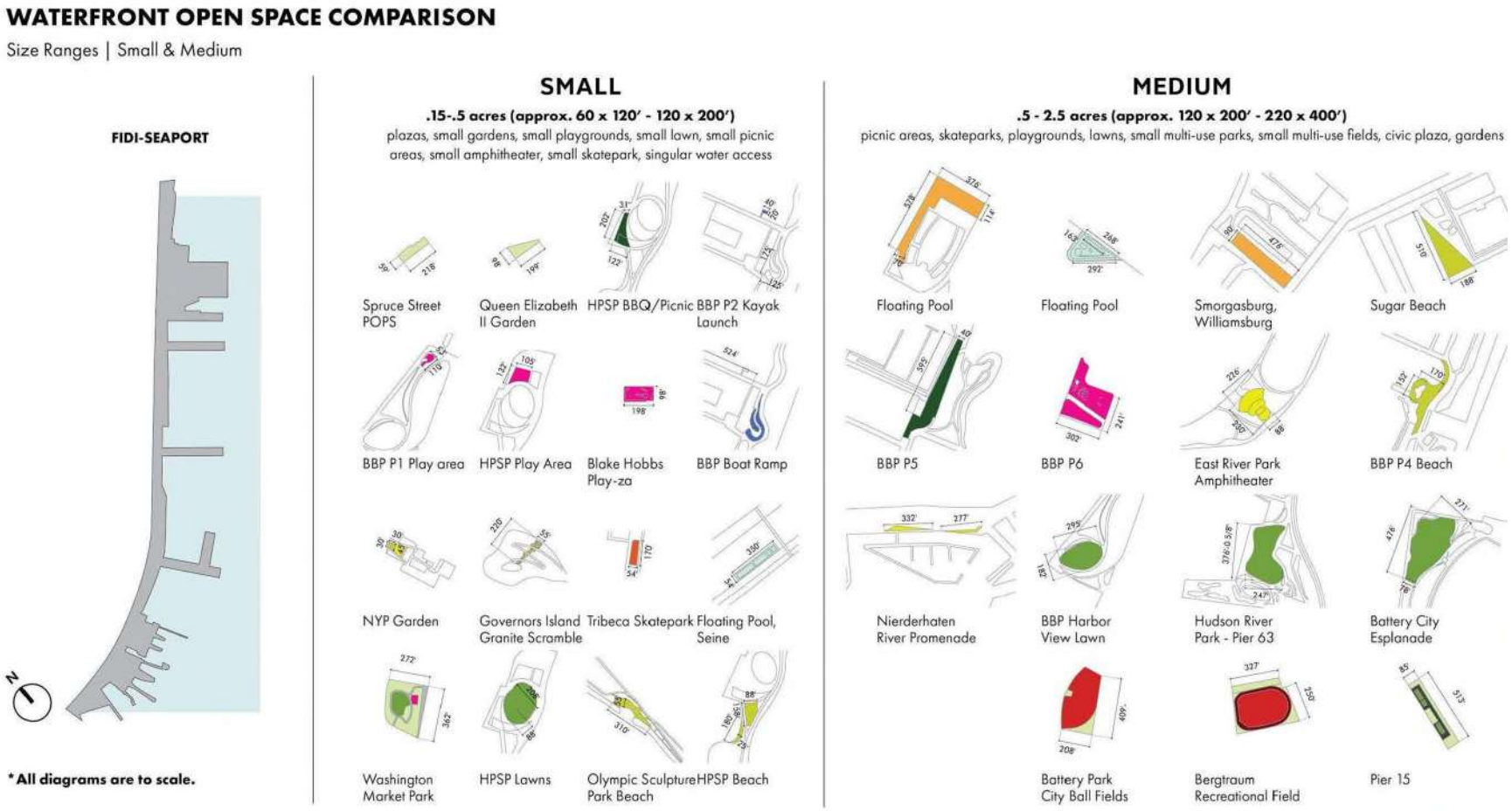


Figure 59: Precedent and scale studies / Small and Medium

Figure 60: Precedent and scale studies / Large scale

Figure 61: Waterfront Open Space Comparisons - Beyond the study area

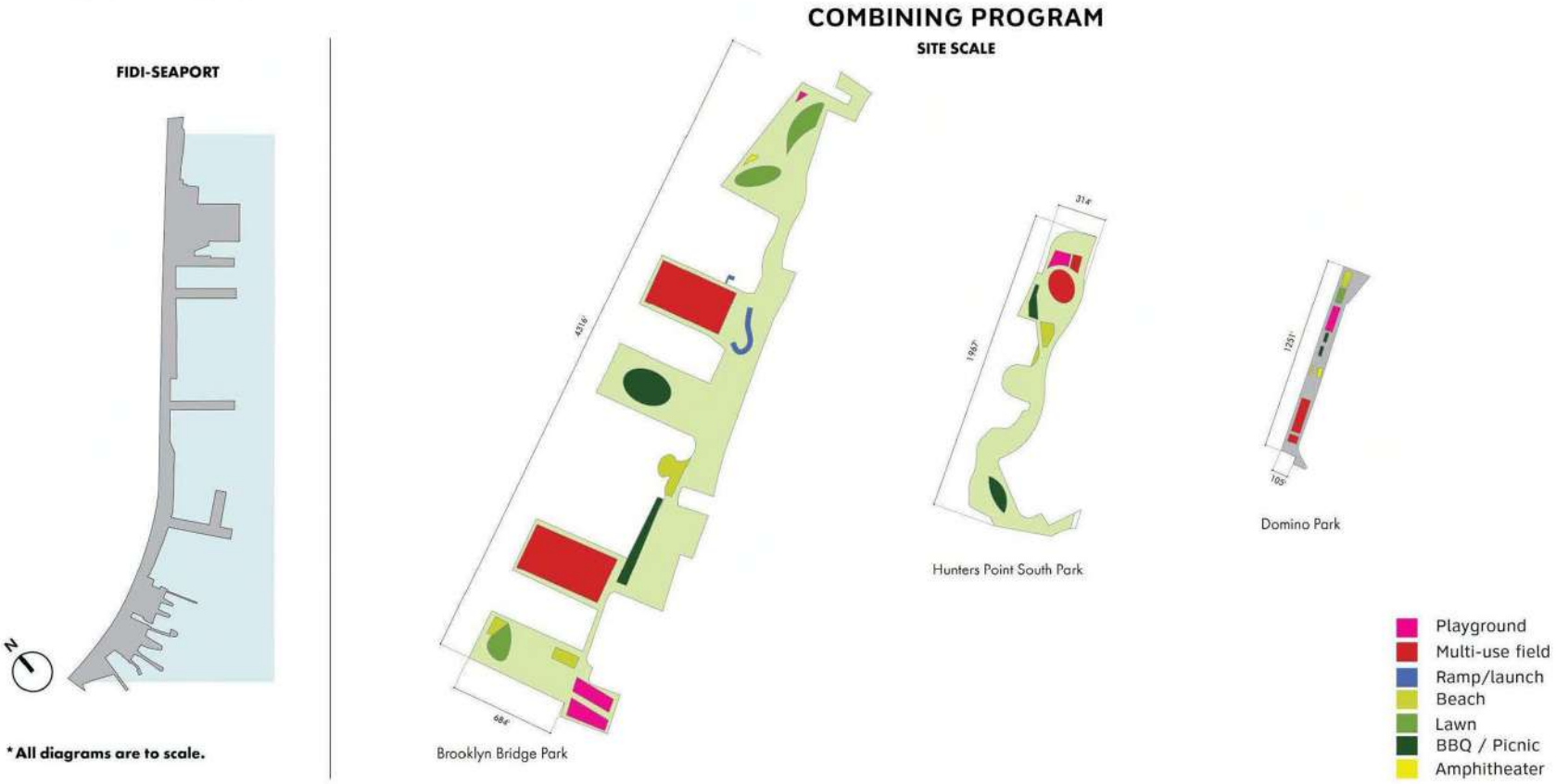


Figure 62: Precedent and scale studies / Combination

WATERFRONT OPEN SPACE COMPARISONS (BEYOND PROJECT VICINITY)

Brooklyn Bridge Park
85 acres (40 acres water)

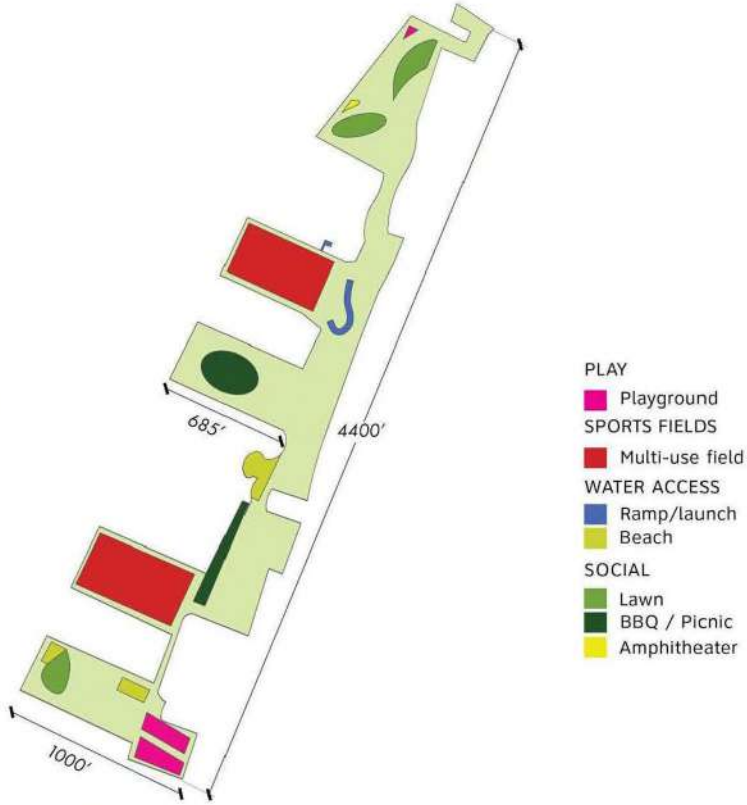


Figure 63: Waterfront Open Space Comparisons (Beyond Project Vicinity) - Brooklyn Bridge Park

WATERFRONT OPEN SPACE COMPARISONS (BEYOND PROJECT VICINITY)

Hunter's Point South Park
10.85 acres

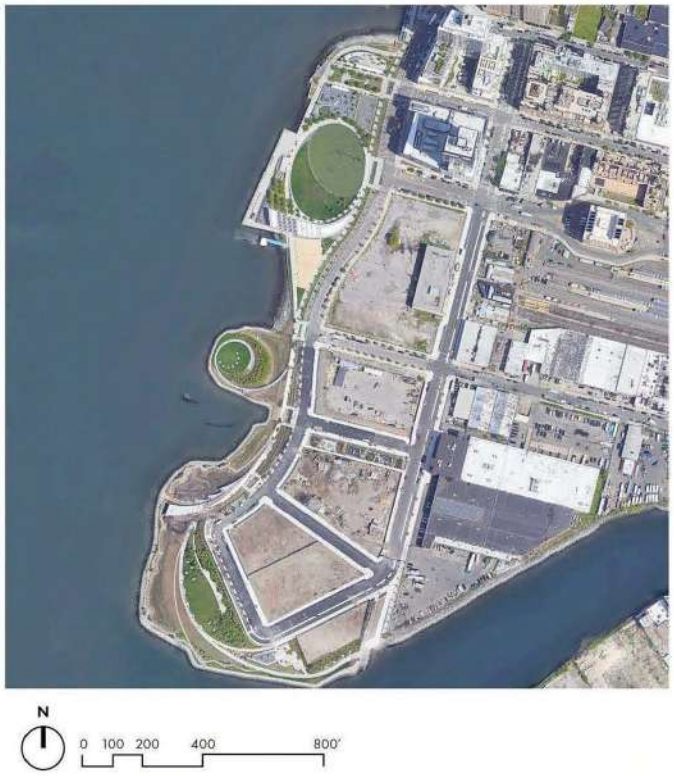
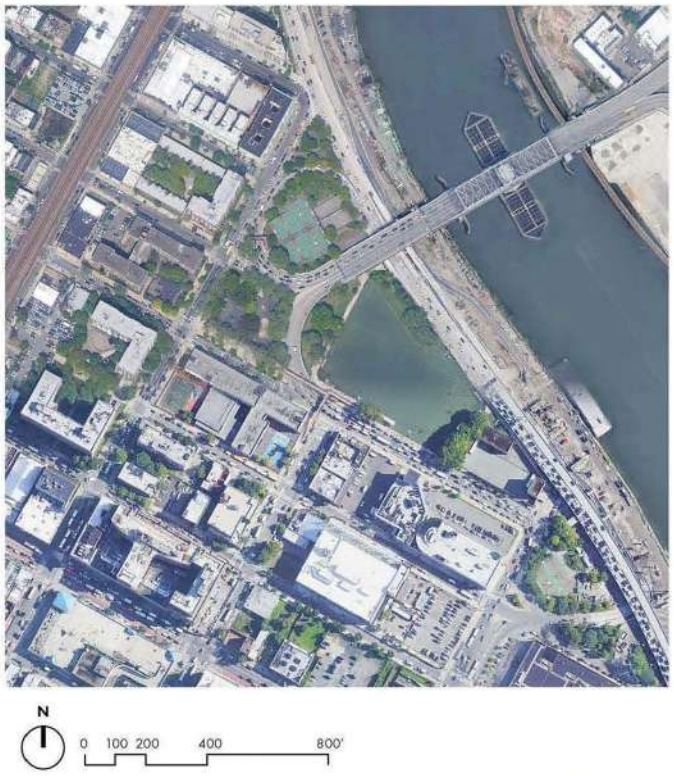
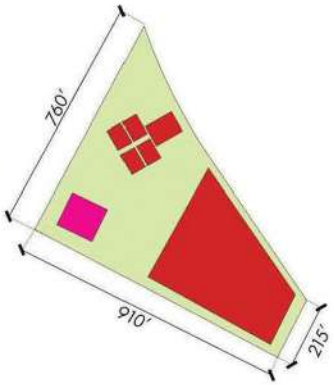


Figure 64: Waterfront Open Space Comparisons (Beyond Project Vicinity) - Hunter's Point South Park

WATERFRONT OPEN SPACE COMPARISONS (BEYOND PROJECT VICINITY)

Harlem River Park
9.58 acres



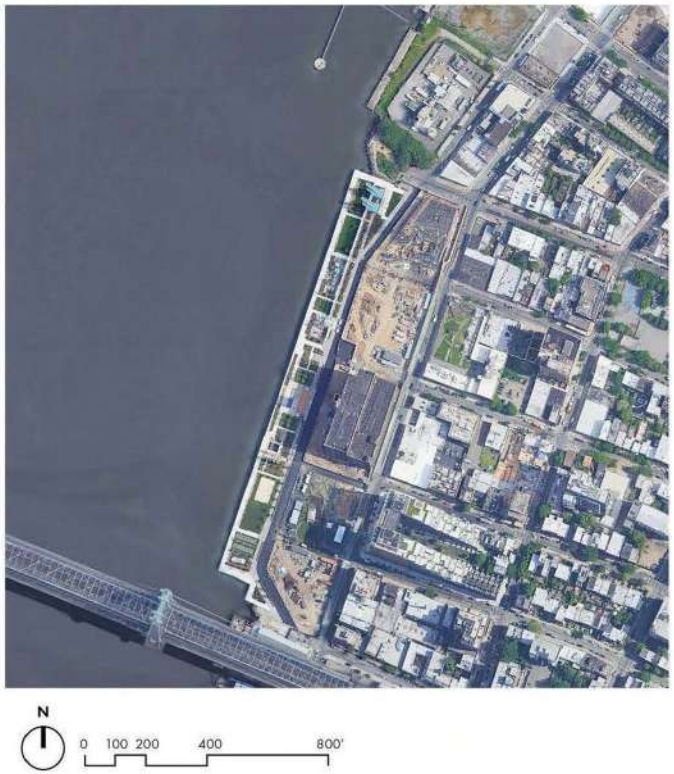


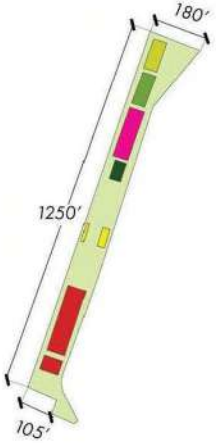
PLAY
Playground
SPORTS FIELDS
Multi-use field

Figure 65: Waterfront Open Space Comparisons (Beyond Project Vicinity) - Harlem River Park

WATERFRONT OPEN SPACE COMPARISONS (BEYOND PROJECT VICINITY)

Domino Park
3.12 acres





PLAY
- Playground

SPORTS FIELDS
- Multi-use field

Water access
- Beach

SOCIAL
- Lawn
- BBQ / Picnic
- Amphitheater

Figure 66: Waterfront Open Space Comparisons (Beyond Project Vicinity) - Domino Park

Paved Plazas with Seasonal Markets

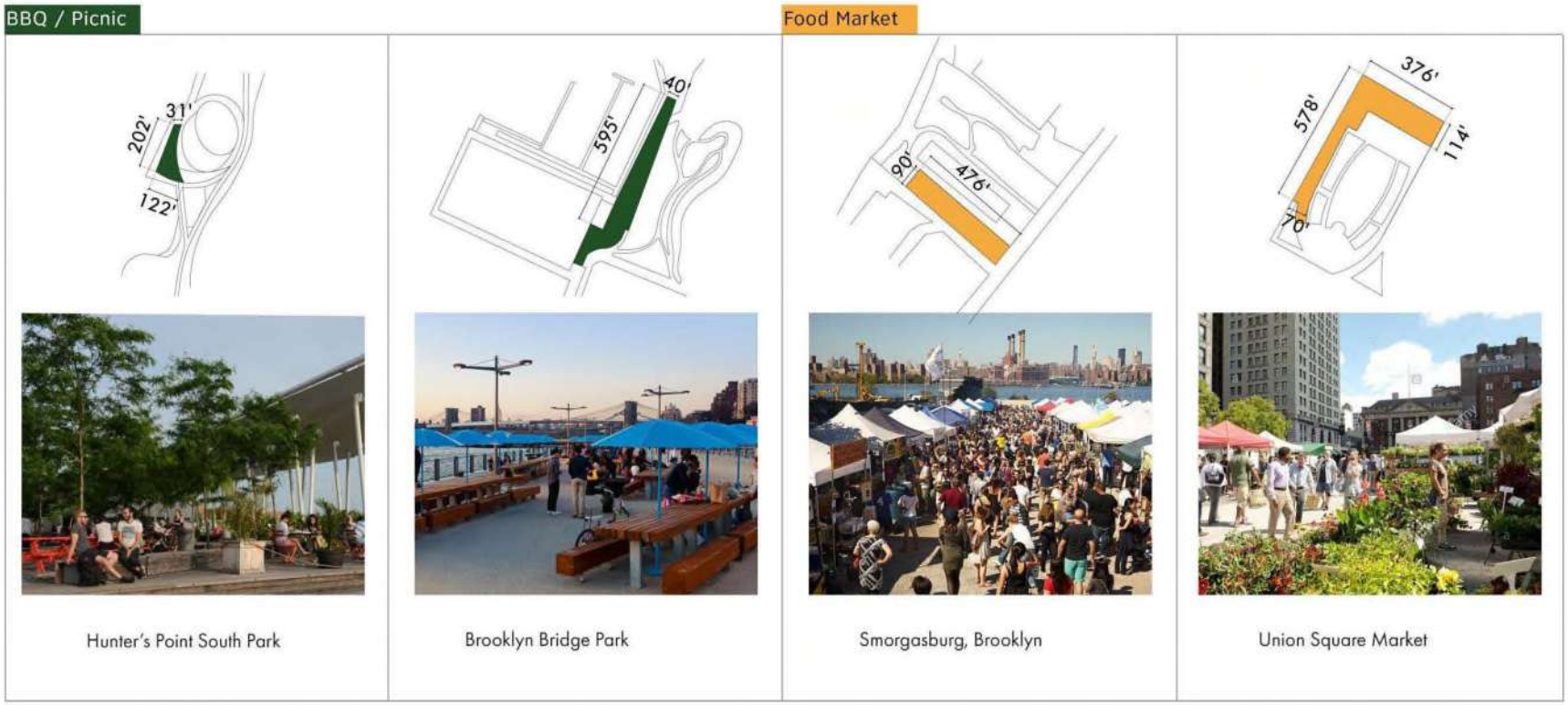


Figure 67: Paved Plazas with Seasonal Markets

Large Scale Active Recreation

Multi-use sports field

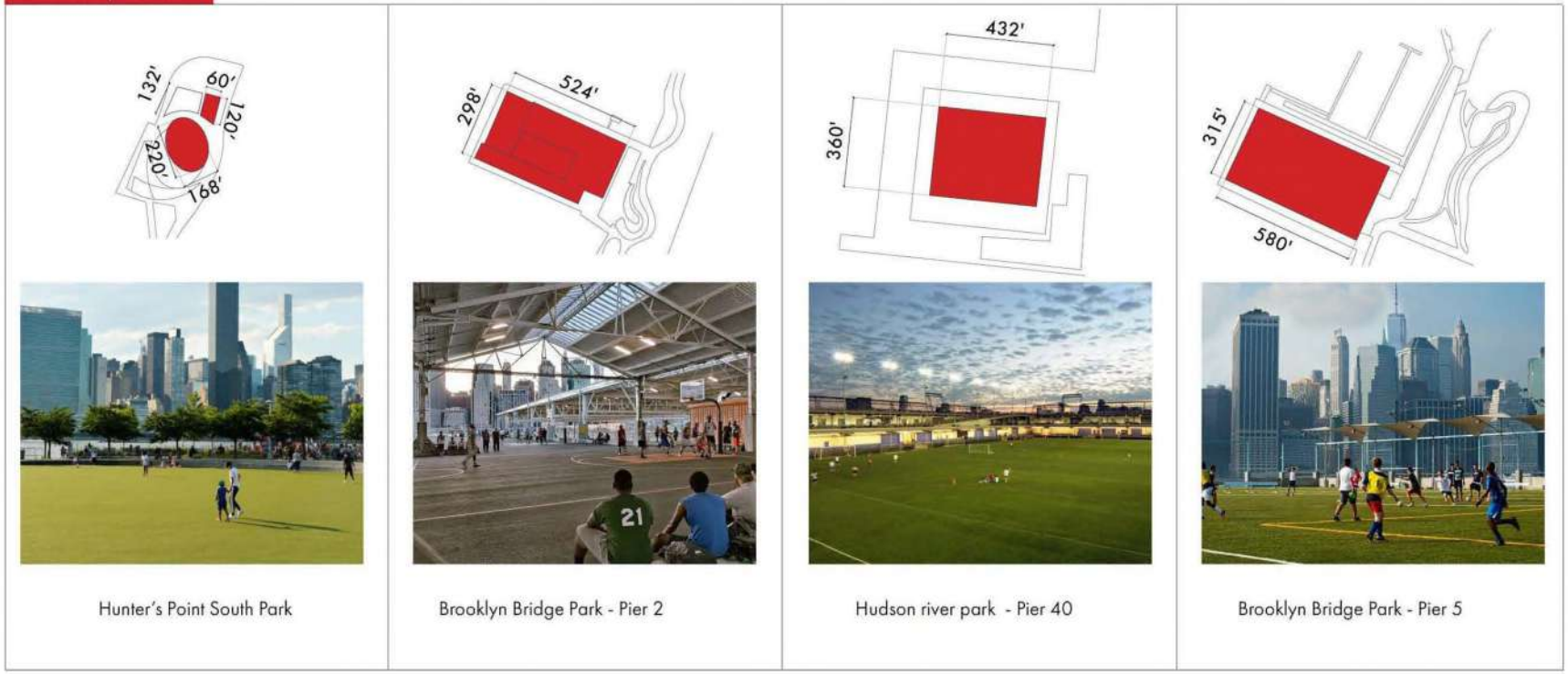


Figure 68: Large Scale Active Recreation

Large Scale Active Recreation

Figure 69: Large Scale Active Recreation

Boat Launches and Swimming Pools

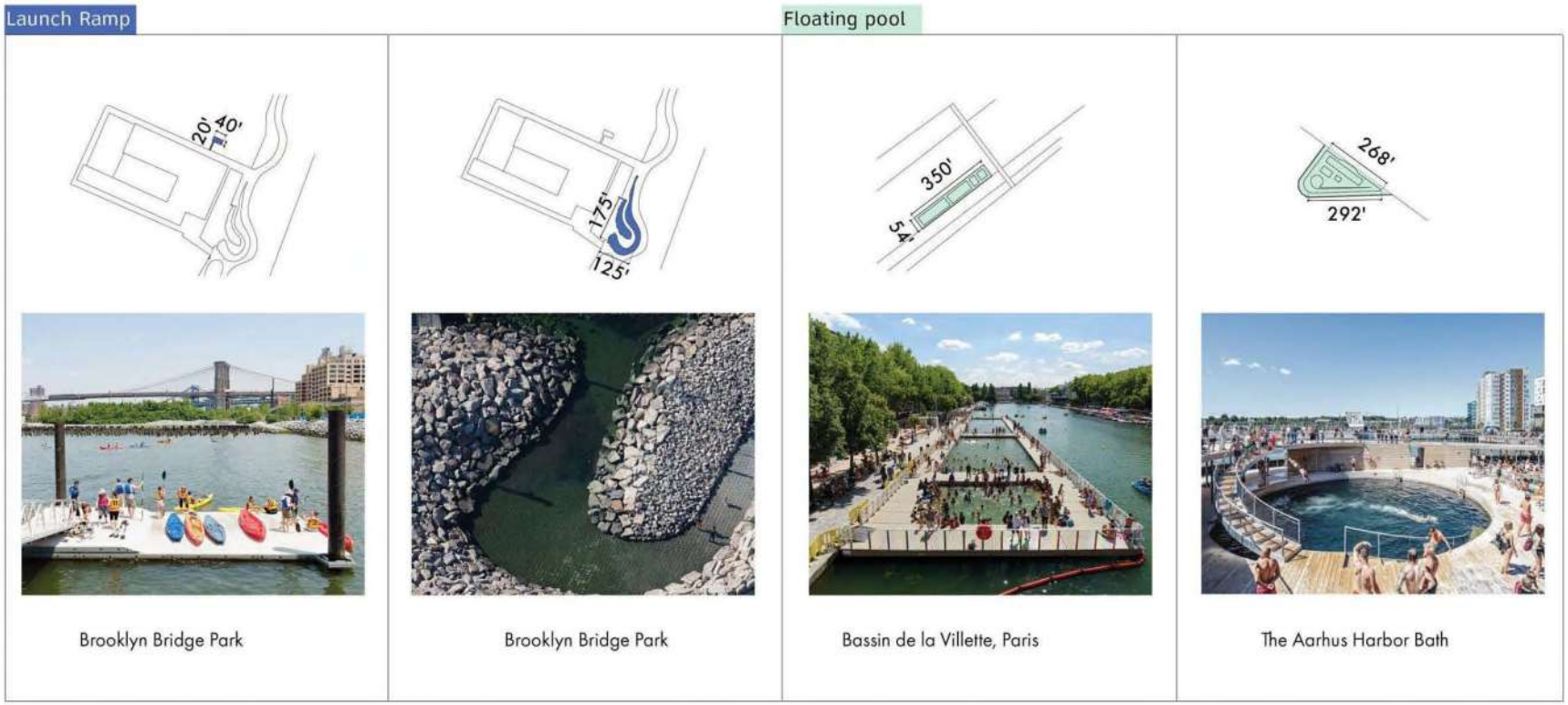


Figure 70: Public Swimming Pools

Public Access Beach

Beach

Figure 71: Public Access Beach

Playground

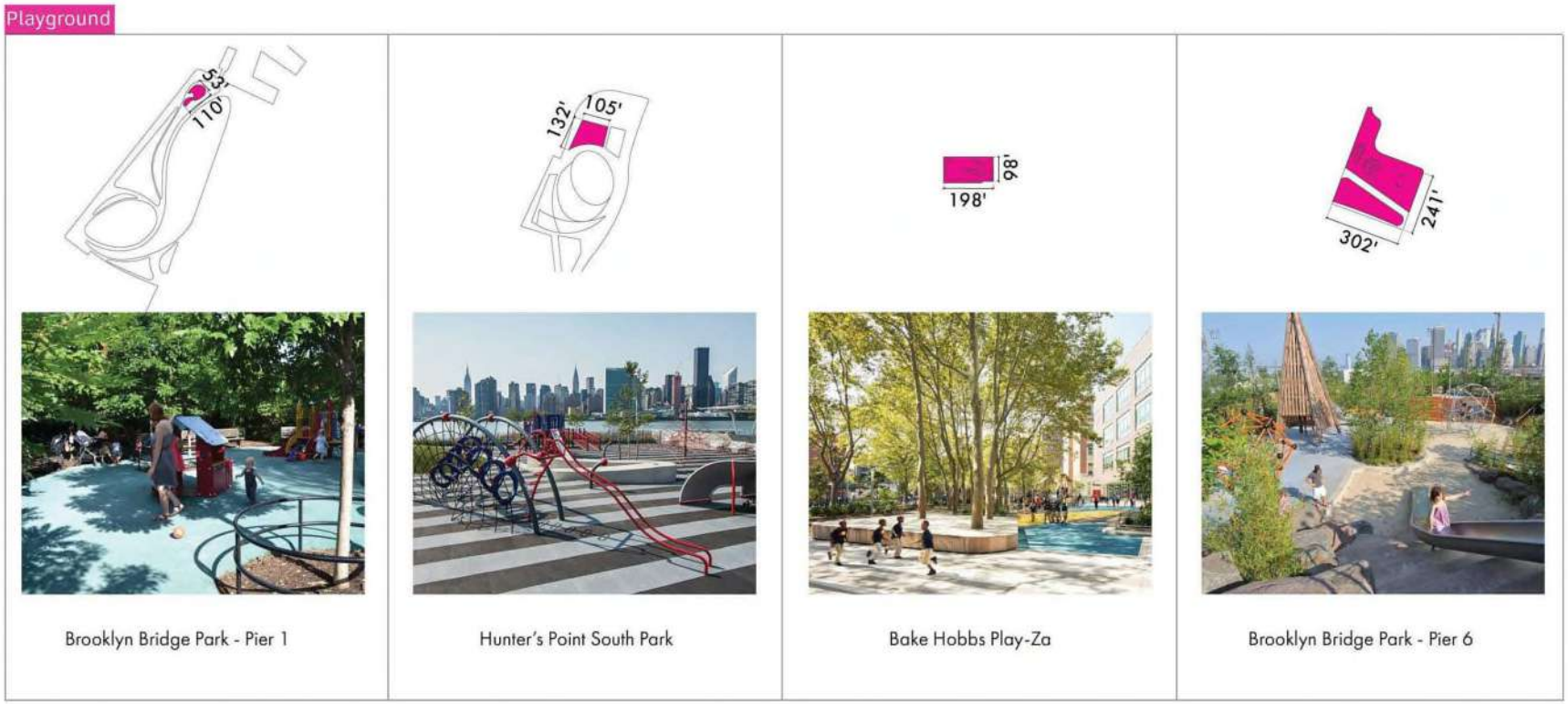


Figure 72: Playgrounds

Passive Lawns

Lawn

Figure 73: Passive Lawns

Theater or Cultural Space

Amphitheater / Terrace

Figure 74: Theater or Cultural Space

4.2 Integrating Existing and New Program with Flood Defense

Based on initial community feedback received during the first and second Open Houses, the Project Team conducted studies to understand how different types of program – at various scales and orientations – could be incorporated alongside the flood defense. Five programmatic typologies were studied including gardens, play areas, plazas, small active areas, and multi-purpose active and passive areas. For each of the five types, the Project Team studied what a narrow, deep, and uniform configuration relative to the flood defense alignment might be as well as the potential users to better understand who these potential programs could serve and where they would be best sited. Narrow program footprints were considered parallel to the line of defense, deep footprints were considered as a way of navigating up and over the line of defense, and uniform footprints were considered for areas with larger footprints alongside the line of defense.

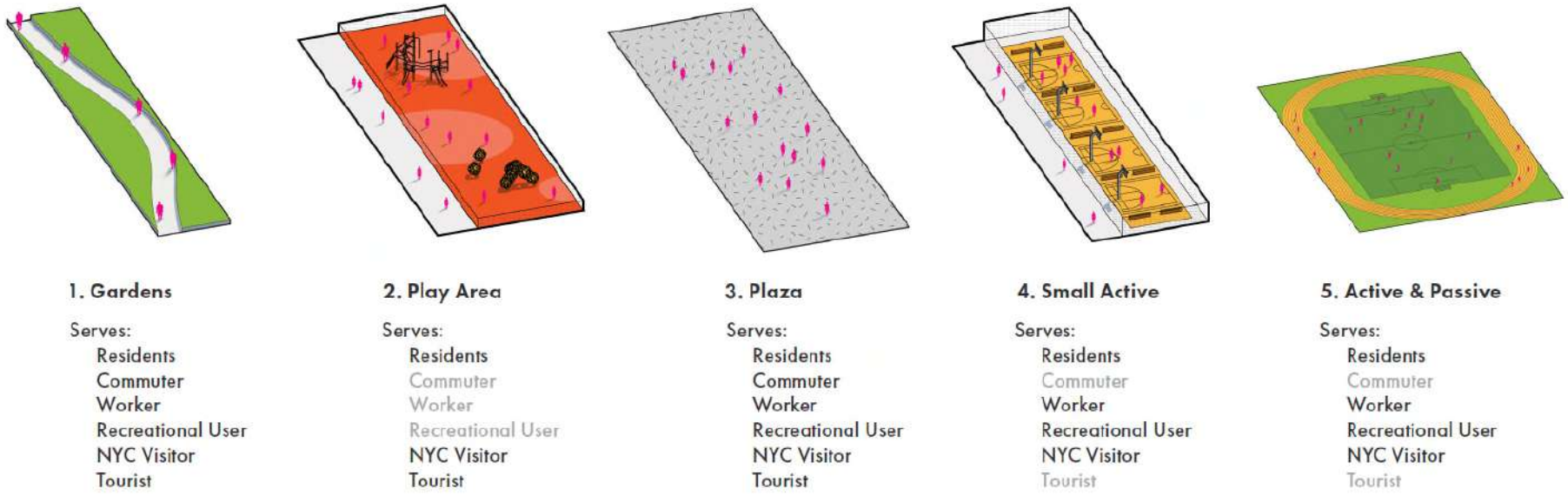


Figure 75: Examples of programmatic typologies relative to flood defense

As shown below, gardens are one of the most flexible program typologies as they are able to be accommodated both on steeper slopes and in narrow spaces. Due to this flexibility, the Project Team recommended that gardens be incorporated into the design wherever other programmatic typologies requiring less

severe slopes or more space were not feasible. Plantings on steeper slopes can be more challenging to maintain. As the Master Plan design advances in future phases, maintenance and operations considerations will influence the design of sloped open spaces.

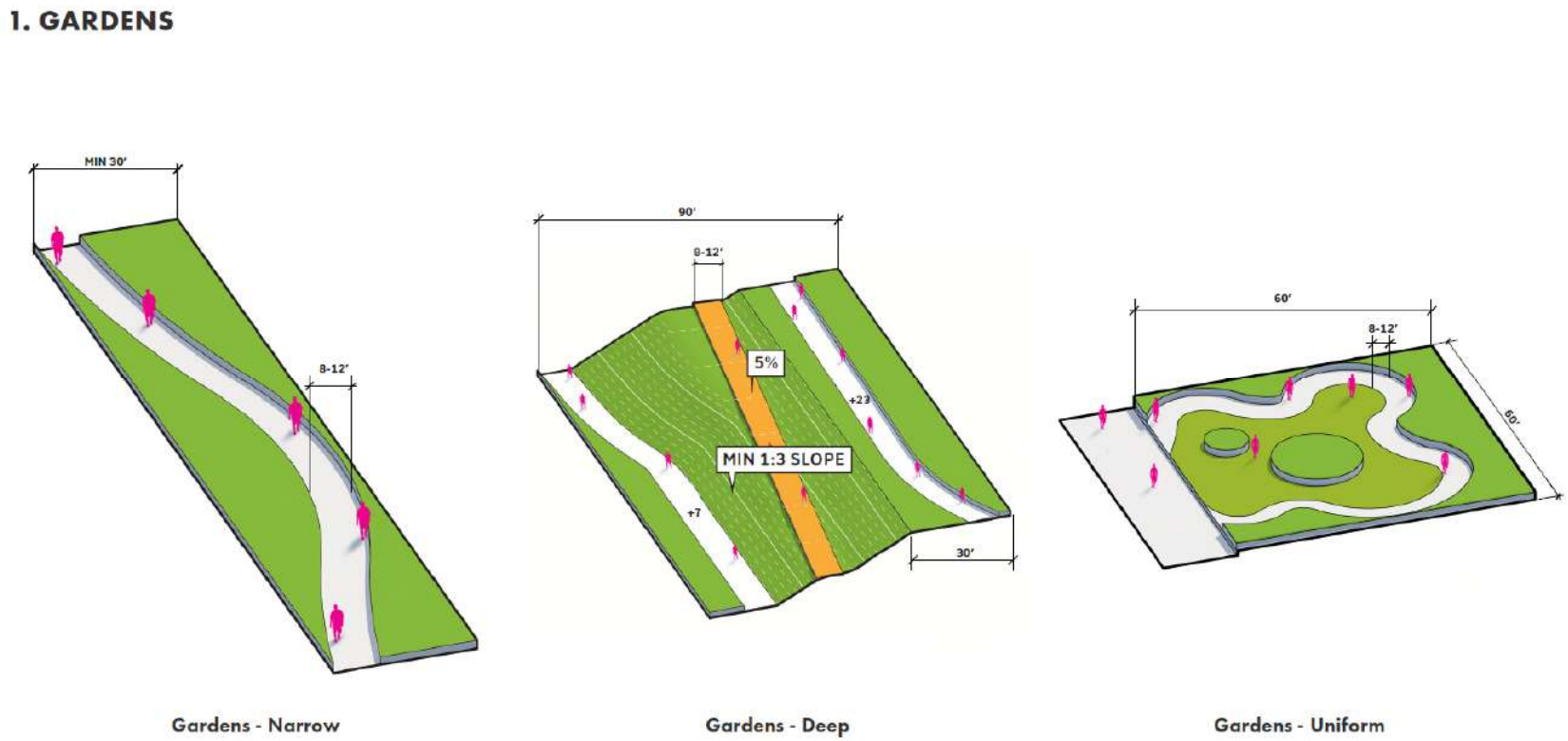


Figure 76: Examples of programmatic typologies relative to flood defense / gardens

While playgrounds can also fit within a variety of spatial constraints, community feedback indicated a strong preference for deep playgrounds that could navigate grade changes. Playgrounds in this category represent a new form of program that currently does not exist within the vicinity of the study area.

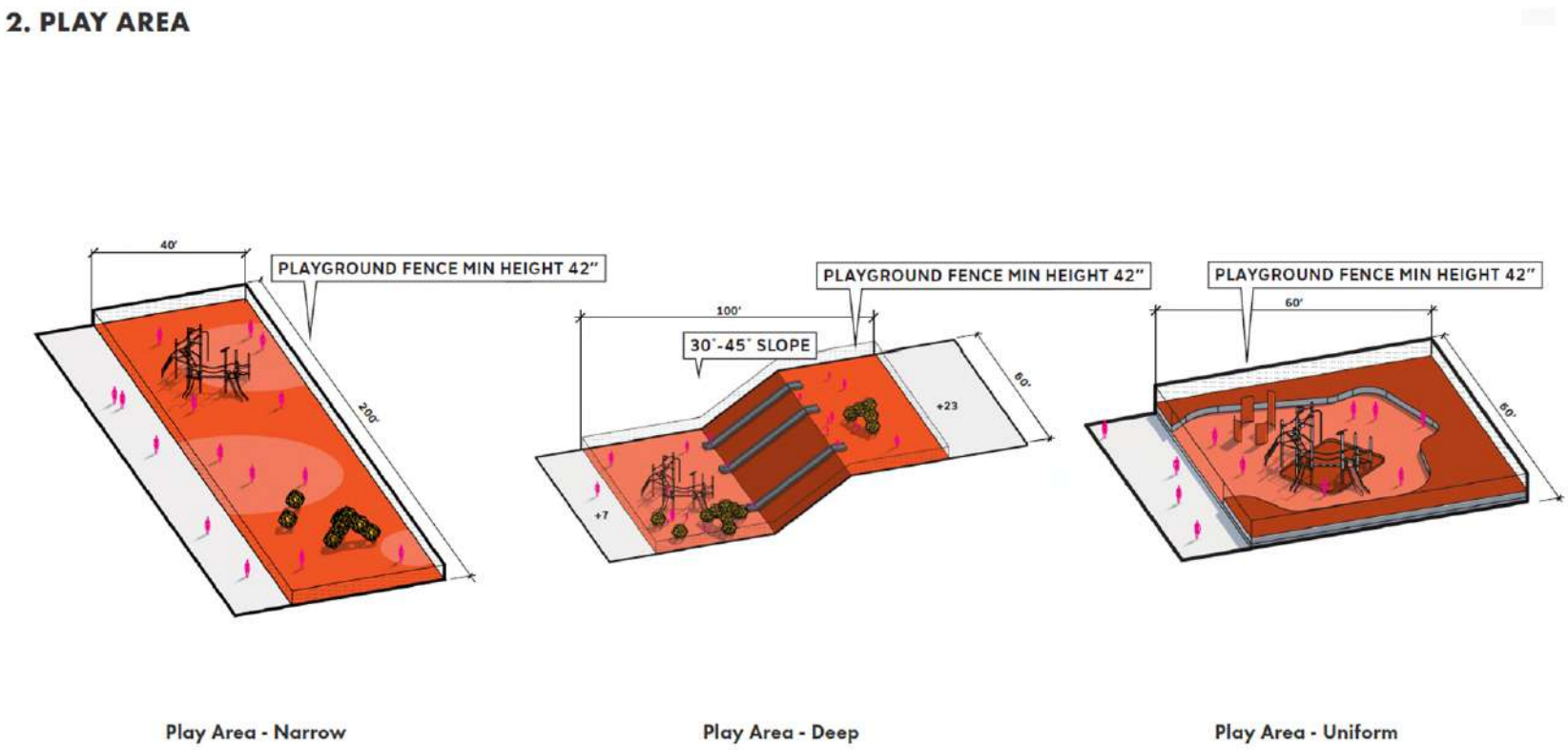


*Figure 77: Examp*les of programmatic typologies relative to flood defense / Play area

Plazas within the design provide very different experiences based on the spatial typology. Narrow plazas provide curated entrance moments to buildings and to get up and over the flood defense. Deep plazas provide programmatic space while also providing up and over access. Finally, uniform upper-level plazas provide a new vantage point and waterfront views.

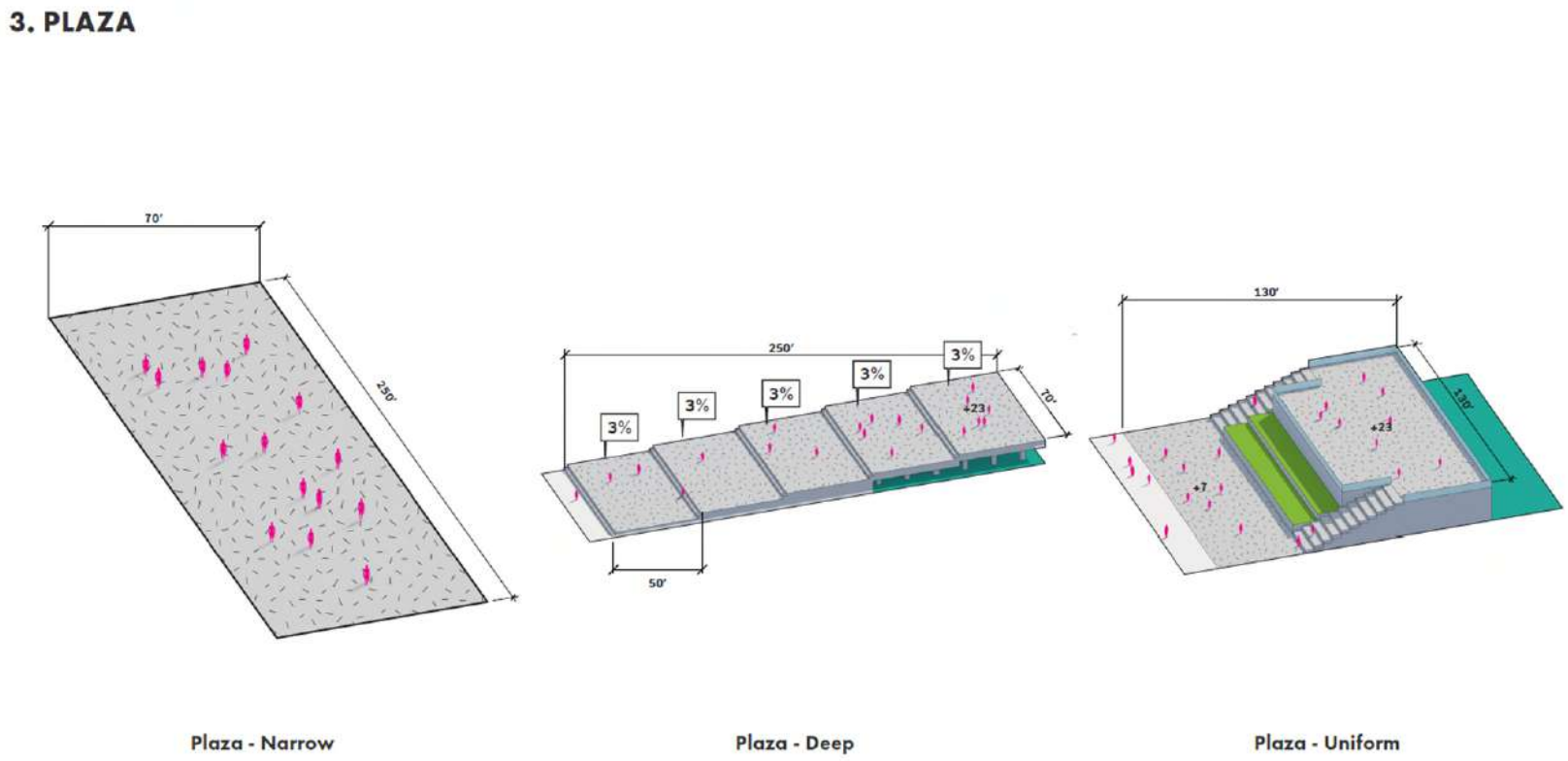
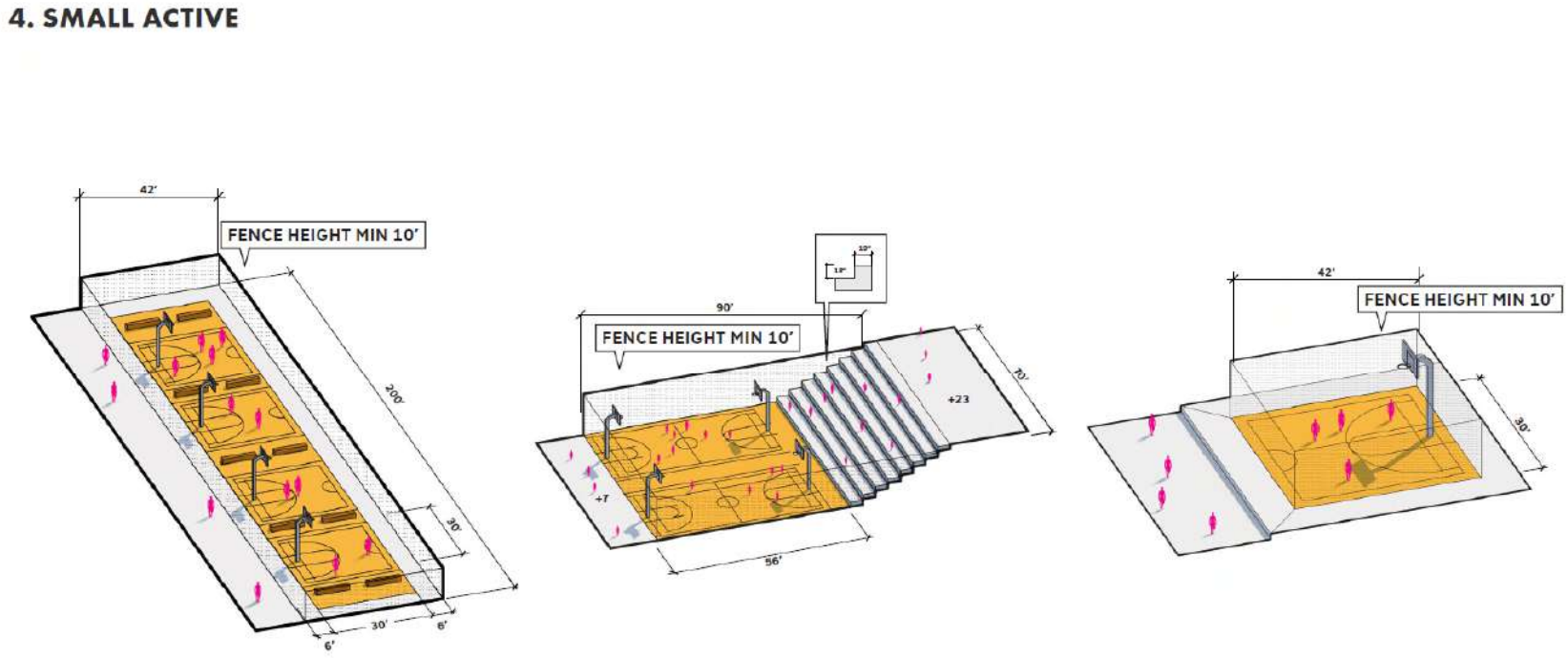


Figure 78:Examples of programmatic typologies relative to flood defense / Plaza

Spaces for active use programs are constrained by the need for level surfaces. Active spaces may be aligned linearly to be accommodated within a narrow footprint. Where possible, small active spaces can be integrated into deep, multi-level spaces that can provide viewing spaces. Though rare, when there are larger level spaces in the study area, uniform active play spaces were considered.



Small Active - Narrow

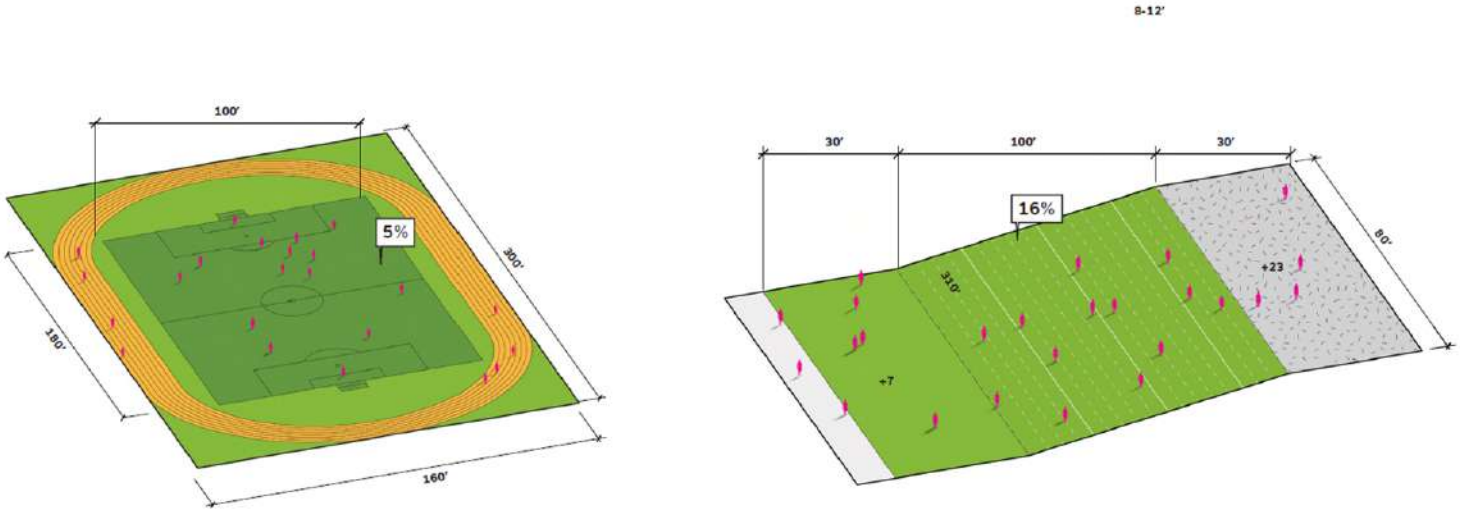
Small Active - Deep

Small Active - Uniform

Figure 79:Examples of programmatic typologies relative to flood defense / Small active

Multi-purpose active program typologies have the largest footprints and were therefore less applicable given the spatial constraints of the project. However, the below axons indicate the couplings of multiple program typologies that are possible within a given spatial condition (such as narrow or deep show below).

5. MULTI-PURPOSE



Multi-Purpose - Narrow

Multi-Purpose - Deep

Figure 80: Examples of programmatic typologies relative to flood defense / multi-purpose

For each of the different potential programs, the Project Team considered both physical requirements as well as locations where each would be feasible. Physical considerations included the slopes, minimum dimensions, subsurface conditions, and privacy while location considerations included the ability to site the program city-side, waterside, or along the slope up to the flood defense.

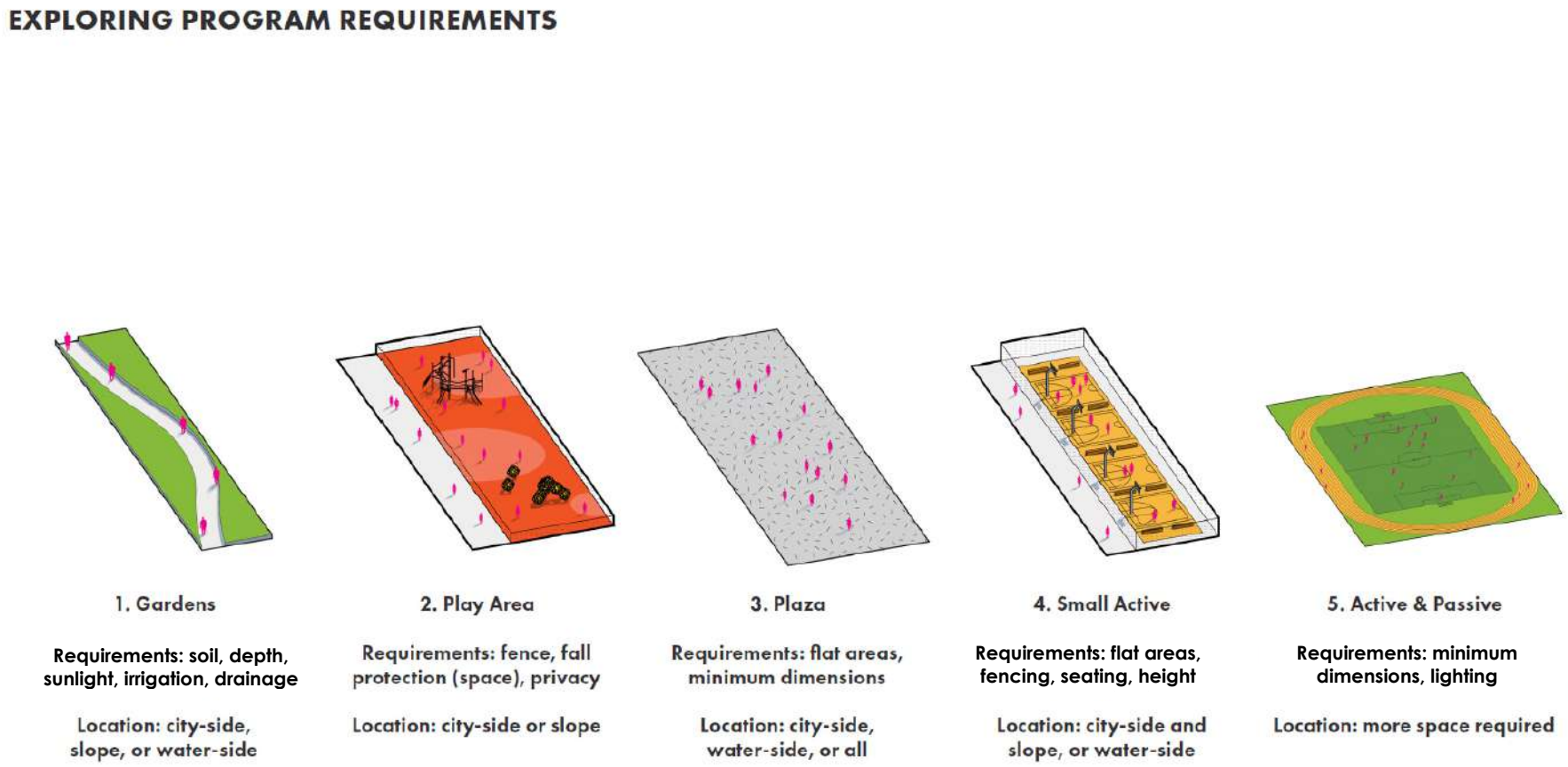


Figure 81: Program requirements for each typology to be considered

4.3 Programmatic Feedback

At the conclusion of Phase III, the City and Project Team considered programmatic input received by different stakeholders. Takeaways were organized by 1) transportation and access, 2) open space and buildings, and 3) waterfront esplanade and maritime activity. For all three, the Project Team weighed positive input that received – or the benefits of such programs – as well as any concerns.

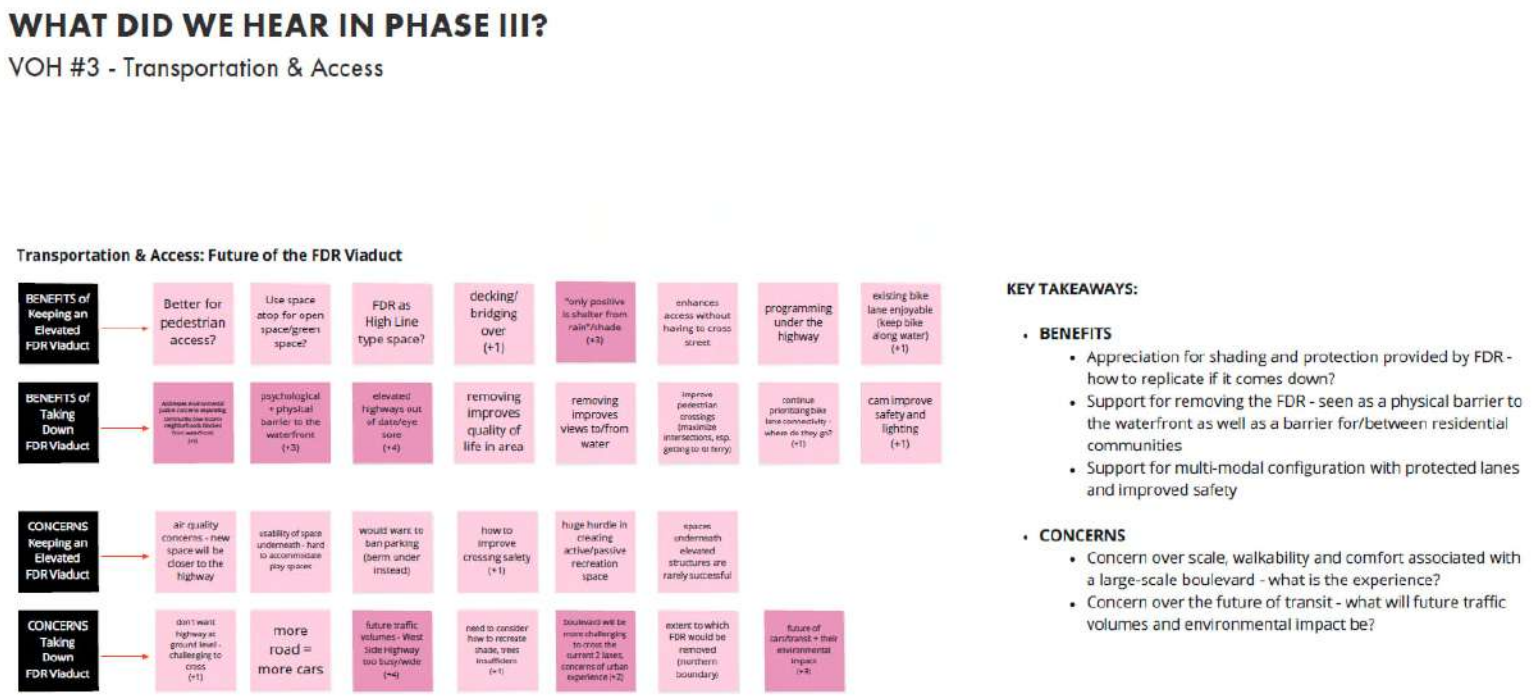


Figure 82: Key takeaways from Phase III / Transportation & Access

WHAT DID WE HEAR IN PHASE III?

VOH #3 - Open Space & Buildings

Figure 83: Key takeaways from Phase III / Open Space and Buildings

WHAT DID WE HEAR IN PHASE III?

VOH #3 - Waterfront Esplanade & Maritime Activity

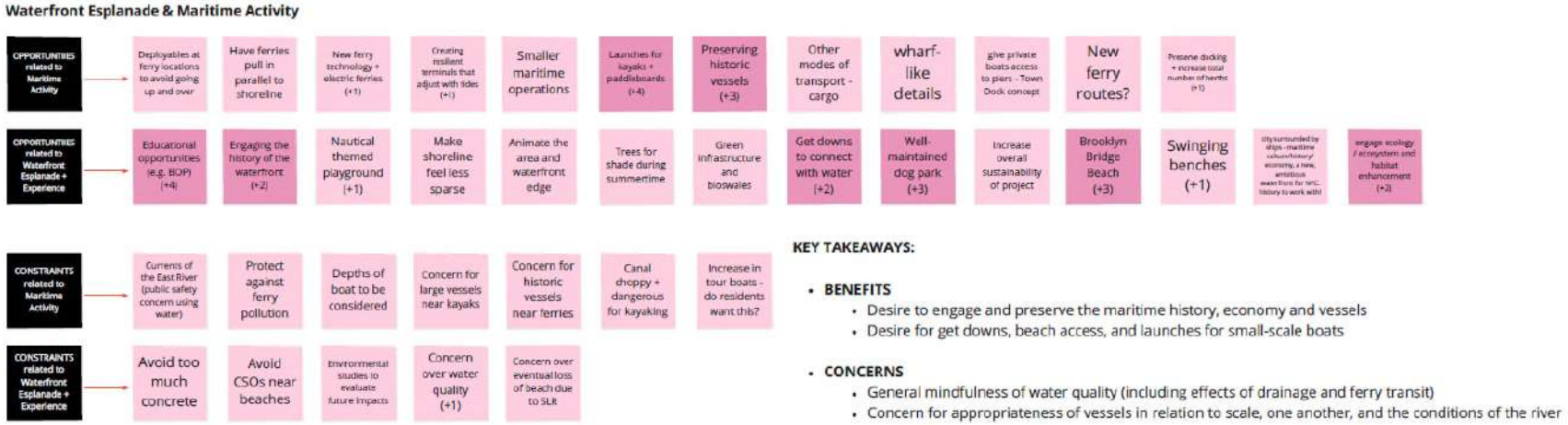


Figure 84: Key takeaways from Phase III / Waterfront Esplanade and Maritime Activity

WHAT DID WE HEAR IN PHASE III?

Summary of Stakeholder Feedback on Program

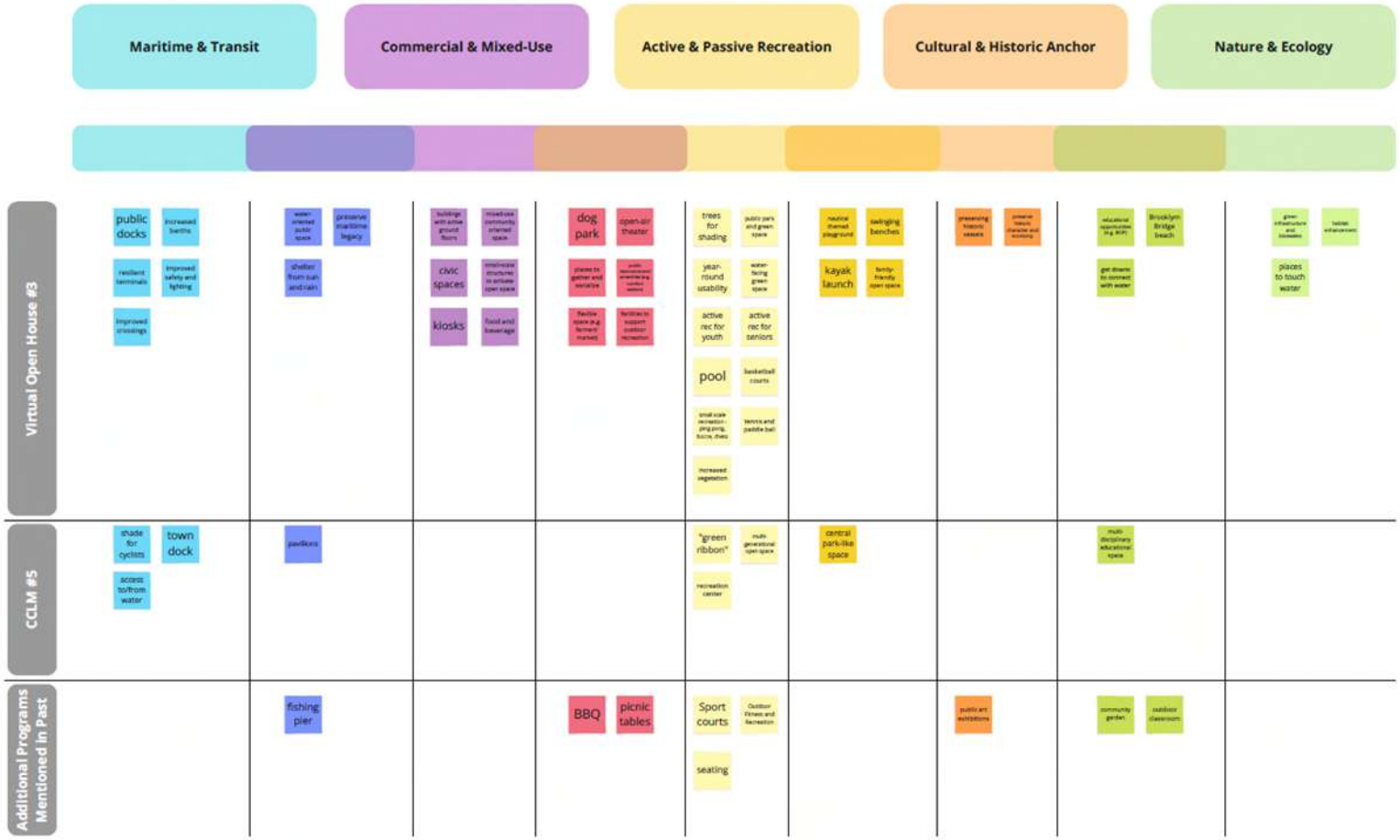


Figure 85: Key takeaways from Phase III / Summary of Stakeholder Feedback on the program

5. Program Studies and Proposed Vision

During Phase IV, the Project Team held a series of internal design workshops to focus in on the design between the Battery Maritime Building to the Brooklyn Bridge. During these workshops, the Project Team developed two spatial and programmatic approaches to demonstrate options for design choices related to buildings, open space, and waterfront experience. One approach focused on a minimum building scenario and relied more on sloped landscapes facing the city with a series of detached pathways along the water. The second approach incorporated single story buildings to maximize upper-level waterfront open space, creating urban terraces connected to an elevated park.

A description and illustrations demonstrating both approaches is provided below.

5.1 Design Approach 1

The first approach was driven by a desire to create similar quantities of program on both the city side and the water side of the project footprint. Early in the project, the Project Team studied the different neighborhoods, functions, and characters along this waterfront. The approach aimed to capture that nuance and variety rather than creating a wall along the water. By selectively pushing the line of defense into the water and selectively pulling it back in towards the city, the design created a variety of types and scales of experiences within what will be (by necessity) a very monumental landscape – a goal critical to the success of this waterfront as an urban place and not just flood defense infrastructure. The design was intended to draw people in from both the city and the water, celebrate key moments of physical and visual access, and embrace a dynamic and undulating waterfront experience.

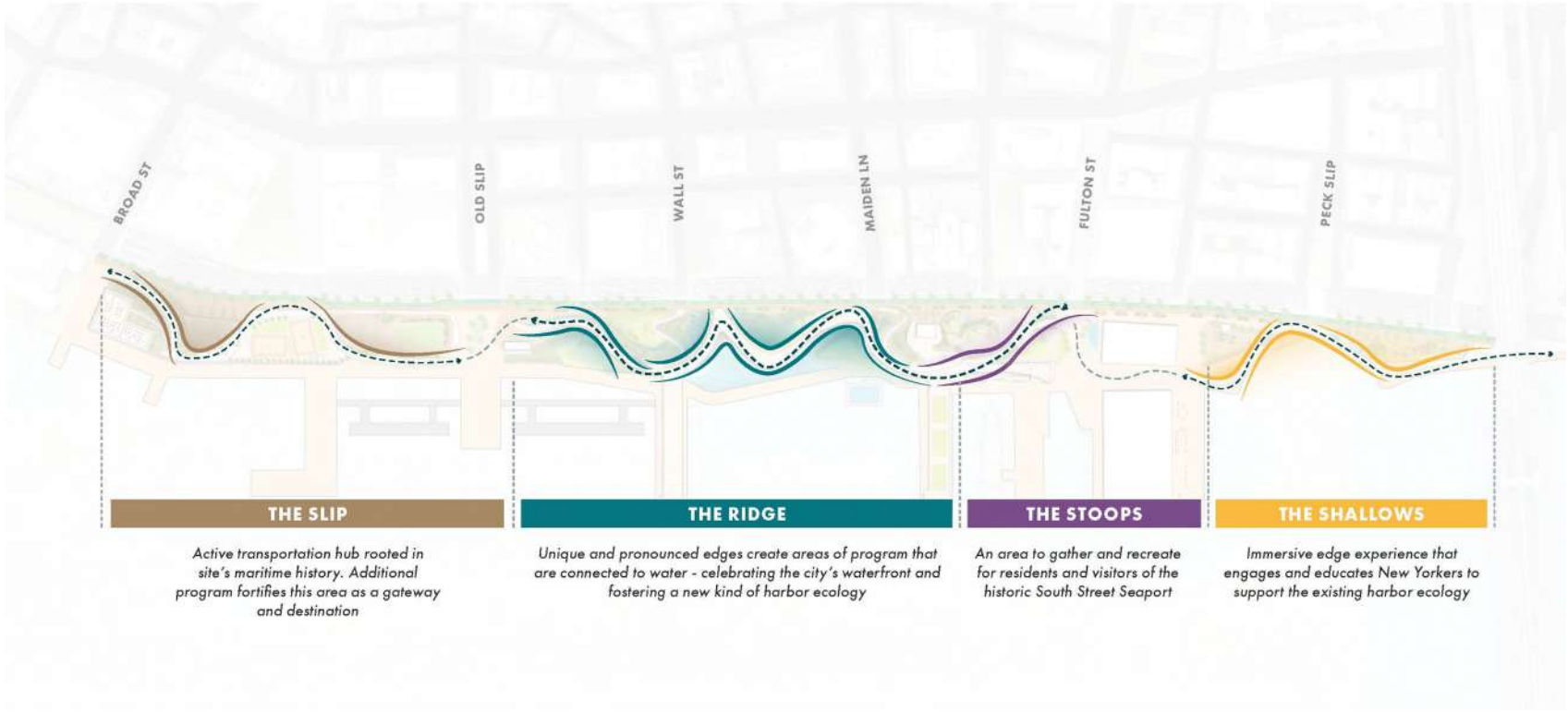
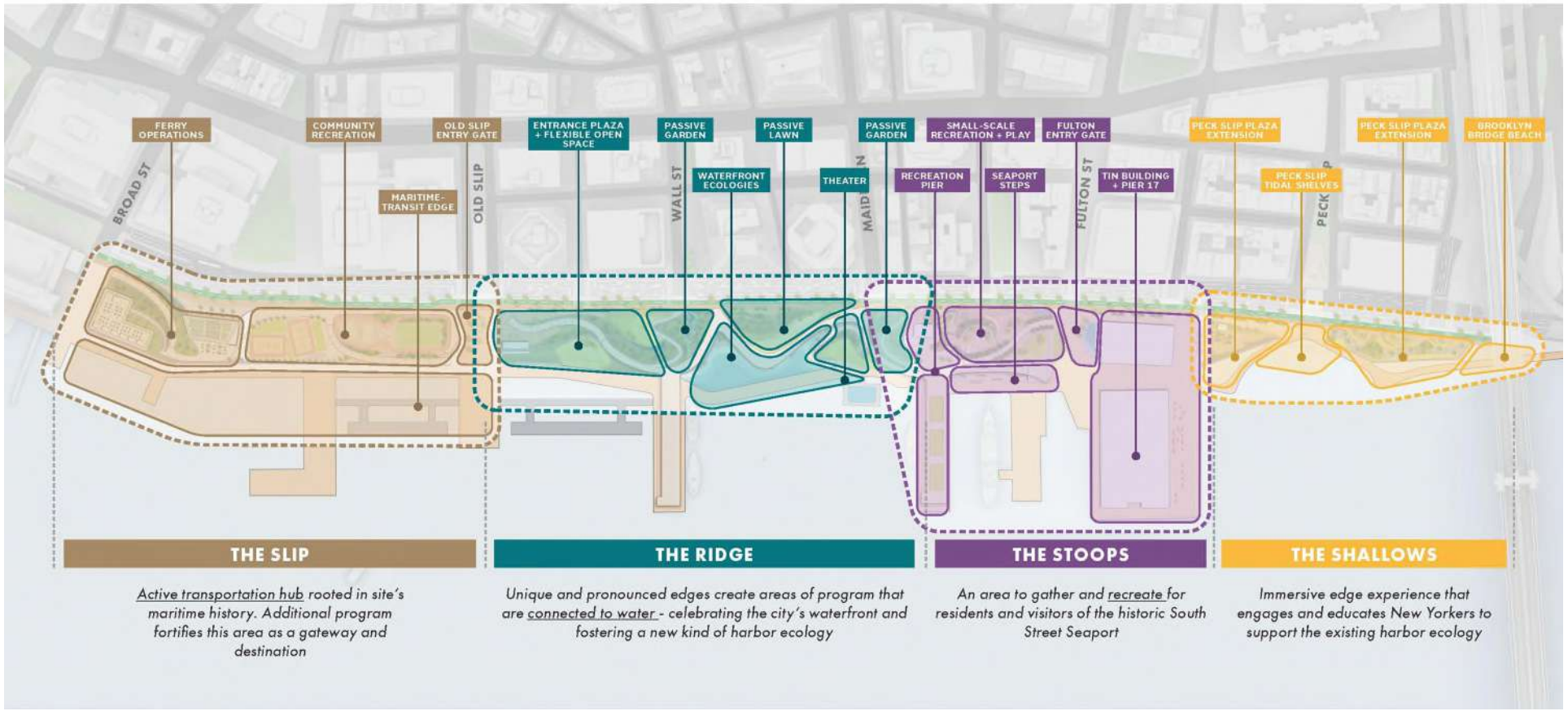


Figure 86: Concept of Design Approach 1

As illustrated in the graphic below, the Project Team tested different program areas as part of Approach 1 to understand how different features and functions could be situated across the study area, as well as the space implications of these different programming features. This helped inform what was feasible to site where in relation to the flood defense.

PROGRAM AREAS

Minimum Buildings Scenario - Battery Maritime Building to Brooklyn Bridge



Circulation and access across the study area was also considered for pedestrians, bicycles, and emergency vehicular access. For more information on access and circulation, please refer to the *Access & Circulation* appendix.

i. Design Opportunities

Responding to feedback in previous phases, this design approach puts forward a vision of a Financial District and Seaport waterfront with limited buildings. This design favors spaces at a variety of elevations oriented to the city or water, rather than singular, flat elevated spaces. This creates a greater array of experiences and views along the waterfront. Multi-level and sloped landscapes include spaces for an array of smaller-scale urban amenities (playgrounds, water features, small lawns, gardens, etc.) rather than ball fields and sports courts. At the same time, a detached esplanade and cove conditions create space for additional ecological habitat enhancements and accommodate north to south movement that exists along the waterfront today, without adding any additional fill to the project footprint. Lastly, curving pathways up landscape slopes provide a sense of wonder and curiosity as users move up to and down from the upper level.

ii. Design Constraints

While this design scenario presents numerous opportunities, the Project Team also learned about numerous constraints. For example, relying on topographic changes to get people up and down from the design flood elevation takes up a larger footprint as compared to the use of walls with direct stairs and elevators. Also, the design presents challenges for accommodating programs that need level footprints, such as active recreation. Moreover, accommodating emergency vehicles on the undulating upper level of the Crests and Coves scheme proved challenging due to the necessary turning radii for larger emergency vehicles, and paths up to and down from the upper level did not always align to create intuitive circulation patterns. Lastly, this design scenario lacks community scale buildings that would provide desired forms of indoor programming and save space that large slopes require.

5.2 Design Approach 2

The second approach used a series of single-story buildings to maximize relatively flat upper-level waterfront open space while also creating an inviting street wall along South Street. Urban terraces connected a series of elevated park spaces to the city and the waterfront. In this option, floodgates provide direct access to the waterfront while framing a series of neighborhood scale spaces. Elevating the open space between access points allows for single story buildings to tuck under the upper-level open space and provide a lively and active street wall, strengthening connections to existing upland open spaces. The upper level can be sculpted to create open spaces that take advantage of views of the harbor and allow for more inviting and generous community buildings underneath. The multi-level open spaces frame a series of waterfront zones, giving each a unique identity.

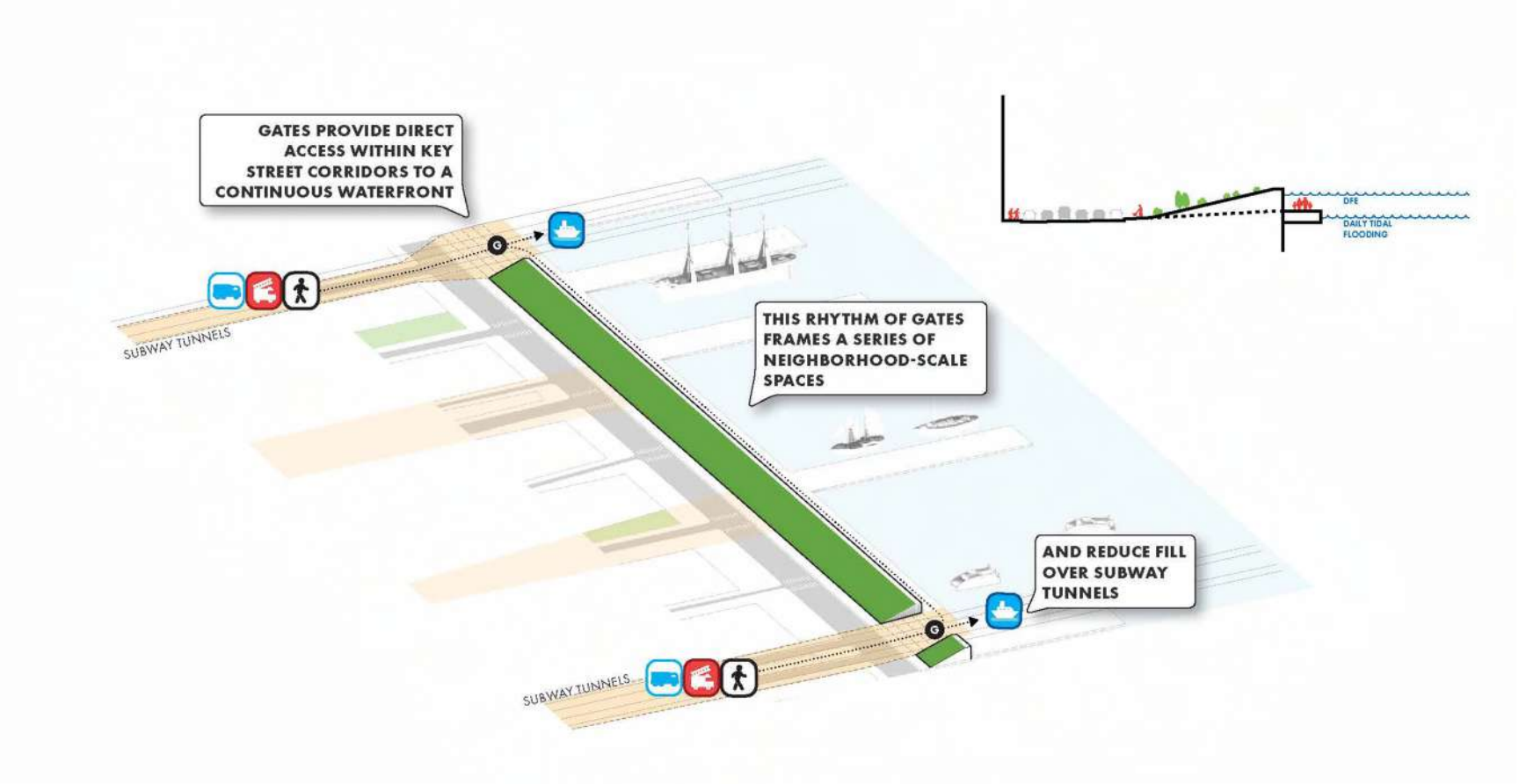


Figure 87: Universal access up to the DFE pushes the shoreline extension out.

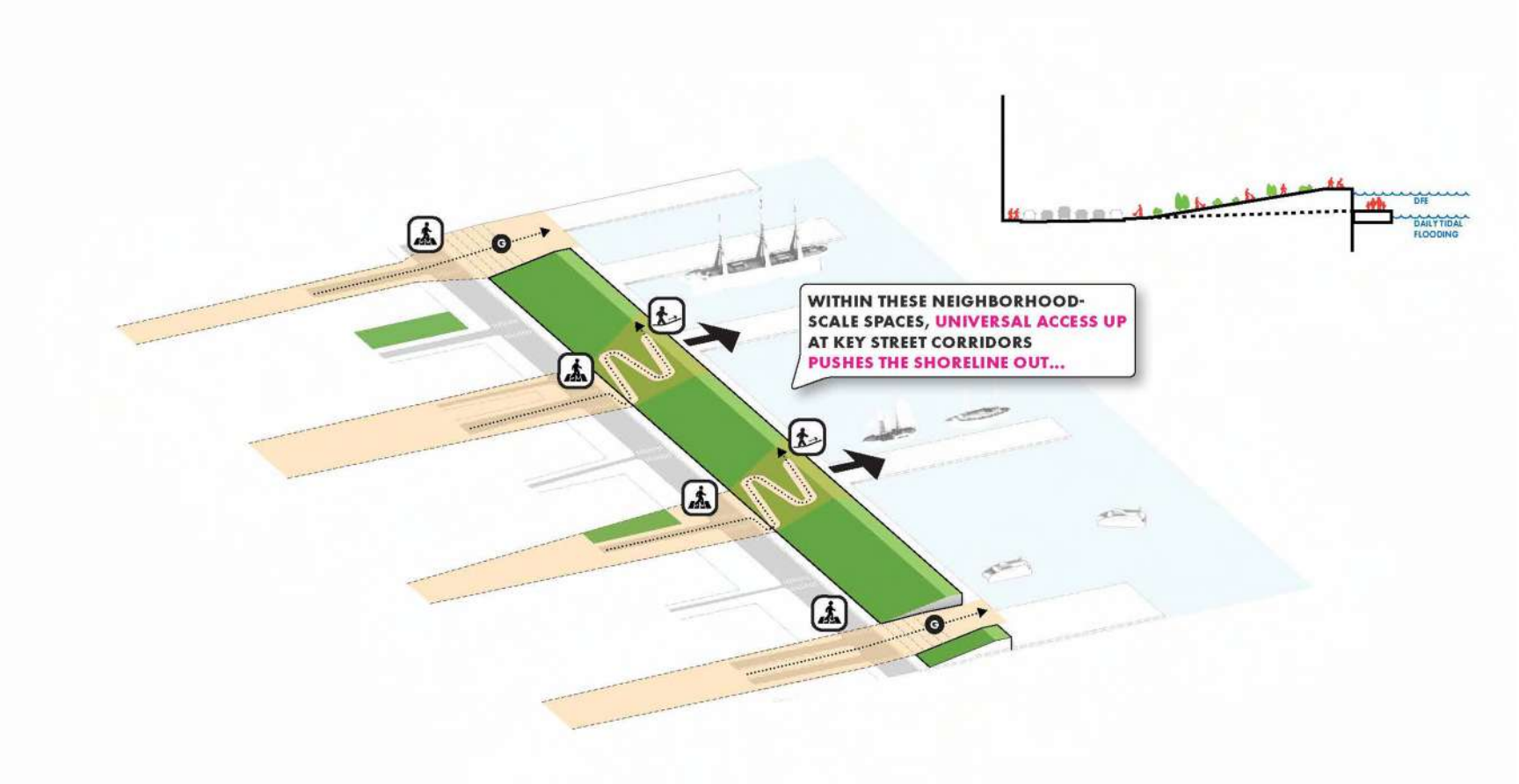


Figure 88: Access back down to the water squeezes the shoreline back towards the city

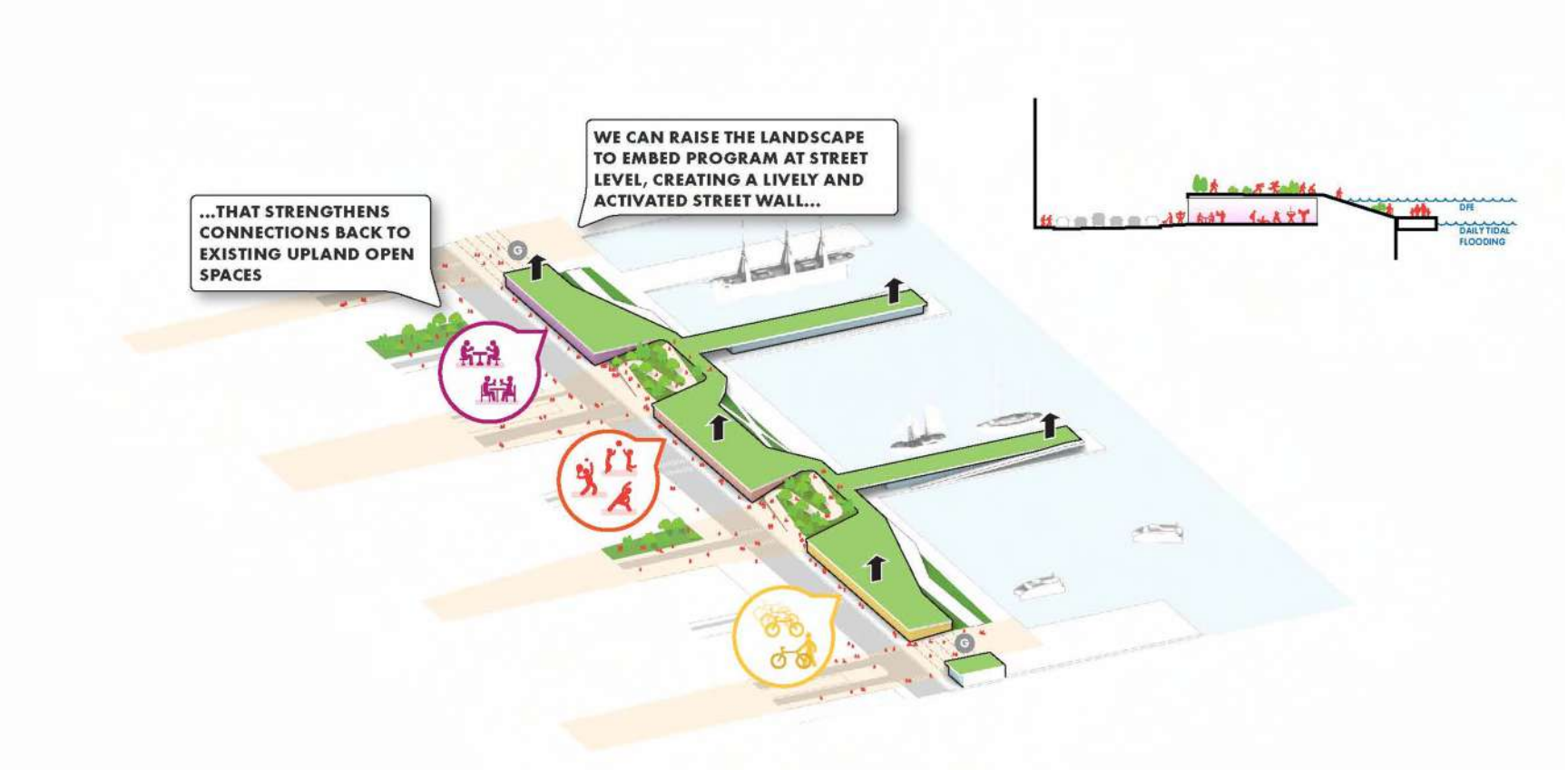
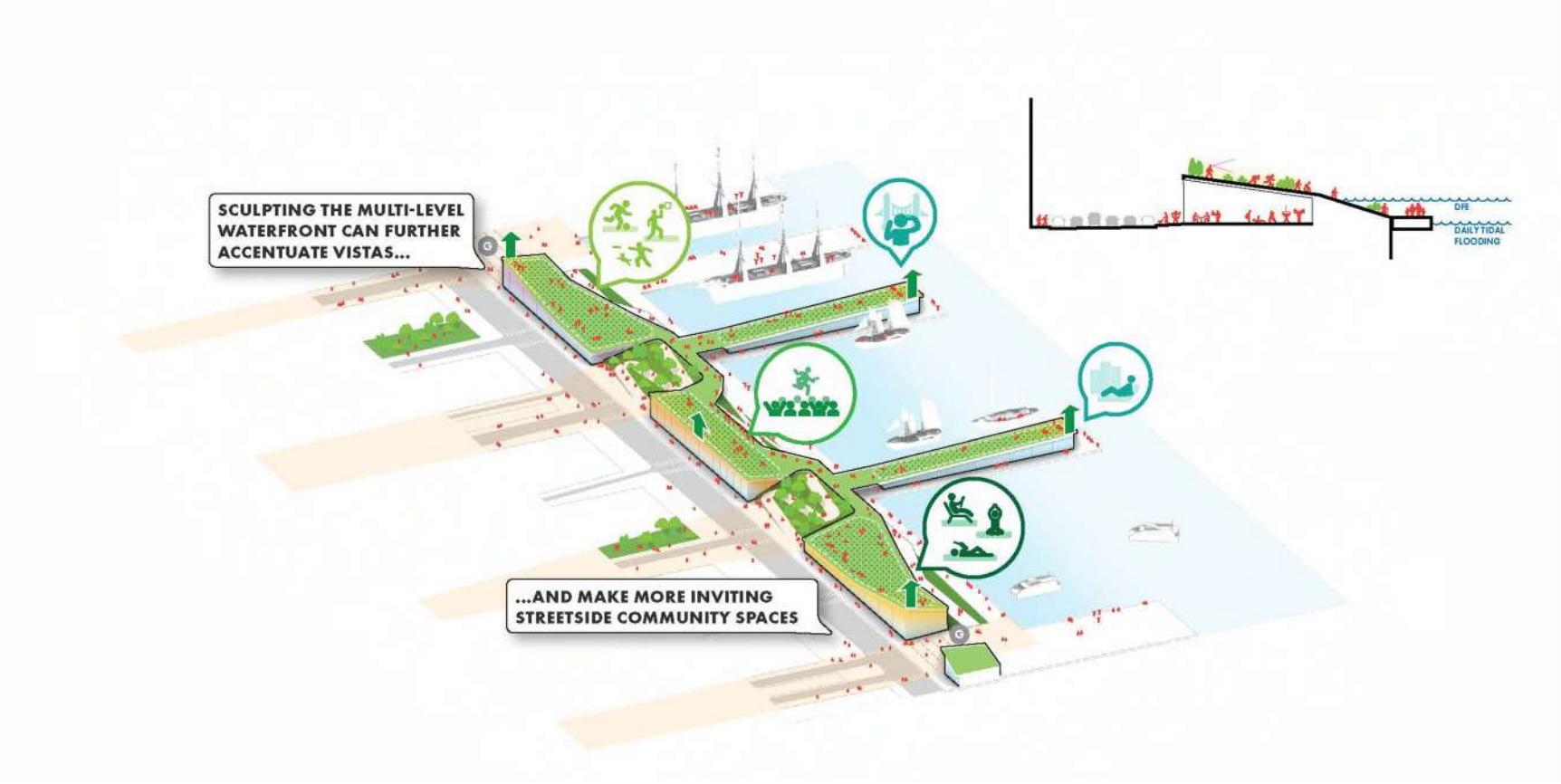


Figure 89: Elevation of open space between access points strengthening connections to existing upland open spaces.


SCULPTING THE MULTI-LEVEL WATERFRONT CAN FURTHER ACCENTUATE VISTAS...
...AND MAKE MORE INVITING STREETSIDE COMMUNITY SPACES
DFE
DAILY TIDAL FLOODING

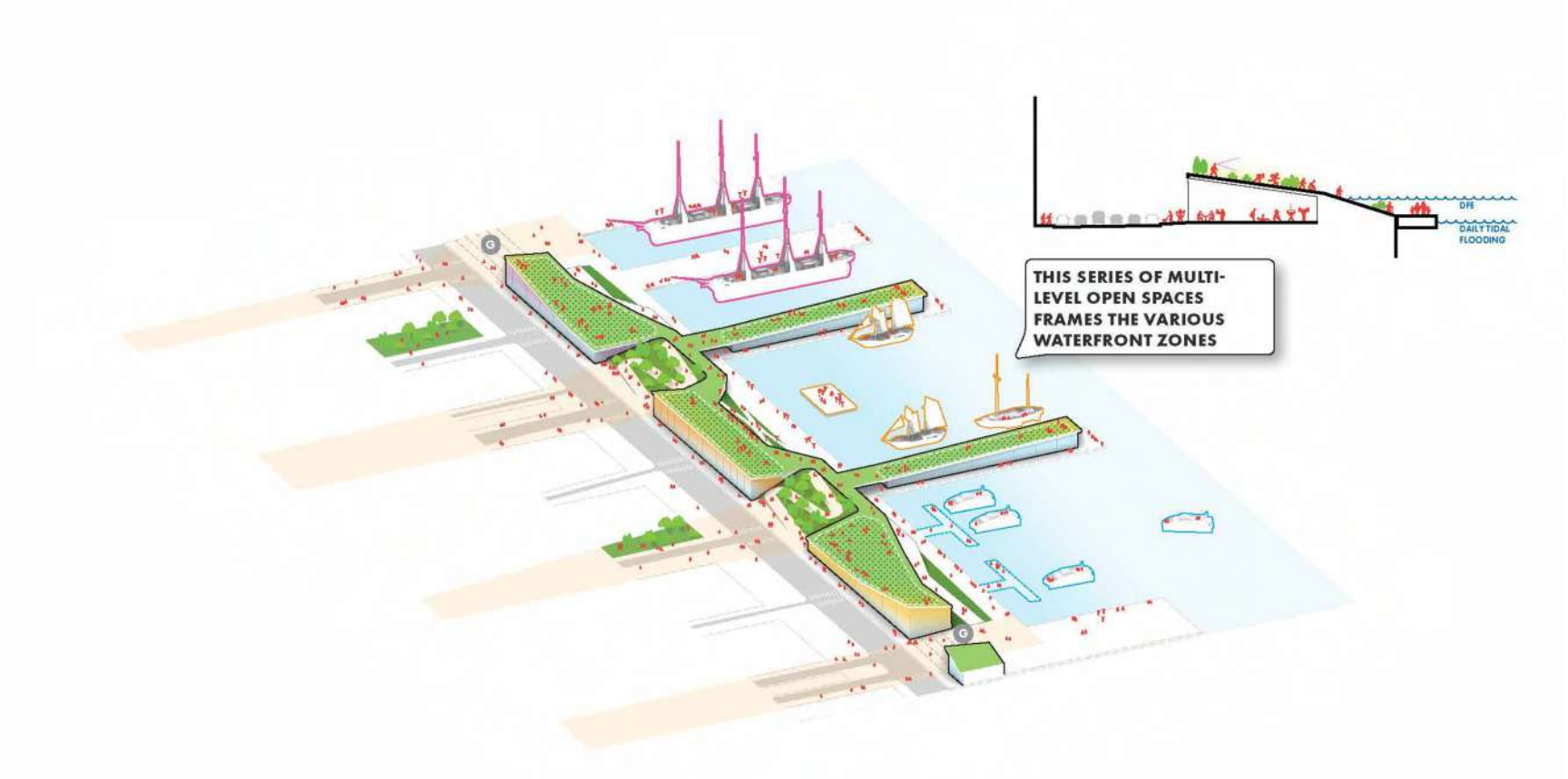


Figure 90: A envisioned waterfront of Design Approach 2

As illustrated in the graphic below, the Project Team tested different program areas as part of Approach 2 to understand how different features and functions could be situated across the study area, as well as the space implications of these different programming features. This helped inform what was feasible to site where in relation to the flood defense.

PROGRAM

Open Space

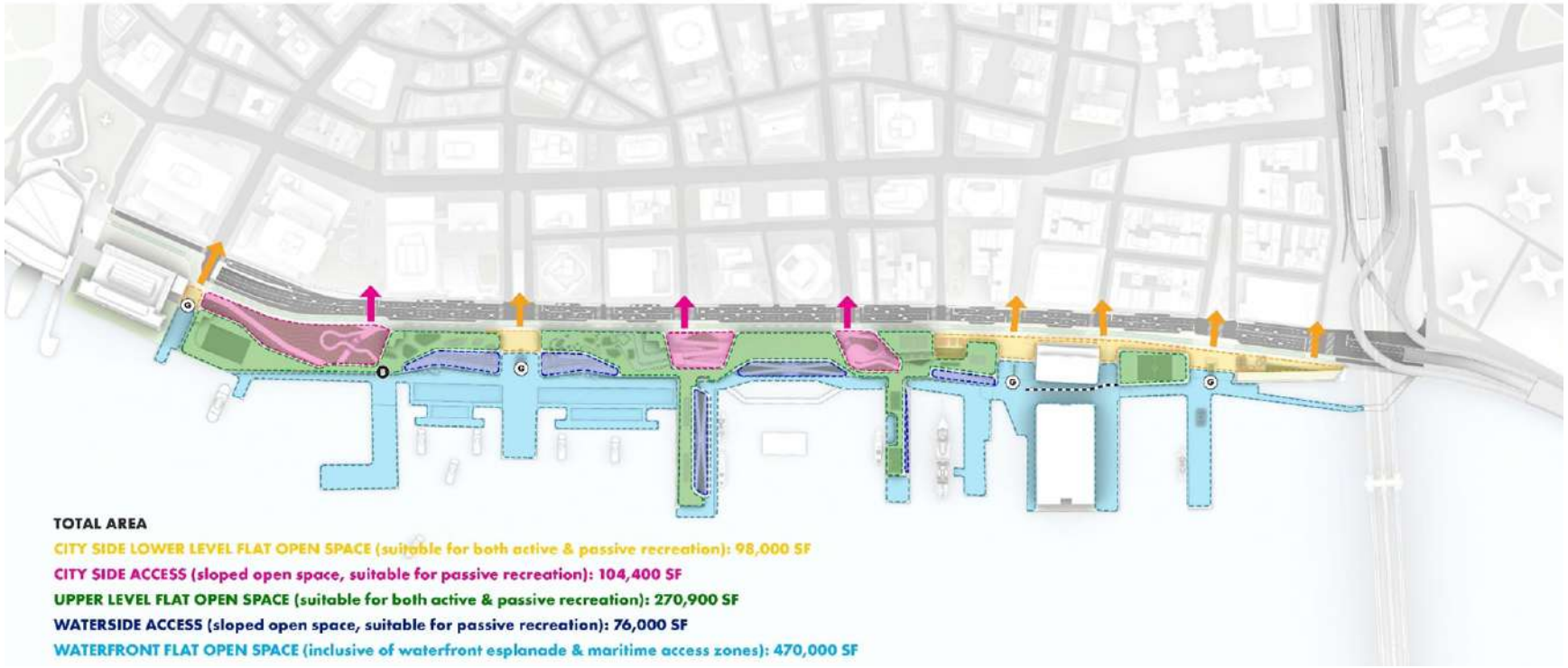


Figure 91: Open Space for Program Activity

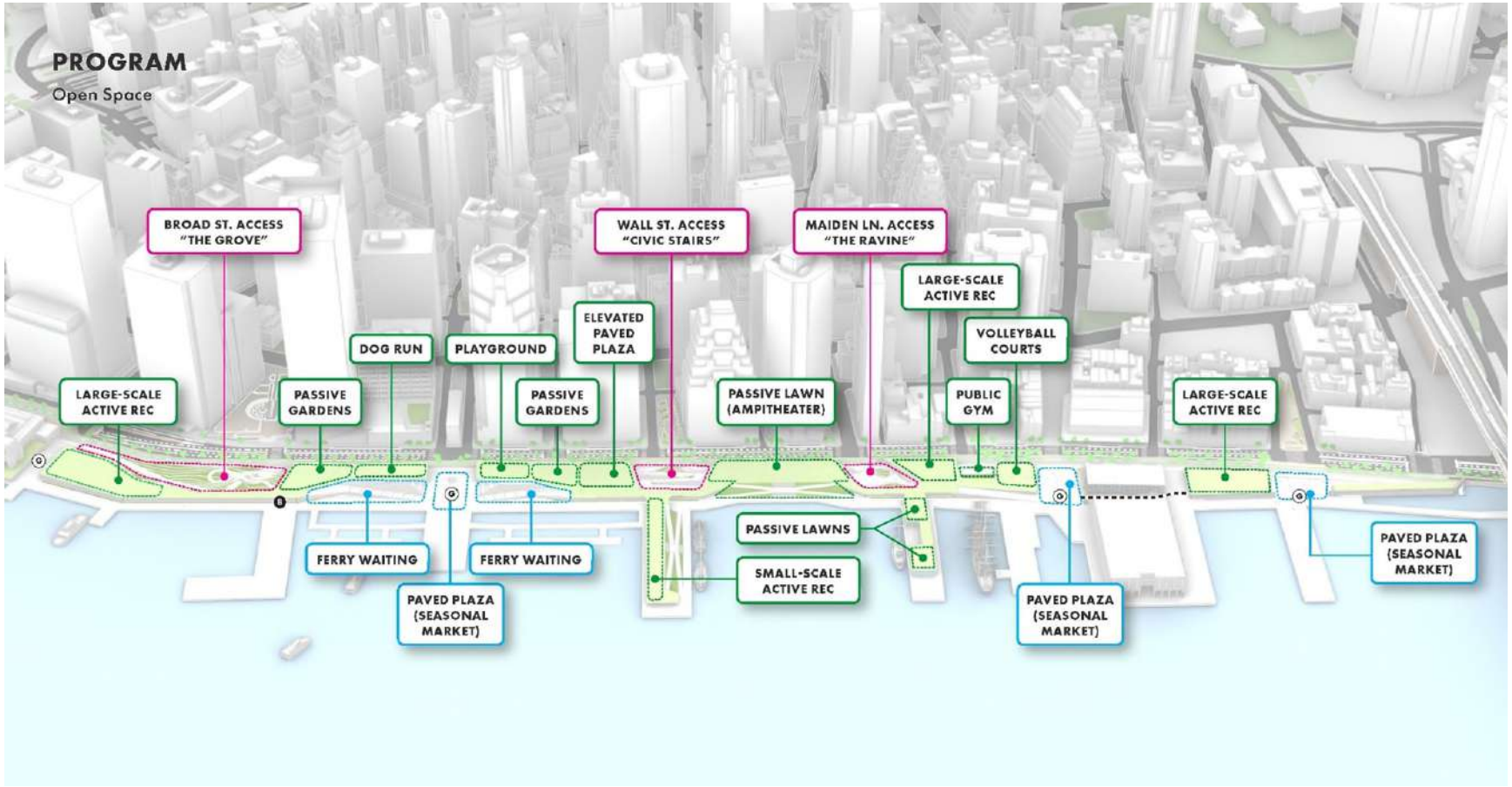


Figure 92: Areas for Programmed Activity

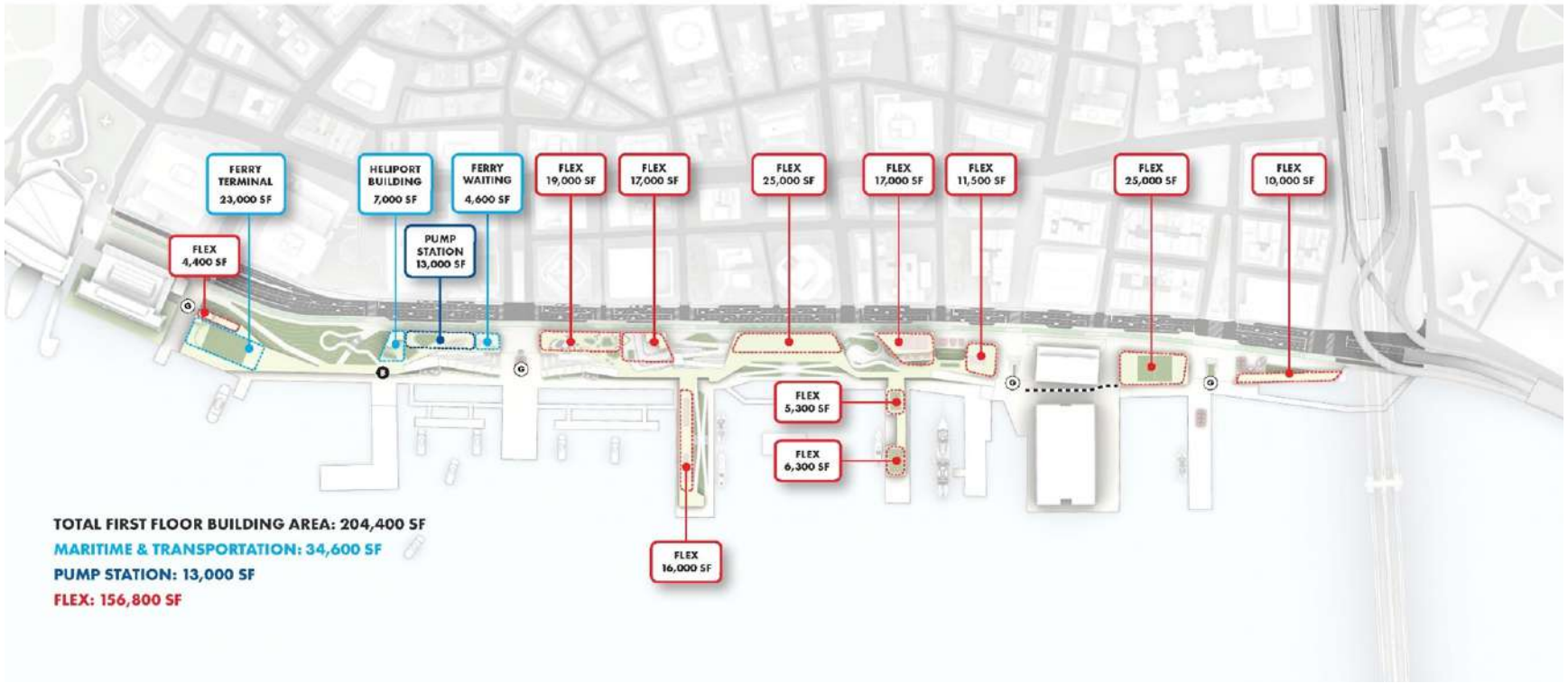


Figure 93: Building Areas for Programmed Activity, including area

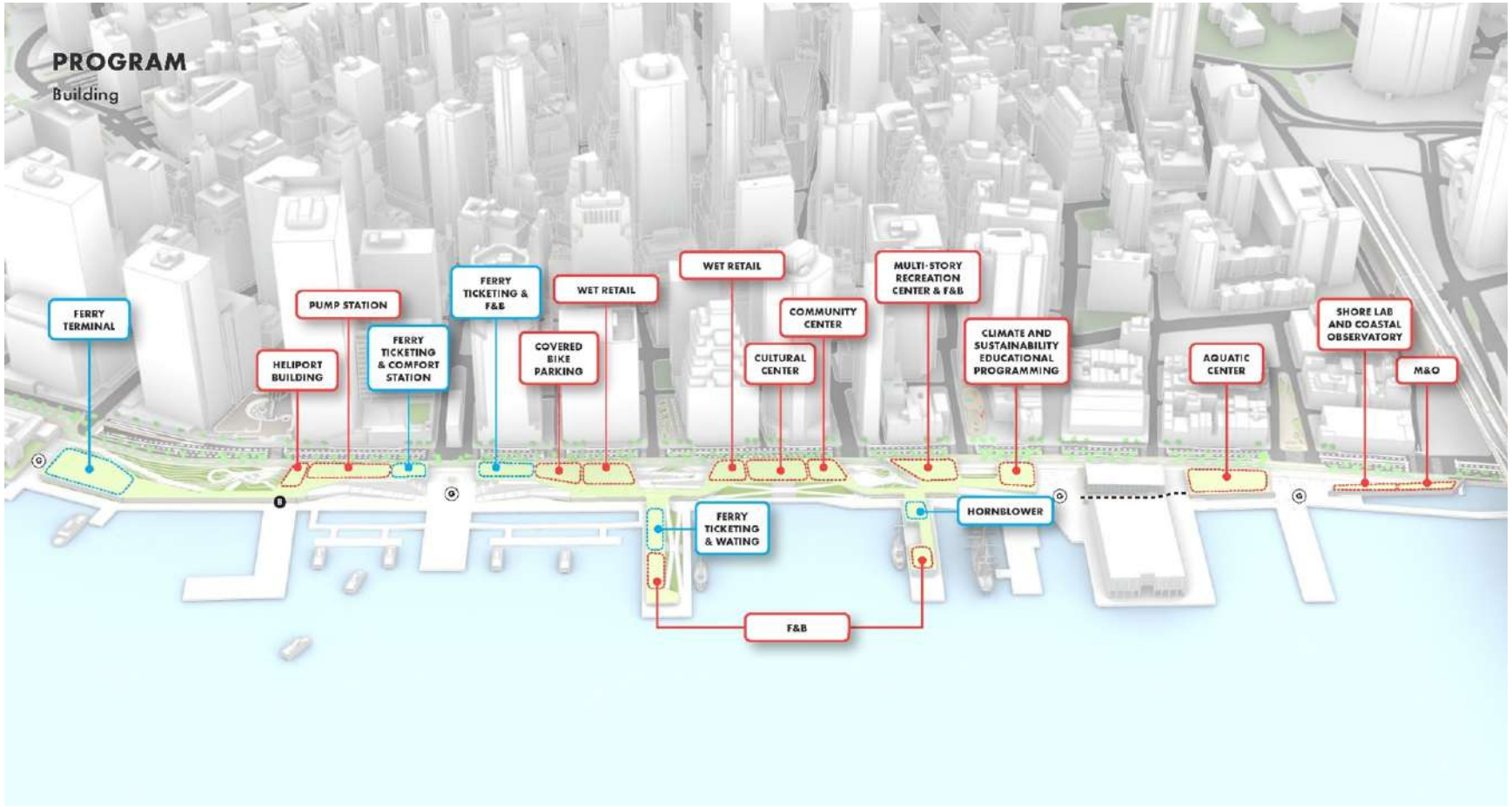


Figure 94: Building Areas for Programmed Activity, including potential use types

i. Design Opportunities

Design Approach 2 maximizes water facing open spaces and elevated spaces create opportunities for enhancing dramatic views of the harbor. The upper-level open spaces can be relatively flat, maximizing program flexibility and allowing for some larger program such as active recreation and sports courts. At the same time, the series of plateaus created between floodgate entrances create opportunities for separate park spaces with distinct identities. Access points can act as lush, planted canyons drawing visitors up to the series of upper-level park spaces connecting to upland open spaces. Large amount of single story building square footage also maximizes flexibility to locate a variety of community buildings along the waterfront. A continuous street wall along South Street could be programmed with a lively mix of community serving buildings and small amenity buildings or food and beverage. Lastly, secondary access via stairs and elevators could easily be co-located with buildings.

ii. Design Constraints

While this design scenario presents numerous opportunities, the Project Team also learned about numerous constraints. For example, large building square footage may be challenging to fill with occupants/tenants. If unoccupied, South Street buildings could create an uninviting experience. In addition, this option has fewer city-facing open spaces.

5.3 Hybridized Scheme

Building upon the lessons learned from Design Approaches 1 and 2, the Master Plan proposes four distinct areas for open spaces and public serving uses. Each area has unique opportunities and limitations, as described below:

1. Uses **inland of the flood defens**e infrastructure are most directly accessible to nearby neighborhoods and can be nestled into ramps, stairs, and sloped green spaces.
2. Uses on the **upper level**, or above the flood defense, can take advantage of new elevated views of the East River. As the Master Plan design advances in future phases, the feasibility of different types of planting needs to be evaluated; in particular, plantings near the flood defensedefense as no trees can be planted within 15 feet of either side of the line of protection.
3. The **waterfront esplanade** is designed to withstand temporary flooding from coastal storms. While this limits the types of uses, sturdier elements, like built-in seating and get-downs that bring people closer to the water, can help activate the esplanade.
4. **Piers 15 and 16**, which are well-used today, can provide similar public-serving uses once reconstructed to a higher elevation. Pier 17's existing esplanade, open space, and dining and beverage establishments will remain in place since the pier is elevated high enough to avoid future tidal flooding.

Overall, the Master Plan replaces and enhances the types of public destinations that are available today, including seating with river views, dining and drinking establishments, and a dog run, while incorporating opportunities to introduce new open spaces and public serving uses. It also increases the amount of open and green space compared to today. The Master Plan does not propose any residential or large-scale commercial development. The City will continue to collaborate with the community to design open space that best meets neighborhood and citywide needs.

The Master Plan will enhance the public waterfront by:

- Preserving and improving existing public destinations, including:
    - Holding space to replace all the public-serving uses along the waterfront, like the public esplanade, seating with river views, eating establishments, and a dog run
    - Expanding the amount of public open space and green space compared to today
- Creating multi-level waterfront open spaces, including:
    - Open spaces inland of the flood defense infrastructure that are directly accessible to nearby neighborhoods and nestled into ramps, stairs, and sloped green spaces
    - Open spaces on the upper level, above the flood defense infrastructure, with new elevated views of the East River
    - A waterfront esplanade, designed to safely flood during a coastal storm, brings people close to the water itself and to maritime destinations
- Providing community-serving uses, including:
    - Outdoor recreation spaces like sports courts, gardens, playgrounds, and more
    - Indoor spaces like comfort stations, community centers, and food establishments

i. Open Space & Program

To identify opportunities for feasible program and community buildings along the Financial District and Seaport waterfront, the Project Team undertook the following process:

- **Analysis:** What is the character and quantity of the existing open space and program?
- **Further Study:** What additional program should be considered?
- **Recommendations:** Guidance and spatial requirements for replacing the esplanade and program

The first two steps in the process have been covered in earlier sections of this appendix. To generate recommendations for site-wide program, the Project Team developed a series of guiding principles for locating program, informed by this previous analysis and further study. These principles were grounded in a desire to integrate usable open space into the flood defense along the waterfront. The following image shows the Project Team's definitions for usable versus not usable open space, as well as opportunities to site program across the study area.

WHAT IS CONSIDERED USABLE OPEN SPACE?

Recommendation

Usable Open Space

- Any areas without obstructions that are at 2% slope or less
- Lawn or other spaces up to 1:6 without obstructions that are not intended primarily for circulation
- Accessible program areas
- Stepped seating/amphitheaters if used sparingly

"Minimally" Usable Slope [1:6] **Universally Accessible Slope** [1:20]

Astoria Park [under Robert F. Kennedy Bridge]

Not Usable Open Space

- Vertical circulation unless it is less than 2% and 20' wide or wider
- Areas with dense obstructions that people cannot enter (e.g. densely planted areas) *(While a critical component of waterfront open space that need to be included and we do not want to discourage, these are not areas people can inhabit)*
- Spaces elevated greater than seat height with no access (e.g. raised planted)

Note: Because the existing open space is mostly flat esplanade/plazas, the majority of the existing usable space is ADA/Universally accessible.

Brooklyn Bridge Park [Main Street Park]

Figure 95: Recommendations for usage of open space using current examples in NYC

Based on these definitions, the Project Team identified where different forms of programs might be feasible within the Master Plan design. As shown in the drawing below, areas with <2% (1:50) slopes can accommodate programs that require largely flat surfaces. Areas with <5% (1:20) slopes are suitable for programs that can be sited on accessible slopes and areas with 5%-16% (1:6) slopes are best suited for inaccessible planted uses.

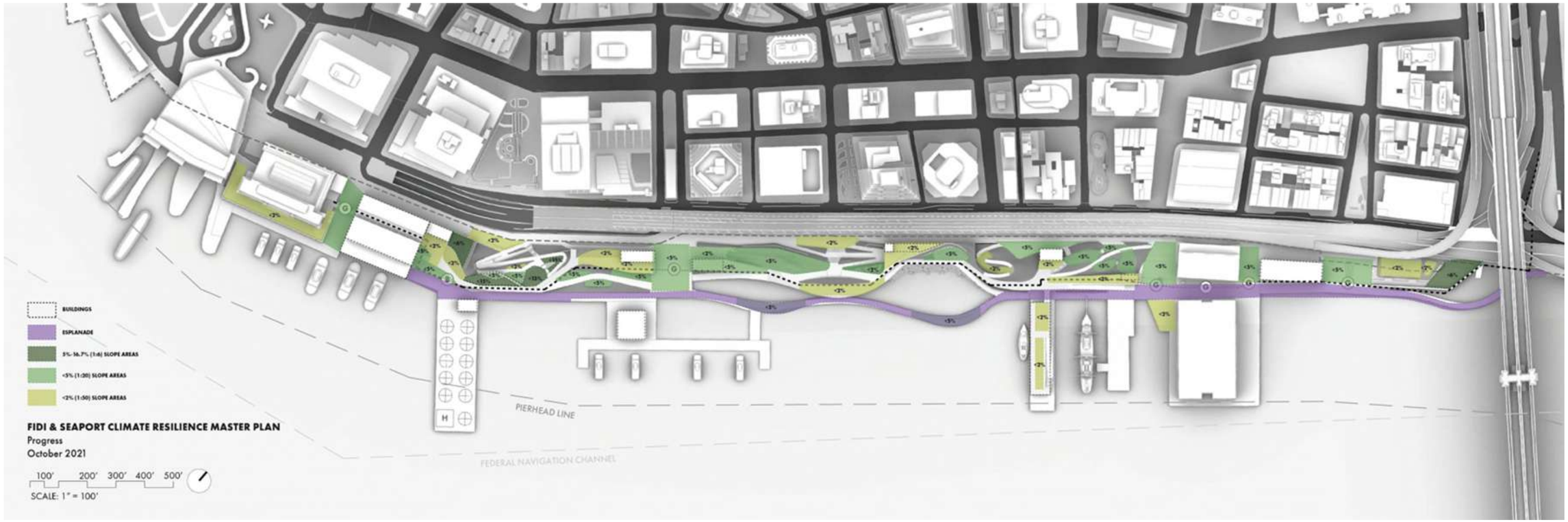


Figure 96: Opportunities for Program Across the Study Area

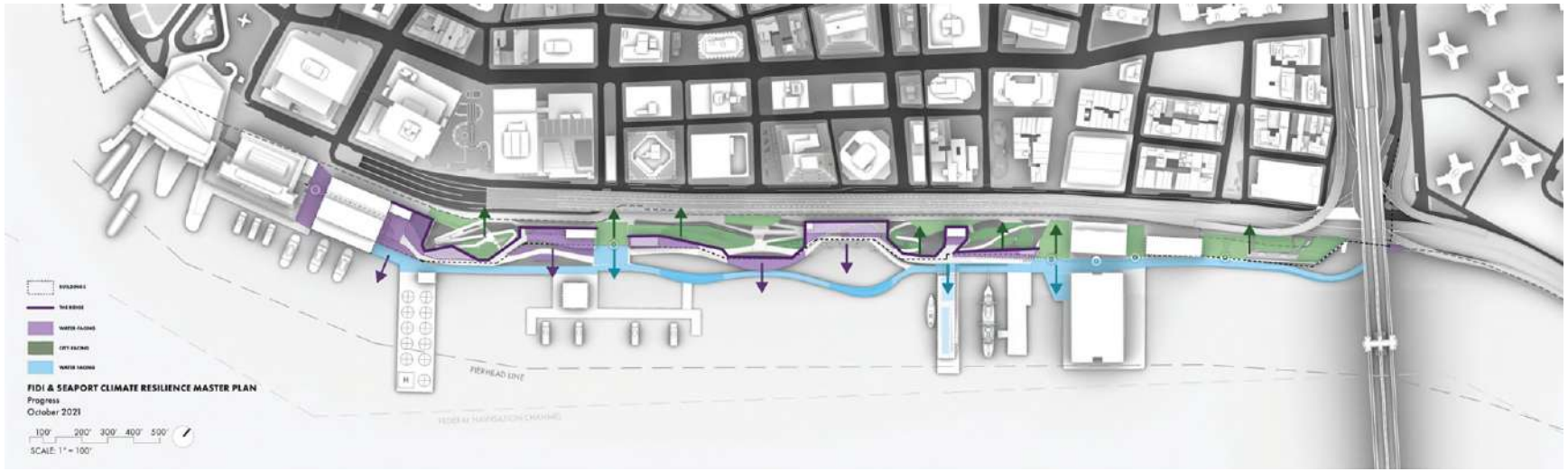
ii. Program Vision

After understanding the physical opportunities and constraints for placing program across the site, the Project Team began to develop a more detailed vision for the waterfront with design strategies informed by public and stakeholder feedback. As shown in the drawings in the following subsections, these design strategies include:

- Creating a variety of experiences, including both city and water-facing spaces
- Accommodating small community buildings and public amenities
- Articulating distinct programmatic destinations within the larger waterfront

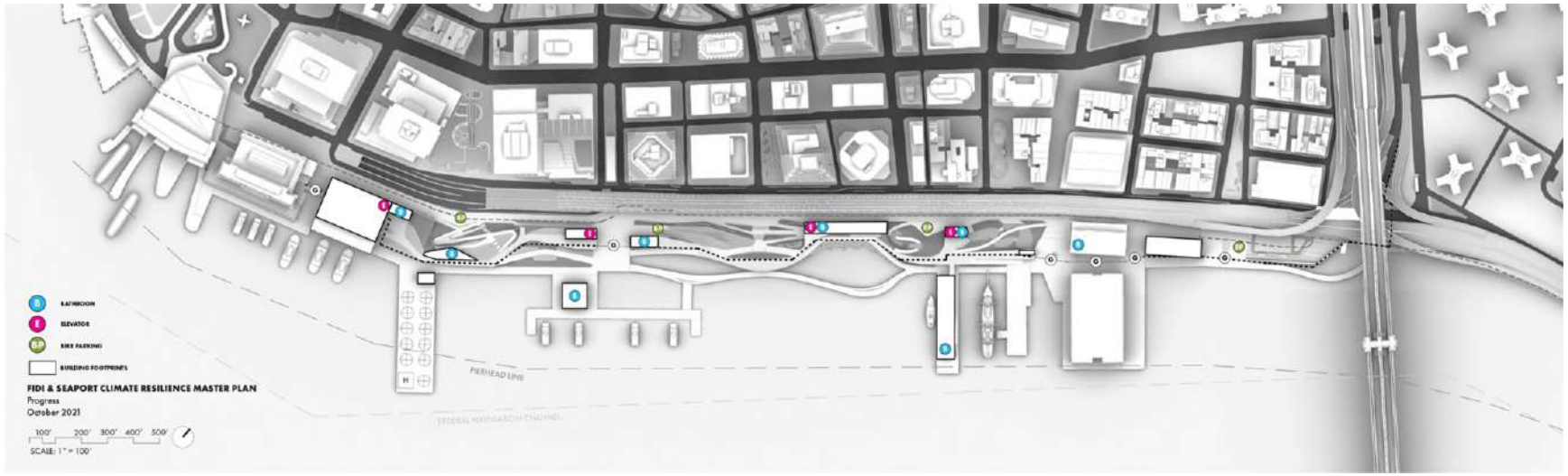
Program Orientation

The below graphic illustrates how the upper level, referred to here as "The Ridge," generates a variety of multi-level spaces that orient both toward the city and the water. Coupled with the previous slope feasibility study, the orientation of the spaces and associated multi-level experiences further informed the Project Teams program recommendations.



Buildings and Amenities

In addition to providing a variety of program opportunities along the waterfront, the Project Team felt it was critical to identify locations for community-scale buildings and smaller public amenities. The graphic below identifies potential locations where proposed buildings can also incorporate bathrooms, elevators, and bike parking stations to better serve the surrounding communities.



Destinations

While the Financial District and Seaport Waterfront will be a destination in and of itself, the Project Team felt that articulating identities for smaller, more distinct spaces could not only help define programming for these sub-areas but could be beneficial to future wayfinding across the site. Identified sub-areas, referenced in the forthcoming program recommendations include (from South to North):

- The Steps
- The Concourse
- The Slip
- The Lawn
- The Overlook
- The Wall Street Wander
- The Cove
- The Climb
- Pier 15
- The Seaport Slope
- The Gateway
- The Beach

These destinations illustrate one potential way in which program could be integrated across the study area.

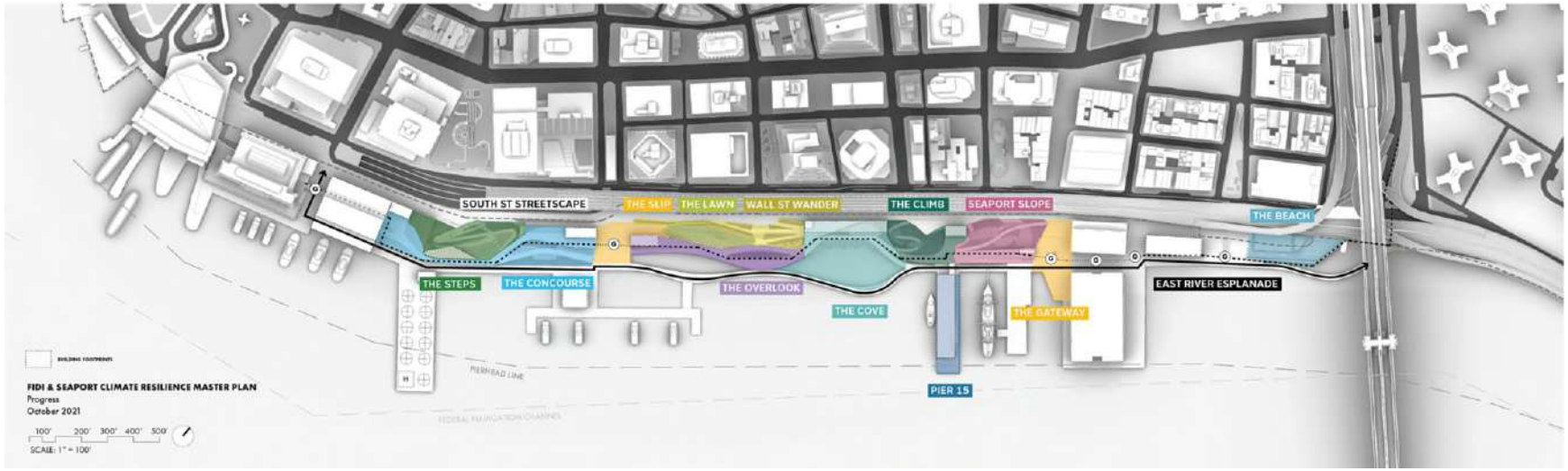


Figure 97: Waterfront Destinations

6. Program Recommendations

The Project Team developed the following recommendations for sitewide program to guide future efforts beyond the scope of the Financial District and Seaport Master Plan. Utilizing the previous studies, and square footage analysis the Project Team developed for the final plan, these recommendations provide guidance intended for consideration as the Master Plan moves toward implementation.

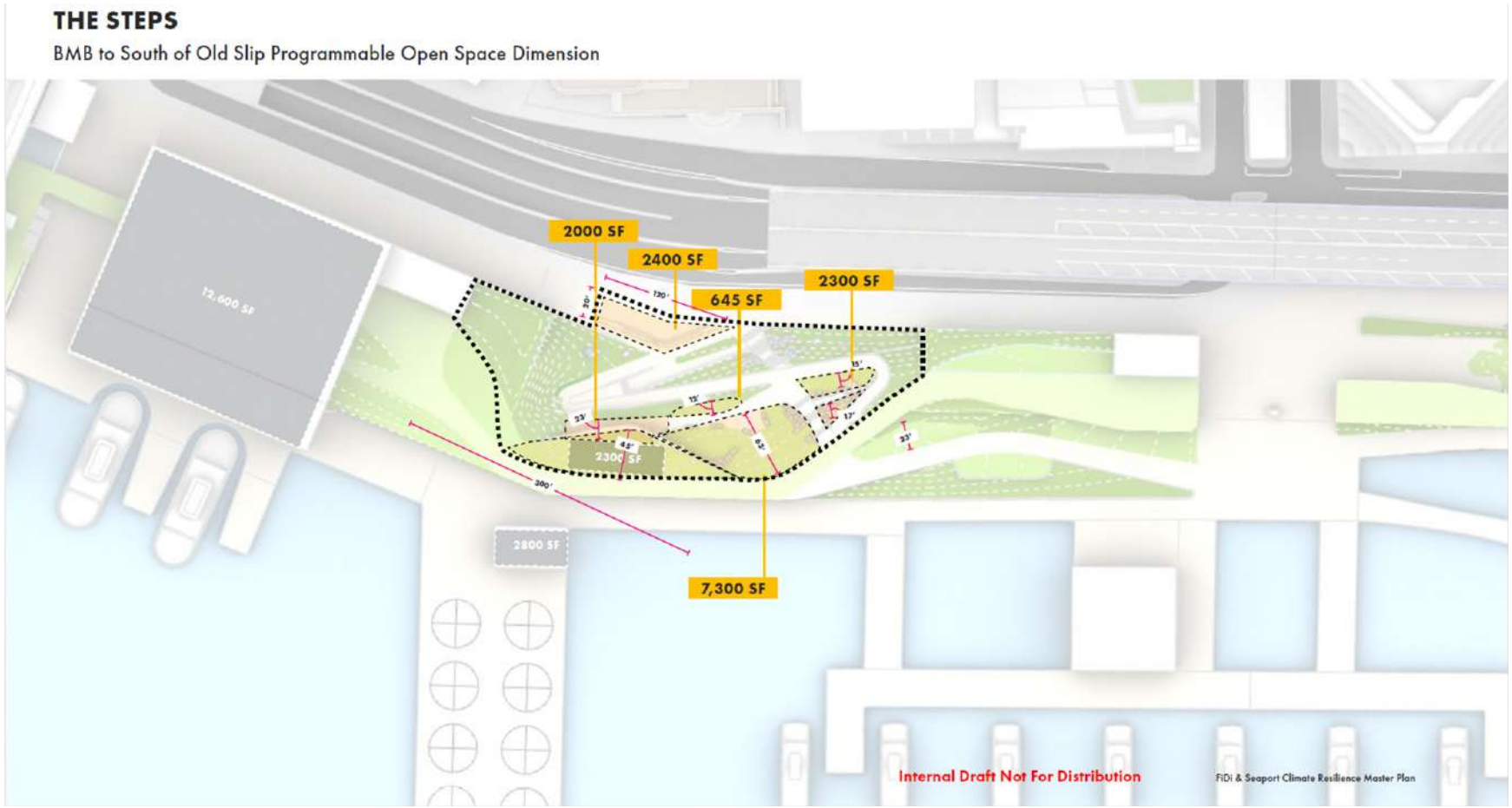
The following graphics are divided into two categories:

1. Areas within the Master Plan that, based on their square footage, location, and the amount of usable of open space they contain, have very clear, limited programs that can be accommodated.
2. Areas within the Master Plan that, based on their square footage, location, and the amount of usable of open space they contain, can accommodate a wider variety of programs, and thus have a greater degree of programmatic optionality.

6.1 Areas with Clear Preference for Program

The following areas have clear, limited programs that can be accommodated. Below demonstrates the square footage associated with different programmable open space and the types of uses that could be accommodated, based on precedents.

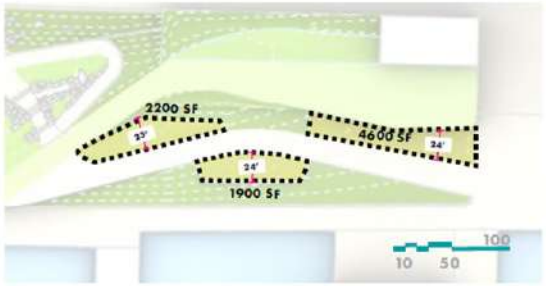
i. The Steps



THE STEPS

South Old Slip Corner Sloped/Terraced Program Area

UPPER LEVEL PROGRAMMING



BASIC CONDITION
TYPE : WATER FACING TERRACED/SLOPED PROGRAMMABLE SPACE
TOTAL AREA: 8700 SQFT
SLOPE: TERRACED/SLOPED

THE HILL AT GOVERNORS ISLAND

Total Area: ~2500 sf
Slope: <50%
Enclosure: No
Surface: Hardscape

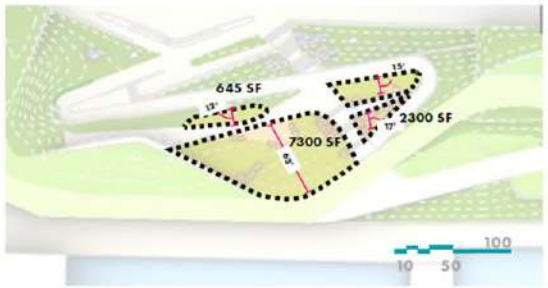
BROOKLYN BRIDGE PARK PIER 3

Total Area: ~300 sf to ~700 sf
Slope: <5%
Enclosure: No
Surface: Hardscape

THE STEPS

North BMB Terraced/Sloped Program Area

CITY FACING TERRACED/SLOPED PROGRAM



BASIC CONDITION
TYPE : CITY FACING TERRACED/SLOPED PROGRAM
TOTAL AREA: 10,245 SQFT
SLOPE: <16%

SLIDE HILL PLAYGROUND AT GOVERNORS ISLAND

Total Area: ~4200 sf
Slope: <50%
Enclosure: No
Surface: Play Surface

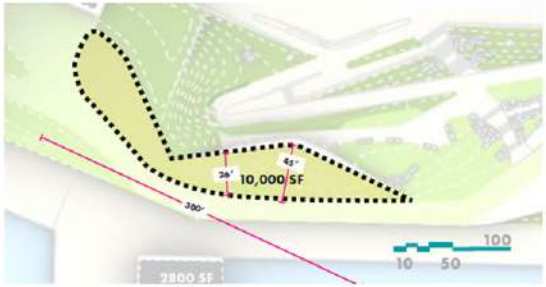
THE GRANITE PROSPECT AT BROOKLYN BRIDGE PARK

Total Area: ~3,200 sf
Slope: Terraced
Enclosure: No
Surface: Hardscape

THE STEPS

South Old Slip Corner Sloped/Terraced Program Area

UPPER LEVEL PASSIVE PROGRAMMING



BASIC CONDITION
TYPE : WATER ORIENTED OPEN SPACE
TOTAL AREA: 10,000 SQFT
SLOPE: TERRACED

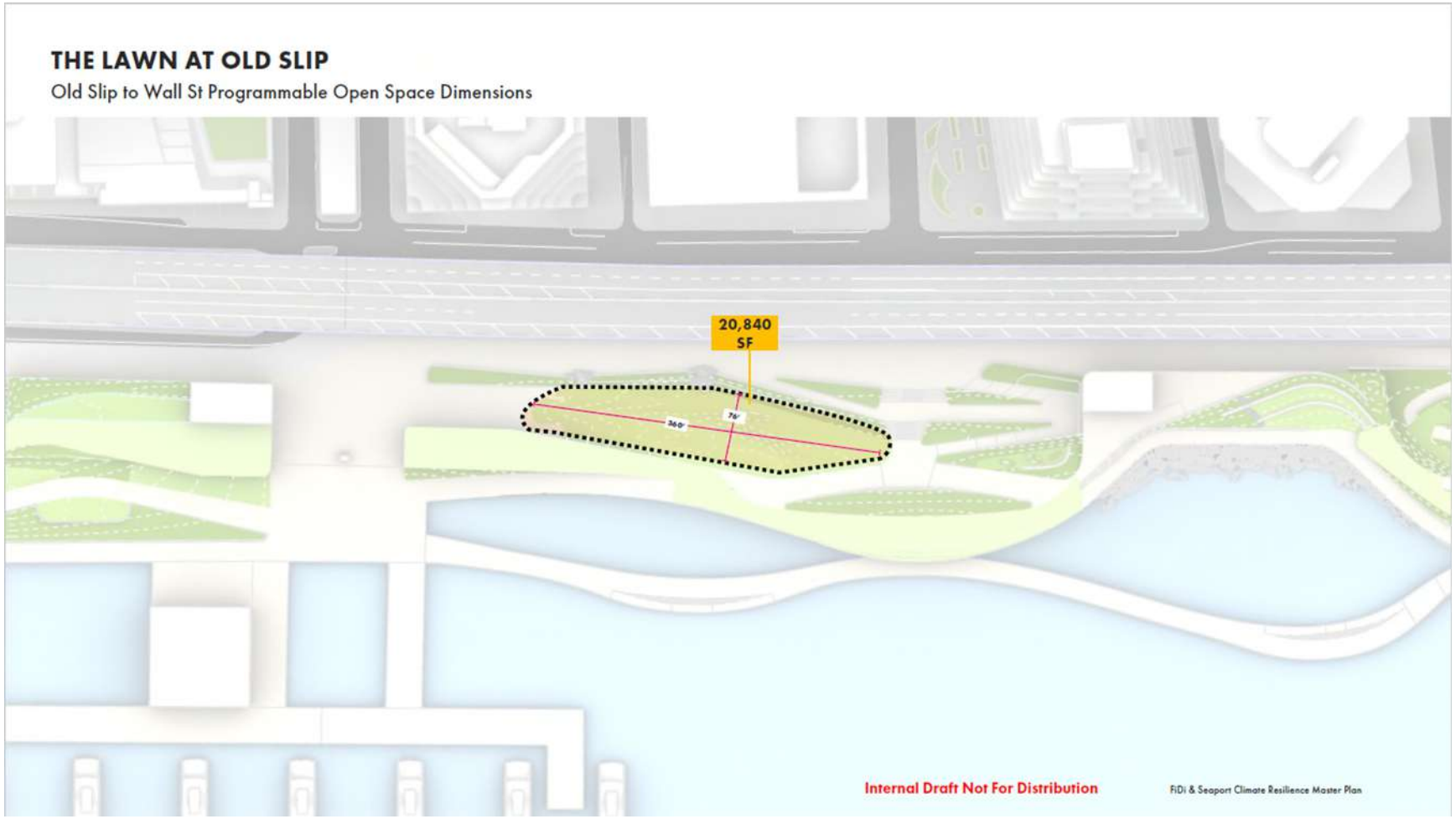
HUNTERS POINT SOUTH PARK

Total Area: ~10,000 sf
Slope: <8%
Enclosure: No
Surface: Lawn Grass

LAWN AT JOHN STREET - BROOKLYN BRIDGE PARK

Total Area: ~9000 sf
Slope: <8%
Enclosure: No
Surface: Lawn Grass

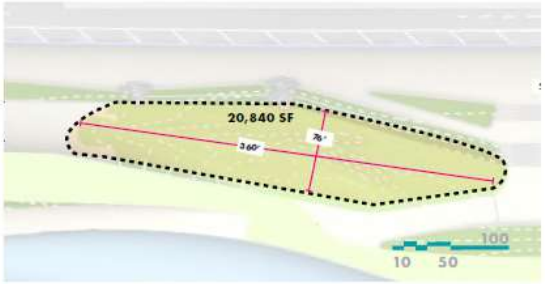
ii. The Lawn


THE LAWN AT OLD SLIP
Old Slip to Wall St Programmable Open Space Dimensions
20,840 SF
360'
76'
Internal Draft Not For Distribution
FiDi & Seaport Climate Resilience Master Plan

THE LAWN AT OLD SLIP

Old Slip to Wall St Programmable Open Space Dimensions

WALL ST SLOPED/TERRACED PROGRAM

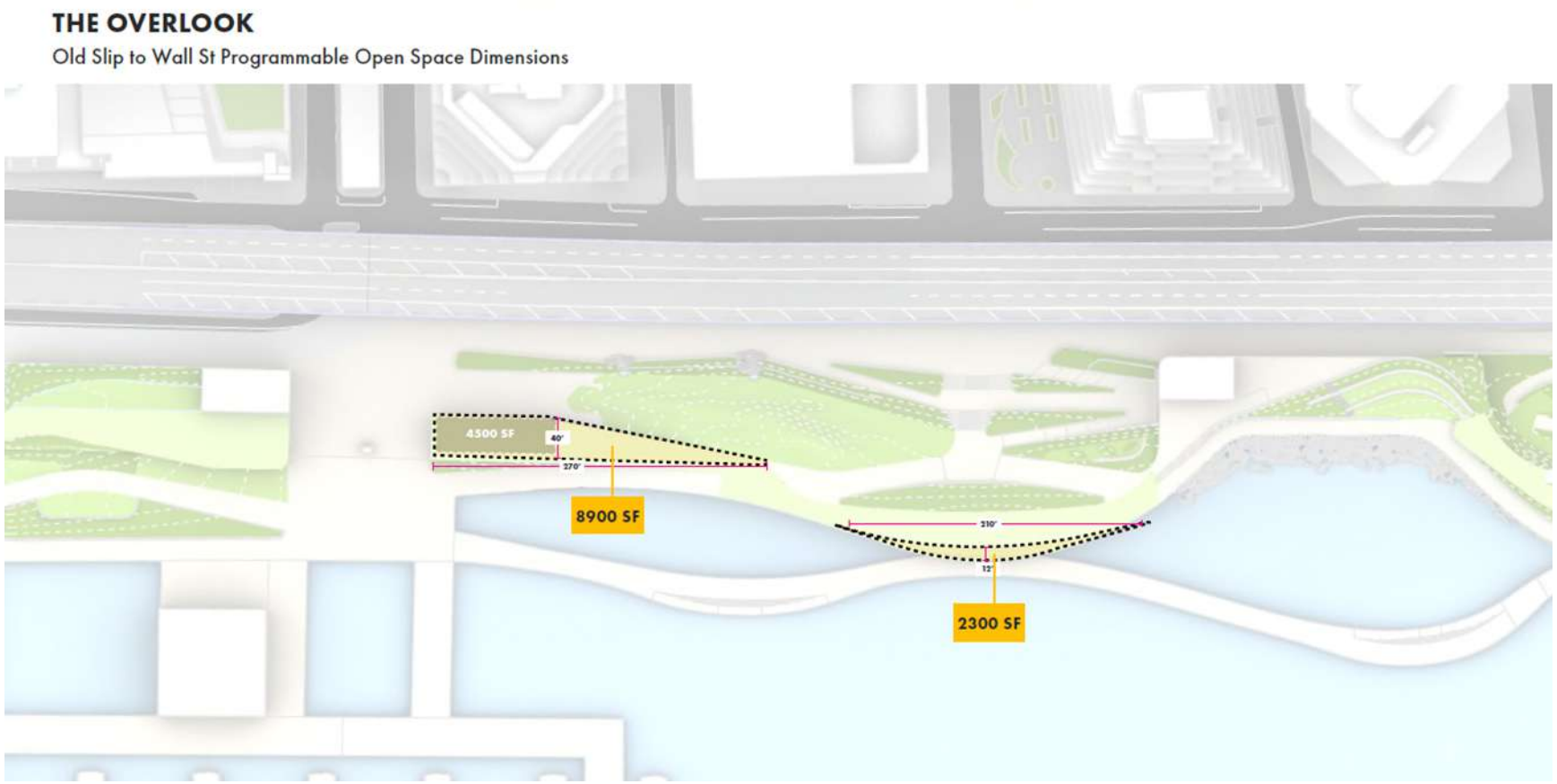


BASIC CONDITION
TYPE : CITY FACING SLOPED/TERRACED PROGRAM
TOTAL AREA: 20,840 SQFT
SLOPE: TERRACED

LAWN AT BROOKLYN BRIDGE PARK PIER 1

Total Area: ~36,000 sf
Slope: <8%
Enclosure: No
Surface: Lawn Grass

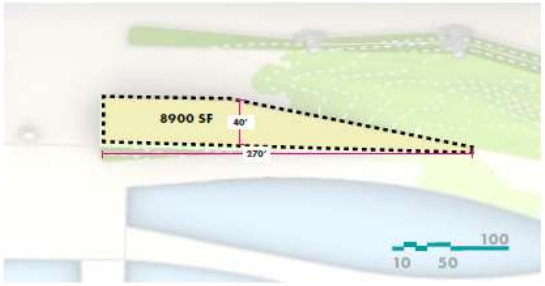
iii. The Overlook



THE OVERLOOK

Old Slip Passive Program

Wall St Upper Level Area



TYPE : UPPER LEVEL, WATER ORIENTED OPEN SPACE
TOTAL AREA: 8900 SQFT
SLOPE: TERRACED

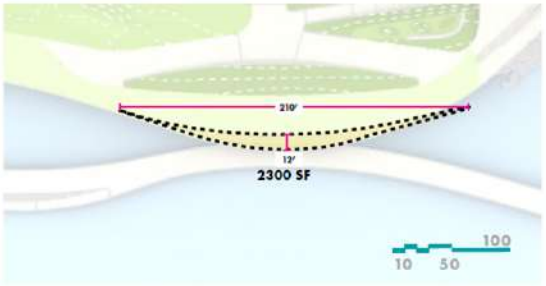
Lawn at John St Park

Total Area: ~9000 sf
Slope: <8%
Enclosure: No
Surface: Lawn Grass

THE OVERLOOK

Old Slip Passive Program

Wall St Upper Level Area

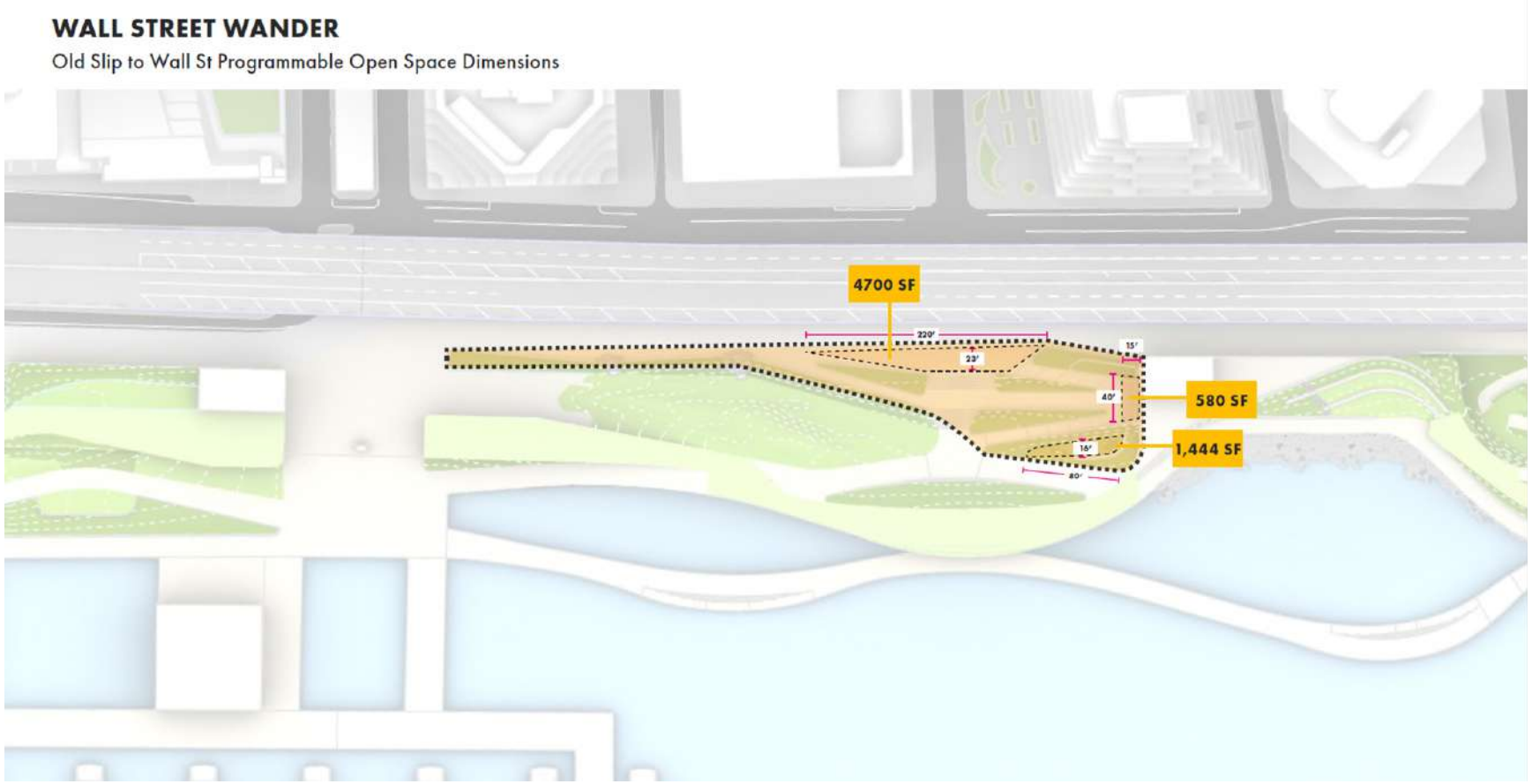


TYPE : WATER ORIENTED OPEN SPACE
TOTAL AREA: 2300 SQFT
SLOPE: TERRACED

Niederhafen River Promenade, Hamburg

Total Area: ~5400 sf
Slope: Terraced
Enclosure: No
Surface: Hardscape

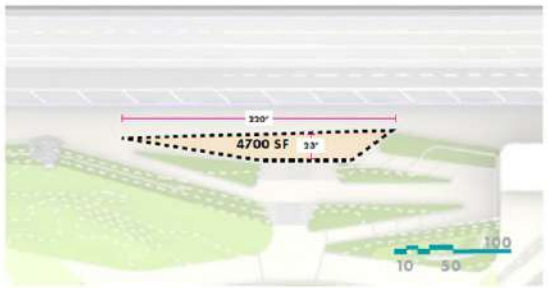
iv. The Wall Street Wander



WALL STREET WANDER

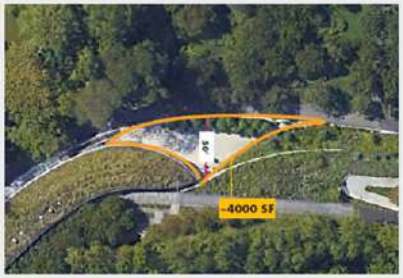
Wall St Streetscape

STREETSCAPE PROGRAMMING



BASIC CONDITION
TYPE : STREETSCAPE/PLAZA AT ENTRY POINT
TOTAL AREA: 4700 SQFT
SLOPE: TERRACED

VISITOR CENTER AT BROOKLYN BOTANIC GARDEN



Total Area: ~4000 sf
Slope: <5%
Enclosure: No
Surface: Hardscape

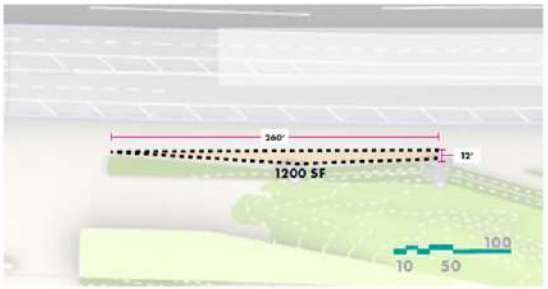
VISITOR CENTER AT BROOKLYN BOTANIC GARDEN

Total Area: ~1300 sf
Slope: <5%
Enclosure: No
Surface: Hardscape

WALL STREET WANDER

Old Slip Streetscape

STREETSCAPE PROGRAMMING



BASIC CONDITION
TYPE : STREETSCAPE
TOTAL AREA: 1200 SQFT
SLOPE: <2%

STREETSCAPE BY LONG ISLAND SIGN

Total Area: ~1300 sf
Slope: <2%
Enclosure: No
Surface: Hardscape

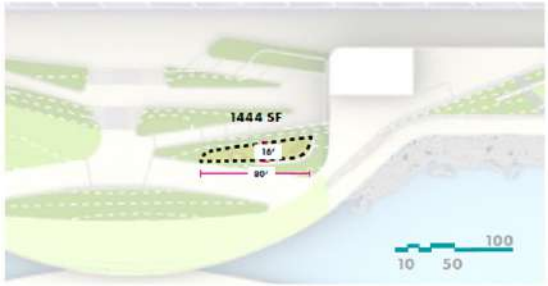
DOMINO PARK SCREW CONVEYER RELIC GARDEN

Total Area: ~1800 sf
Slope: <2%
Enclosure: No
Surface: Mixed

WALL STREET WANDER

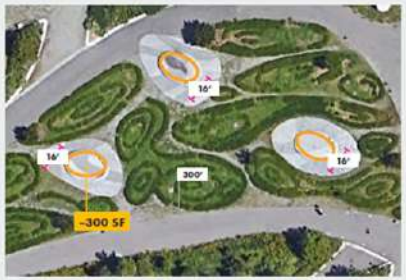
Wall St Entrance

WALL ST INNACCESSIBLE SLOPE PROGRAM



BASIC CONDITION
TYPE : INNACCESSIBLE SLOPE PROGRAM
TOTAL AREA: 1444 SQFT
SLOPE: >2%

WATER FEATURE AT GOVERNORS ISLAND

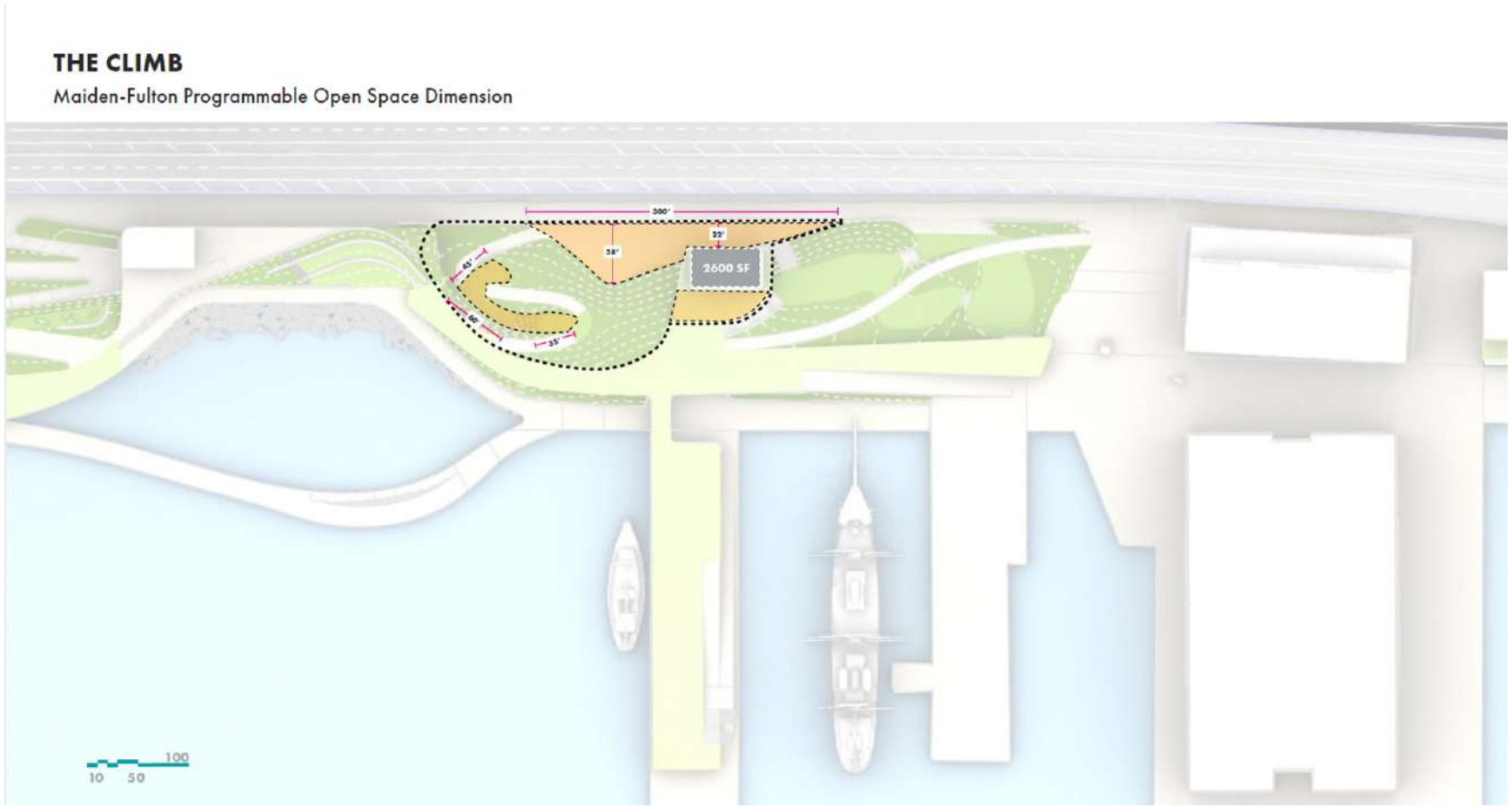


Total Area: ~300 sf
Slope: >5%
Enclosure: No
Surface: Hardscape

BROOKLYN BRIDGE PARK PIER 3

Total Area: ~300 sf to ~700 sf
Slope: <5%
Enclosure: No
Surface: Hardscape

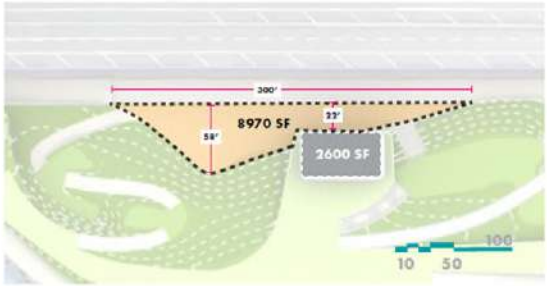
v. The Climb


THE CLIMB
Maiden-Fulton Programmable Open Space Dimension
300'
22'
58'
45'
60'
35'
2600 SF
100
10
50

THE CLIMB

Maiden-Fulton Plaza Area

PLAZA & STREETSCAPE PROGRAMMING



BASIC CONDITION
TYPE : STREETSCAPE CONDITION, ENTRANCE AT GATE,STREETSCAPE/PLAZA AT OTHERS ACCESS POINT
TOTAL AREA: 8970 SQFT
SLOPE: FLAT SPACE WITH <2% SLOPE

- One of the larger streetscape areas, but must accommodate circulation in front of building and flow to access point
- Small plaza with one key program (see examples of hedge maze and water feature).
- Other amenities, such as seating, active building frontage, etc., can help support the key program
- While the FDR is in place, this design provides a generous area to program

LIGGET TERRACE FOOD COURT AT GOVERNORS ISLAND

Total Area: ~6000 sf
Slope: <5%
Enclosure: No
Surface: Hardscape

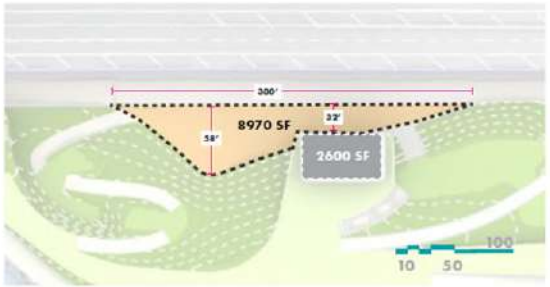
WATER FEATURE AT 1ST AVENUE WATER PLAZA

Total Area: ~3000 sf
Slope: <16%
Enclosure: ~2' Tall Wall
Surface: Hardscape

THE CLIMB

Maiden-Fulton Plaza Area

PLAZA & STREETSCAPE PROGRAMMING



BASIC CONDITION
TYPE : STREETSCAPE CONDITION, ENTRANCE AT GATE,STREETSCAPE/PLAZA AT OTHERS ACCESS POINT
TOTAL AREA: 8970 SQFT
SLOPE: FLAT SPACE WITH <2% SLOPE

- A more open approach can highlight the features of the massing design, like planting and the building
- Passive elements like planting or stormwater treatment gardens can break up the circulation
- Open, flexible space can host periodic program like markets, pop ups, or exhibits, with additional space under the FDR to expand that program

VISITOR CENTER AT BROOKLYN BOTANIC GARDEN

Total Area: ~4000 sf
Slope: <5%
Enclosure: No
Surface: Hardscape

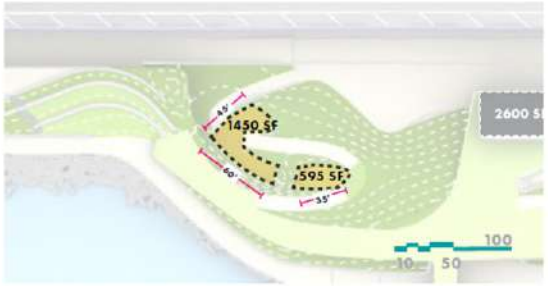
GREENPOINT LIBRARY AND ENVIRONMENTAL CENTER

Total Area: ~2000 sf
Slope: <5%
Enclosure: No
Surface: Hardscape

THE CLIMB

Maiden-Fulton Plaza Area

PLAZA & STREETSCAPE PROGRAMMING



BASIC CONDITION
TYPE : INACCESSIBLE SLOPES
TOTAL AREA: 2045 SQFT
SLOPE: FLAT SPACE AT A SLOPE

- Smaller area at switchback can accommodate small areas of active space

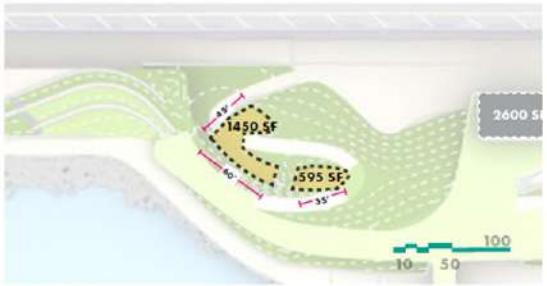
LIGGET TERRACE FOOD COURT AT GOVERNORS ISLAND

Total Area: ~2800 sf
Slope: <5%
Enclosure: Yes
Surface: Play Surface

THE CLIMB

Maiden-Fulton Plaza Area

PLAZA & STREETSCAPE PROGRAMMING



BASIC CONDITION
TYPE : INACCESSIBLE SLOPES
TOTAL AREA: 2045 SQFT
SLOPE: FLAT SPACE AT A SLOPE

- "Rest-stop" program can accommodate seating along with some more unique elements
- There can be interpretive elements, such as at BBP P3, signage explaining the project or site history
- Small accompaniments to seating like tables with chess boards are also possible.

VISITOR CENTER AT BROOKLYN BOTANIC GARDEN

Total Area: ~150 sf to ~250 sf
Slope: <5%
Enclosure: No
Surface: Hardscape

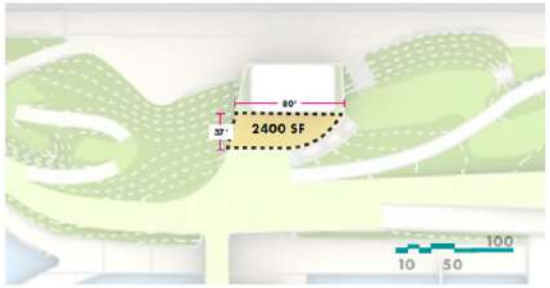
BROOKLYN BRIDGE PARK PIER 3

Total Area: ~300 sf to ~700 sf
Slope: <5%
Enclosure: No
Surface: Hardscape

THE CLIMB

Maiden-Fulton Plaza Area

UPPER LEVEL PROGRAMMING



BASIC CONDITION
TYPE : UPPER LEVEL PROGRAMMING
TOTAL AREA: 2400 SQFT
SLOPE: FLAT SPACE WITH <2% SLOPE

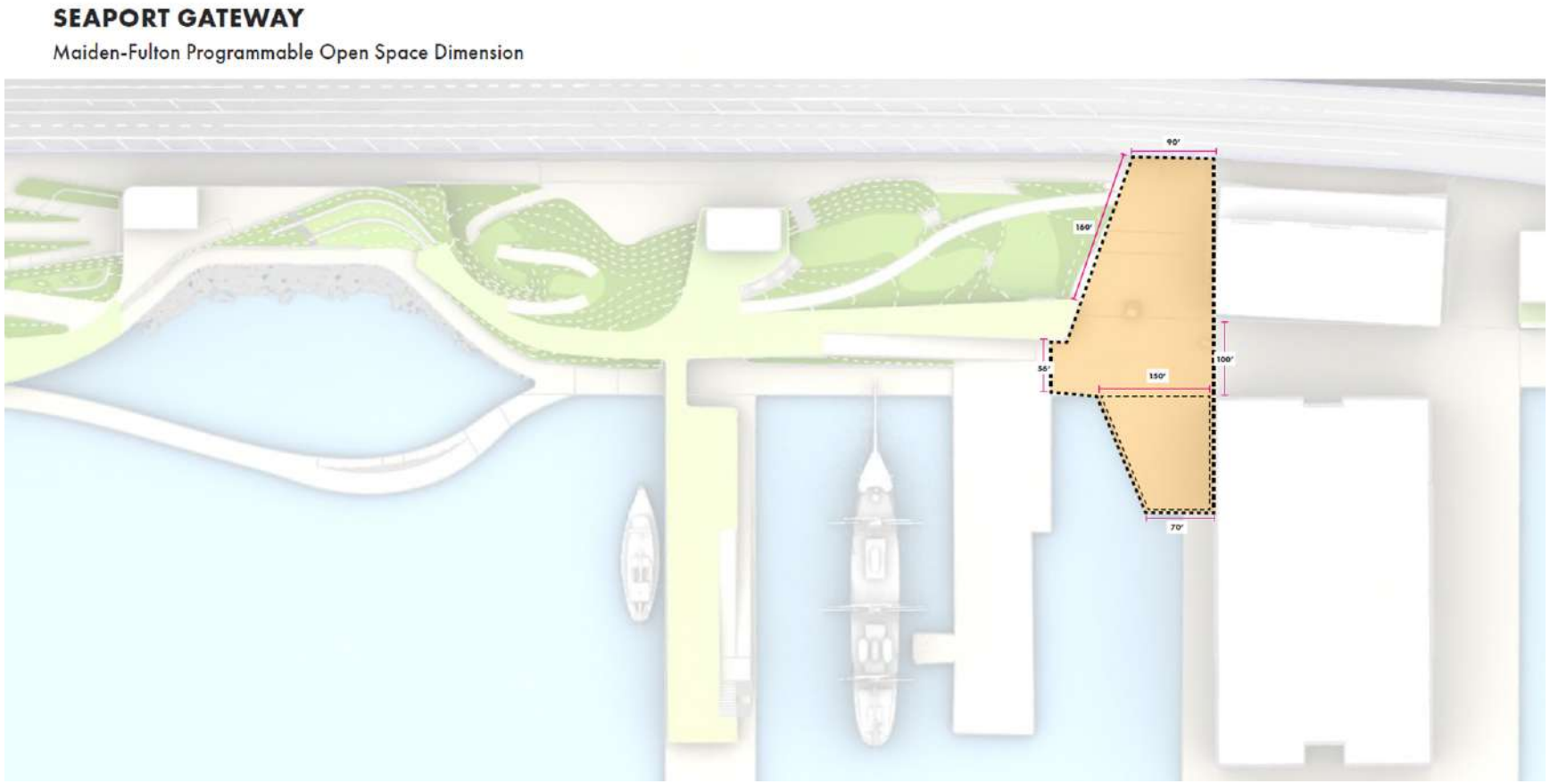
ELEVATED ACRE

Total Area: ~4000 sf
Slope: <5%
Enclosure: No
Surface: Hardscape

BATTERY BOSQUE AT BATTERY PARK

Total Area: ~4000 sf
Slope: <5%
Enclosure: No
Surface: Hardscape

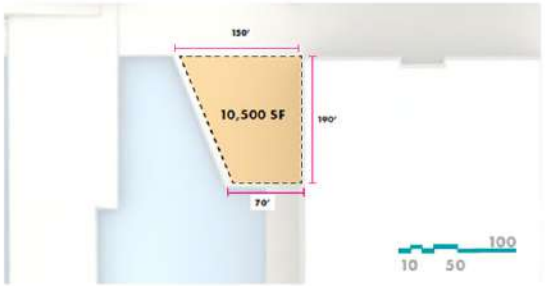
vi. The Seaport Gateway



SEAPORT GATEWAY

Maiden-Fulton Programmable Open Space Dimension

PIER PROGRAMMING



BASIC CONDITION
TYPE : PIER LEVEL PROGRAMMING
TOTAL AREA: 10,500 SQFT
SLOPE: FLAT SPACE WITH <2% SLOPE

EXISTING PROGRAMMING AT SEAPORT PIER

Total Area: ~10,500
Slope: Flat
Enclosure: n/a
Surface: n/a

THE LEARNING BARGE AT ELIZABETH RIVER

Total Area: ~4,200 sf
Slope: Flat with <2% Slope
Enclosure: n/a
Surface: n/a

vii. The Beach

Note: The design for this area has been updated in conceptual design of the Master Plan to further minimize the footprint near the Brooklyn Bridge.

6.2 Areas with Programmatic Optionality

The following areas have a wider variety of programs that can be accommodated. Within the programmatic options for each area below, the Project Team has indicated a recommended program preference:

i. The Concourse

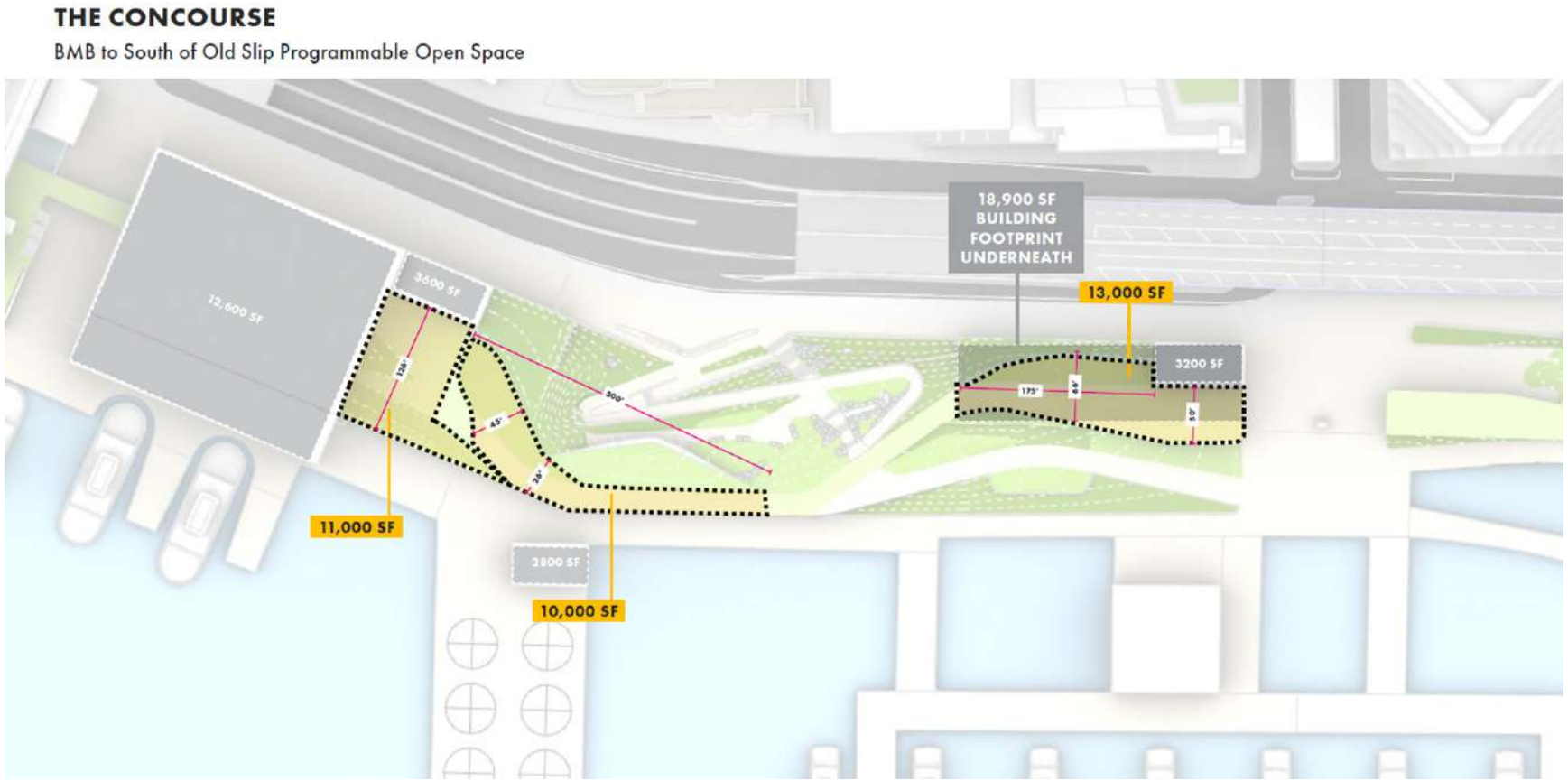
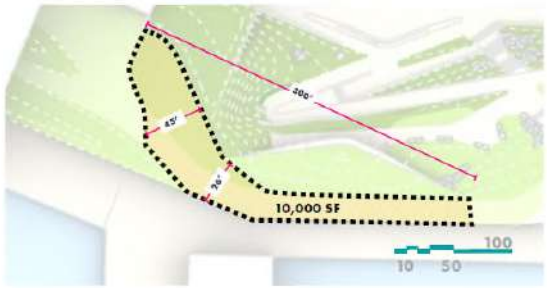


Figure 98: Open space areas with a wider variety of programs that can be accommodated (series)

THE CONCOURSE

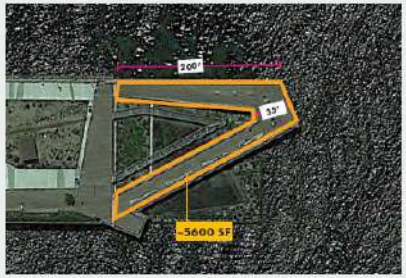
OPTION 1: COMMUTER SERVICES/HIGH USE ACTIVITY

North of BMB Upper Level Program Area



TYPE: UPPER LEVEL WATER FACING
TOTAL AREA: 10,000 SQFT
SLOPE: <2%

Pier 26 Overlook



Total Area: ~5600 sf
Slope: <5%
Enclosure: No
Surface: Hardscape

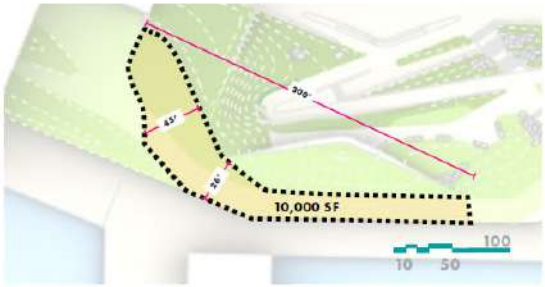
Garden at Battery Park

Total Area: ~17,000 sf
Slope: <2%
Enclosure: No
Surface: Planted

THE CONCOURSE

OPTION 2: RECREATION TERRACES

North of BMB Upper Level Program Area



TYPE: UPPER LEVEL WATER FACING
TOTAL AREA: 10,000 SQFT
SLOPE: <2%

Half Basketball Court at Hunters Point South

Total Area: ~1250-2100 sf
Slope: <2%
Enclosure: Yes
Surface: Play Surface

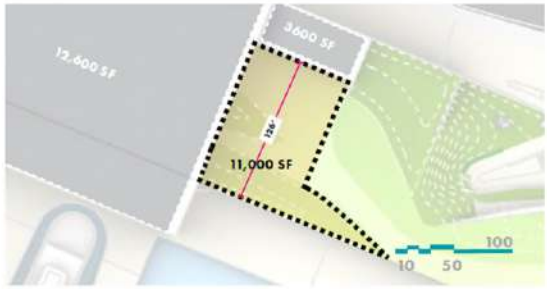
Water Play at Brooklyn Bridge Park Pier 2

Total Area: ~5500 sf
Slope: <5%
Enclosure: No
Surface: Hardscape

THE CONCOURSE

OPTION 1: COMMUTER SERVICES/HIGH USE ACTIVITY

North of BMB Upper Level Program Area



TYPE: UPPER LEVEL WATER FACING
TOTAL AREA: 11,000 SQFT
SLOPE: <2%

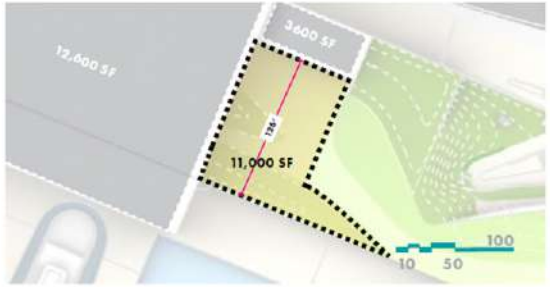
Fornino Cafe, Pier 6, Brooklyn Bridge Park

Total Area: ~9300 sf
Slope: <2%
Enclosure: No
Surface: Hardscape

THE CONCOURSE

OPTION 2: RECREATION TERRACES

North of BMB Upper Level Program Area



TYPE: UPPER LEVEL WATER FACING
TOTAL AREA: 11,000 SQFT
SLOPE: <2%

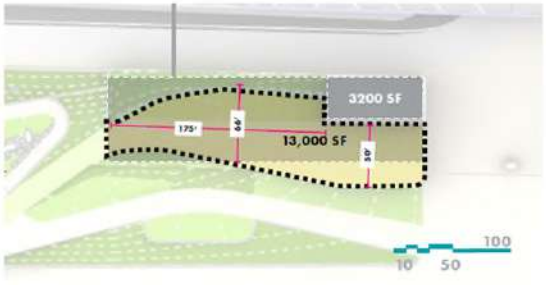
Tennis Courts at Hudson River Park

Total Area: ~6600 sf
Slope: <2%
Enclosure: Yes: 10'-12'
Surface: Play Surface

THE CONCOURSE

OPTION 1: COMMUTER SERVICES/HIGH USE ACTIVITY

Old Slip Corner Upper Level Program Area

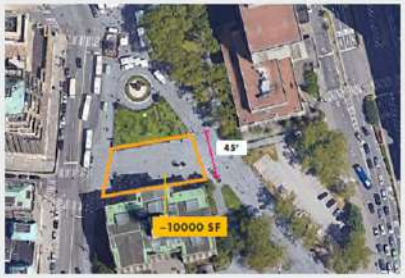


TYPE: UPPER LEVEL WATER FACING
TOTAL AREA: 13,000 SQFT
SLOPE: <2%

Seating Plaza at Domino Park

Total Area: ~1800 sf
Slope: <2%
Enclosure: No
Surface: Hardscape

Borough Hall Farmer's Market

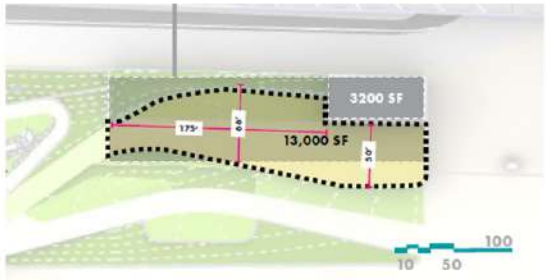


Total Area: ~1800 sf
Slope: <2%
Enclosure: No
Surface: Hardscape

THE CONCOURSE

OPTION 2: RECREATION TERRACES

Old Slip Corner Upper Level Program Area

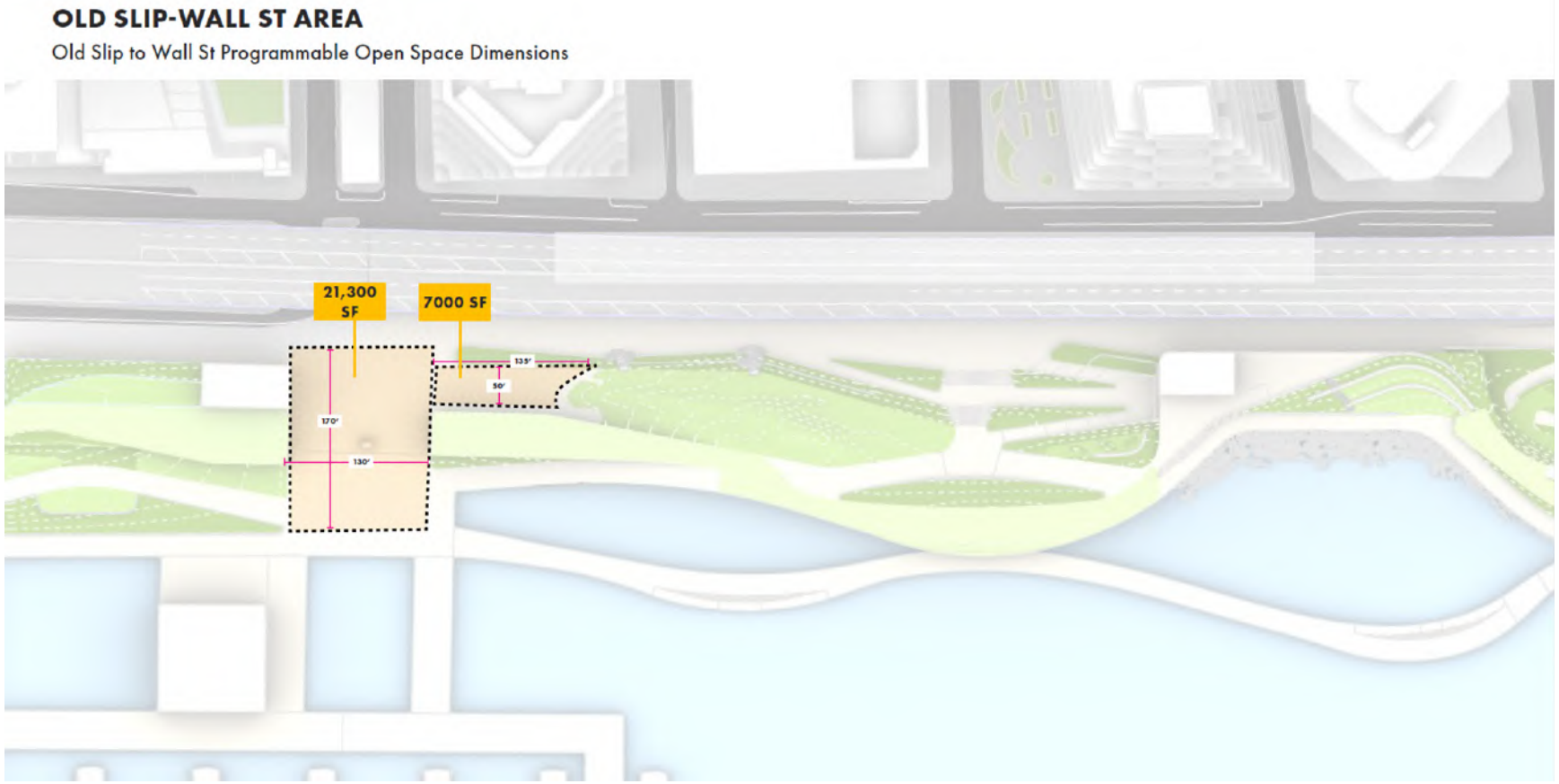


TYPE: UPPER LEVEL WATER FACING
TOTAL AREA: 13,000 SQFT
SLOPE: <2%

Volleyball Courts at Hudson River Park

Total Area: ~4800 sf
Slope: <2%
Enclosure: Yes: 15'-18'
Surface: Sand

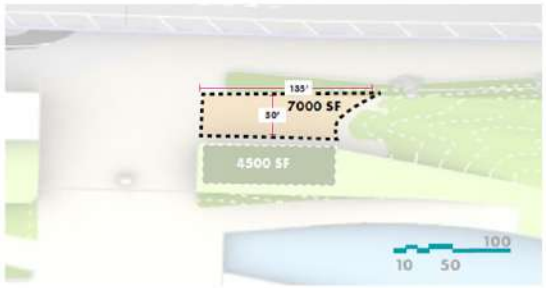
ii. The Slip


OLD SLIP-WALL ST AREA
Old Slip to Wall St Programmable Open Space Dimensions
21,300 SF
7000 SF
135'
50'
170'
130'

THE SLIP

OPTION 1: EDUCATION AND EVENTS

Old Slip Building Entrance



TYPE: ENTRANCES AT GATES
TOTAL AREA: 7,000 SQFT
SLOPE: <2%

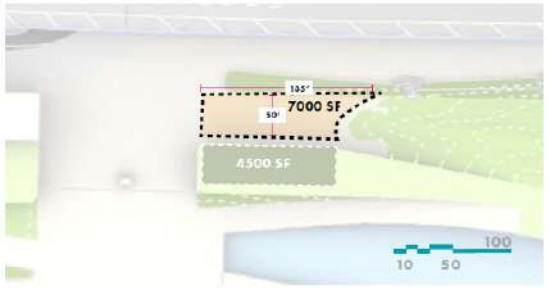
Bike and Roll Cycle Center
Millenium Park, Chicago

Total Area: ~6800 sf
Slope: <2%
Enclosure: No
Surface: Hardscape

THE SLIP

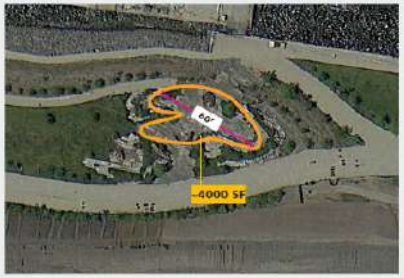
OPTION 2: TACTILE AND SHADY

Old Slip Building Entrance



TYPE: ENTRANCES AT GATES
TOTAL AREA: 7,000 SQFT
SLOPE: <2%

Granite Terrace at Brooklyn Bridge Park

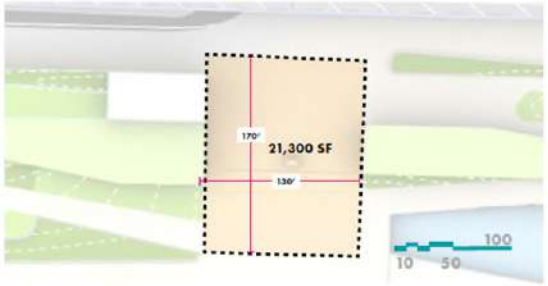


Total Area: ~4000 sf
Slope: <2%
Enclosure: No
Surface: Hardscape

THE SLIP

OPTION 1: BOLD AND ACTIVE

Old Slip Plaza



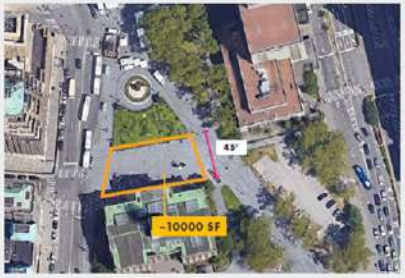
TYPE: ENTRANCES AT GATES
TOTAL AREA: 21,300 SQFT
SLOPE: <5%

Channel Gardens at Rockefeller Center

Total Area: ~9200 sf
Slope: <2%
Enclosure: No
Surface: Hardscape

Borough Hall Farmer's Market

Can be accommodated with regrade to 2%

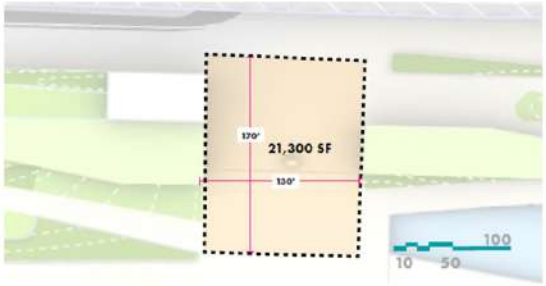


Total Area: ~1800 sf
Slope: <2%
Enclosure: No
Surface: Hardscape

THE SLIP

OPTION 2: TACTILE AND SHADY

Old Slip Plaza

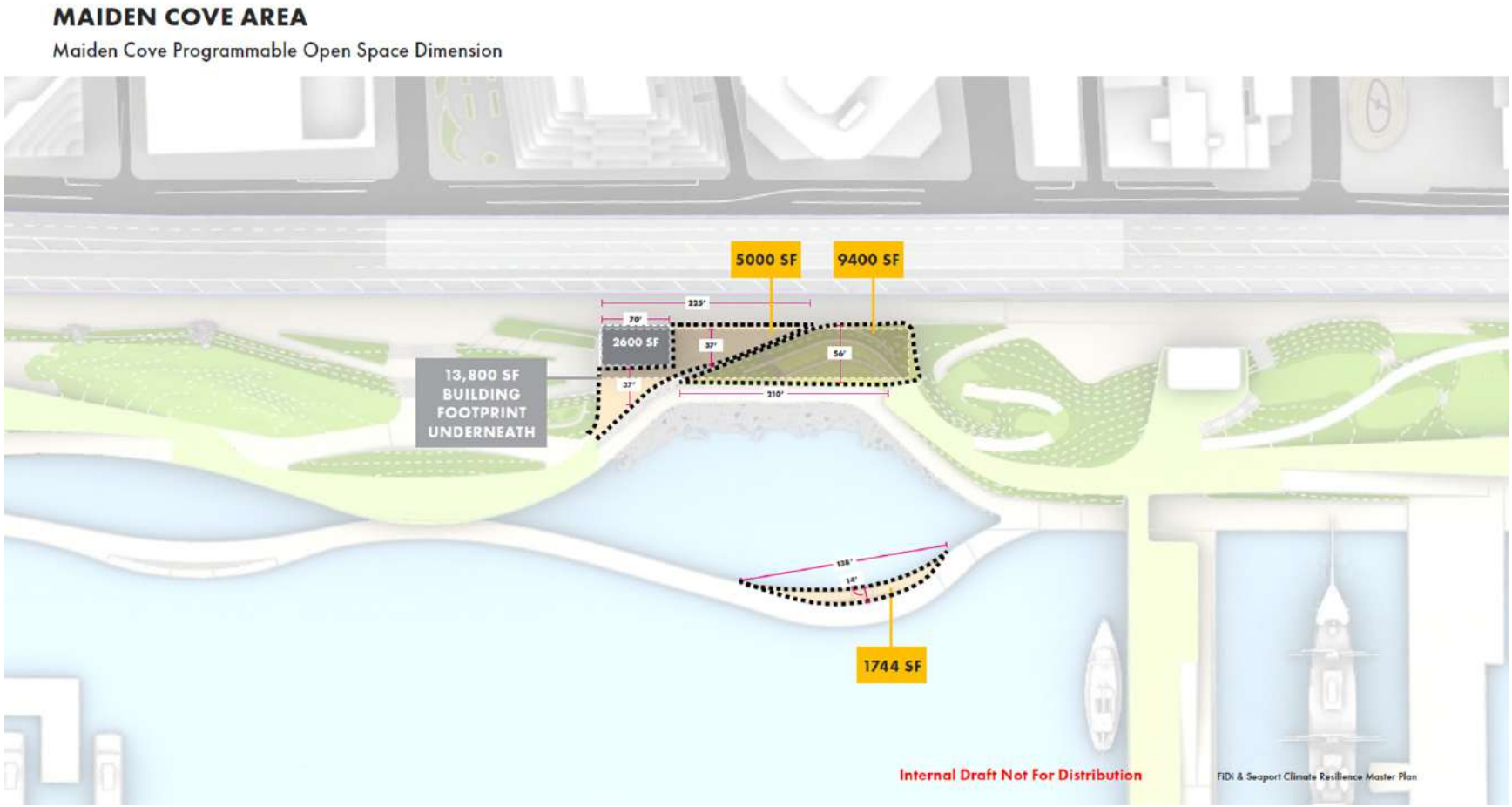


TYPE: ENTRANCES AT GATES
TOTAL AREA: 21,300 SQFT
SLOPE: <5%

Water Fountain Plaza at Domino Park

Total Area: ~6700 sf
Slope: Terraced
Enclosure: No
Surface: Hardscape

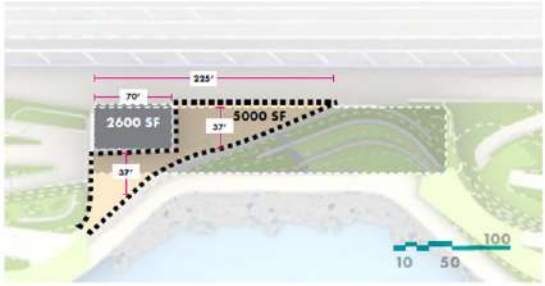
iii. The Cove


MAIDEN COVE AREA
Maiden Cove Programmable Open Space Dimension
5000 SF
9400 SF
2600 SF
13,800 SF BUILDING FOOTPRINT UNDERNEATH
1744 SF
Internal Draft Not For Distribution
FiDi & Seaport Climate Resilience Master Plan

THE COVE

OPTION 1: EDUCATION AND EVENTS

Maiden Cove Upper Level Area



TYPE : UPPER LEVEL PROGRAMMING
TOTAL AREA: 5000 SQFT
SLOPE: FLAT SPACE WITH <2% SLOPE

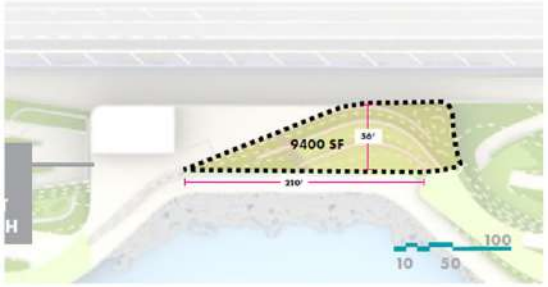
Ligget Terrace at Governors Island

Total Area: ~6000 sf
Slope: <5%
Enclosure: No
Surface: Hardscape

THE COVE

OPTION 1: EDUCATION AND EVENTS

Maiden Cove Upper Level Area



TYPE : UPPER LEVEL PROGRAMMING
TOTAL AREA: 9400 SQFT
SLOPE: TERRACED SLOPE WITH <5% SLOPE

Granite Prospect at Brooklyn Bridge Park

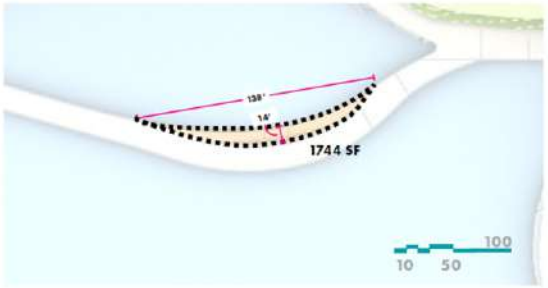
Total Area: ~2700 sf
Slope: Terraced
Enclosure: No
Surface: Hardscape

New Orleans Sculpture Garden

THE COVE

OPTION 1: EDUCATION AND EVENTS

Maiden Cove Area



TYPE : ESPLANADE
TOTAL AREA: 1744 SQFT
SLOPE: TERRACED

Get Down at East River Esplanade

Total Area: ~1000 sf
Slope: Terraced
Enclosure: No
Surface: Hardscape

THE COVE

OPTION 2: RECREATION

Maiden Cove Area

TYPE : ESPLANADE
TOTAL AREA: 1744 SQFT
SLOPE: TERRACED

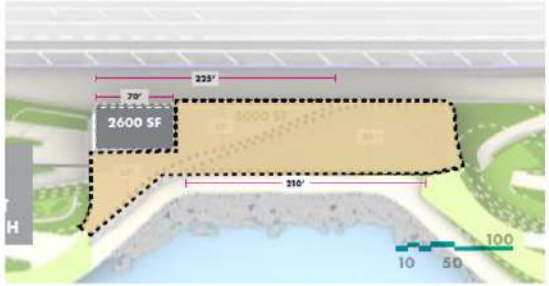
Kayak Launch at Brooklyn Bridge Park

Total Area: ~5800 sf
Slope: Slopped
Enclosure: No
Surface: Hardscape

THE COVE

OPTION 2: RECREATION

Maiden Cove Upper Level Area



TYPE : UPPER LEVEL PROGRAMMING
TOTAL AREA: 14,400 SQFT
SLOPE: FLAT SPACE WITH <2% SLOPE

Tennis Courts at Hudson River Park

Total Area: ~13200 sf
Slope: <2%
Enclosure: Yes: 10'-12'
Surface: Play Surface

iv. The Seaport Slope

SEAPORT SLOPE

OPTION 1: MARITIME THEMED DESTINATION PLAYGROUND

Fulton Street Area

TYPE : CITY-FACING TERRACES
TOTAL AREA: 12,442 SQFT
SLOPE: TERRACED FLAT SPACES WITH <5% SLOPE

Margaret Hayward Playground, San Francisco

Total Area: ~12,400 sf
Slope: Slopped
Enclosure: No
Surface: Turf, Playsurface

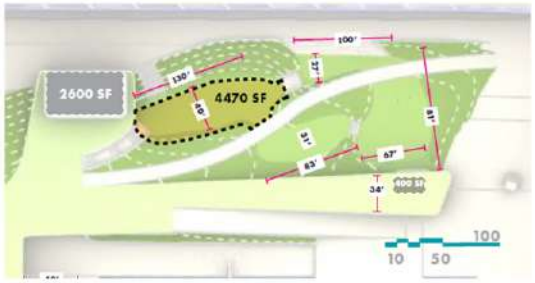
Playground at Teardrop Park, Battery City

Total Area: ~14,000 sf
Slope: Slopped & Terraced
Enclosure: No
Surface: Hardscape, Playscape, Water

SEAPORT SLOPE

OPTION 2: NEIGHBORHOOD STORMWATER PARK

Fulton Street Area



TYPE : CITY-FACING TERRACES
TOTAL AREA: 12,442 SQFT
SLOPE: TERRACED FLAT SPACES WITH <5% SLOPE

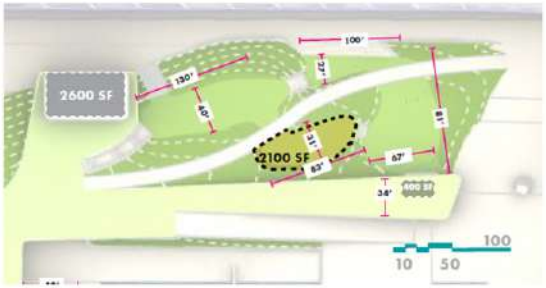
Dog Park at Domino Park

Total Area: ~2,600 sf
Slope: Slopped
Enclosure: No
Surface: Turf, Playsurface

SEAPORT SLOPE

OPTION 2: NEIGHBORHOOD STORMWATER PARK

Fulton Street Area



TYPE : CITY-FACING TERRACES
TOTAL AREA: 12,442 SQFT
SLOPE: TERRACED FLAT SPACES WITH <5% SLOPE

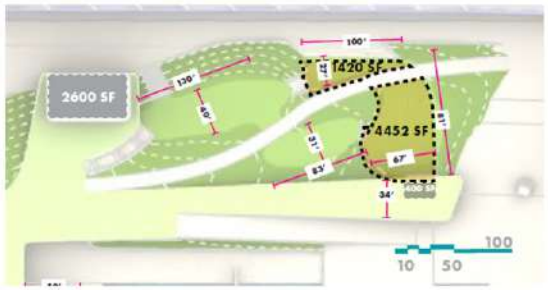
Art Installation at Hudson River Park

Total Area: ~3,700 sf
Slope: <2%
Enclosure: No
Surface: Hardscape

SEAPORT SLOPE

OPTION 2: NEIGHBORHOOD STORMWATER PARK

Fulton Street Area



TYPE : CITY-FACING TERRACES
TOTAL AREA: 12,442 SQFT
SLOPE: TERRACED FLAT SPACES WITH <5% SLOPE

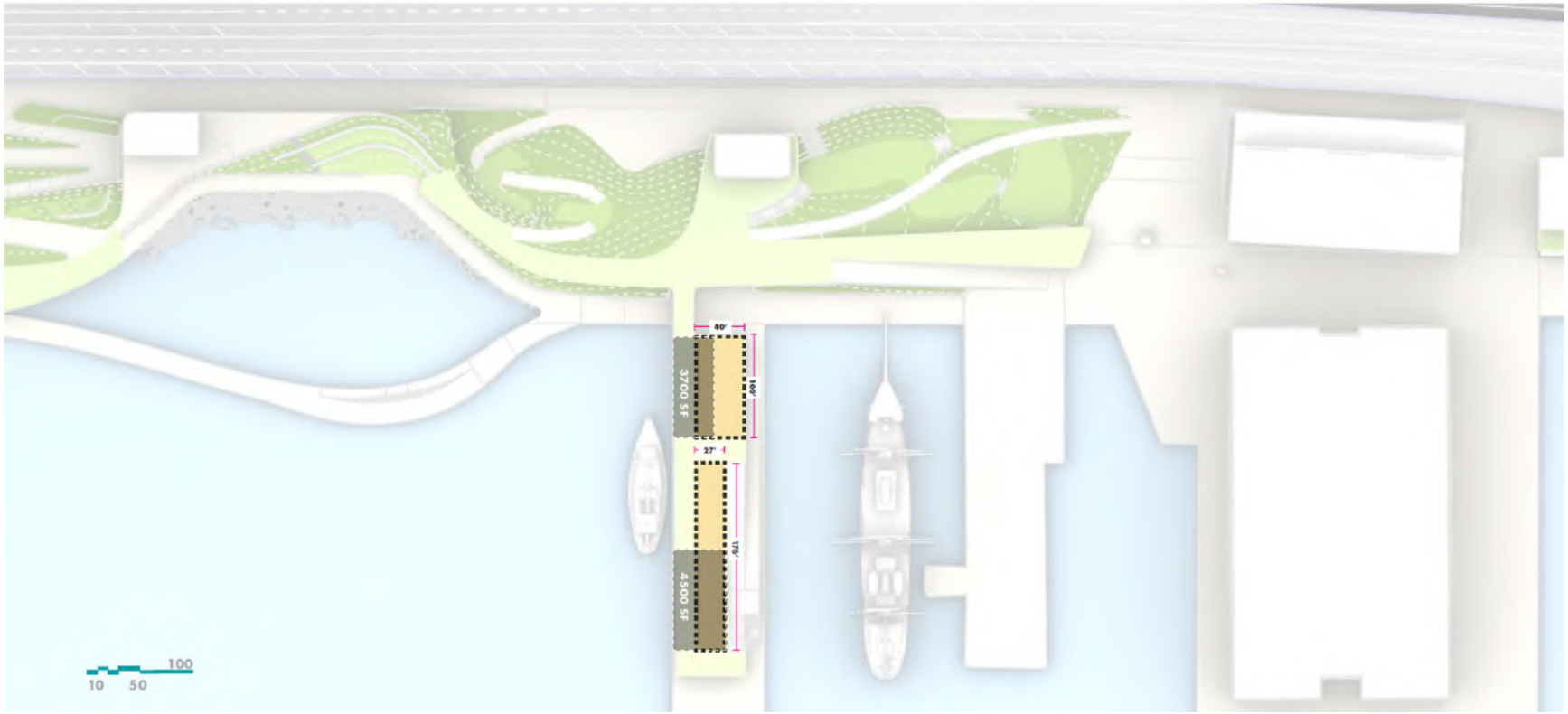
Chelsea Waterside Play Area

Total Area: ~3,600 sf
Slope: <2%
Enclosure: No
Surface: Playsurface, Water

v. Pier 15

PIER 15

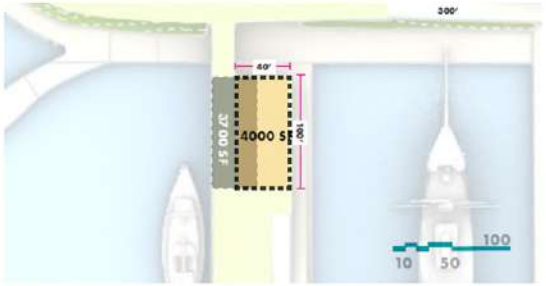
Maiden-Fulton Programmable Open Space Dimension



PIER 15

OPTION 1: RECREATION

Upper Level Pier



TYPE : PIER
TOTAL AREA: 4000 SQFT
SLOPE: FLAT SPACE WITH <2% SLOPE

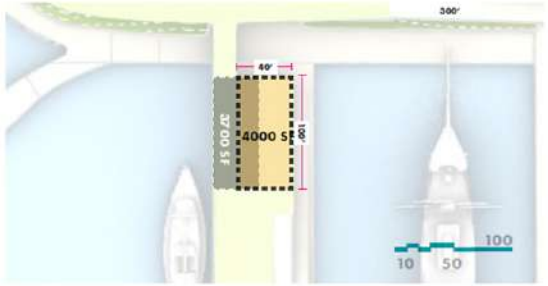
Volleyball Courts at Hudson River Park

Total Area: ~3000 sf
Slope: <2%
Enclosure: No
Surface: Sand

PIER 15

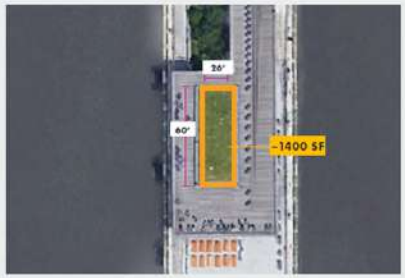
OPTION 2: OVERLOOKS & LAWNS (KEEP OR RESTORE EXISTING)

Upper Level Pier



TYPE : PIER
TOTAL AREA: 4000 SQFT
SLOPE: FLAT SPACE WITH <2% SLOPE

Lawn at Pier 15 Rooftop

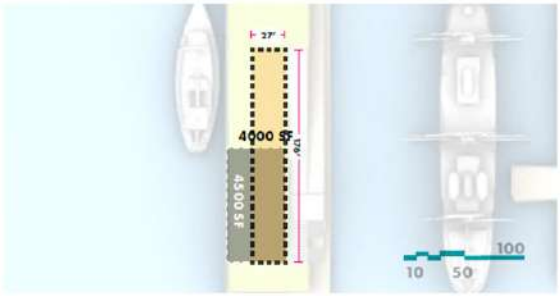


Total Area: ~1400 sf
Slope: <5%
Enclosure: No
Surface: Lawn Grass

PIER 15

OPTION 1: RECREATION

Upper Level Pier



TYPE : UPPER LEVEL PROGRAMMING
TOTAL AREA: 4000 SQFT
SLOPE: FLAT SPACE WITH <2% SLOPE

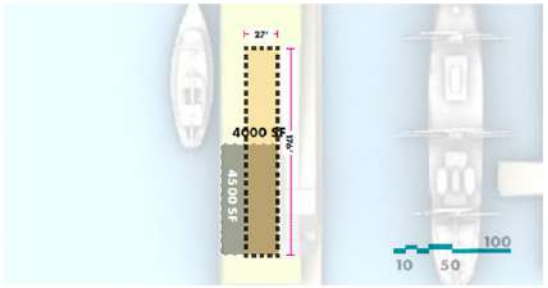
Half Basketball Court at Hunters Point South

Total Area: ~1250-2100 sf
Slope: <2%
Enclosure: Yes
Surface: Play Surface

PIER 15

OPTION 2: OVERLOOKS & LAWNS (KEEP OR RESTORE EXISTING)

Upper Level Pier



TYPE : UPPER LEVEL PROGRAMMING
TOTAL AREA: 4000 SQFT
SLOPE: FLAT SPACE WITH <2% SLOPE

Bocce Court at Domino Park

Total Area: ~1320 sf
Slope: <2%
Enclosure: No
Surface: Hardscape

6.3 Building Program Recommendations

The Master Plan holds space for flexible community serving building program in several locations. Building footprints 7, 8, 10, 12, 14, and 16 are all suitable for built program such as small amenity spaces, dining, comfort station, and sheltered bicycle parking. Building footprint 13 and 15 could house more substantial community spaces or educational spaces such as a climate and environmental education center. Building footprint 17, the Fish Market site, could accommodate a larger, several story tall community space such as a recreation center.

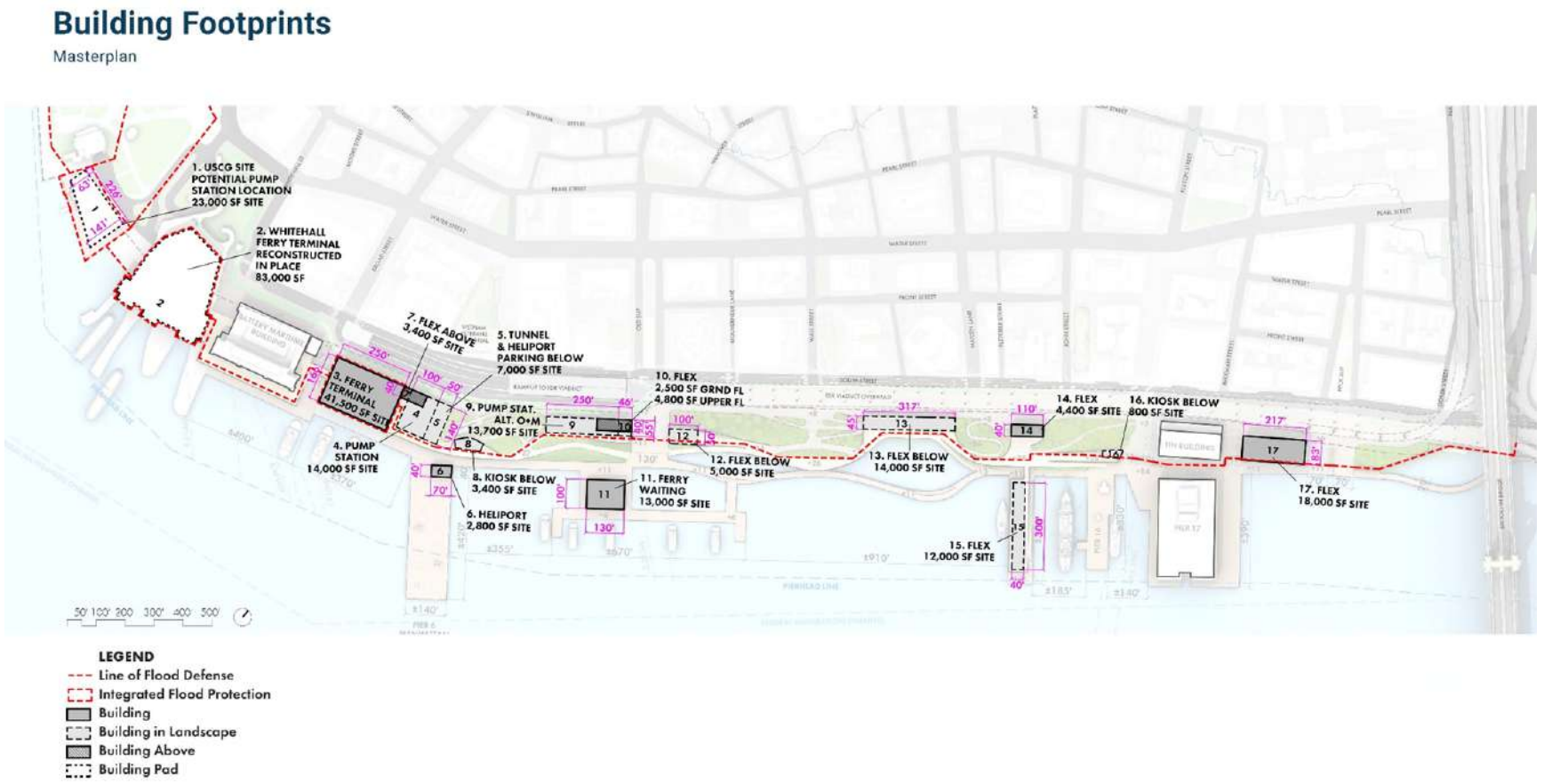


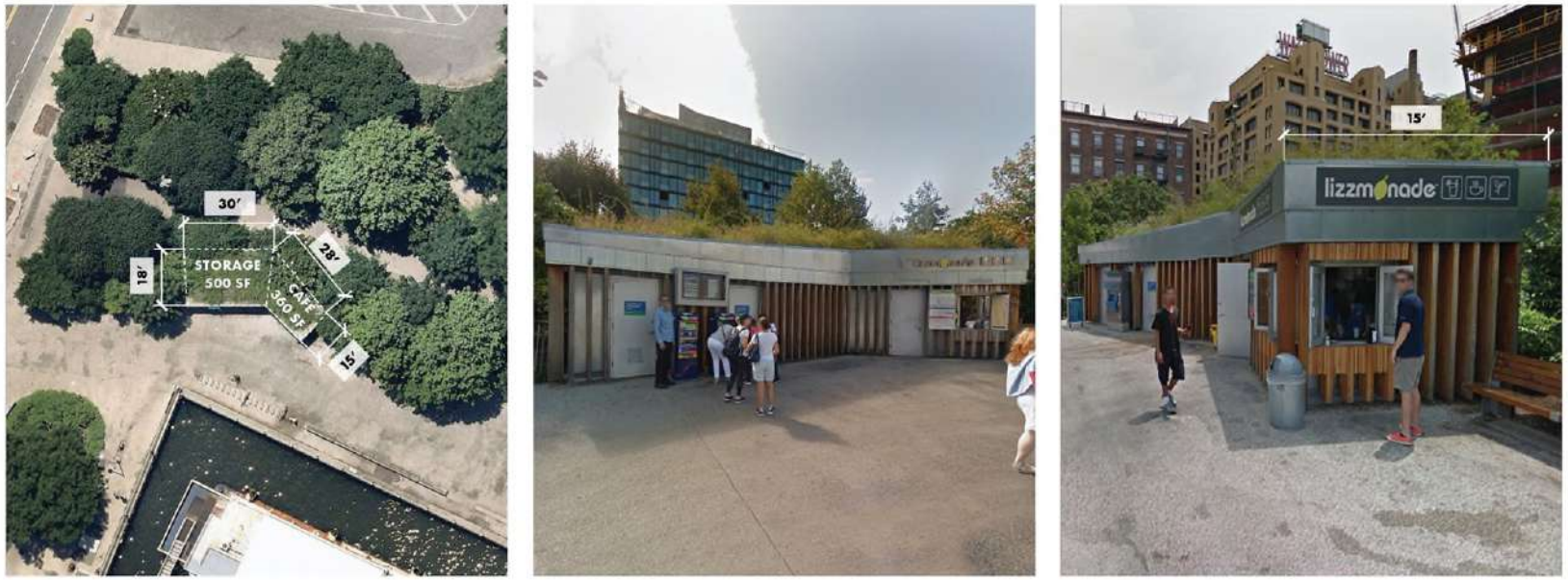
Figure 99: Building program Recommendations

i. Community Serving Building Case Studies

The Project Team's recommendations are informed by case study analysis of community serving buildings in New York and throughout the world.

Small Amenity Buildings, Comfort Stations, and Dining Kiosks

Case Study: **Brooklyn Bridge Park Pier 1**



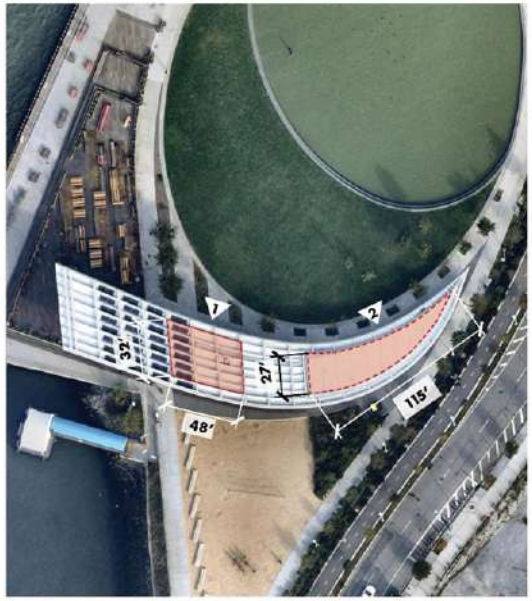
Brooklyn Bridge Park Pier 1
Cafe window & Storage Facility
Total SF: 860
Cafe SF: 360
Storage SF:500

Figure 100: Community Serving Building recommendations from the Project Team – based of actual examples (series)

Case Study: **Taco Vista, Govenors Island**

Taco Vista
3 ISO Shipping Containers
Shaded Bar and Seating Area
Total SF: 400

Case Study: **Hunters Point South Pavilion**



Hunters Point South Pavilion

1. Takeout Cafe - 1,500 SF
2. Bathroom & Storage - 2,100 SF

Case Study: New Amsterdam Pavilion, Peter Minuit Plaza

New Amsterdam Pavilion

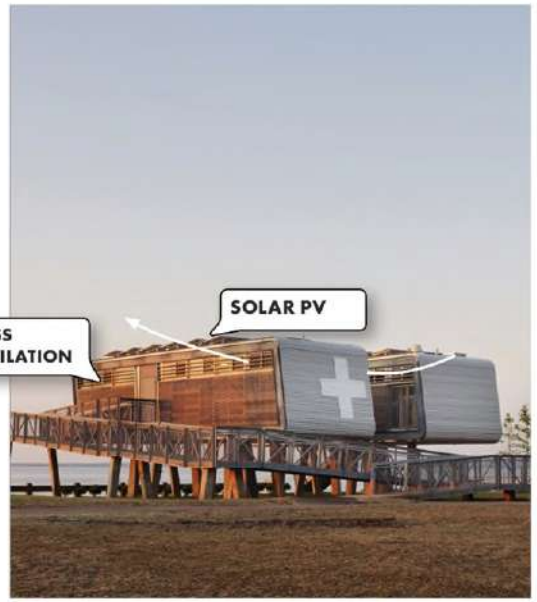
1. Cafe Window - 100 SF
2. Entry/ Exhibition Space - 100 SF
3. Information Booth - 100 SF
4. Cafe Window - 100 SF

Case Study: **Pier 45 at Hudson River Park**

Pier 45 at Hudson River Park

1. Takeout Cafe - 640 SF
2. Bathroom & Information Booth - 2,200 SF

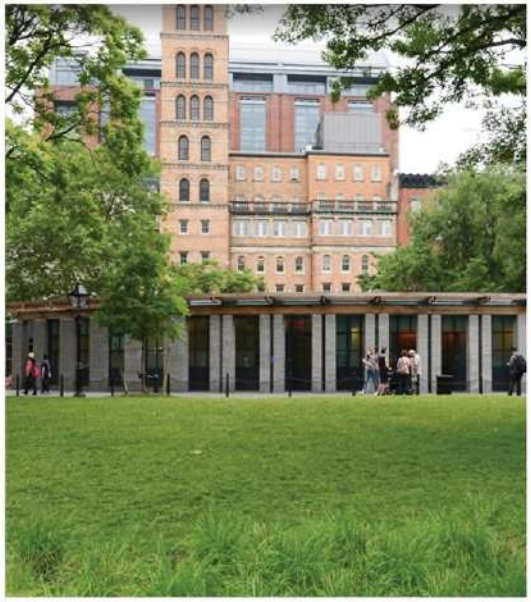
Case Study: **NYC Beach Restoration Modules**



NYC Beach Restoration Modules

37 Modules throughout NYC beaches used as bathrooms, change rooms, lifeguard stations, information kiosks, and offices.

Case Study: **Washington Square Park**



Washington Square Park

Offices, Maintenance Equipment, Fountain Pump, Bathrooms

Case Study: Schmul Park, Staten Island

Schmul Park

1.Offices - 280 SF

2.Bathrooms - 720 SF

Case Study: Ferry Point Park, Bronx

Ferry Point Park

Bathrooms - 800 SF

Case Study: Parque Urquiza Baños Públicos, Rosario, Argentina

Parque Urquiza Baños Públicos

Bathrooms - 720 SF

Sheltered Bicycle Parking

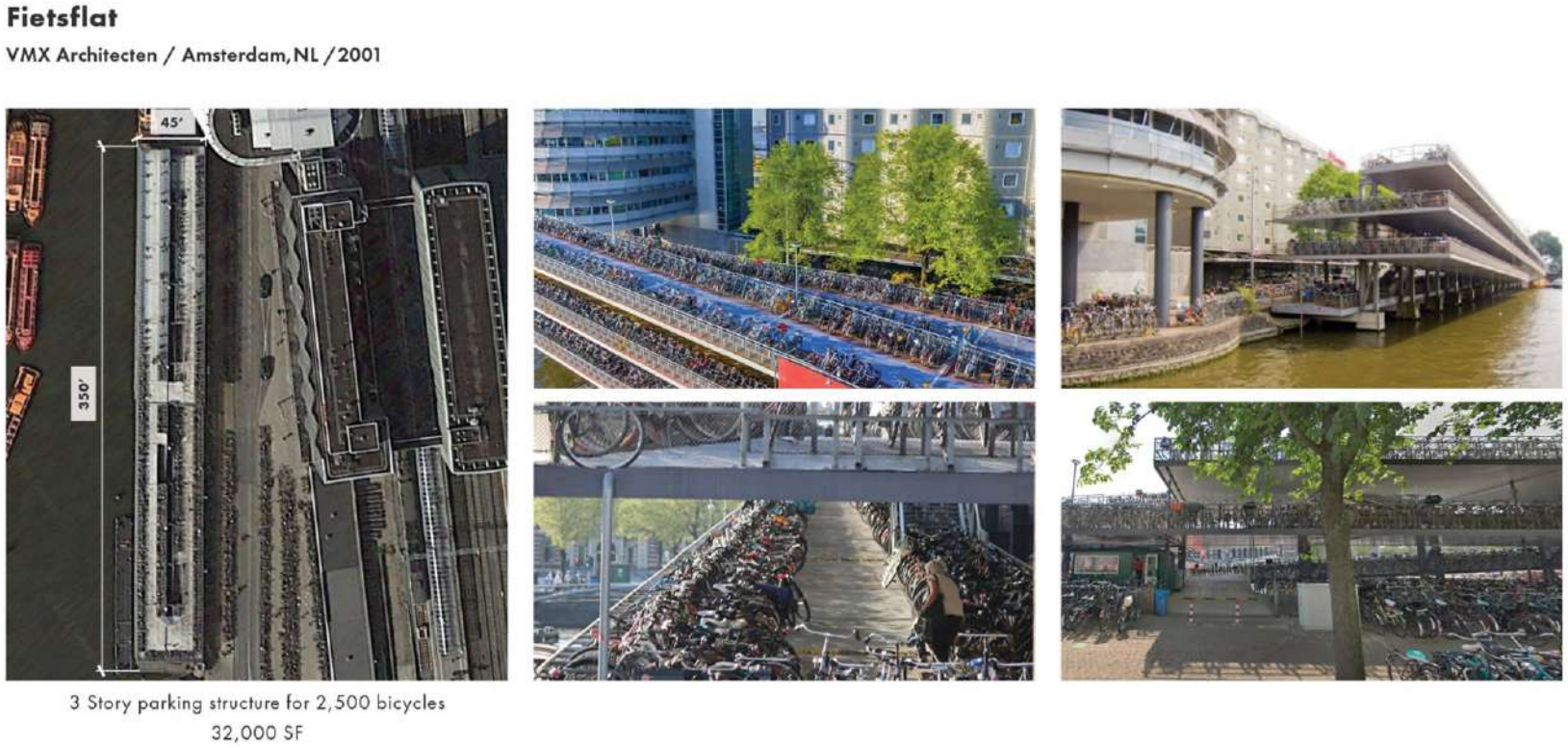


Figure 101: Community Serving Building recommendations from the Project Team / Sheltered Bicycle Parking

Karen Blixens Plads

Cobe / Copenhagen / 2017

Covered parking for 2,000 Bikes
28,500 SF

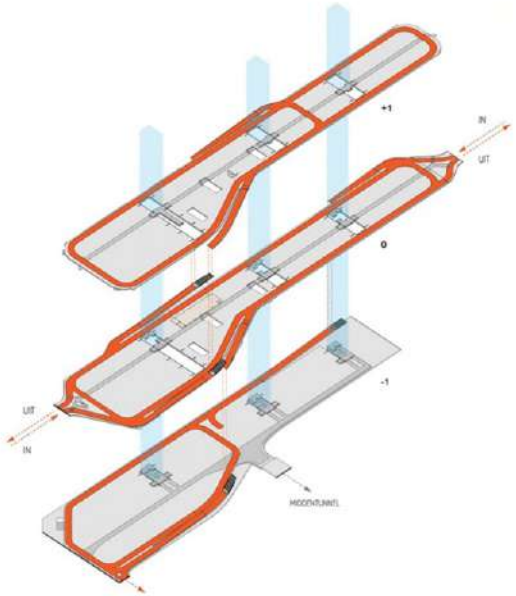
Edmonton Green Cycle Hub

Edmonton, UK

660 SF

Utrecht Central Station Bike Parking

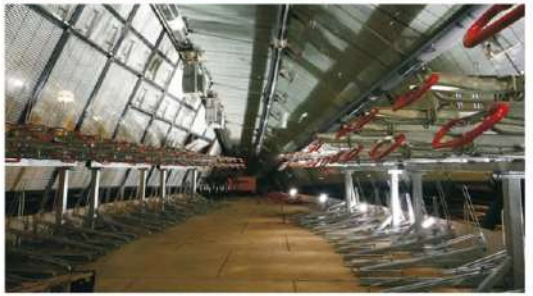
Ector Hoogstad Architecten / Utrecht, NL/ 2019



Three levels of parking for 12,656 bikes
184,000 SF

Edmonton Green Cycle Hub

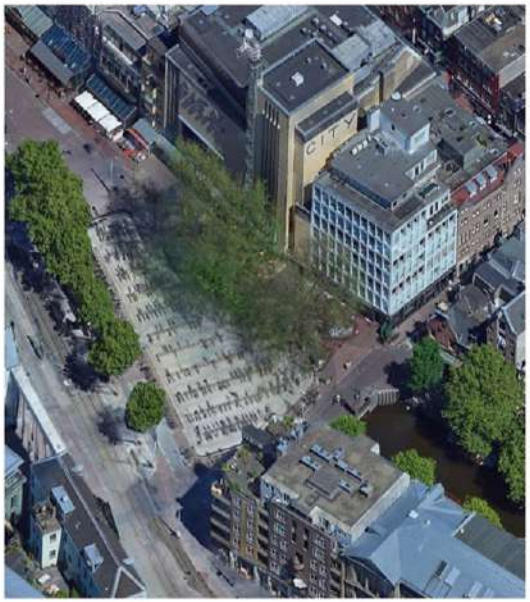
KGP Design / Washington, DC /2009



Parking for 100 Bikes
1,800SF

Leidseplein Bicycle Parking

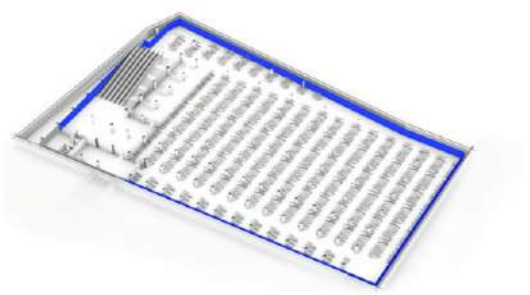
ZJA / Amsterdam, NL / 2017



Underground parking for 2000 bikes

Leidseplein Bicycle Parking

Silo / The Hague, NL / 2020



Underground parking for 8000 bikes
86,000 SF

Lillestrøm Bicycle Hotel

Various Architects / Lillestrøm, NO /2020

Parking for 8000 bikes
5,400 SF

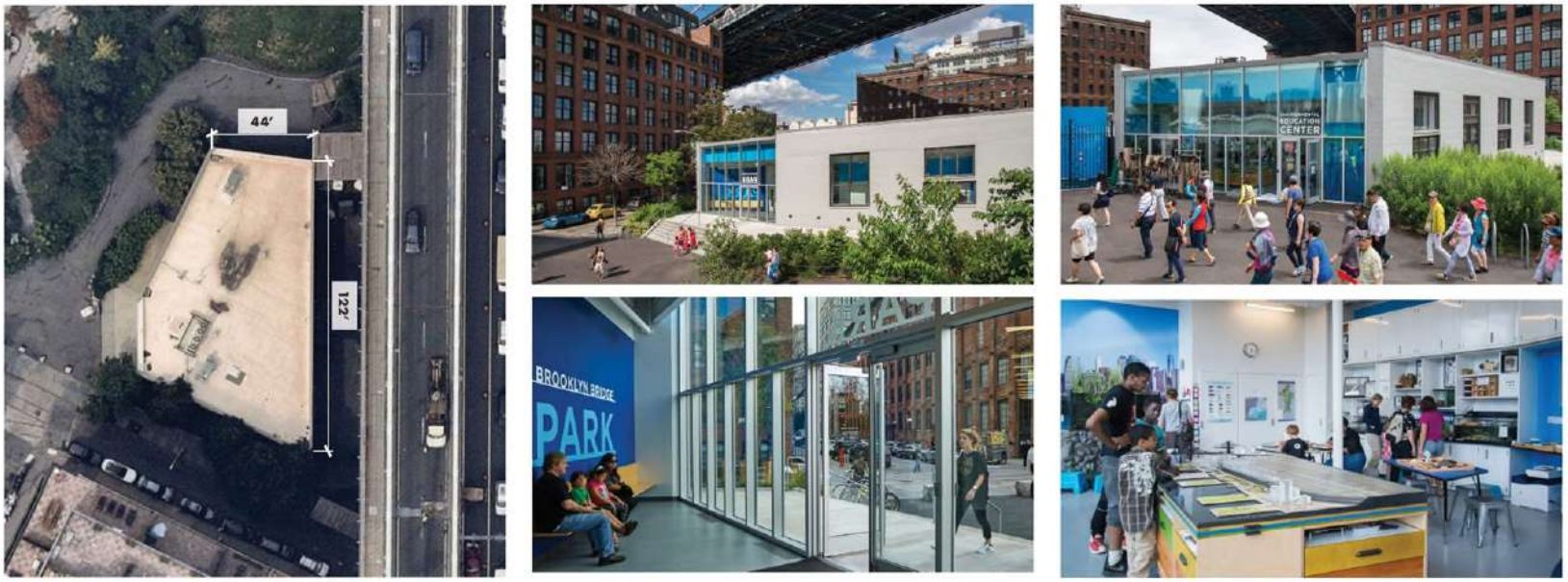
Helsingborg Central Station

Tengbom / Helsingborg, SE / 2015

Parking for 204 bikes
2,100 SF

Brooklyn Bridge Park Environmental Education Center

ARO/Brooklyn, NY / 2010



Classrooms
Community Gathering Space
Offices
7,300 SF

Figure 102: Community Serving Building recommendations from the Project Team / Climate and Environmental Education Buildings

Jones Beach Energy & Nature Center

N Architects/Wantagh, NY / 2020

Classrooms
Exhibition Galleries
Community Gathering Space
Offices
12,000 SF

Net zero energy building through a combination of solar PV and geothermal wells

Continuous solar shading around the perimeter of the building

Walden Pond Visitors Center

Maryann Thompson Architects /Concord, MA/ 2016

Exhibition spaces
Community meeting room
Staff offices
5575 SF

All electric building, no reliance on fossil fules
Entirely powered by solar PV shade structure
Parking lot offers EV charging

Walls and floors are locally-sourced heat-treated wood
All glazing is made of tipple pane glass
Ample operable windows promote natural ventilation

Ohiopyle State Park Visitor Center

SMP Architects / Ohiopyle, PA / 2014

Exhibition spaces
Community meeting room
Staff offices
10,000 SF

Wastewater treatment and recycling system

Filled with environmental education exhibits

Buffalo Bayou Park

Page Southerland Page, Larry Speck /Houston, TX / 2014

Ranger Station
Staff offices
Visitor Center
Restaurant
14,800 SF

The building preserved a 1926 underground cistern and 8.3 million pounds of embodied carbon dioxide

The landscape was converted to riparian woodlands and naturalized meadows featuring native species.

This stabilized the landscape and increased flood storage capacity.

Canal Park Pavilion

Studios Architecture/Washington,DC / 2014

Public Bathrooms
Staff offices
Restaurant
4,700 SF

EV charging stations along curbside parking
Compost collection site
Operable windows designed for natural ventilation

Rain garden collects and treats stormwater runoff
Heat recovery system for water and space heating

St. Elizabeths East Gateway Pavilion

Davis Brody Bond/Washington,DC / 2013

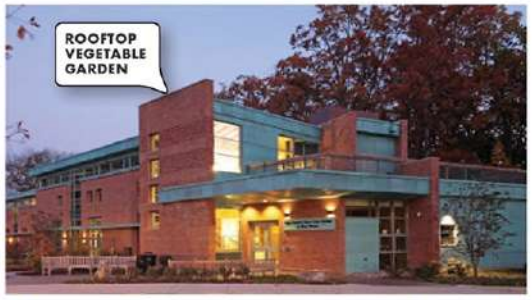
Enclosed community center w/ kitchen and dinning room
Open-air community space
Public Bathrooms
16,300 SF

Operable windows designed for natural ventilation

Child Care Center at Hort Woods

Studio MLA/State College, PA / 2016

Child Care Center
Family Gathering Space
Library
21,500 SF



Rainwater is harvested and used for bathrooms
Building shaded by forest for natural cooling
Radiant heating in the concrete slab

Green lights signal to children to open windows for passive ventilation.

Hawaii Preparatory Academy Energy Laboratory

Flansburgh Architects/Waimea, HI / 2010

Energy Science Lab
Classrooms
Community Gathering Space
6,100 SF

The building monitors the local climate and shares hourly data with the community

Sensors in the building measure micro climate and control ventilation, heating and cooling accordingly

Combined cross and stack ventilation
All electric solar powered building
Rainwater harvested and used for bathrooms

Recreation Centers

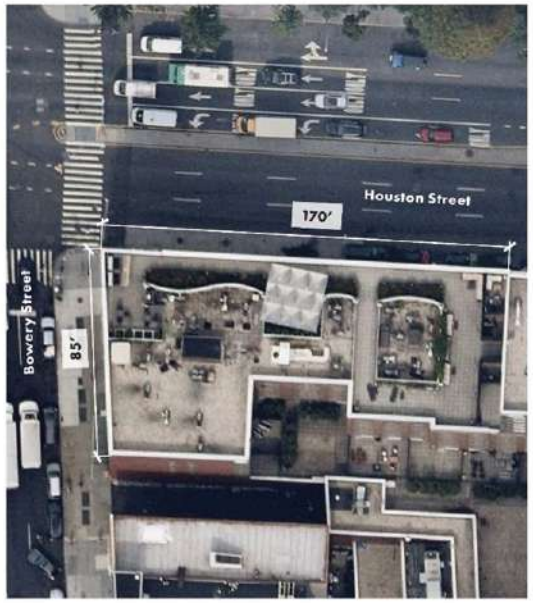
Asphalt Green
Manhattan, NY / 1972

Sports Courts
Offices
Classrooms
48,000 SF

- Basketball Courts
- Fitness Studio
- Indoor/ Outdoor Soccer Fields
- Weight Room
- Swimming Pool
- Locker Rooms

Chinatown YMCA - Houston St.

Manhattan, NY / 1970



Sports Courts
Community Meeting Rooms
Daycare Center
Offices
45,000 SF

- Weight Room
- Fitness Studio
- Lounge

- Swimming Pool
- Locker Rooms

Prospect Park YMCA
Brooklyn, NY / 2000

Sports Courts
Community Meeting Rooms
Daycare Center
Offices
63,600 SF

- Basketball Courts
- Fitness Studio
- Indoor Track
- Weight Room
- Swimming Pool
- Locker Rooms

Bedford-Stuyvesant YMCA
Brooklyn, NY / 1905

Sports Courts
Community Meeting Rooms
Offices
41,000 SF

- Basketball Courts
- Fitness Studio
- Indoor Track
- Weight Room
- Swimming Pool
- Locker Rooms

Bedford Union Armory Community Center

Marvel/Brooklyn, NY / 2016

Sports Courts
Community Meeting Rooms
Offices
63,500 SF

- Basketball Courts
- Volleyball Courts
- Tennis Courts
- Soccer Field
- Swimming Pool
- Dance Studios

Office space for tutoring, counseling, cultural programming, and LGBT support services

Figure 103: Community Serving Building precedents from the Project Team / Recreation Centers

ii. Building Test Fit Studies

Although the Project Team ultimately found that large-scale development was not consistent with the project goals, of the Master Plan, the Project Team conducted test fit studies to understand what building area potential project footprints could accommodate as part of early design studies. The Project Team studied four zoning scenarios and calculated the building area possible with a maximum build-out.

Zoning Scenarios (FAR Assumptions):

- Scenario 1: Maximum FAR under existing zoning (M1-4: 2.0; C4-6: 3.4)
- Scenario 2: 15 FAR (C6-9)
- Scenario 3: Extend existing upland zoning to waterfront (C4-6, C5-5, C6-2A, C6-9)
- Scenario 4: Reflecting Density of Upland Neighborhood (C4-6, C5-3, C5-5, C6-9)

Additional information on the definition of each of the zoning lots is shown in the figures below.

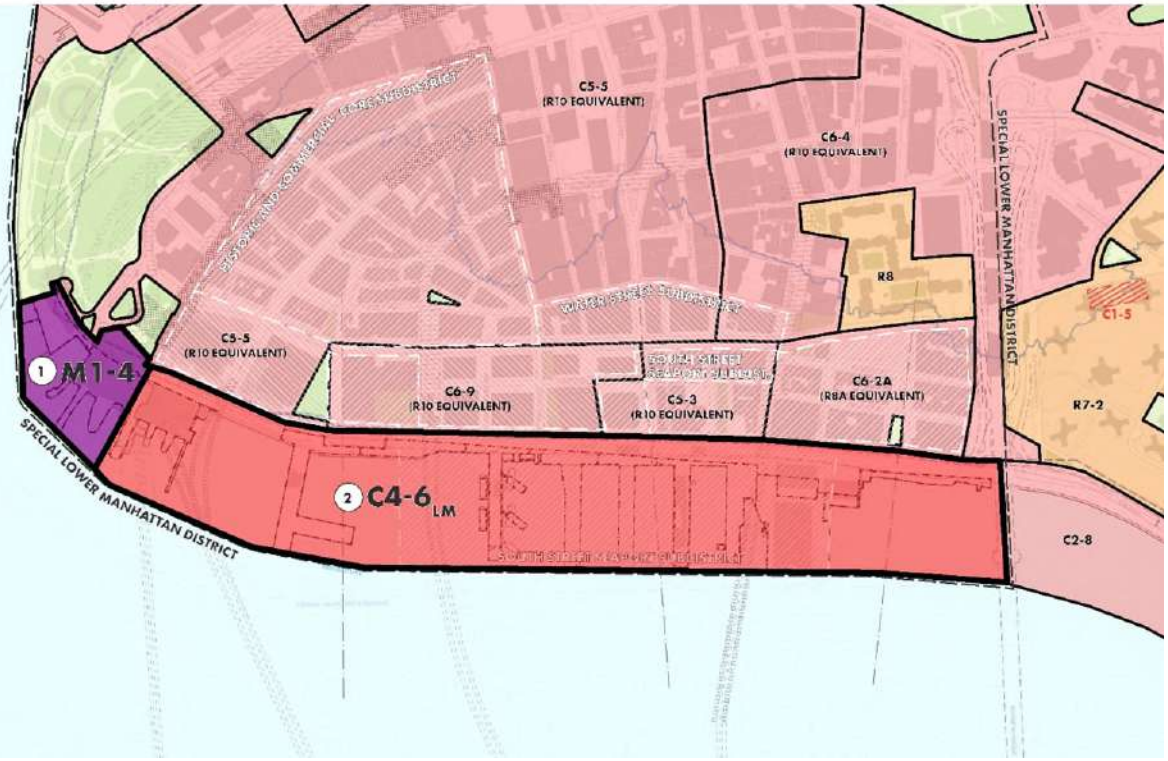
ZONING LOTS DEFINITION

Scenario 1: Existing Zoning Districts

- Scenario 1 maintains the current zoning district boundaries and maximum FAR requirements.

Zoning Lot	Maximum FAR		
	Commercial	Community Facility	Residential
(1) M1-4	2.0[a]	6.5	0.0
(2) C4-6$_{LM}$	3.4[b]	3.4[b]	3.4[b]

[a] 2.0 is used in financial analysis. While community use allows FAR of 6.5, it is assumed revenue may not be significant.
[b] All waterfront zoning lots within the Special Lower Manhattan District has a max FAR of 3.4 for all 3 types of development. (ZR 91-22)



LEGEND

- Commercial Districts
- Manufacturing Districts
- Residence Districts
- Parks
- Commercial Overlay
- Special Purpose Districts
- Special District Subdistricts
- Waterfront Tax Lots

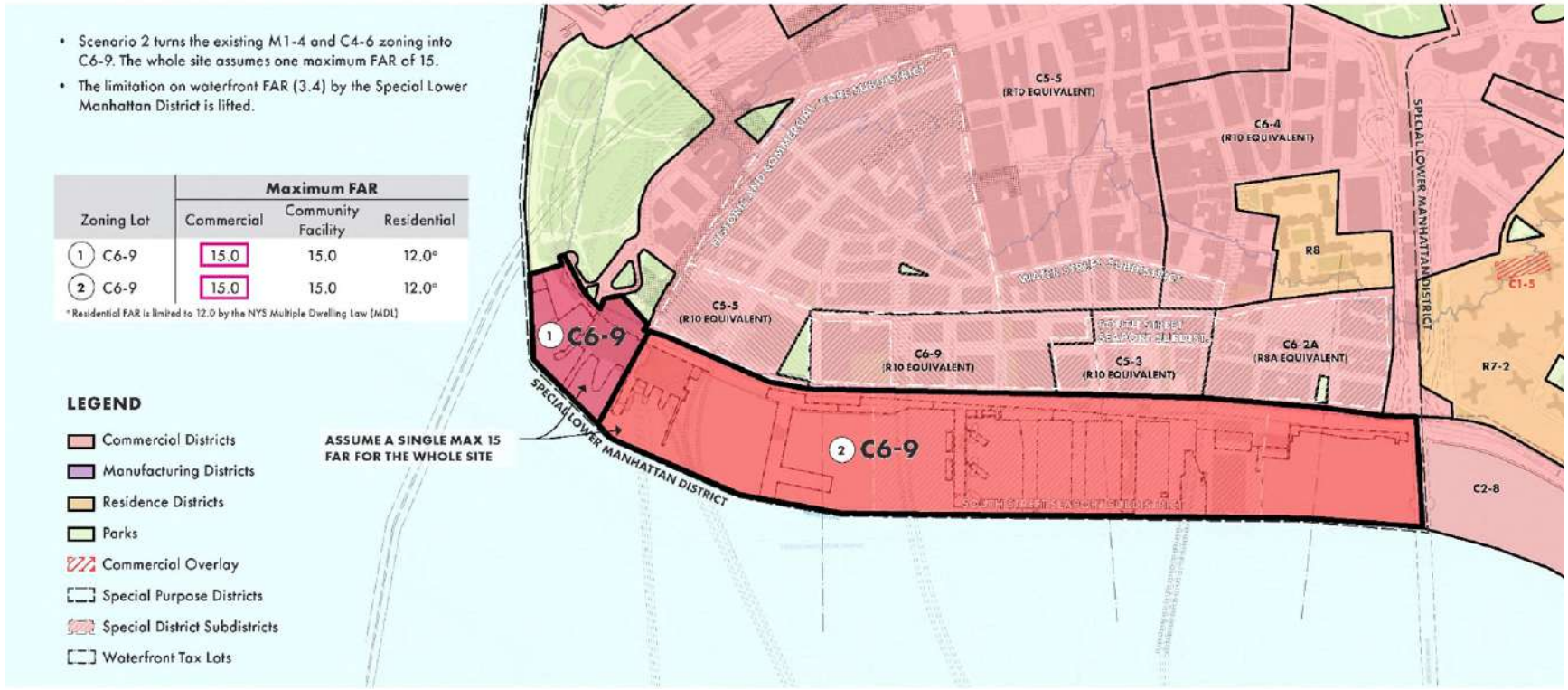
ZONING LOTS DEFINITION

Scenario 2: 15 FAR (C6-9)

- Scenario 2 turns the existing M1-4 and C4-6 zoning into C6-9. The whole site assumes one maximum FAR of 15.
- The limitation on waterfront FAR (3.4) by the Special Lower Manhattan District is lifted.

Zoning Lot	Maximum FAR		
	Commercial	Community Facility	Residential
(1) C6-9	15.0	15.0	12.0[a]
(2) C6-9	15.0	15.0	12.0[a]

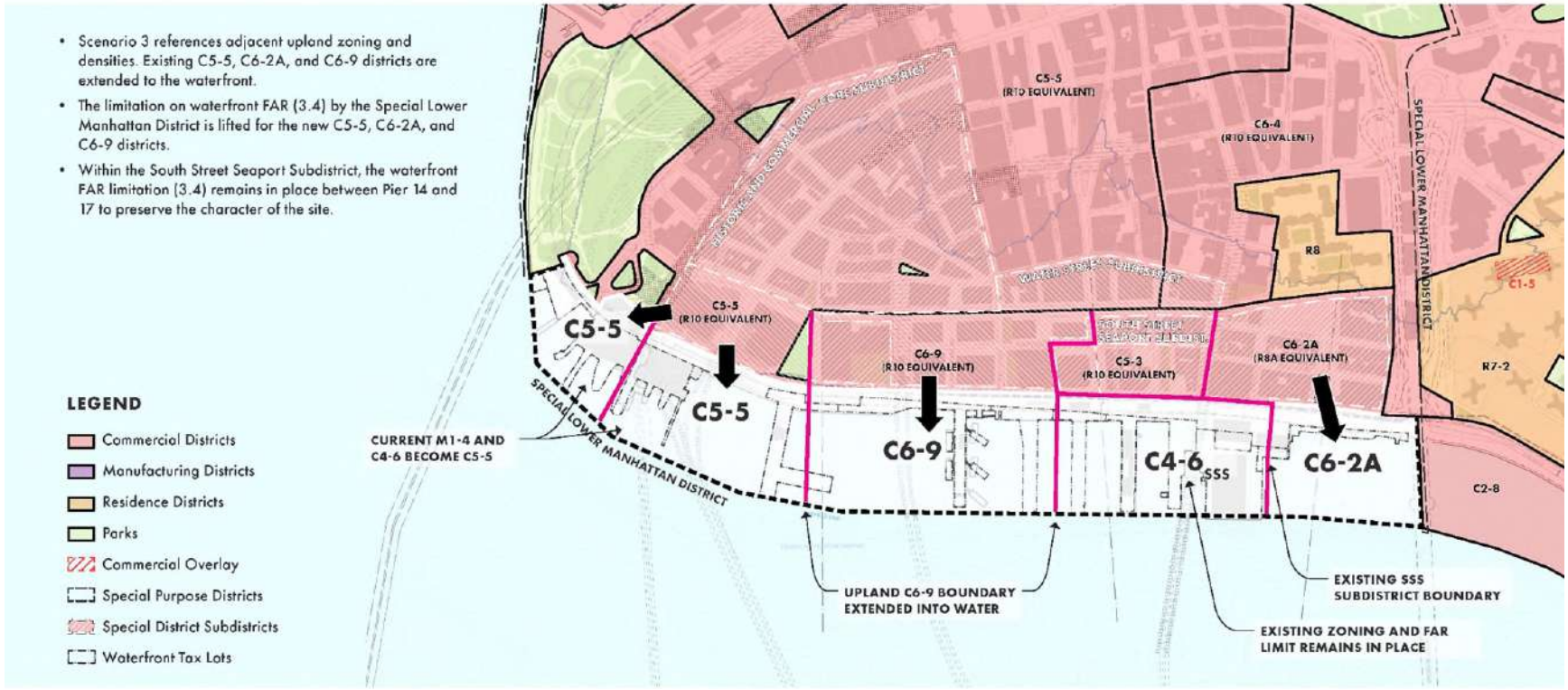
[a] Residential FAR is limited to 12.0 by the NYS Multiple Dwelling Law (MDL)



ZONING LOTS DEFINITION

Scenario 3: Extend Existing Upland Zoning To Waterfront

- Scenario 3 references adjacent upland zoning and densities. Existing C5-5, C6-2A, and C6-9 districts are extended to the waterfront.
- The limitation on waterfront FAR (3.4) by the Special Lower Manhattan District is lifted for the new C5-5, C6-2A, and C6-9 districts.
- Within the South Street Seaport Subdistrict, the waterfront FAR limitation (3.4) remains in place between Pier 14 and 17 to preserve the character of the site.

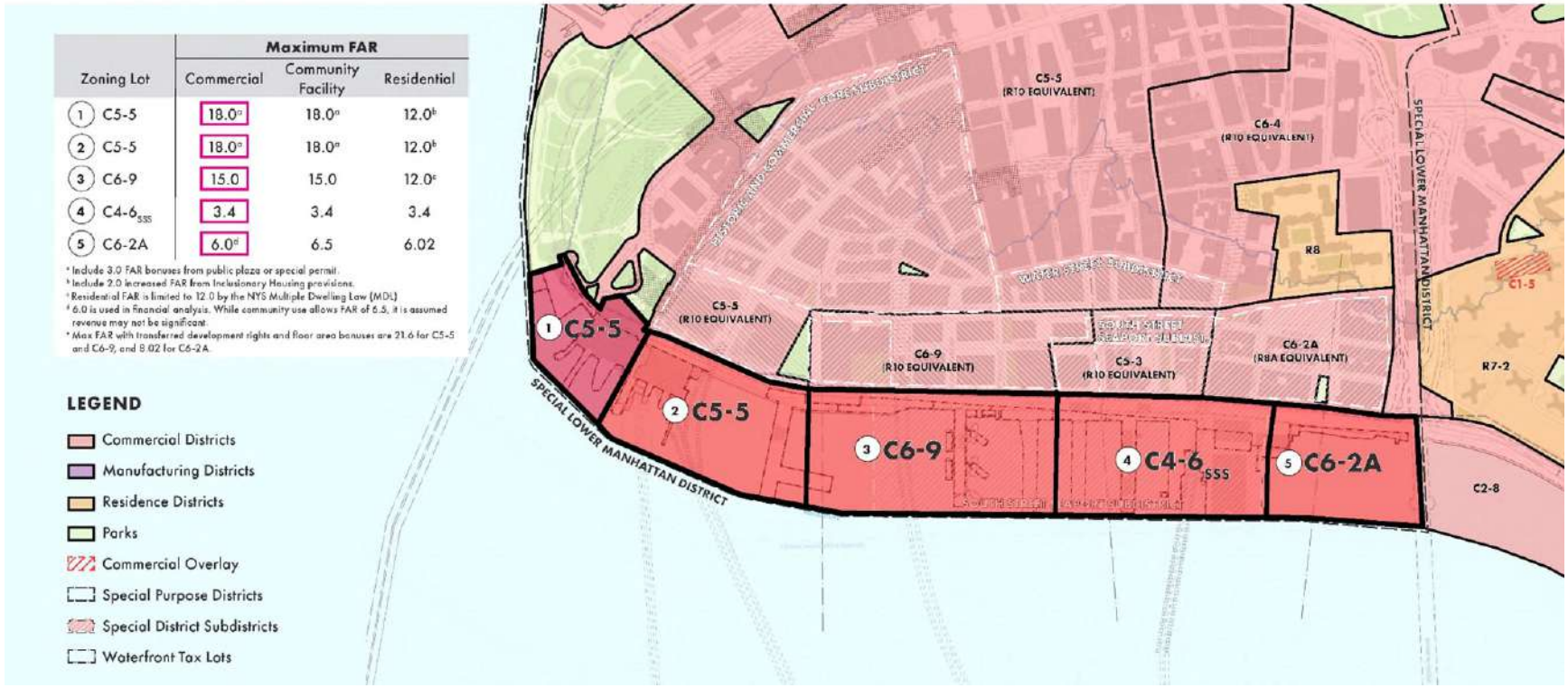


ZONING LOTS DEFINITION

Scenario 3: Extend Existing Upland Zoning To Waterfront

Zoning Lot	Maximum FAR		
	Commercial	Community Facility	Residential
1 C5-5	18.0[a]	18.0[a]	12.0[b]
2 C5-5	18.0[a]	18.0[a]	12.0[b]
3 C6-9	15.0	15.0	12.0[c]
4 C4-6$_{SSS}$	3.4	3.4	3.4
5 C6-2A	6.0[d]	6.5	6.02

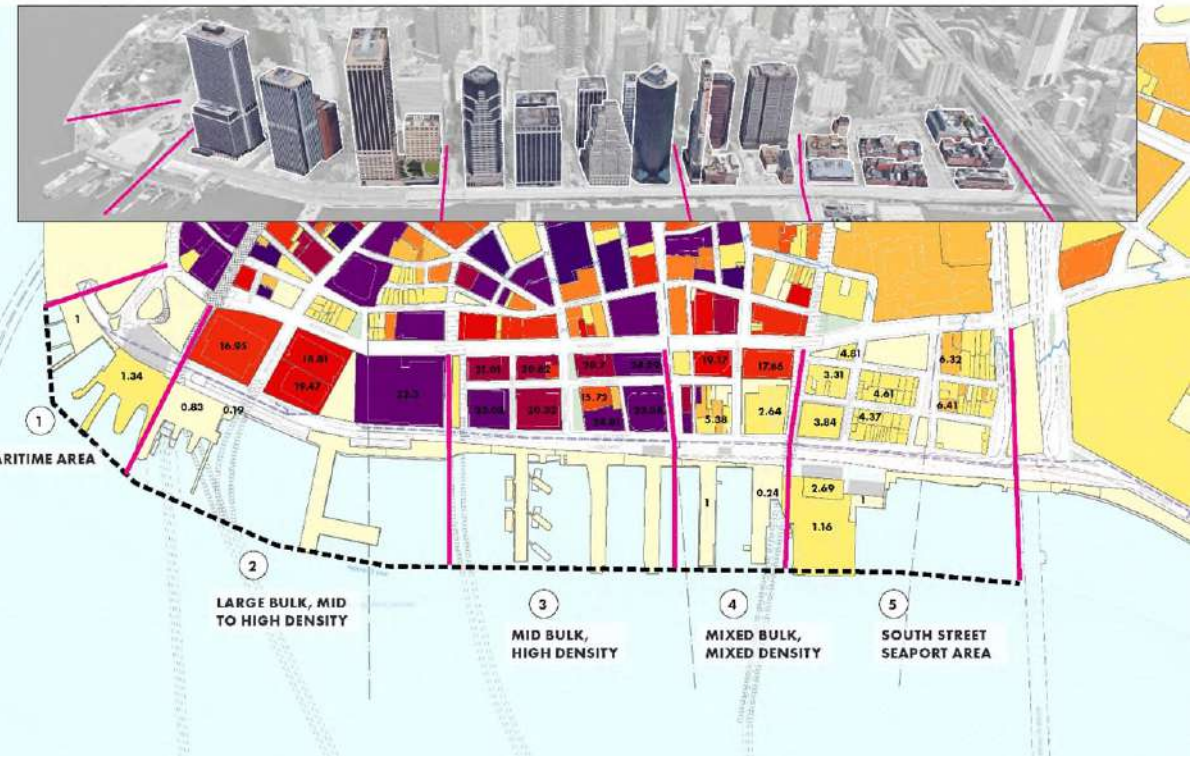
[a] Include 3.0 FAR bonuses from public plaza or special permit.
[b] Include 2.0 increased FAR from Inclusionary Housing provisions.
[c] Residential FAR is limited to 12.0 by the NYS Multiple Dwelling Law (MDL)
[d] 6.0 is used in financial analysis. While community use allows FAR of 6.5, it is assumed revenue may not be significant.
[e] Max FAR with transferred development rights and floor area bonuses are 21.6 for C5-5 and C6-9, and 8.02 for C6-2A.



ZONING LOTS DEFINITION

Scenario 4: Reflecting Density of Upland Neighborhood

- Scenario 4 reflects the existing built density and building bulk between Water Street and the waterfront, the waterfront is divided into 5 areas accordingly.
- Areas (1) and (2) are where tall, bulky buildings exist and would be zoned C5-5
- Existing buildings in Area (3) have a smaller footprint, but have a higher FAR and are more densely packed. This would be zoned C6-9.
- Area (4) has a mix of mid-rise and high-rise buildings. It would be zoned C5-3 for this study.
- Area (5) is currently a low density, low-to-mid-rise neighborhood. The waterfront will keep the current zoning and 3.4 FAR limit in place to preserve its character.



ZONING LOTS DEFINITION

Scenario 4: Reflecting Density of Upland Neighborhood

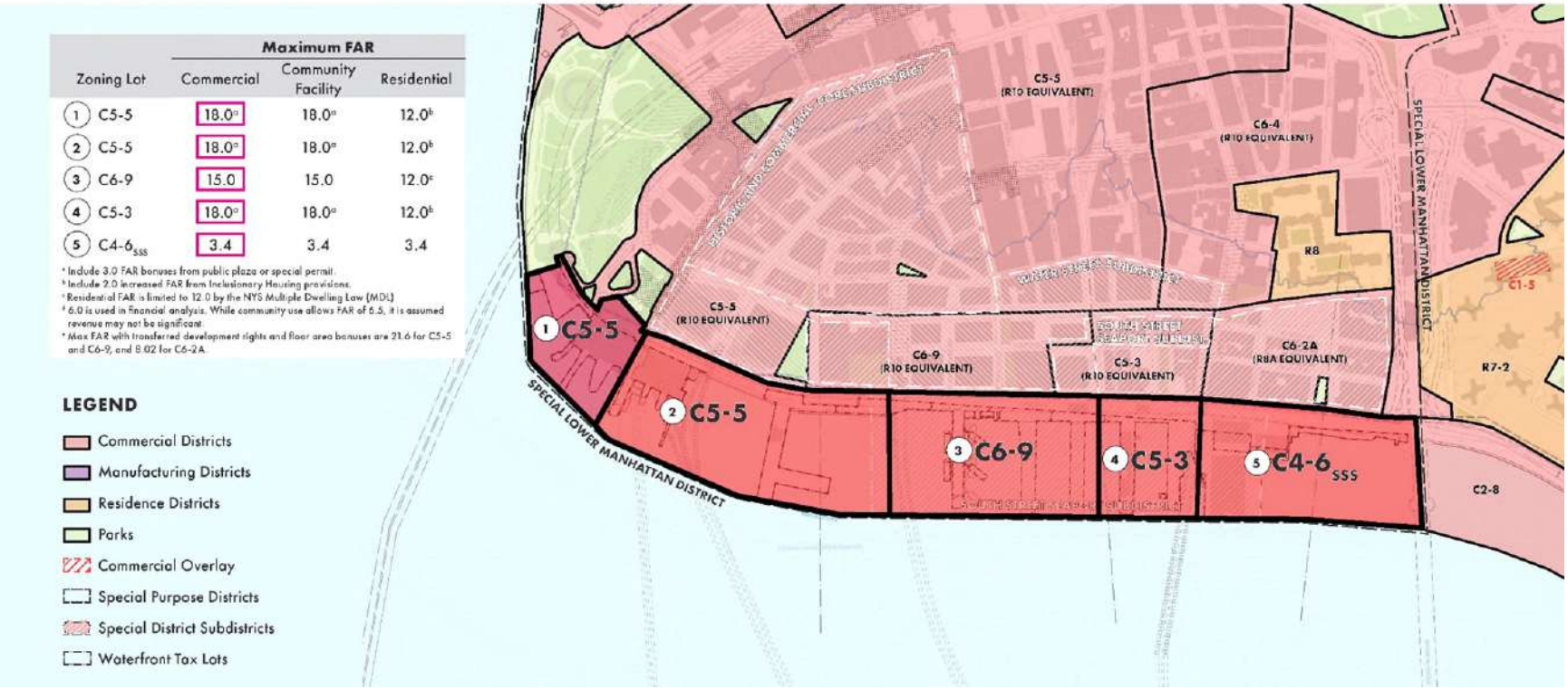


Figure 104: Zoning lot definitions

The Project Team conducted studies to understand whether buildings could fit on the shoreline extension. Building pad areas were defined as part of this exercise, including maritime uses with additional program above, potential taller structures (to be tested south of Maiden Lane), smaller structures (relative to the scale of the South Street Seaport), and then structures that could be situated on piers. An example definition of a building pad is illustrated below, with sample takeoff calculations also presented.

BUILDING PAD SKETCHES

Typical Building Pad Definition

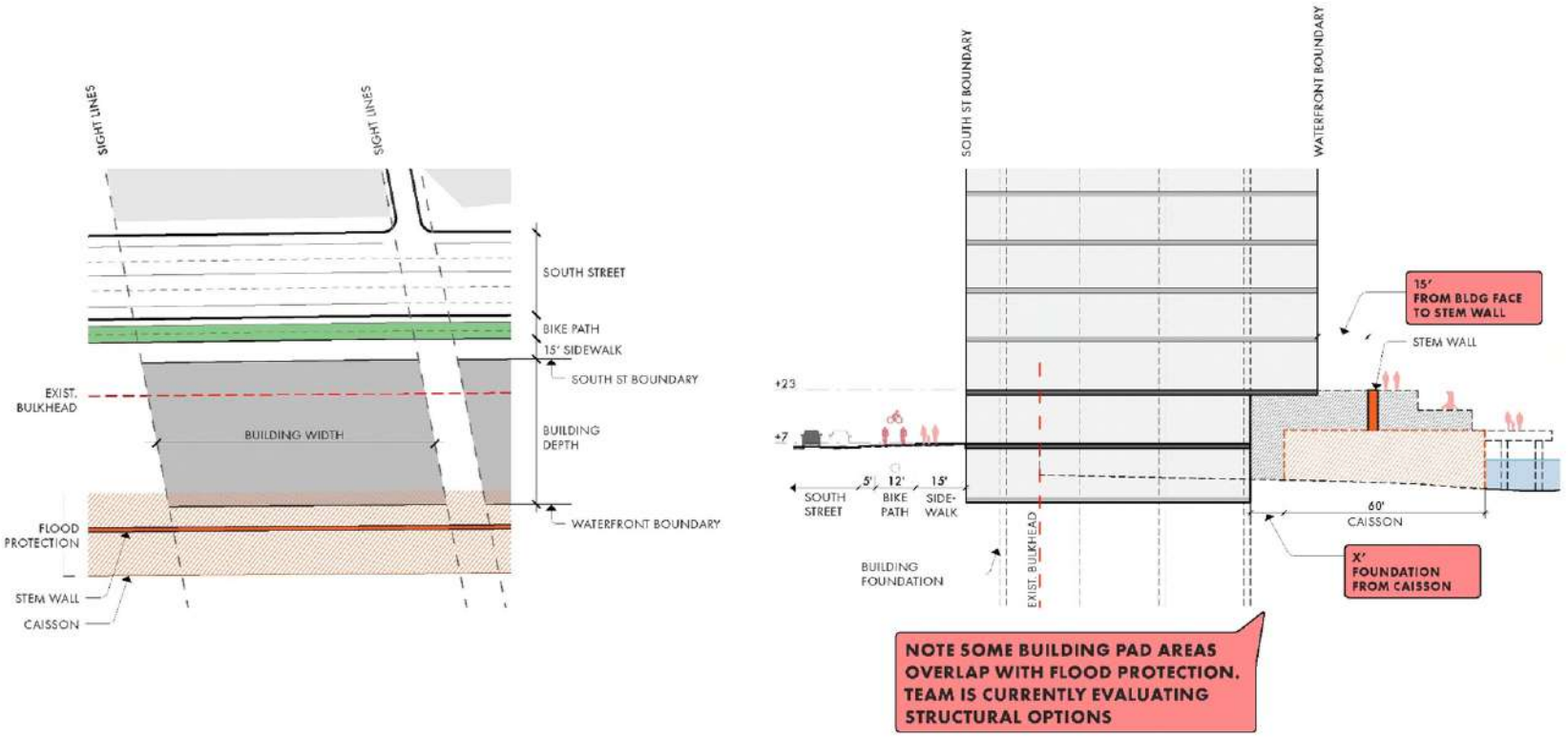


Figure 105: Building pad definition

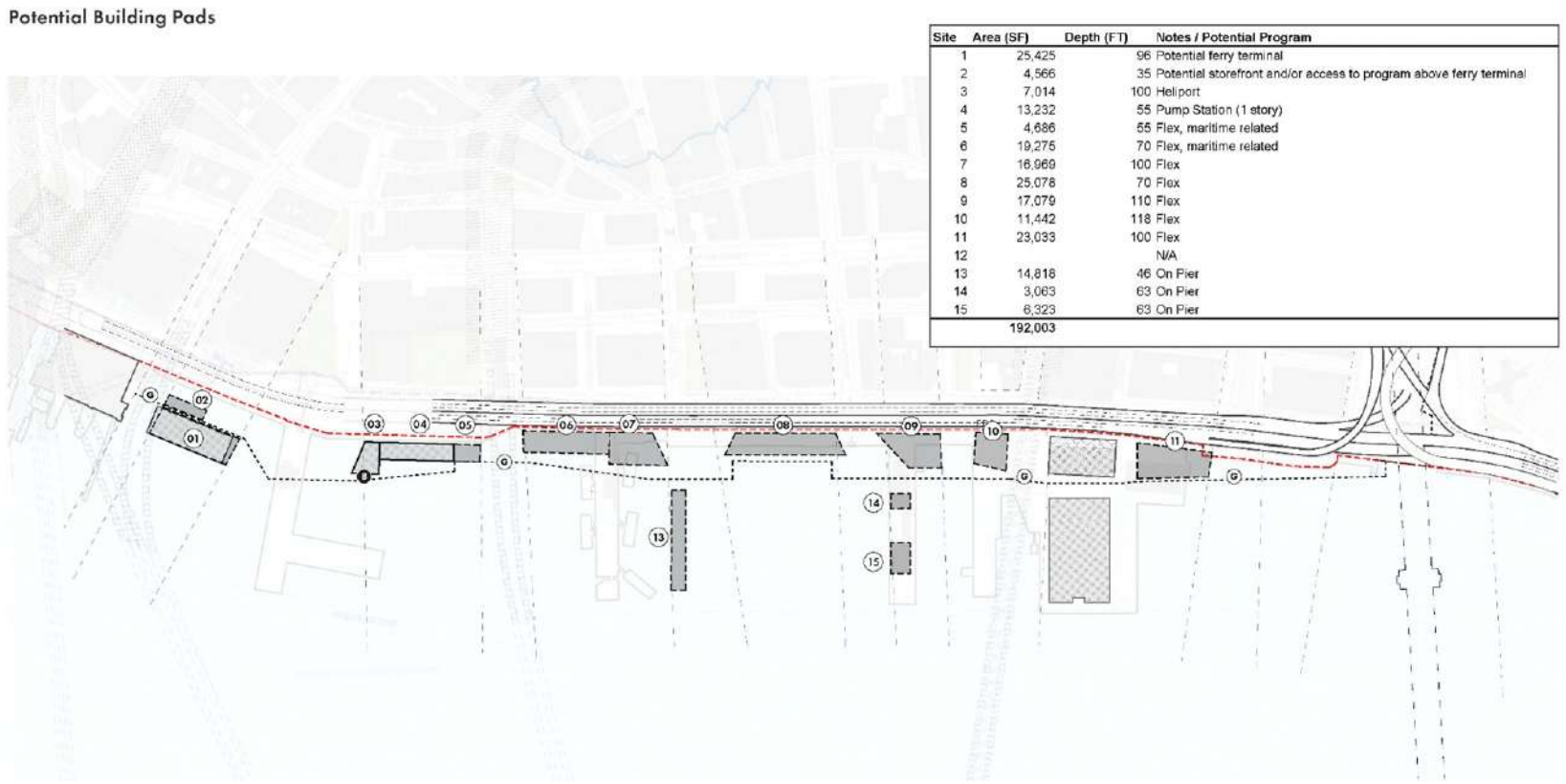


Figure 106: Potential building pad locations and area takeoffs