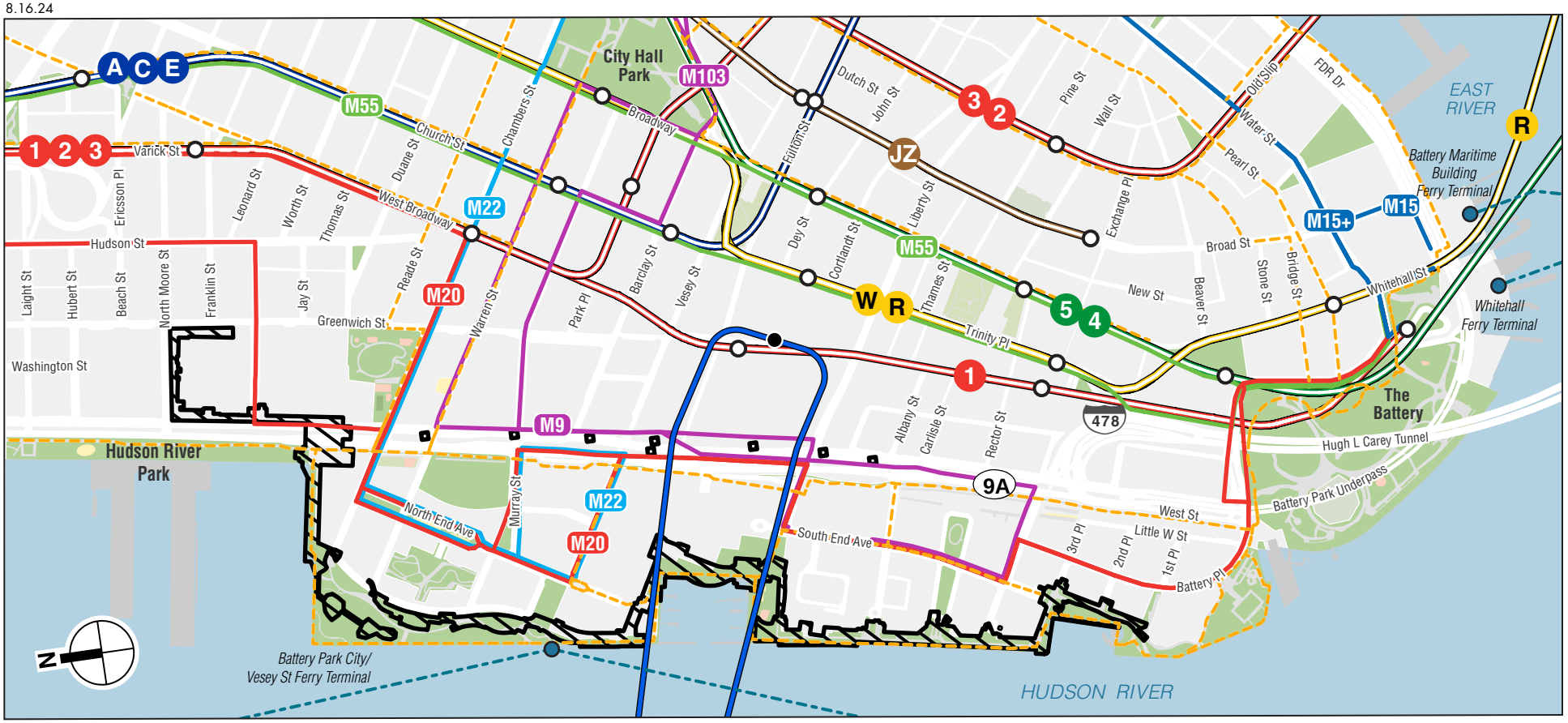
Appendix H
Construction

8.16.24



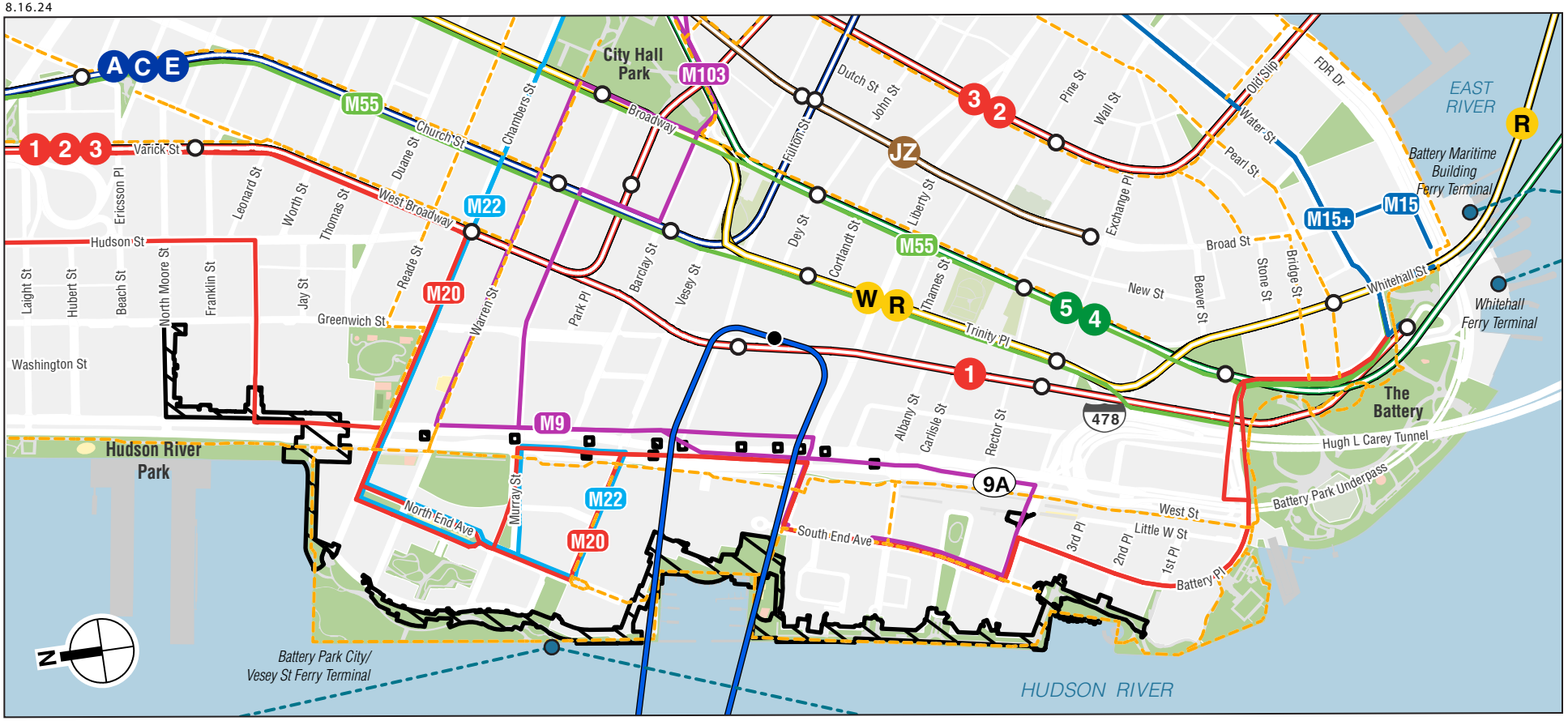
- Project Area
- Subway Line/Station
- M15 Bus Routes
- Bike Facility
- PATH Train and WTC Station
- Ferry Line and Terminal

Bicycle and Transit Facilities

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-1

8.16.24



0 1,000 FEET

- Project Area
- Subway Line/Station
- M15 Bus Routes
- Bike Facility
- PATH Train and WTC Station
- Ferry Line and Terminal

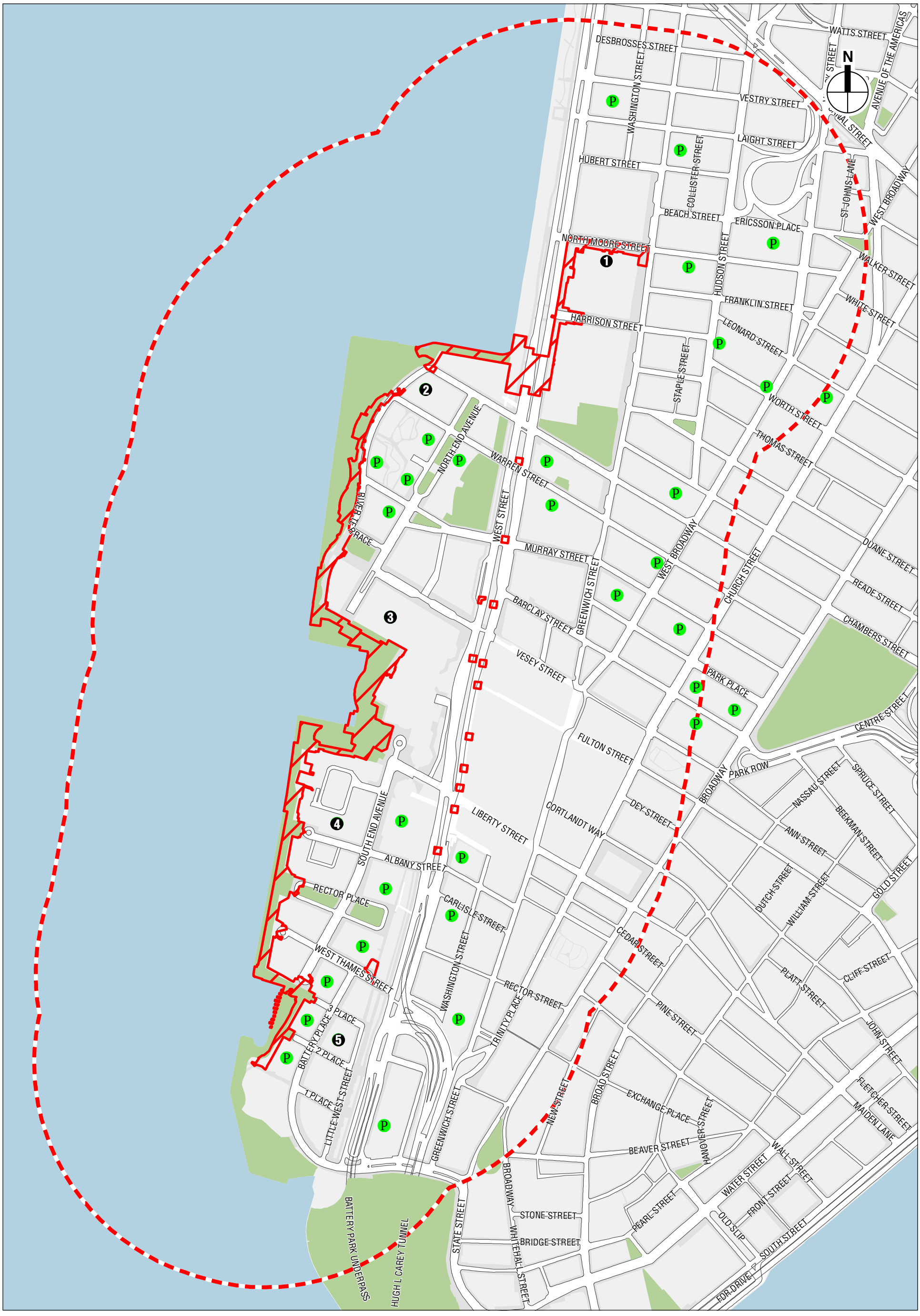
This figure has been updated for the FEIS.

Bicycle and Transit Facilities

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-1

11.21.24



Project Area

Study Area (Quarter-Mile Perimeter)

Parking Facilities

Parking Facilities Used For Assignments

0 500 FEET

Off-Street Parking Facilities

Figure H.1-2

NORTH/WEST BATTERY PARK CITY RESILIENCY

4.18.24



Incremental Construction Vehicle Trips (in PCEs)
Construction Weekday 6:00 to 7:00 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-3

4.18.24



Incremental Construction Vehicle Trips (in PCEs)
Construction Weekday 3:00 to 4:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-4

11.22.24



Incremental Construction Pedestrian Trips
Construction Weekday 6:00 to 7:00 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-5

11.22.24



Incremental Construction Pedestrian Trips
Construction Weekday 3:00 to 4:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-6

11.21.24



Existing Traffic Volumes
Construction Weekday 6:00 to 7:00 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-7

11.21.24



Existing Traffic Volumes
Construction Weekday 3:00 to 4:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-8

11.21.24



2030 No Action Traffic Volumes
Construction Weekday 6:00 to 7:00 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-9

11.21.24



2030 No Action Traffic Volumes
Construction Weekday 3:00 to 4:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-10

11.21.24



Project Area

0 500 FEET

2030 With Action Traffic Volumes
Construction Weekday 6:00 to 7:00 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-11

11.21.24



Project Area

2030 With Action Traffic Volumes
Construction Weekday 3:00 to 4:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-12

11.21.24



Existing MPT Traffic Volumes
Weekday 8:15 to 9:15 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-13

11.21.24



Existing MPT Traffic Volumes
Weekday 12:00 to 1:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-14

11.21.24



Existing MPT Traffic Volumes
Weekday 5:30 to 6:30 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-15

11.21.24



Existing MPT Traffic Volumes
Saturday 2:45 to 3:45 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-16

11.21.24

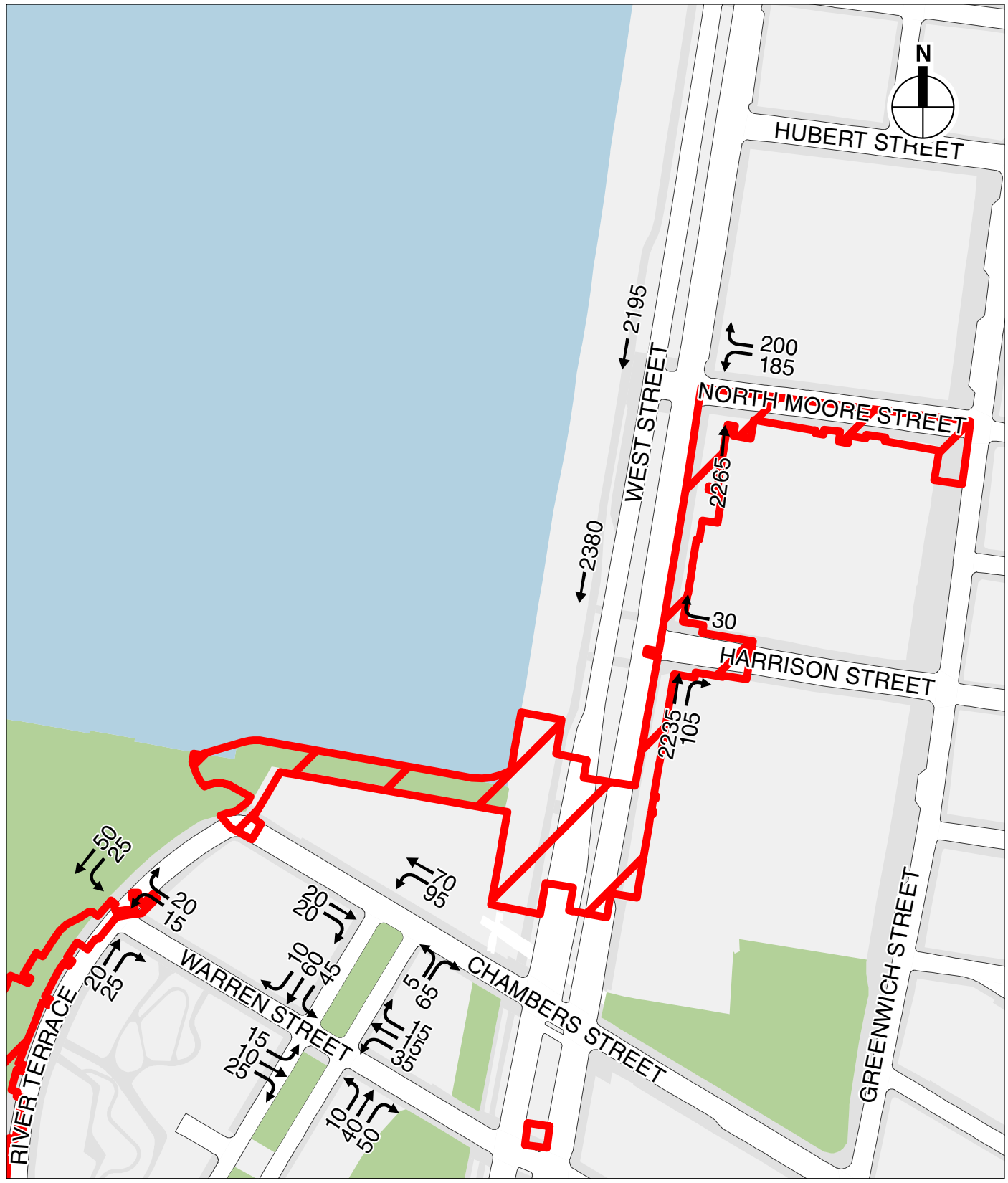


Existing MPT Traffic Volumes
Construction Weekday 6:00 to 7:00 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-17

11.21.24



Existing MPT Traffic Volumes
Construction Weekday 3:00 to 4:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-18

11.21.24



2030 No Action MPT Traffic Volumes
Weekday 8:15 to 9:15 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-19

11.21.24



2030 No Action MPT Traffic Volumes
Weekday 12:00 to 1:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-20

11.21.24



2030 No Action MPT Traffic Volumes
Weekday 5:30 to 6:30 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-21

11.21.24



2030 No Action MPT Traffic Volumes
Saturday 2:45 to 3:45 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-22

11.21.24



2030 No Action MPT Traffic Volumes
Construction Weekday 6:00 to 7:00 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-23

11.21.24



2030 No Action MPT Traffic Volumes
Construction Weekday 3:00 to 4:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-24

11.21.24



2030 With Action MPT Traffic Volumes
Weekday 8:15 to 9:15 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-25

11.21.24

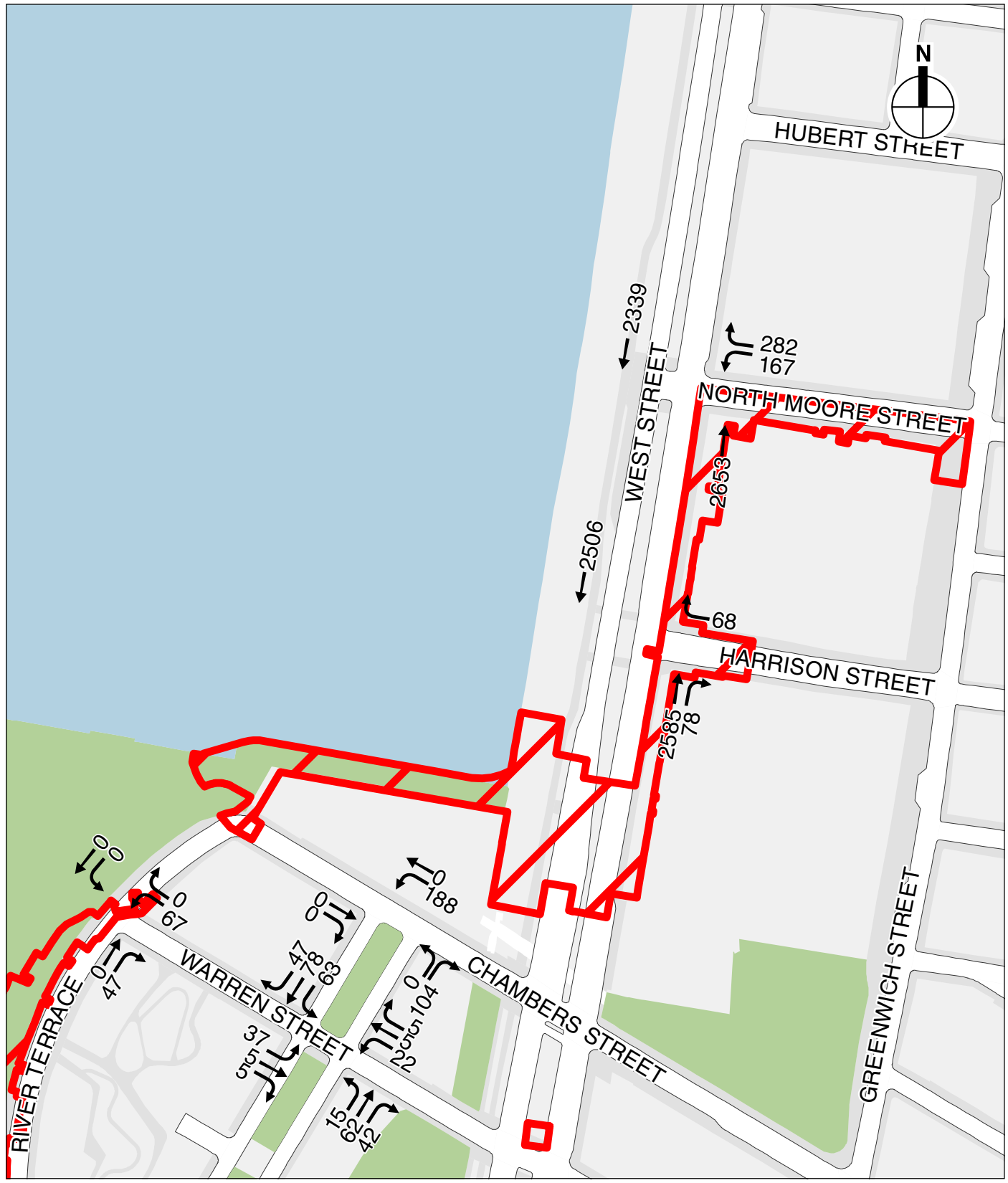


2030 With Action MPT Traffic Volumes
Weekday 12:00 to 1:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-26

11.21.24



2030 With Action MPT Traffic Volumes
Weekday 5:30 to 6:30 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-27

11.21.24



2030 With Action MPT Traffic Volumes
Saturday 2:45 to 3:45 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-28

11.21.24

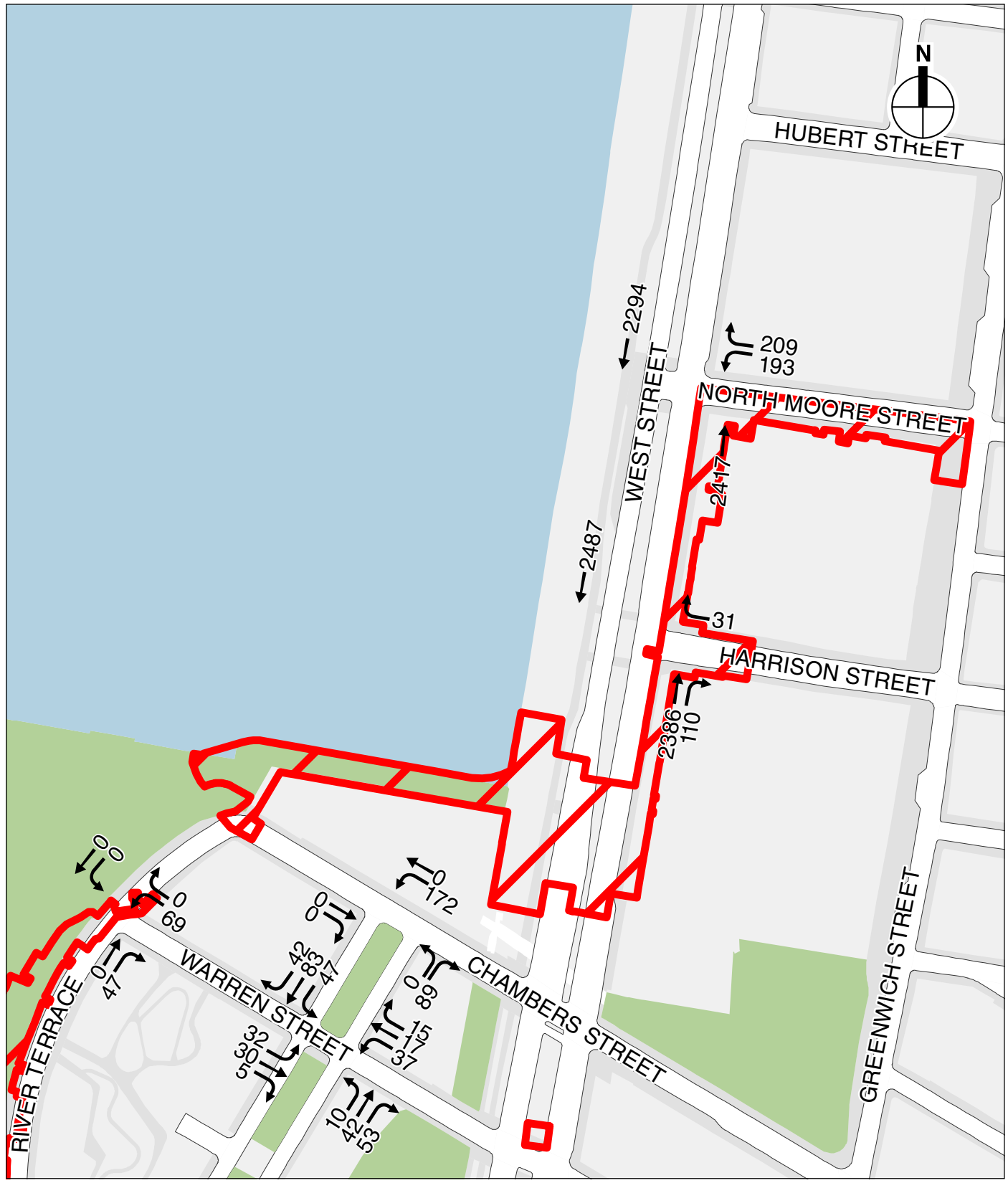


2030 With Action MPT Traffic Volumes
Construction Weekday 6:00 to 7:00 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-29

11.21.24



2030 With Action MPT Traffic Volumes
Construction Weekday 3:00 to 4:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-30



Existing MPT Pedestrian Volumes
Weekday 8:00 to 9:00 AM Peak Hour



Existing MPT Pedestrian Volumes
Weekday 12:00 to 1:00 PM Peak Hour



Existing MPT Pedestrian Volumes
Weekday 5:00 to 6:00 PM Peak Hour



Existing MPT Pedestrian Volumes
Saturday 12:00 to 1:00 PM Peak Hour



2030 No Action MPT Pedestrian Volumes
Weekday 8:00 to 9:00 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-35



2030 No Action MPT Pedestrian Volumes
Weekday 12:00 to 1:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-36



2030 No Action MPT Pedestrian Volumes
Weekday 5:00 to 6:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-37



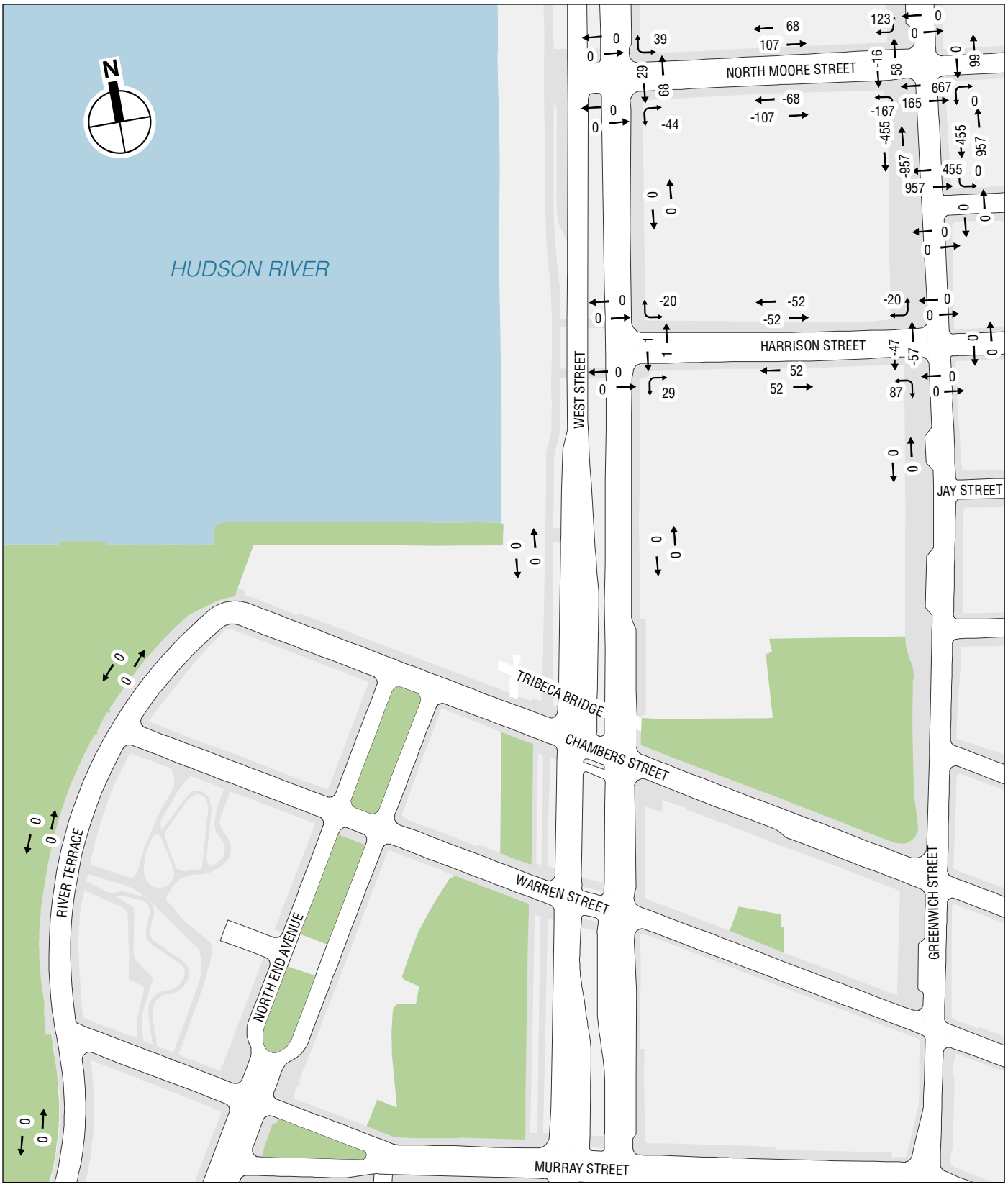
2030 No Action MPT Pedestrian Volumes
Saturday 12:00 to 1:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-38



2030 No Action MPT Pedestrian Diversion Volumes
Phase 1 Harrison Street South Sidewalk Closure
Weekday 8:00 to 9:00 AM Peak Hour

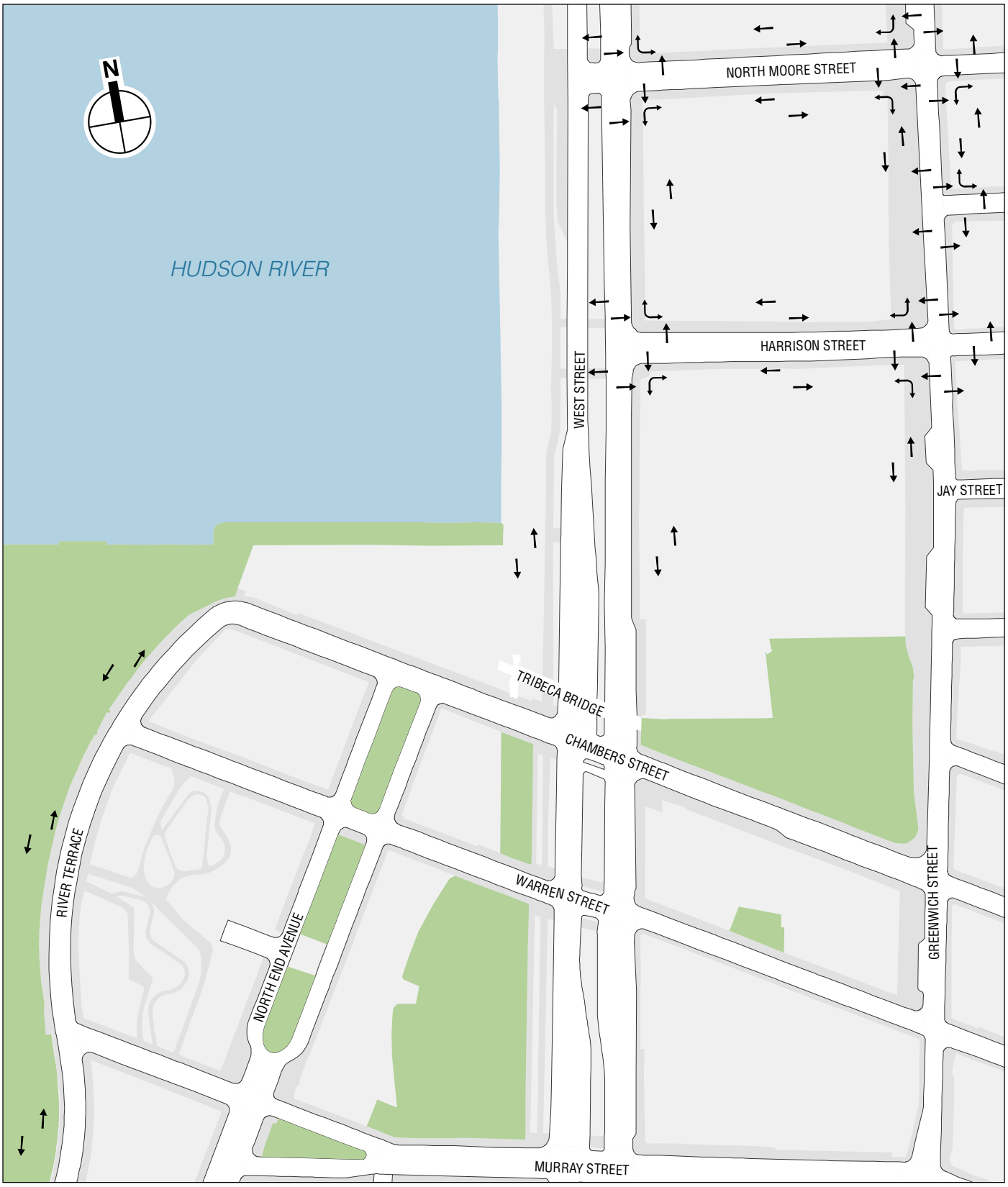


2030 No Action MPT Pedestrian Diversion Volumes
Phase 2 Harrison Street North Sidewalk Closure
Weekday 8:00 to 9:00 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

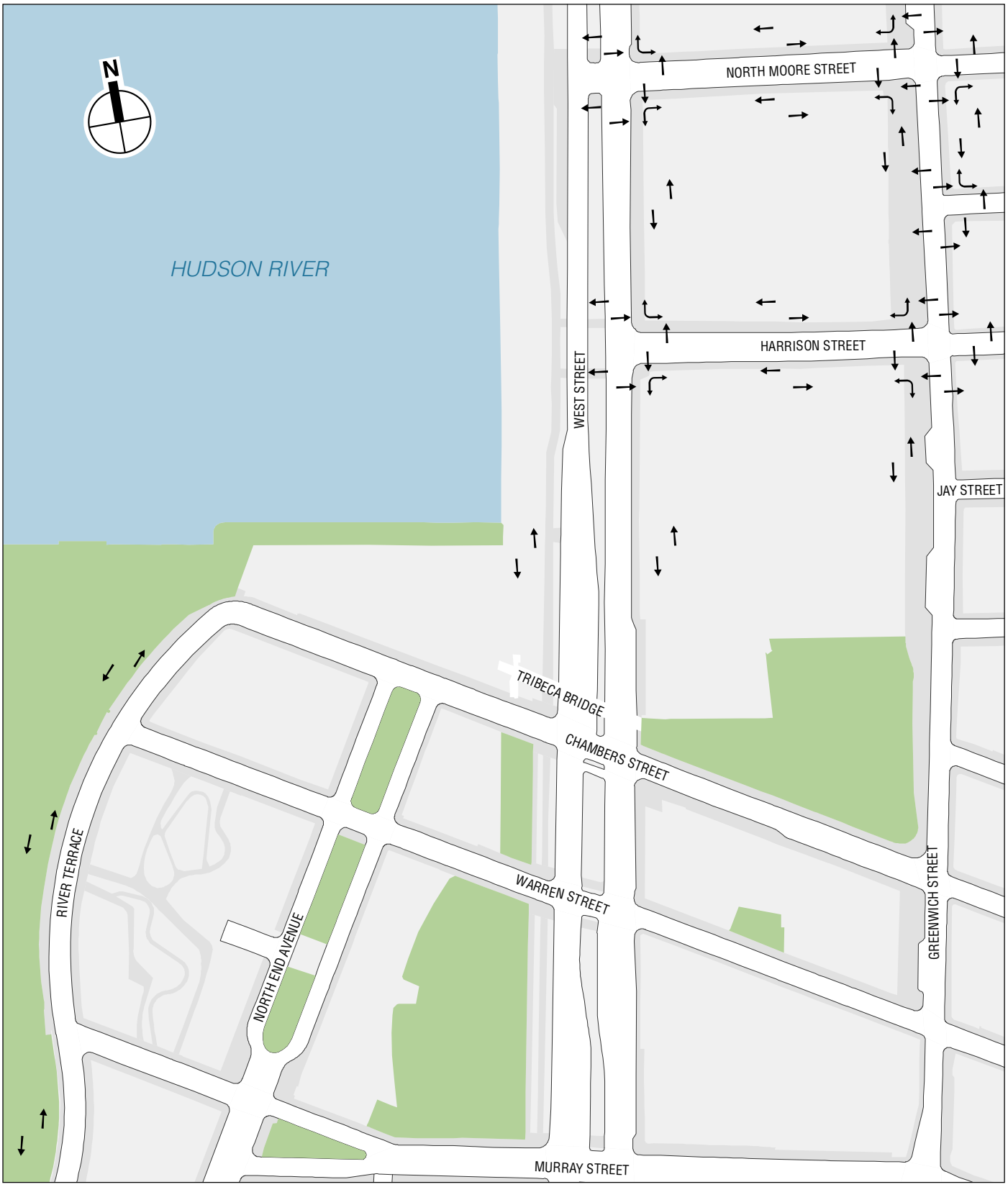
Figure H.1-39b

4.10.25



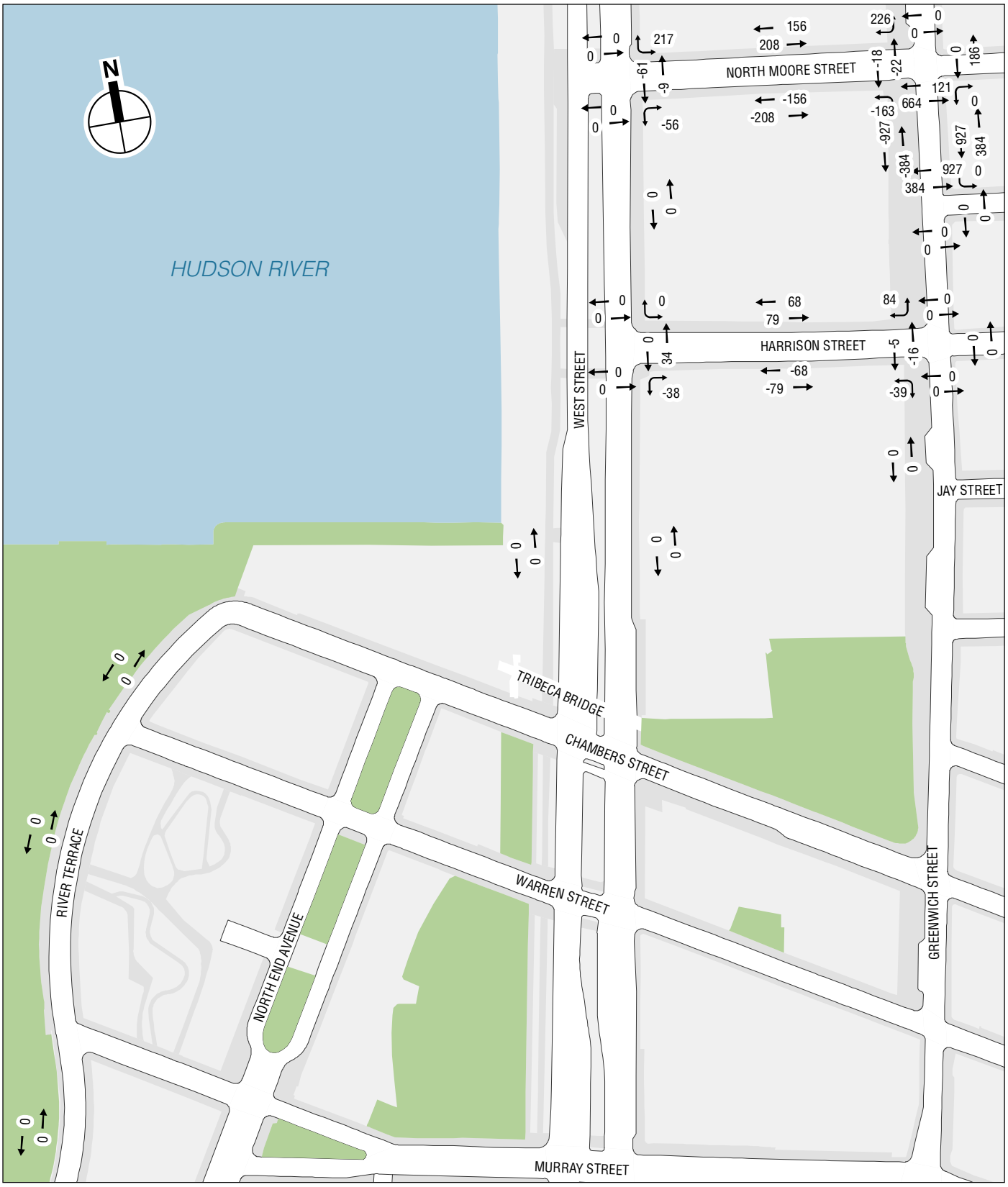
2030 No Action MPT Pedestrian Diversion Volumes
Phase 1 Harrison Street South Sidewalk Closure
Weekday 12:00 to 1:00 PM Peak Hour

4.10.25



2030 No Action MPT Pedestrian Diversion Volumes
Phase 2 Harrison Street North Sidewalk Closure
Weekday 12:00 to 1:00 PM Peak Hour

4.10.25

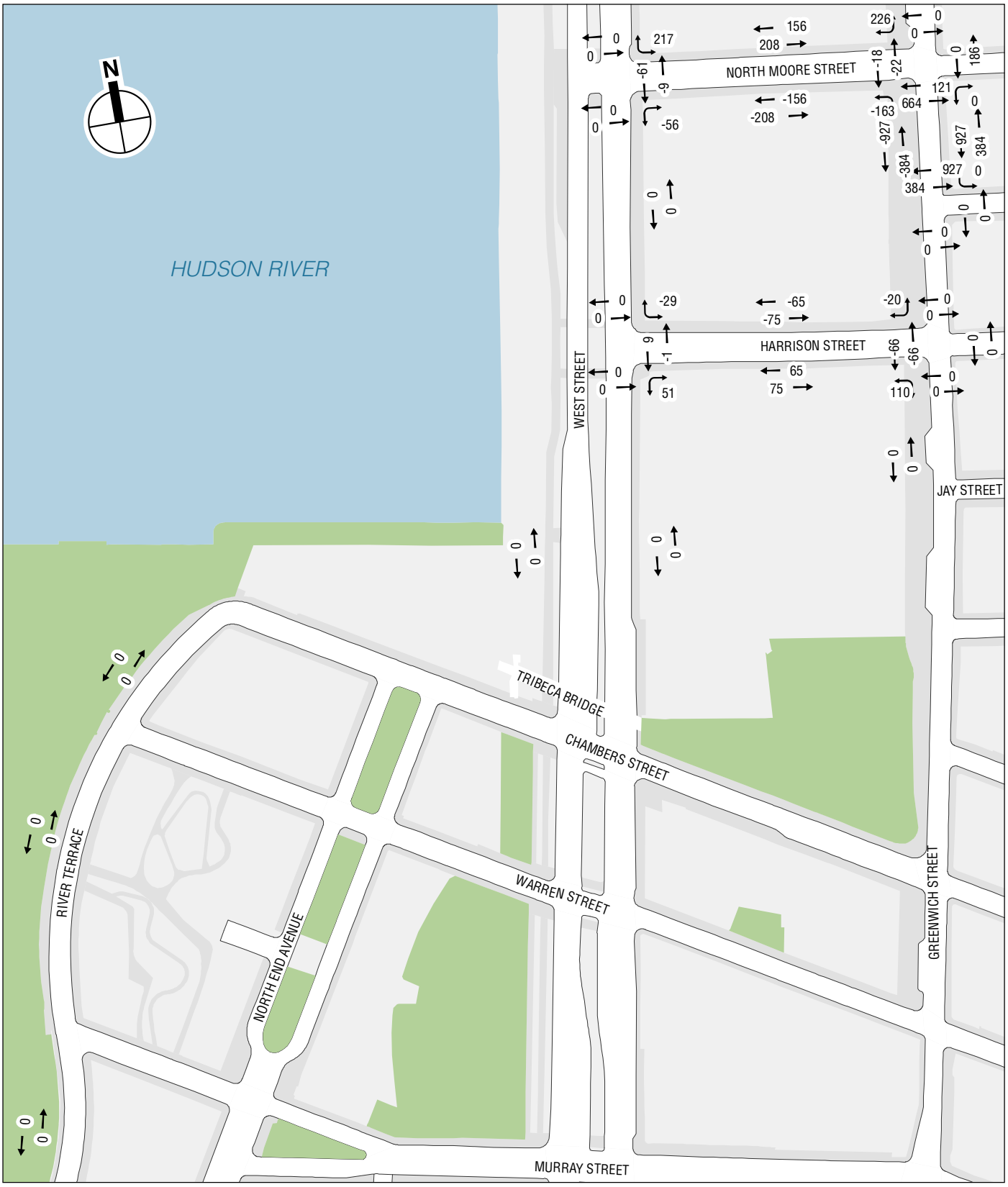


2030 No Action MPT Pedestrian Diversion Volumes
Phase 1 Harrison Street South Sidewalk Closure
Weekday 5:00 to 6:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-41a

4.10.25



2030 No Action MPT Pedestrian Diversion Volumes
Phase 2 Harrison Street North Sidewalk Closure
Weekday 5:00 to 6:00 PM Peak Hour

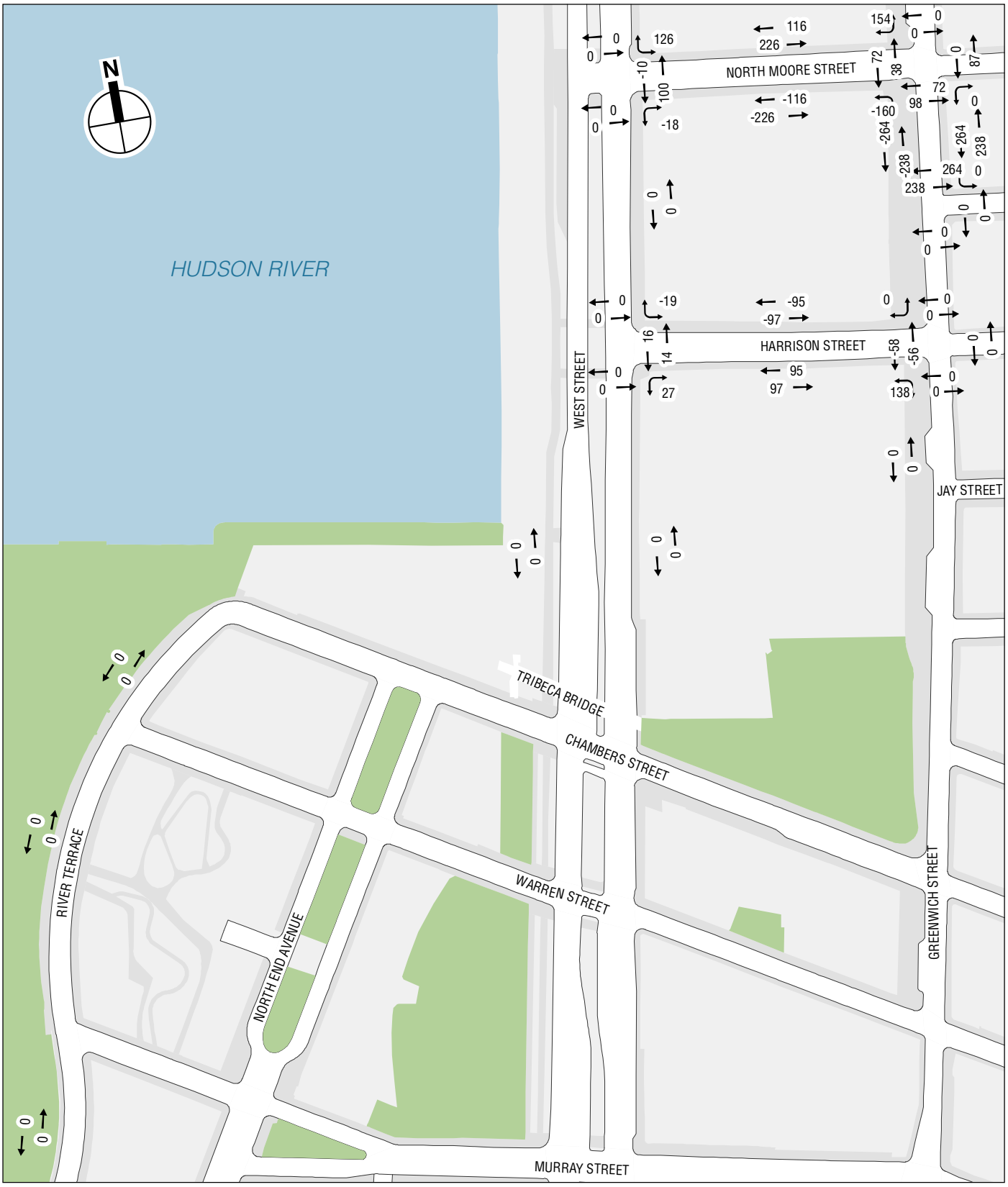
NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-41b



2030 No Action MPT Pedestrian Diversion Volumes
Phase 1 Harrison Street South Sidewalk Closure
Saturday 12:00 to 1:00 PM Peak Hour

4.10.25



2030 No Action MPT Pedestrian Diversion Volumes
Phase 2 Harrison Street North Sidewalk Closure
Saturday 12:00 to 1:00 PM Peak Hour



2030 With Action MPT Pedestrian Volumes
Phase 1 Harrison Street South Sidewalk Closure
Weekday 8:00 to 9:00 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-43a



2030 With Action MPT Pedestrian Volumes
Phase 2 Harrison Street North Sidewalk Closure
Weekday 8:00 to 9:00 AM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-43b



2030 With Action MPT Pedestrian Volumes
Phase 1 Harrison Street South Sidewalk Closure
Weekday 12:00 to 1:00 PM Peak Hour



2030 With Action MPT Pedestrian Volumes
Phase 2 Harrison Street North Sidewalk Closure
Weekday 12:00 to 1:00 PM Peak Hour



2030 With Action MPT Pedestrian Volumes
Phase 1 Harrison Street South Sidewalk Closure
Weekday 5:00 to 6:00 PM Peak Hour



2030 With Action MPT Pedestrian Volumes
Phase 2 Harrison Street North Sidewalk Closure
Weekday 5:00 to 6:00 PM Peak Hour

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-45b

4.10.25

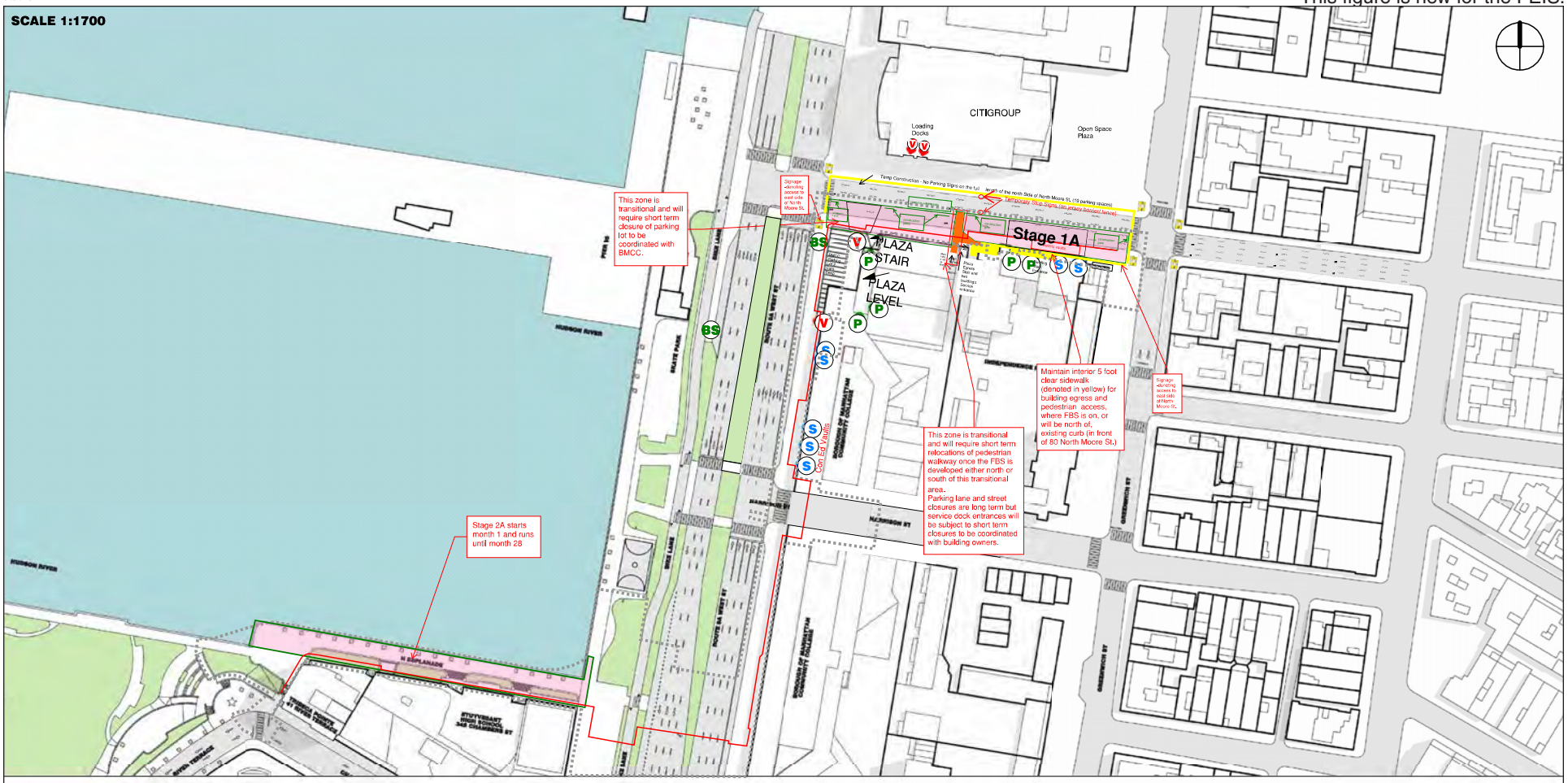


2030 With Action MPT Pedestrian Volumes
Phase 1 Harrison Street South Sidewalk Closure
Saturday 12:00 to 1:00 PM Peak Hour



2030 With Action MPT Pedestrian Volumes
Phase 2 Harrison Street North Sidewalk Closure
Saturday 12:00 to 1:00 PM Peak Hour

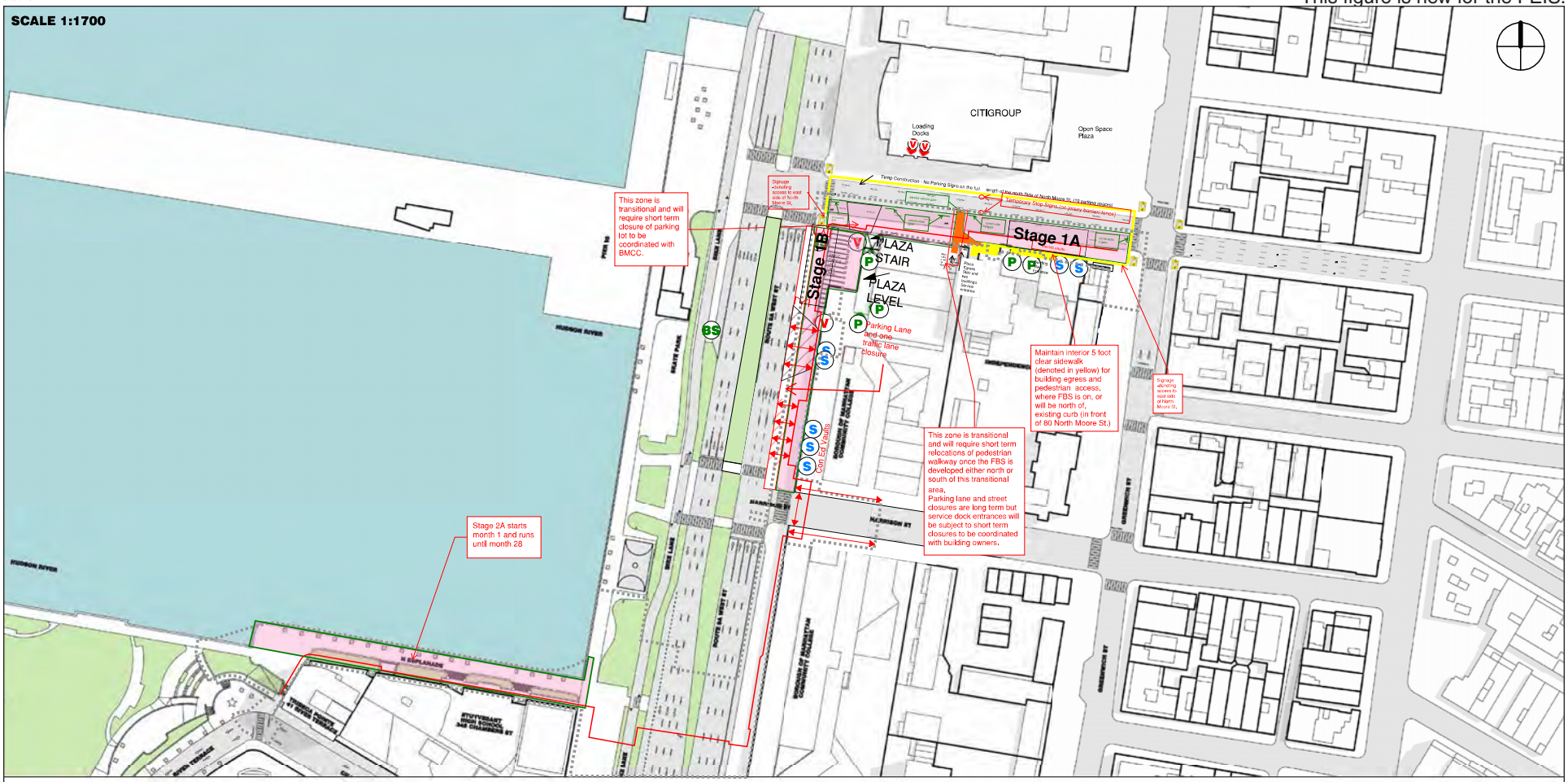
This figure is new for the FEIS.



Source: Turner E. E. Cruz

MPT Plan - Reach 1

This figure is new for the FEIS.



NOTES

Reach 1:

Phase 2 - Continue Stage 1A, Start Stage 1B

Duration: 8 months

Months - 10 thru 17 of 56

	Staging Area
	Stage under Construction

LEGEND

- (P) PEDESTRIAN EGRESS
- (S) SERVICE EGRESS
- (V) VEHICLE EGRESS
- (BS) BUS STOP
- ALIGNMENT WALL
- ARROWS DENOTE PUBLIC ACCESS/PATHS
- TEMPORARY BIKE LANES

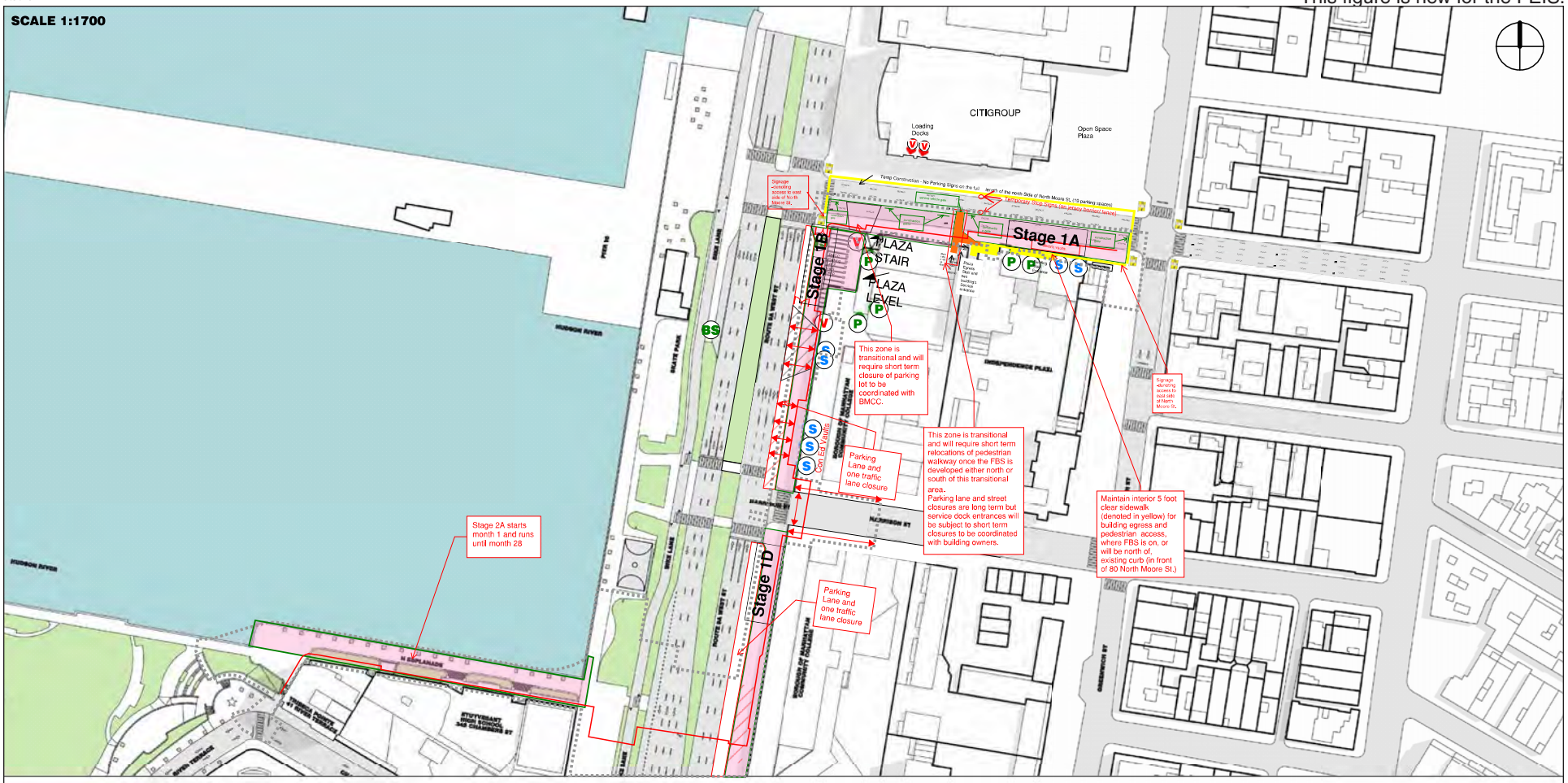
KEY PLAN - REACH 1



Source: Turner E. E. Cruz

MPT Plan - Reach 1

This figure is new for the FEIS.



NOTES Reach 1:

Phase 3 - Continue Stage 1A and 1B, Start Stage 1D

Duration: 5 months

Months - 18 thru 22 of 56

	Staging Area
	Stage under Construction

LEGEND

- (P) PEDESTRIAN EGRESS
- (S) SERVICE EGRESS
- (V) VEHICLE EGRESS
- BS BUS STOP
- ALIGNMENT WALL
- ARROWS DENOTE PUBLIC ACCESS/PATHS
- TEMPORARY BIKE LANES

KEY PLAN - REACH 1



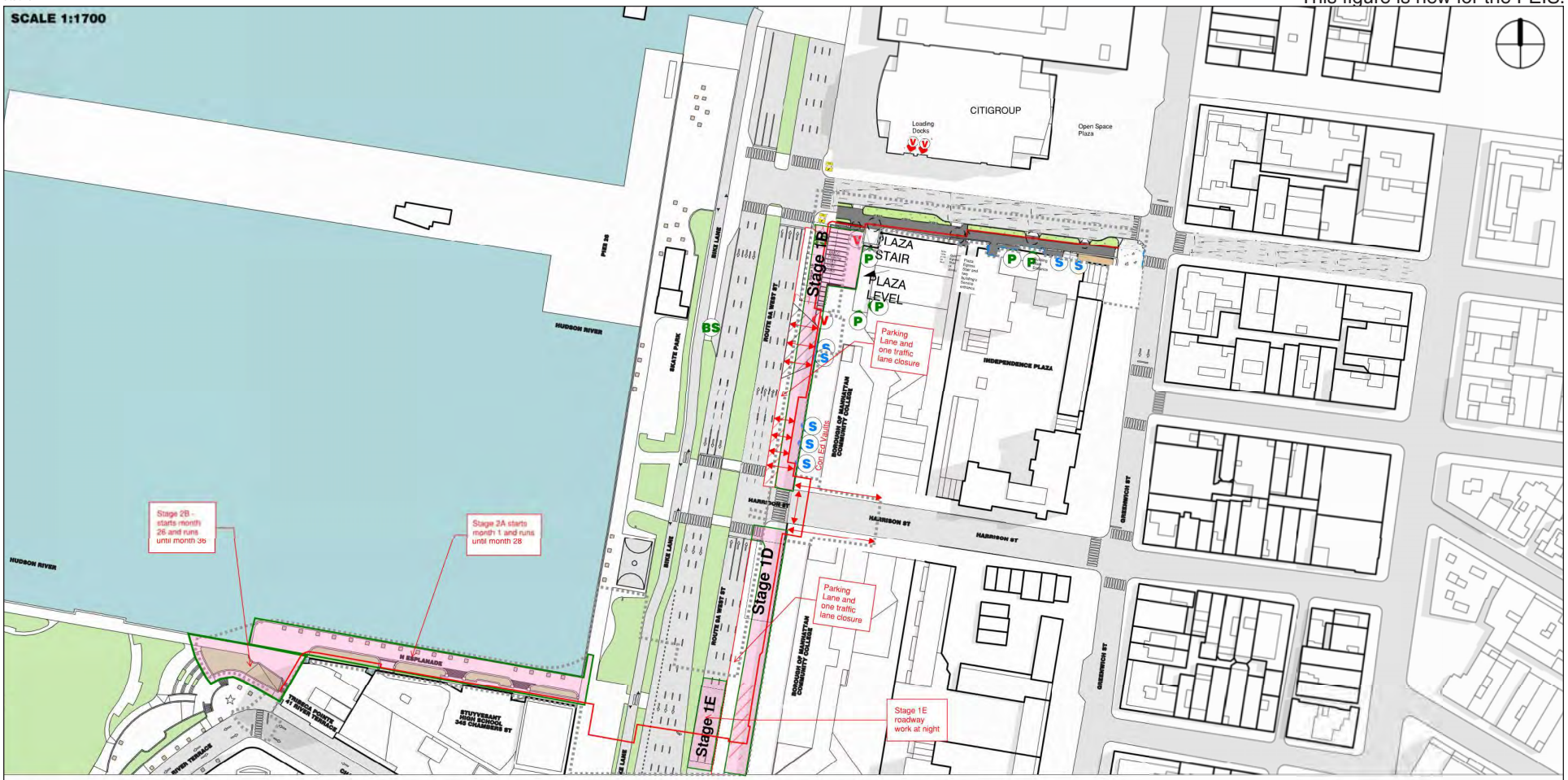
Source: Turner E. E. Cruz

MPT Plan - Reach 1

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-49

This figure is new for the FEIS.



NOTES Reach 1:

Phase 4 - Stage 1A completed, Continue Stage 1B, 1D, Start Stage 1E Northbound lane

Duration: 10 months

Months - 23 thru 31 of 56

	Staging Area
	Stage under Construction

LEGEND

- P — PEDESTRIAN EGRESS
- S — SERVICE EGRESS
- V — VEHICLE EGRESS
- BS — BUS STOP
- ALIGNMENT WALL
- ARROWS DENOTE PUBLIC ACCESS/PATHS
- TEMPORARY BIKE LANES

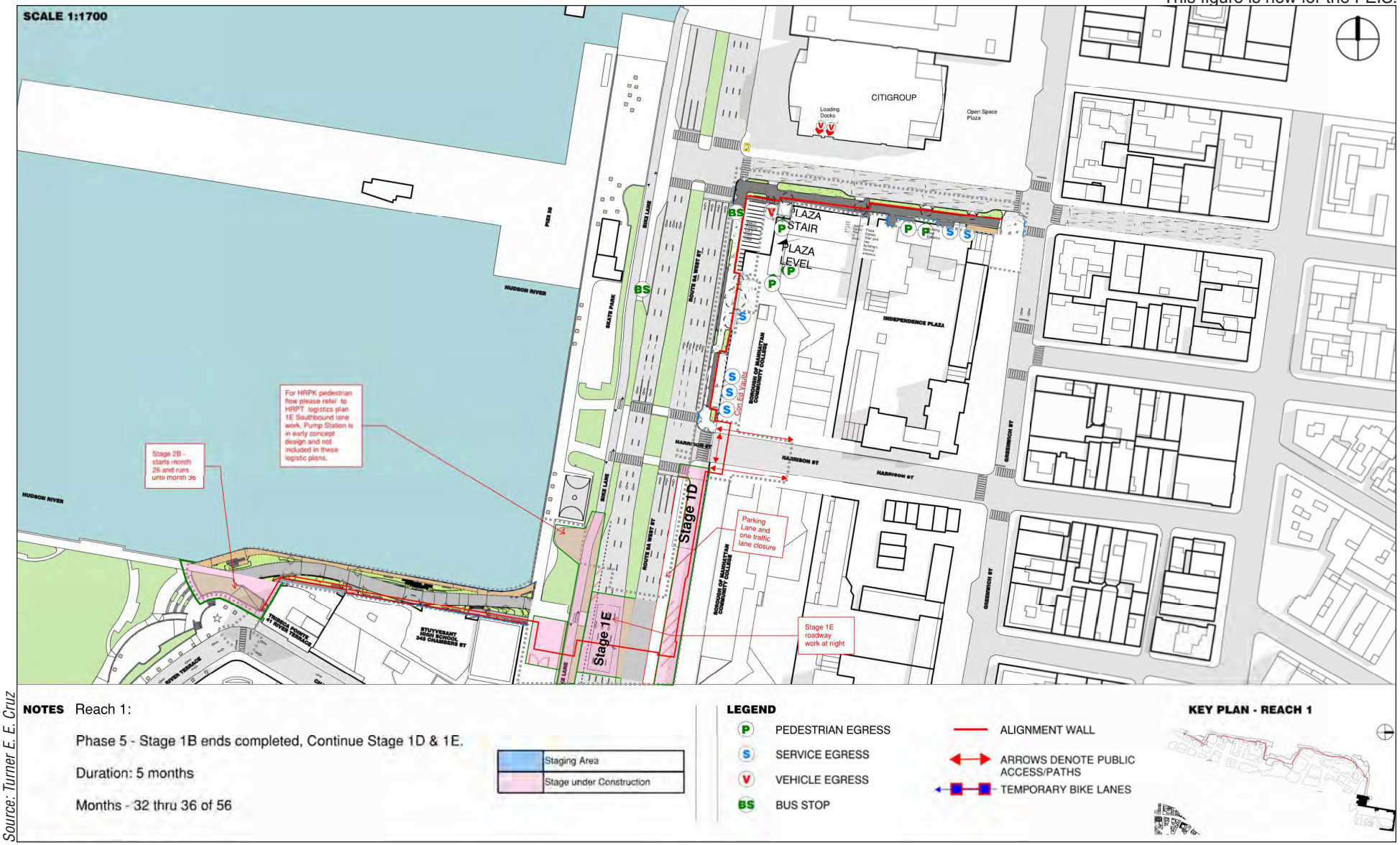
KEY PLAN - REACH 1



Source: Turner E. E. Cruz

MPT Plan - Reach 1

This figure is new for the FEIS.



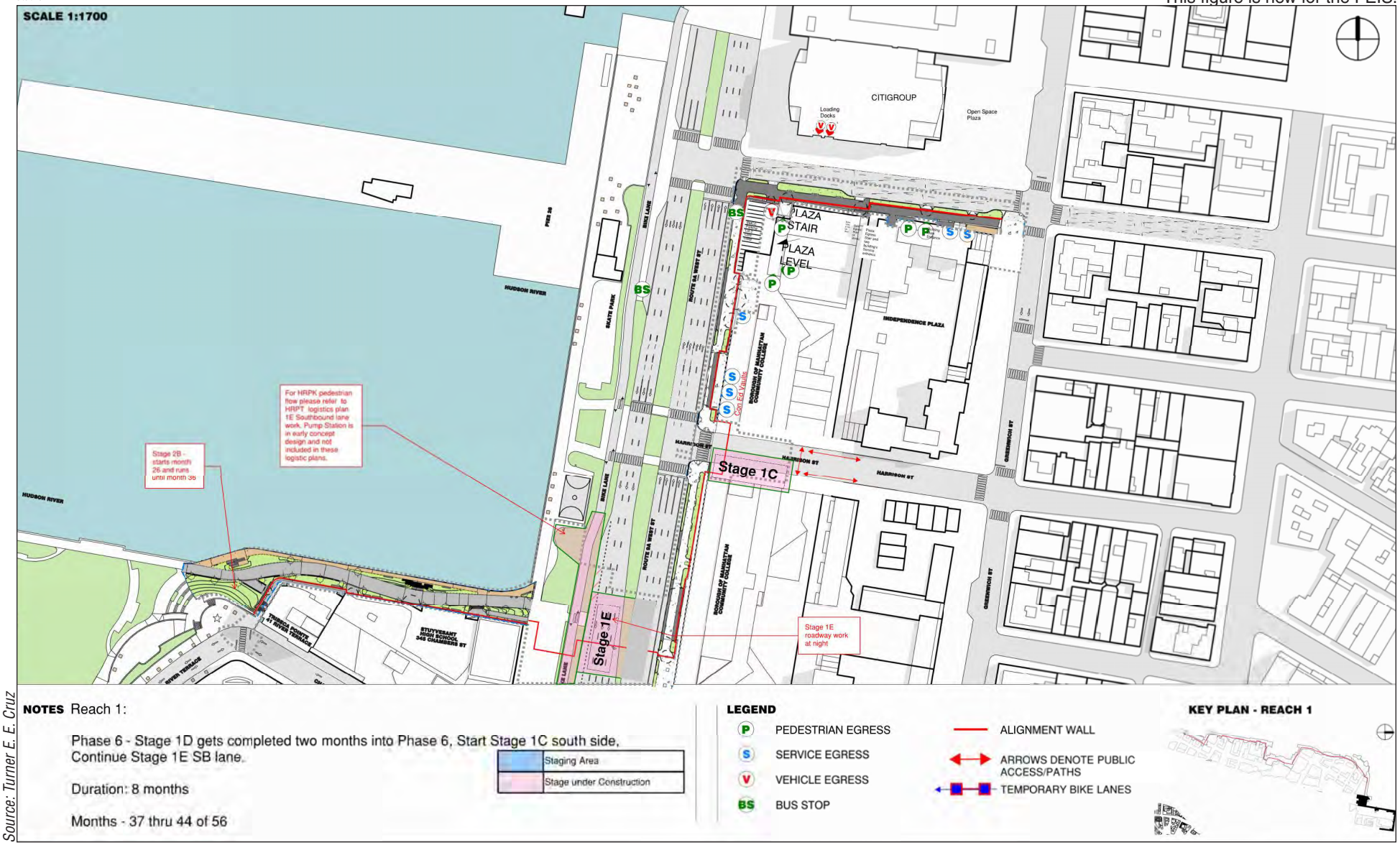
Source: Turner E. E. Cruz

MPT Plan - Reach 1

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-51

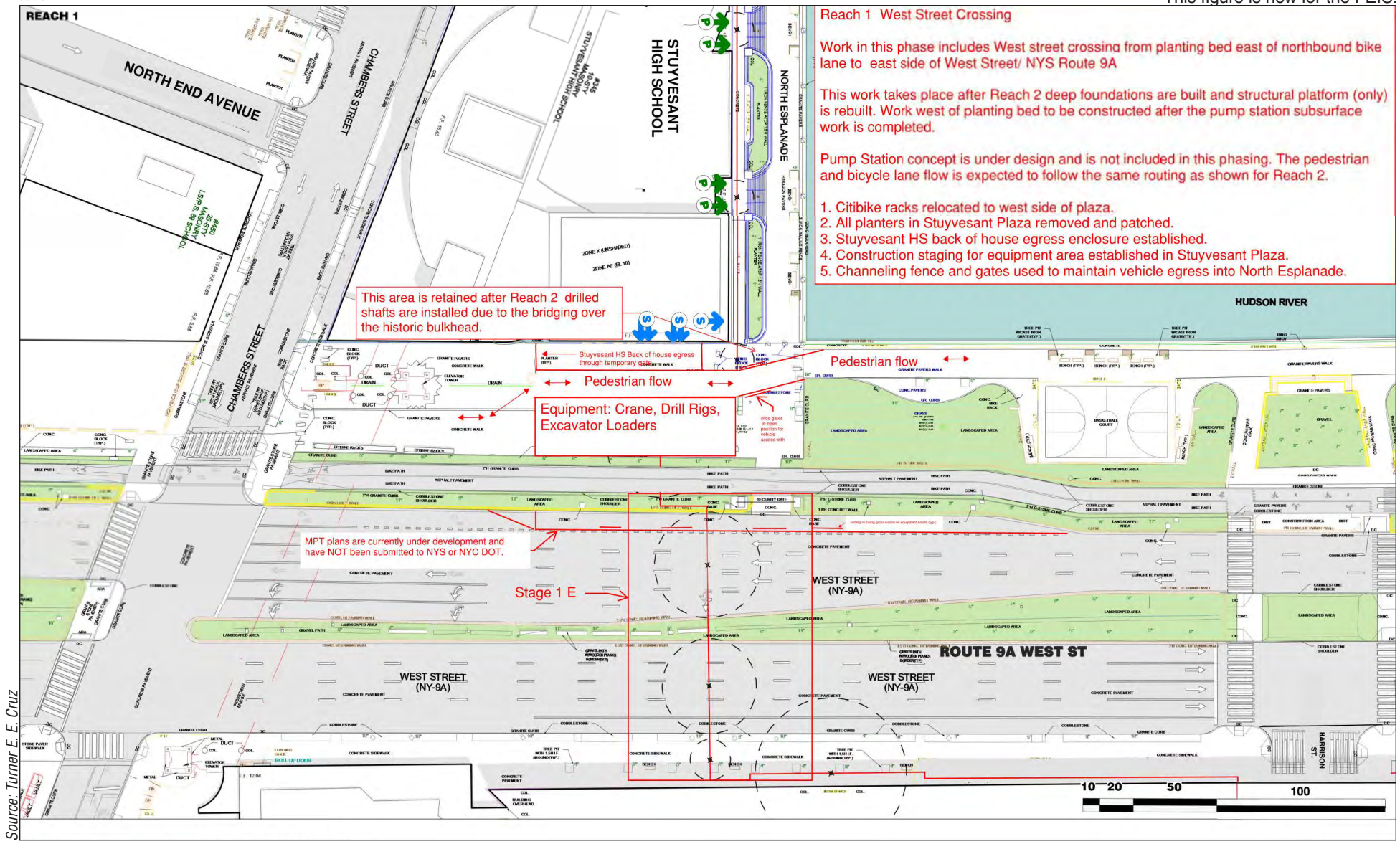
This figure is new for the FEIS.



Source: Turner E. E. Cruz

MPT Plan - Reach 1

This figure is new for the FEIS.

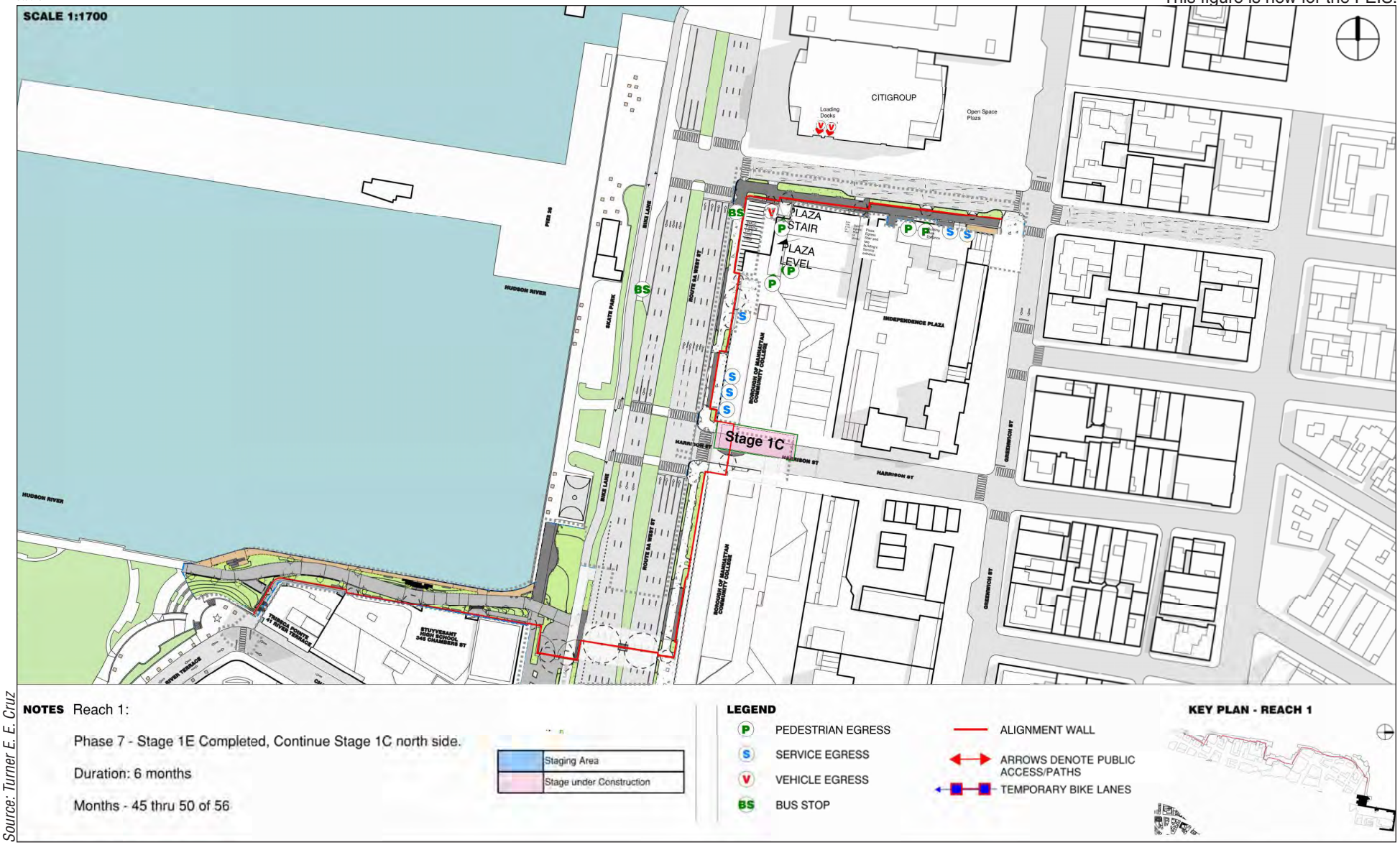


Source: Turner E. E. Cruz

MPT Plan - Reach 1

Figure H.1-53

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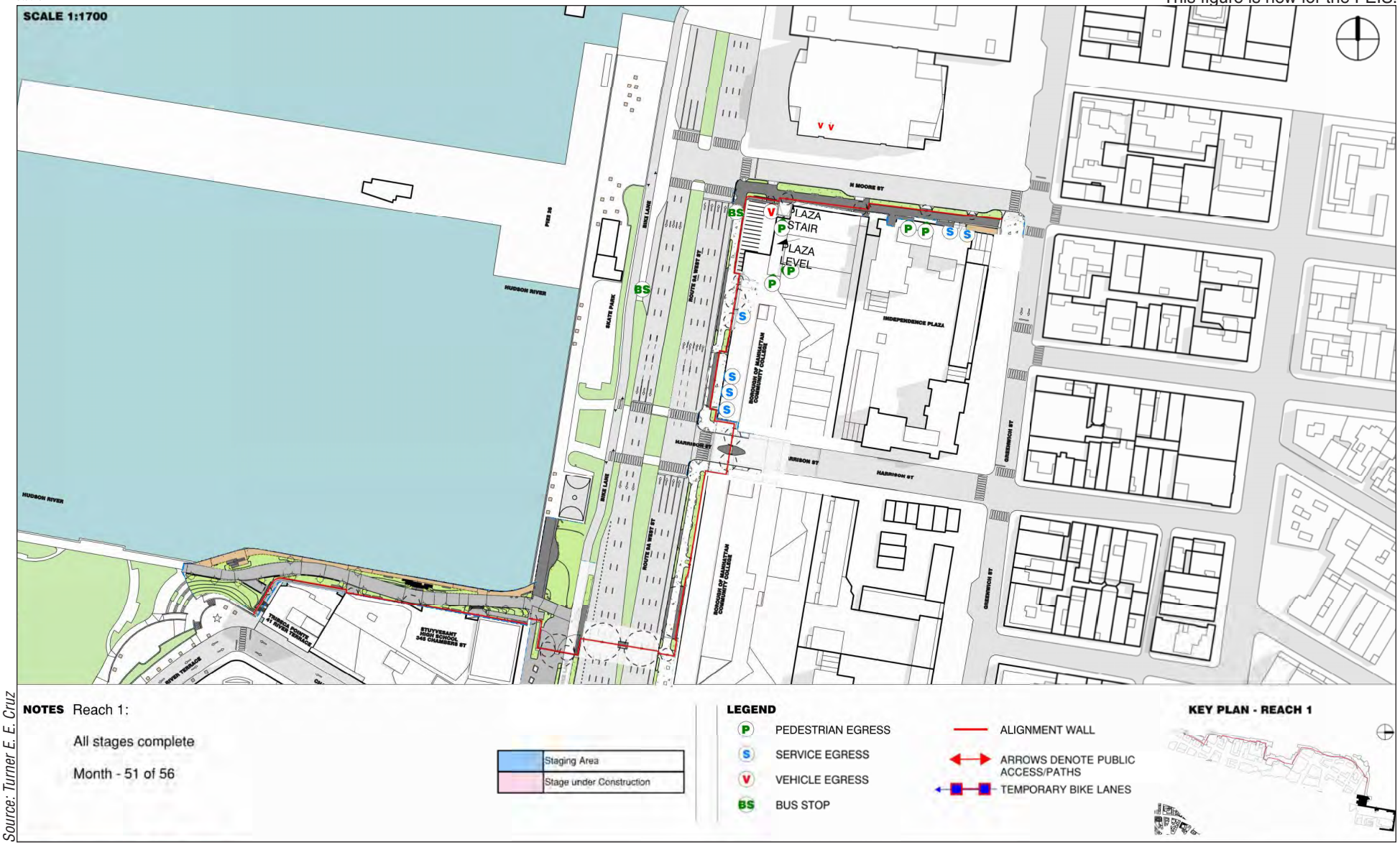


Source: Turner E. E. Cruz

MPT Plan - Reach 1

Figure H.1-54

This figure is new for the FEIS.

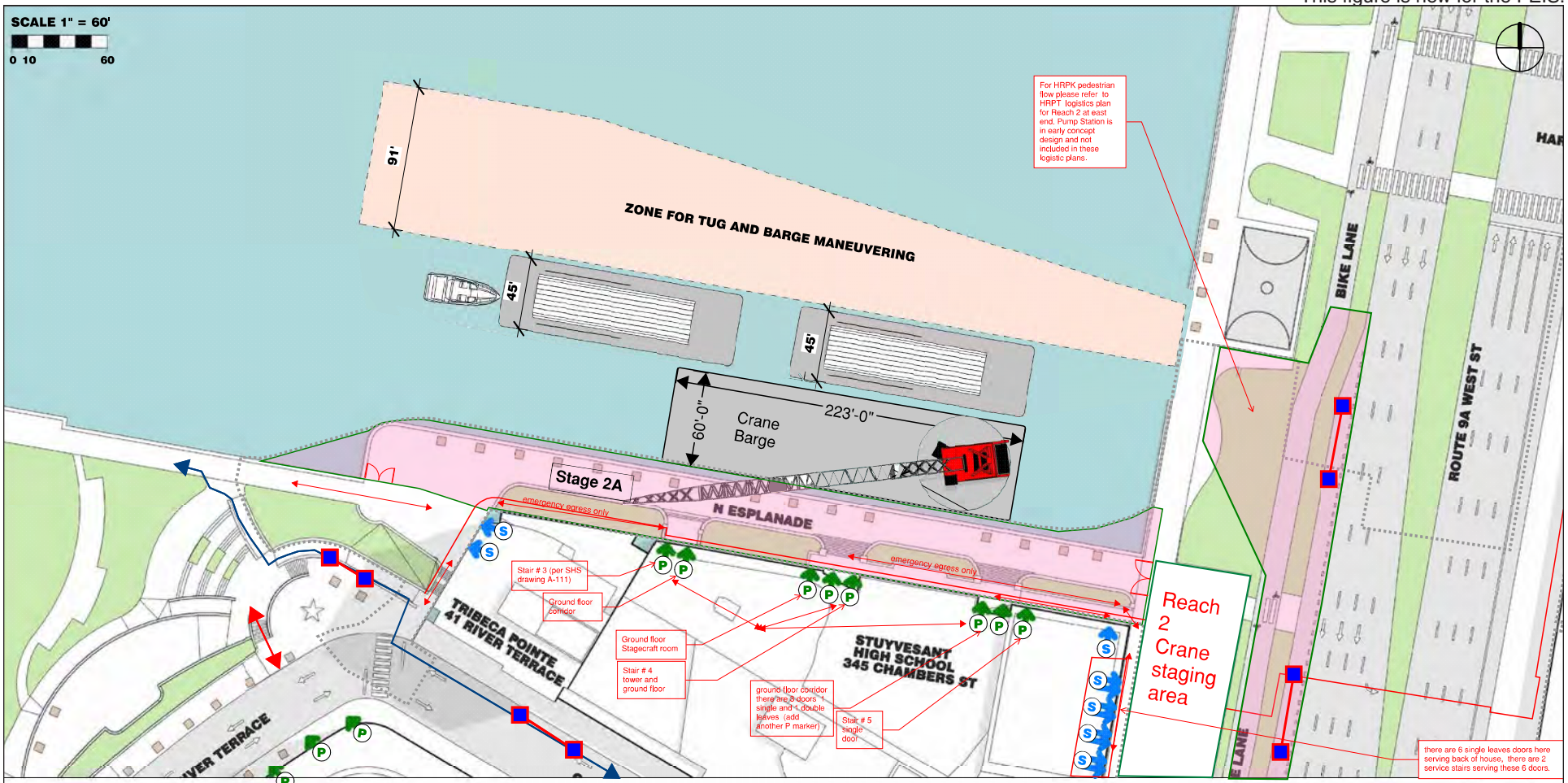


Source: Turner E. E. Cruz

MPT Plan - Reach 1

Figure H.1-55

This figure is new for the FEIS.

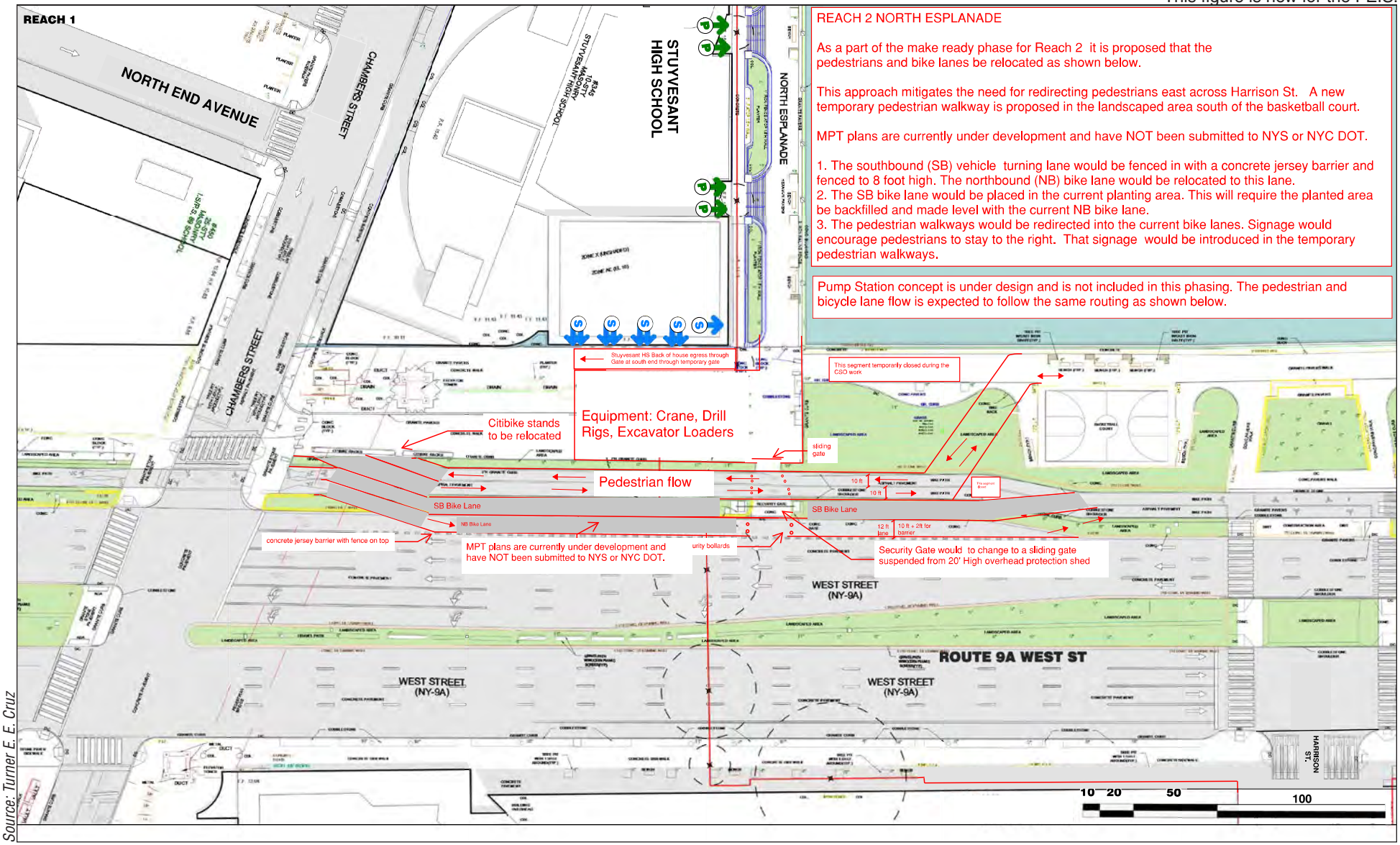


Source: Turner E. E. Cruz

MPT Plan - Reach 2

Figure H.1-56

This figure is new for the FEIS.



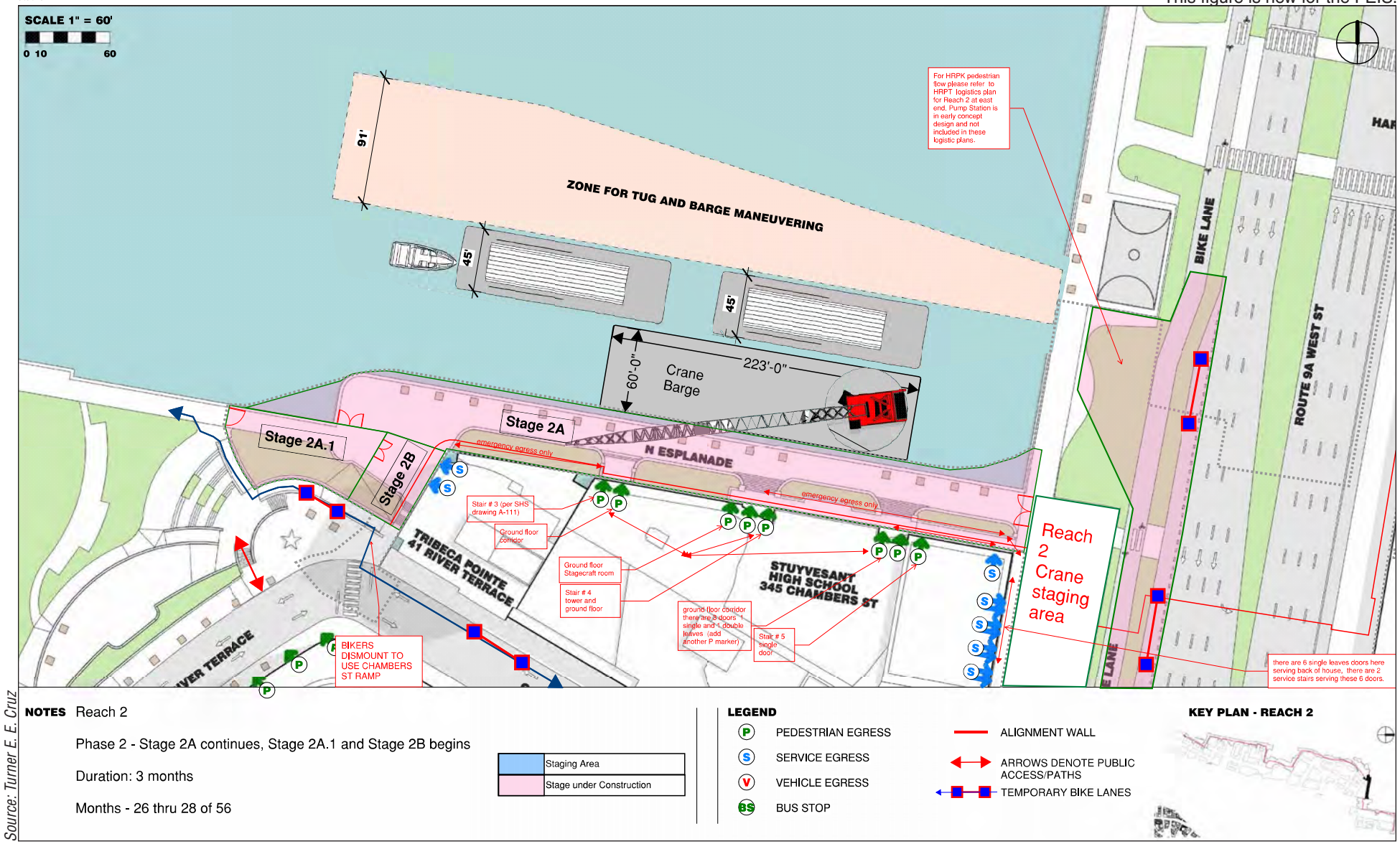
Source: Turner E. E. Cruz

MPT Plan - Reach 2

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-57

This figure is new for the FEIS.

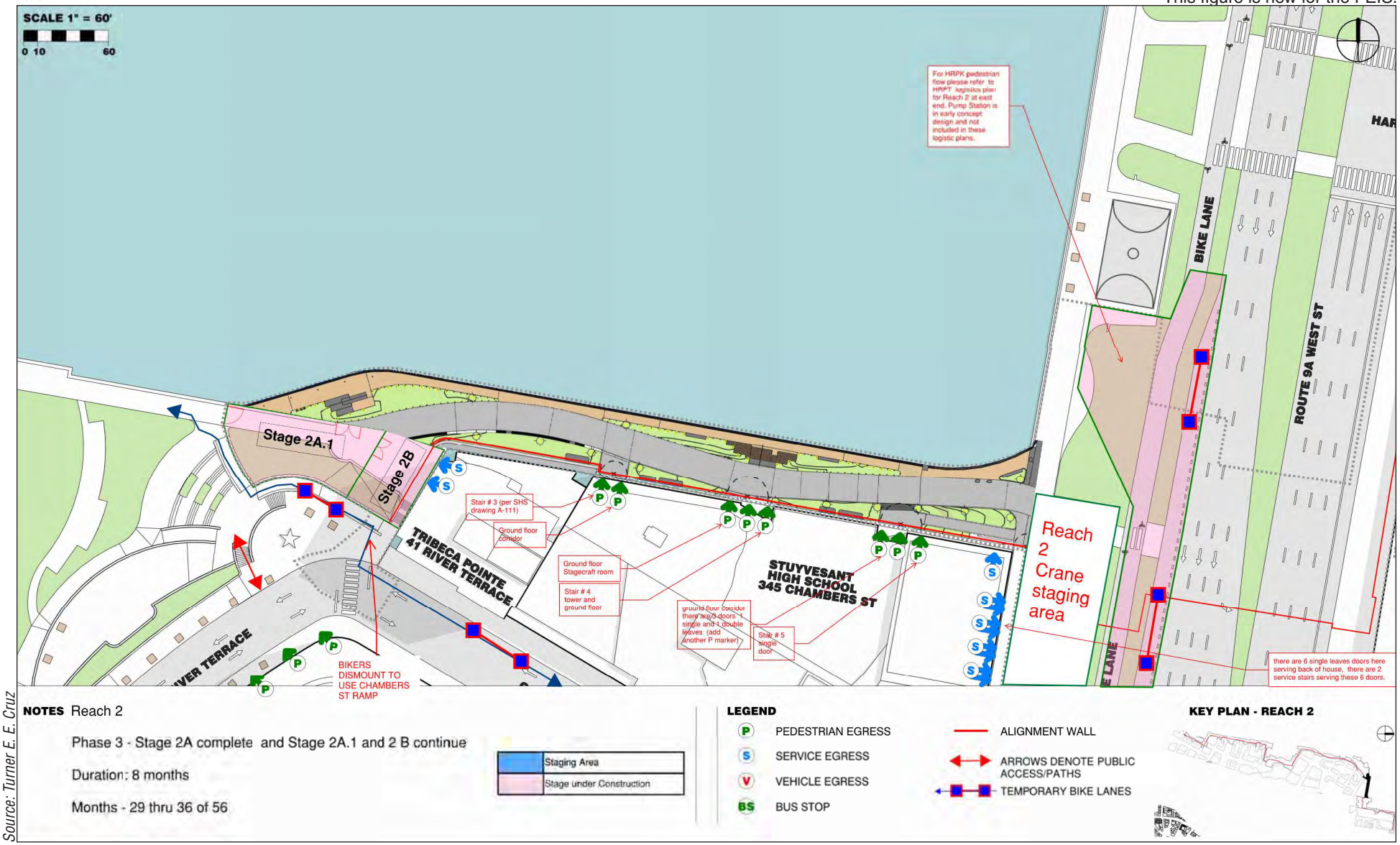


Source: Turner E. E. Cruz

MPT Plan - Reach 2

Figure H.1-58

This figure is new for the FEIS.

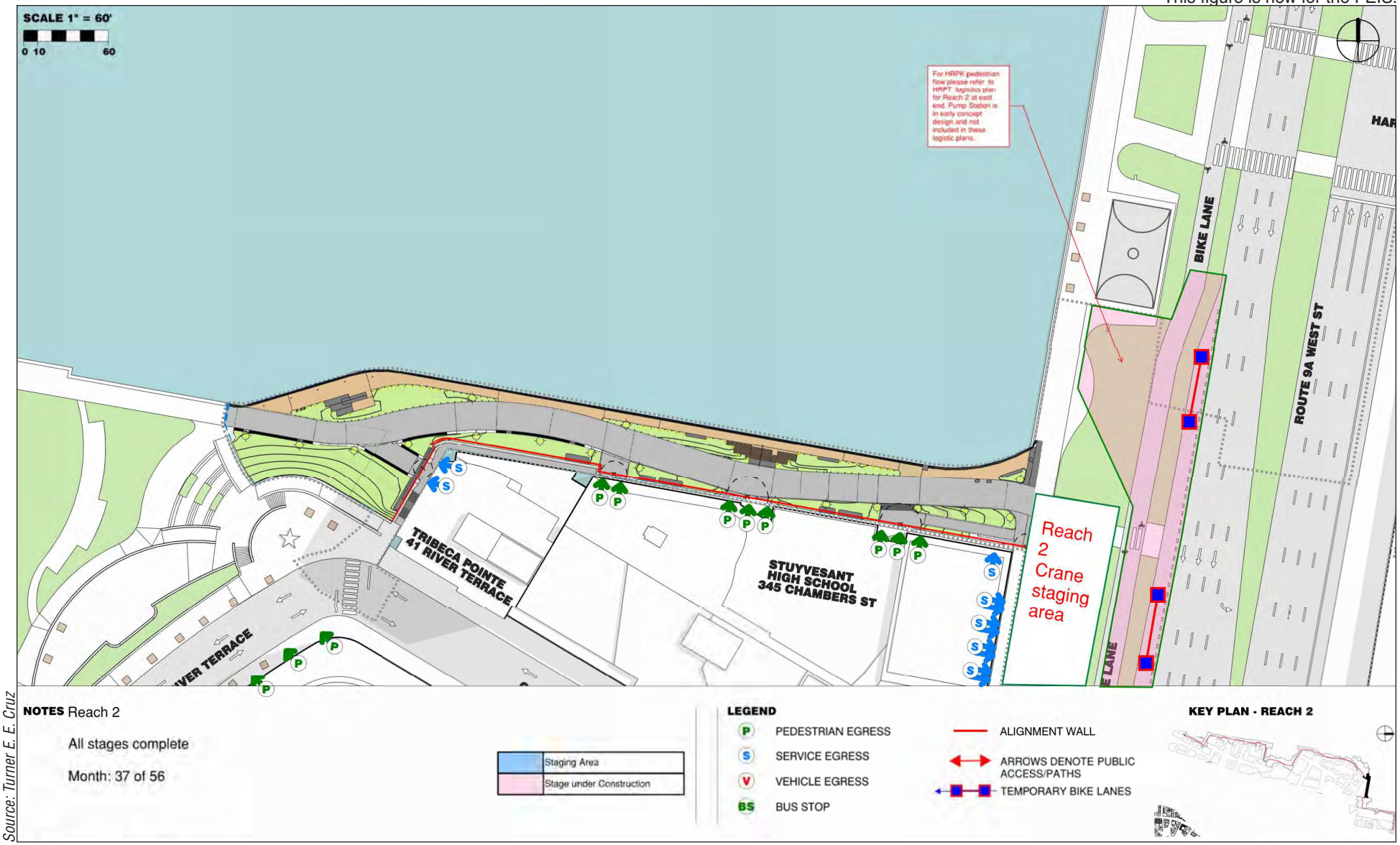


Source: Turner E. E. Cruz

MPT Plan - Reach 2

Figure H.1-59

This figure is new for the FEIS.



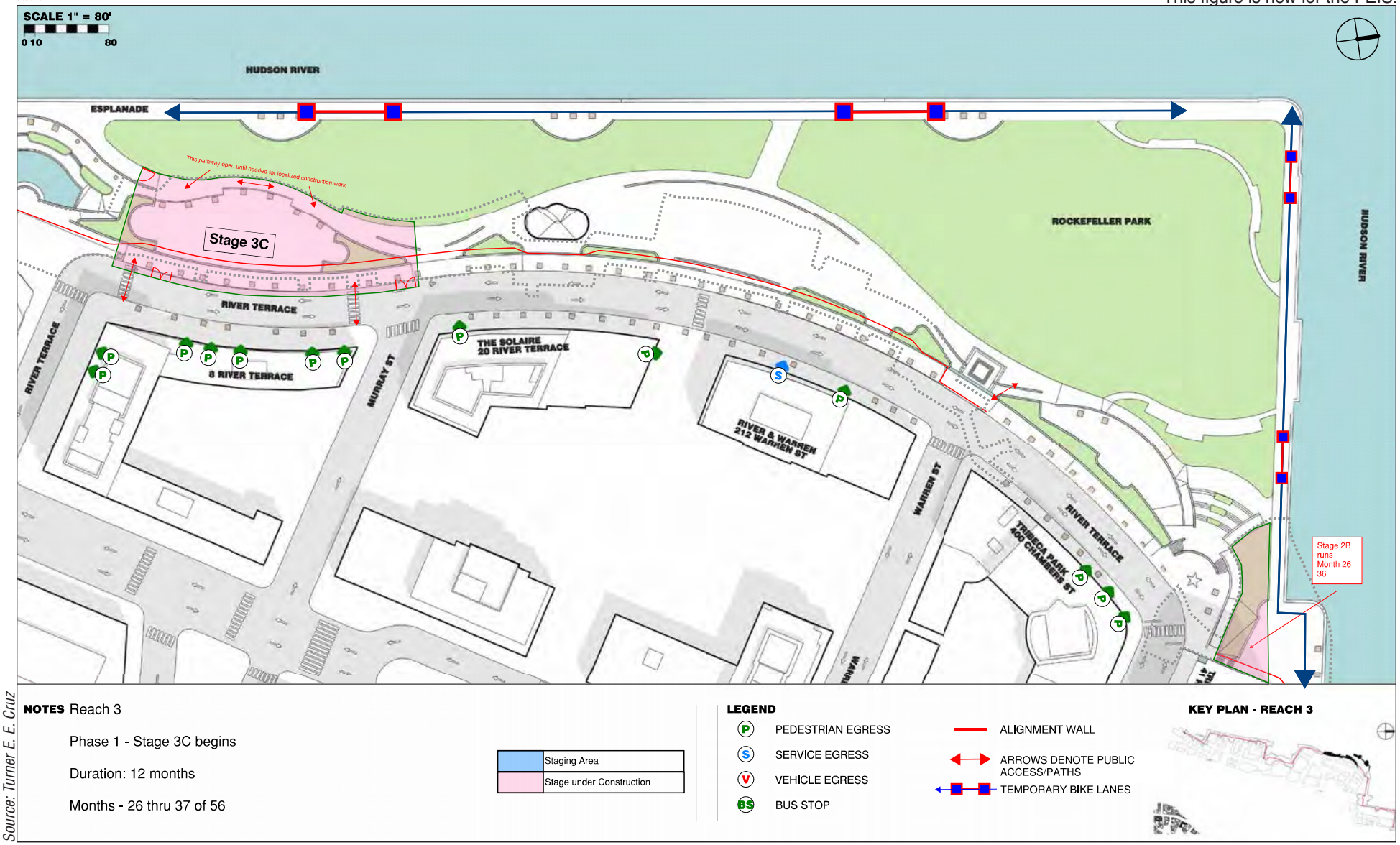
Source: Turner E. E. Cruz

MPT Plan - Reach 2

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-60

This figure is new for the FEIS.



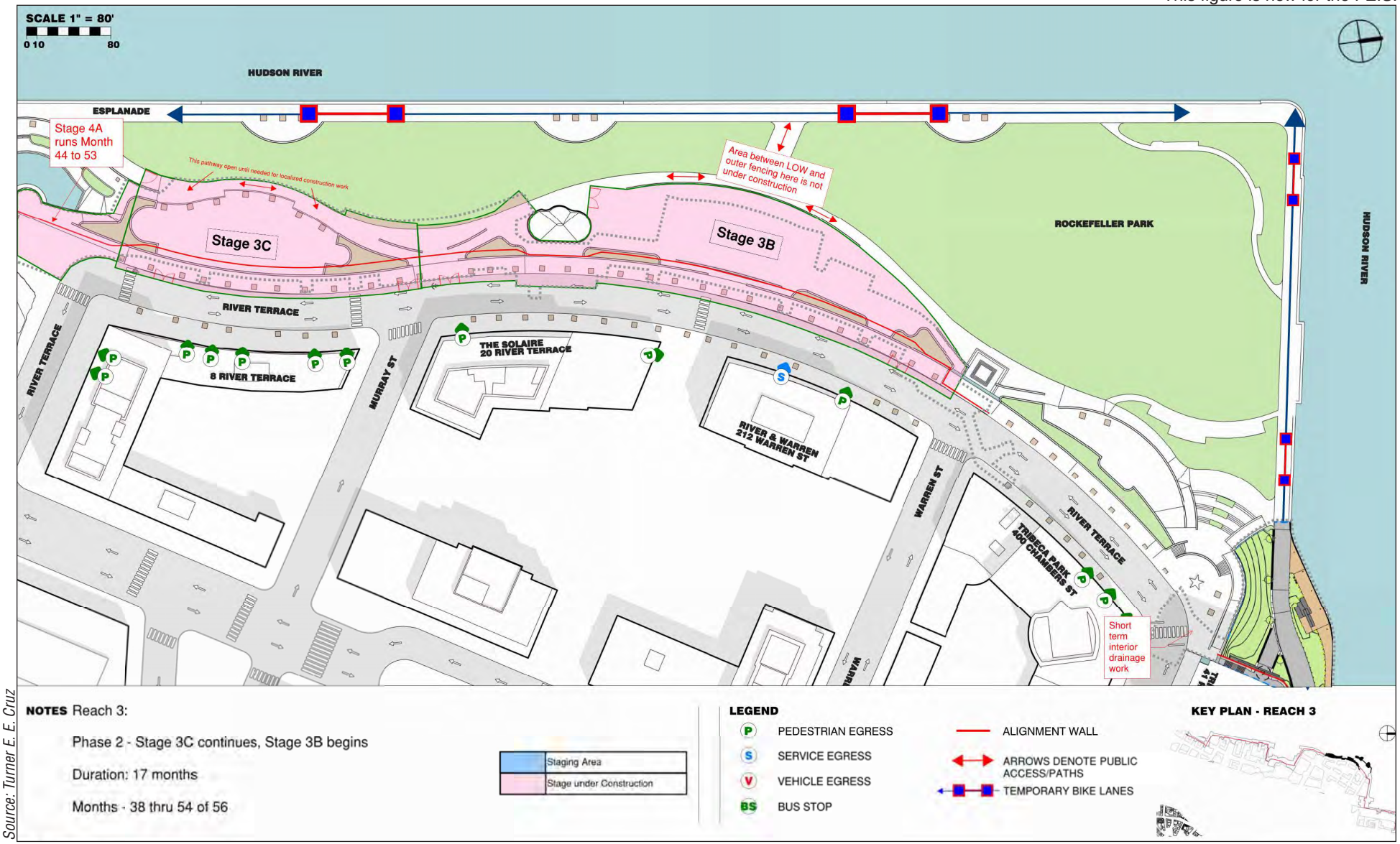
Source: Turner E. E. Cruz

MPT Plan - Reach 3

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-61

This figure is new for the FEIS.

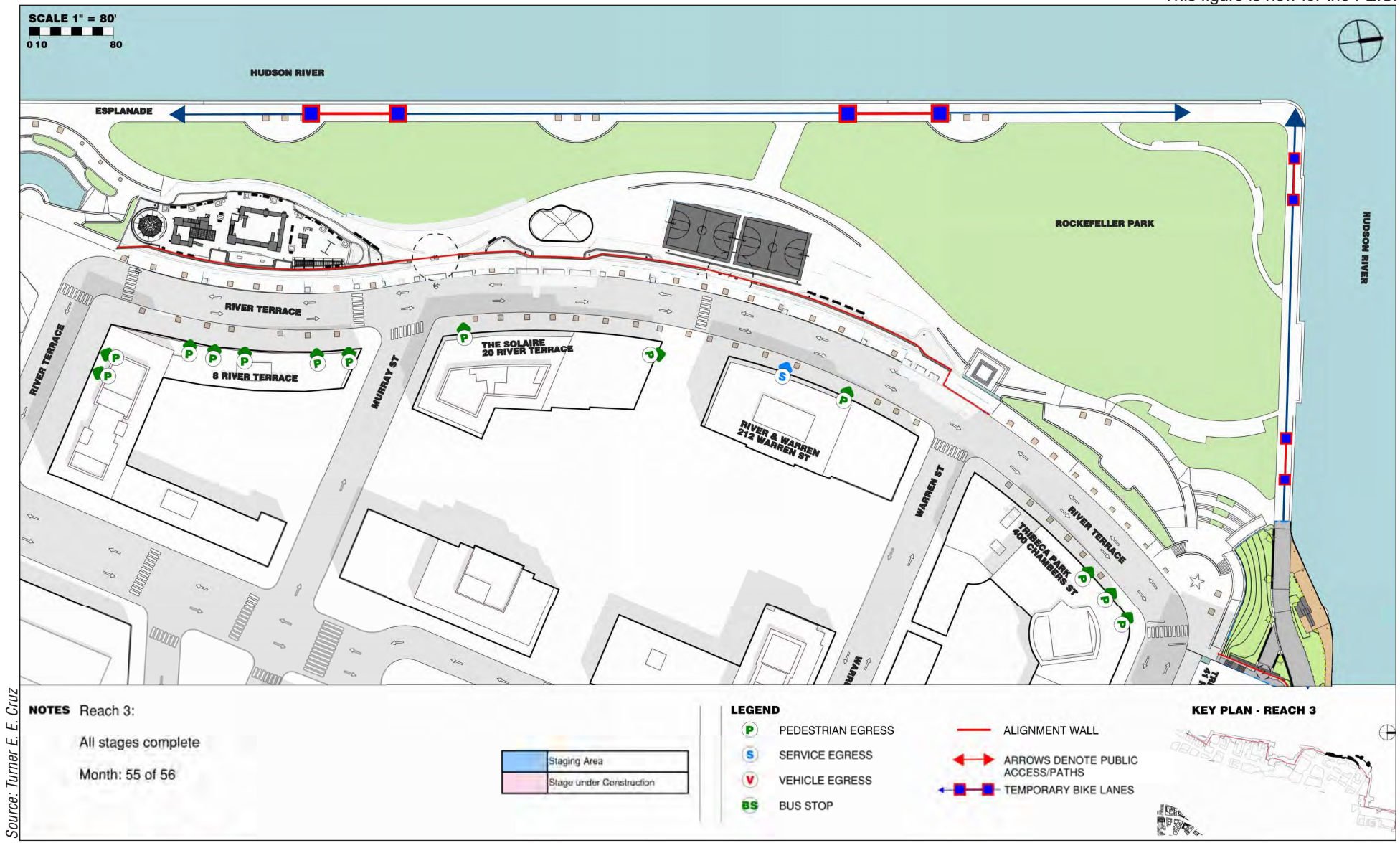


Source: Turner E. E. Cruz

MPT Plan - Reach 3

Figure H.1-62

This figure is new for the FEIS.

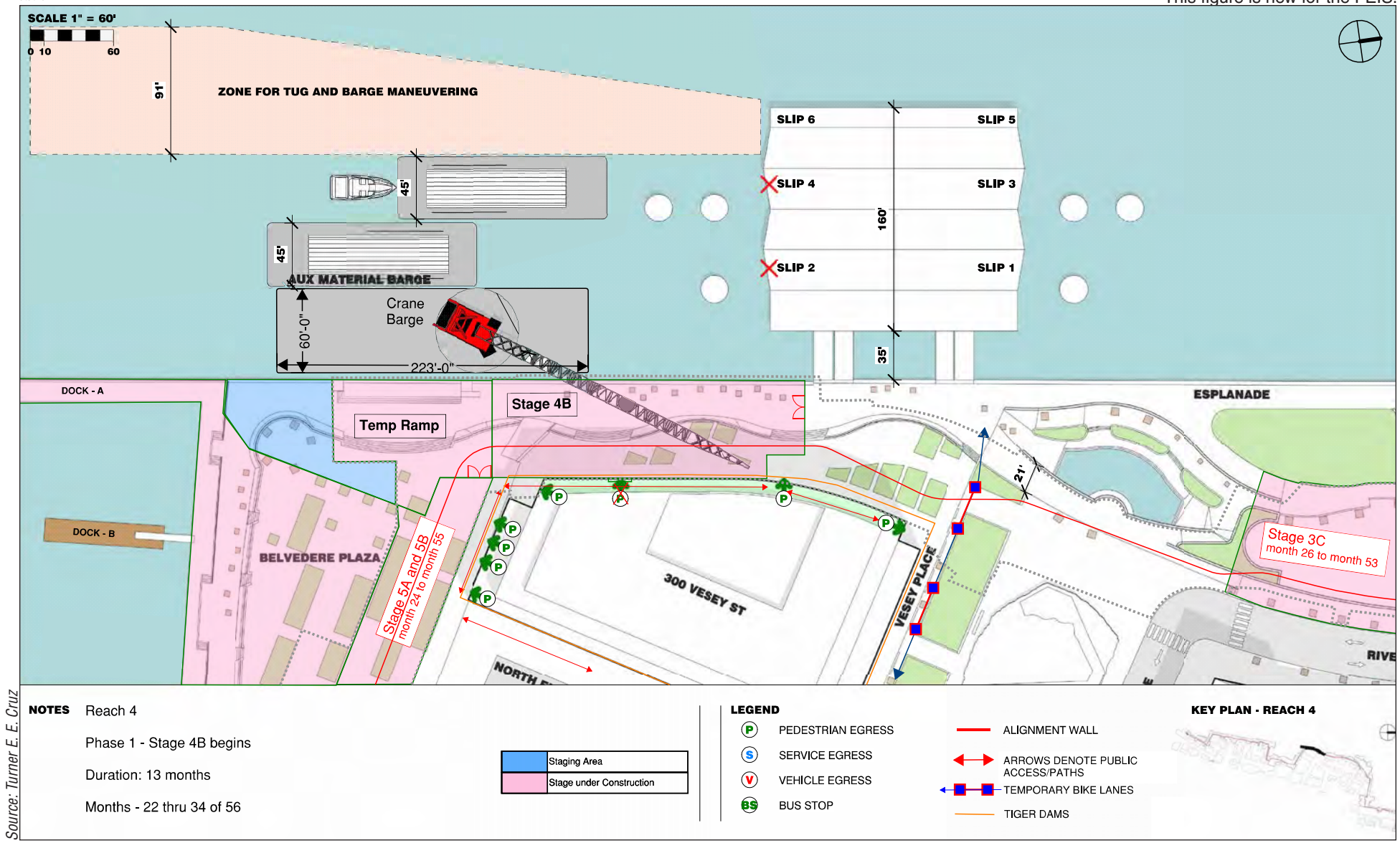


Source: Turner E. E. Cruz

MPT Plan - Reach 3

Figure H.1-63

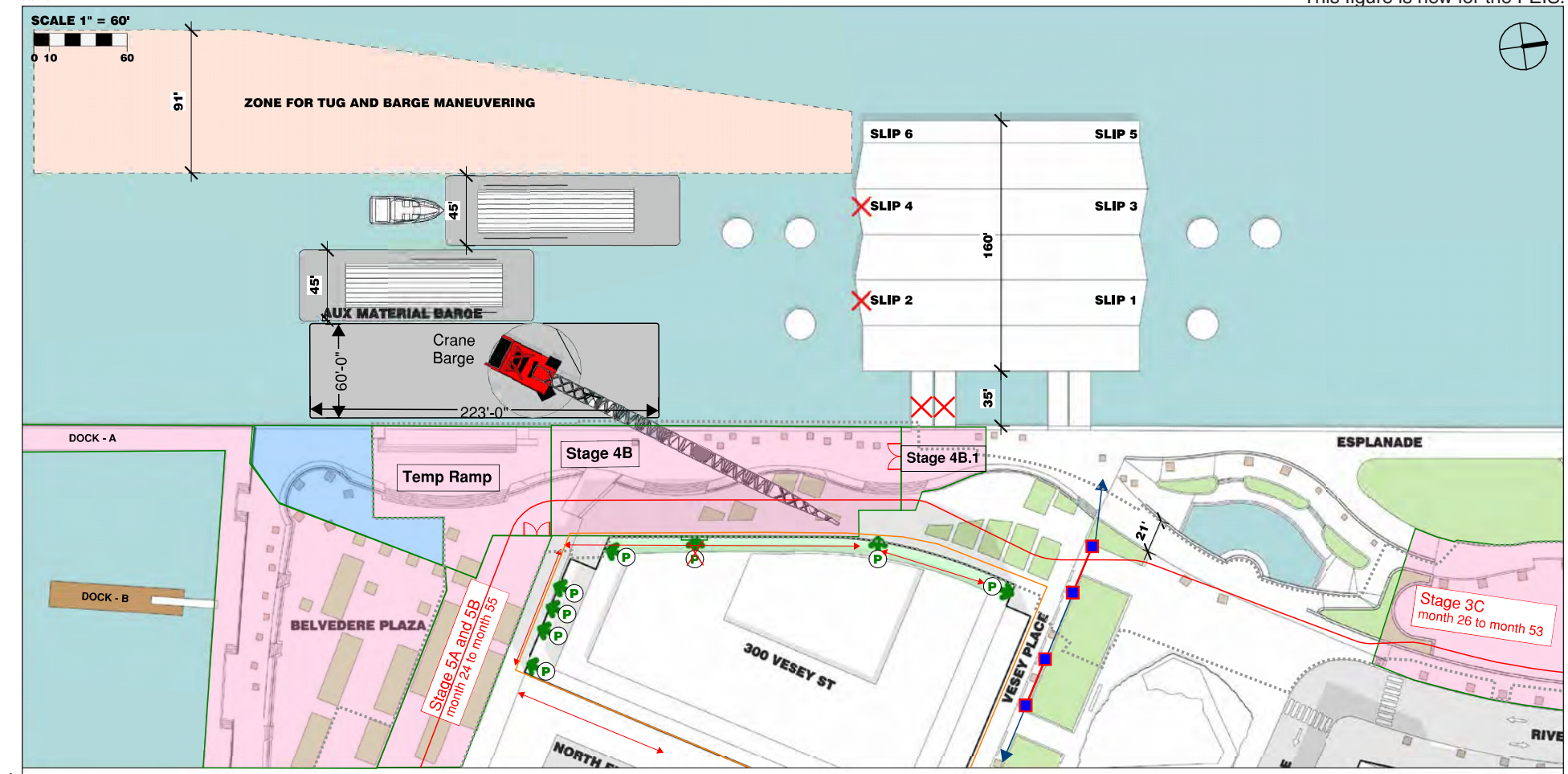
This figure is new for the FEIS.



Source: Turner E. E. Cruz

MPT Plan - Reach 4

This figure is new for the FEIS.

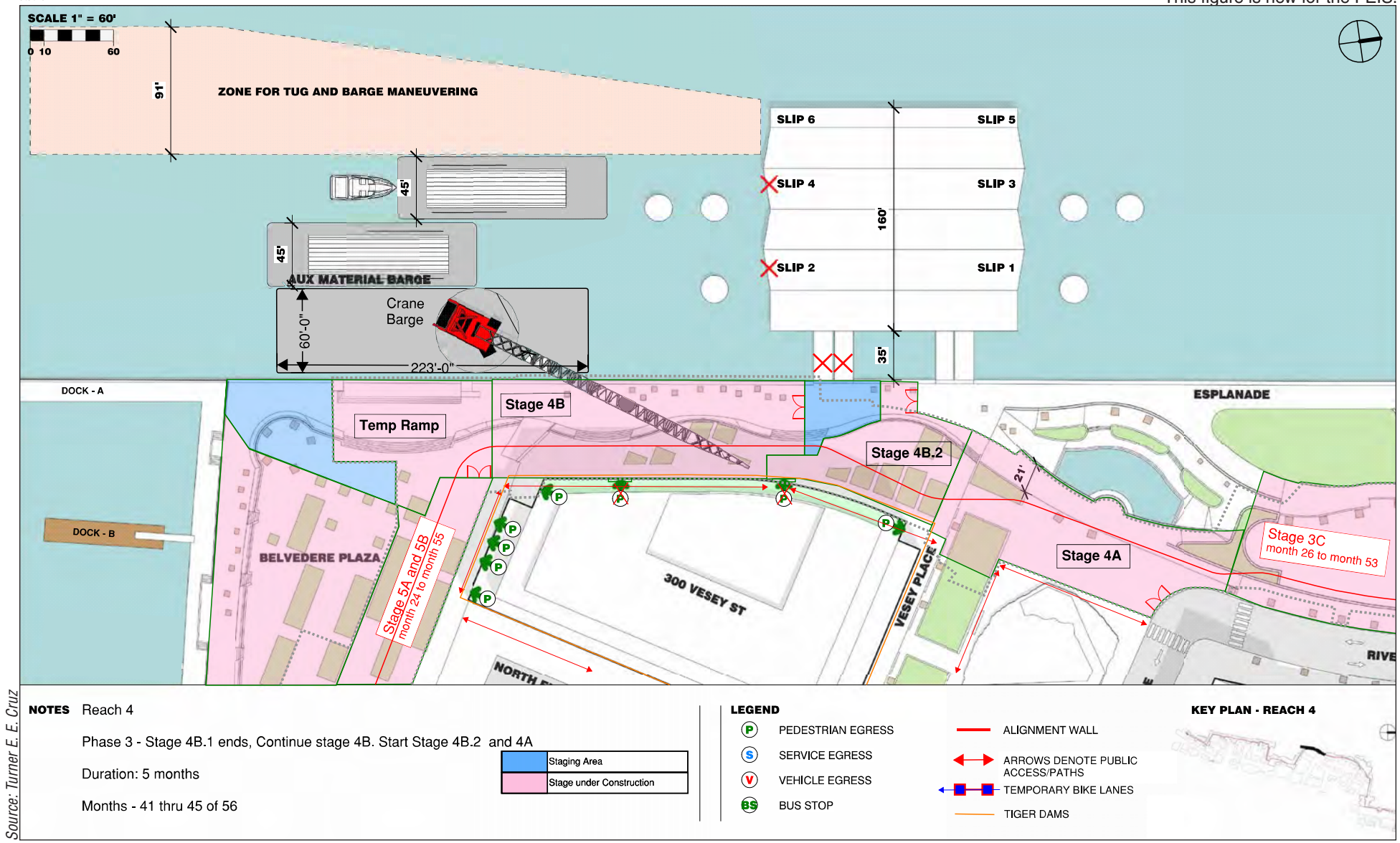


Source: Turner E. E. Cruz

MPT Plan - Reach 4

Figure H.1-65

This figure is new for the FEIS.

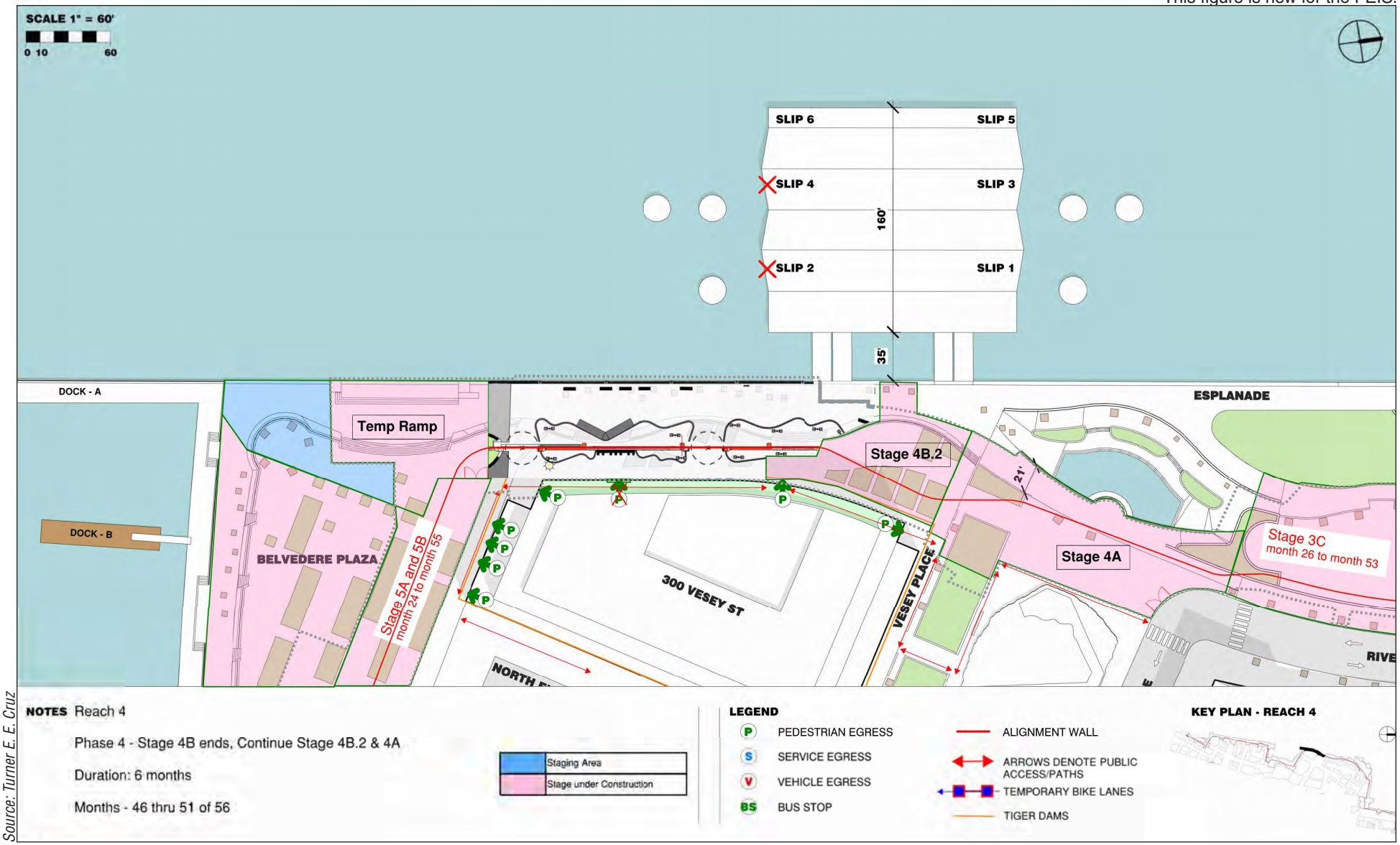


Source: Turner E. E. Cruz

MPT Plan - Reach 4

Figure H.1-66

This figure is new for the FEIS.

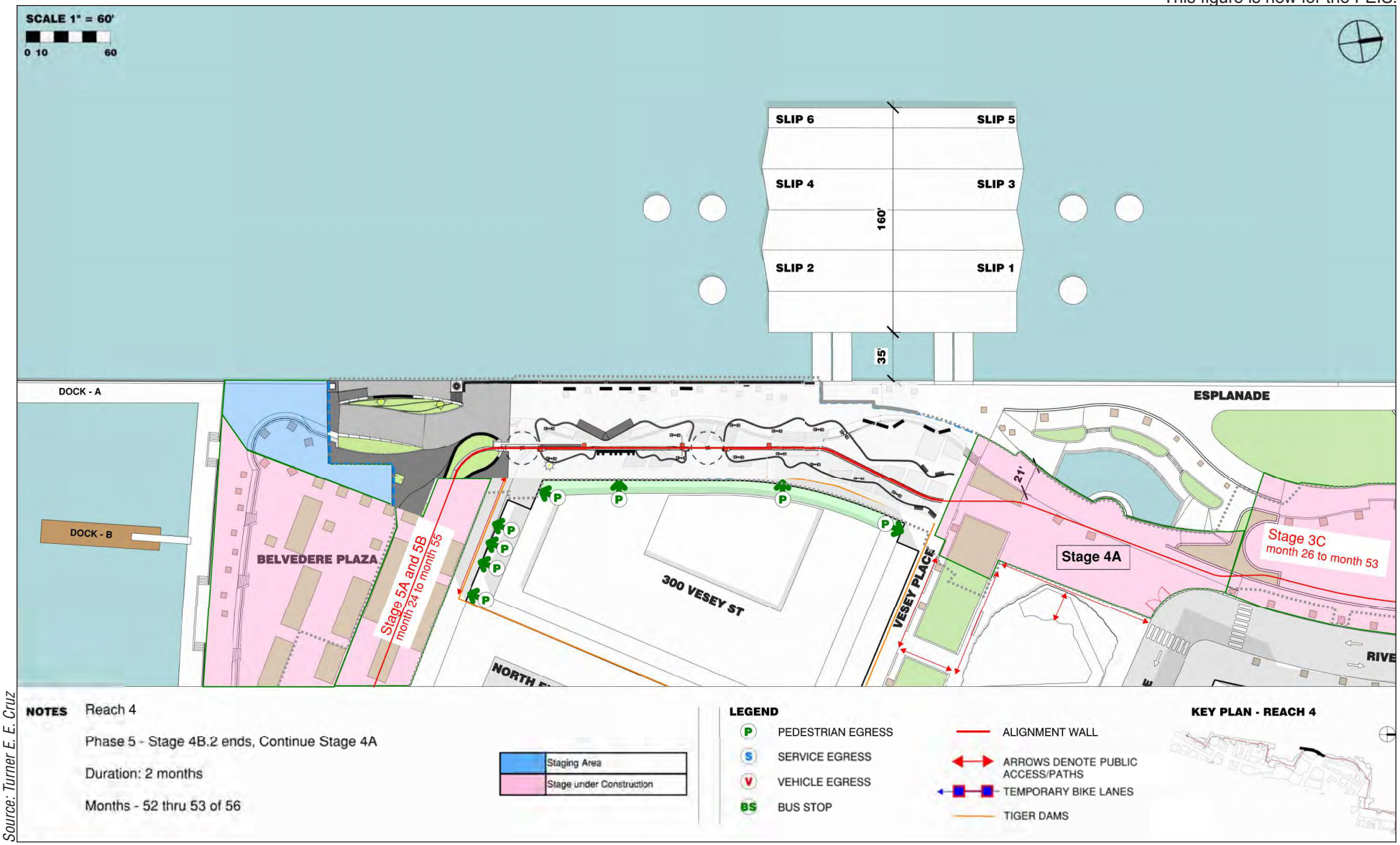


Source: Turner E. E. Cruz

MPT Plan - Reach 4

Figure H.1-67

This figure is new for the FEIS.

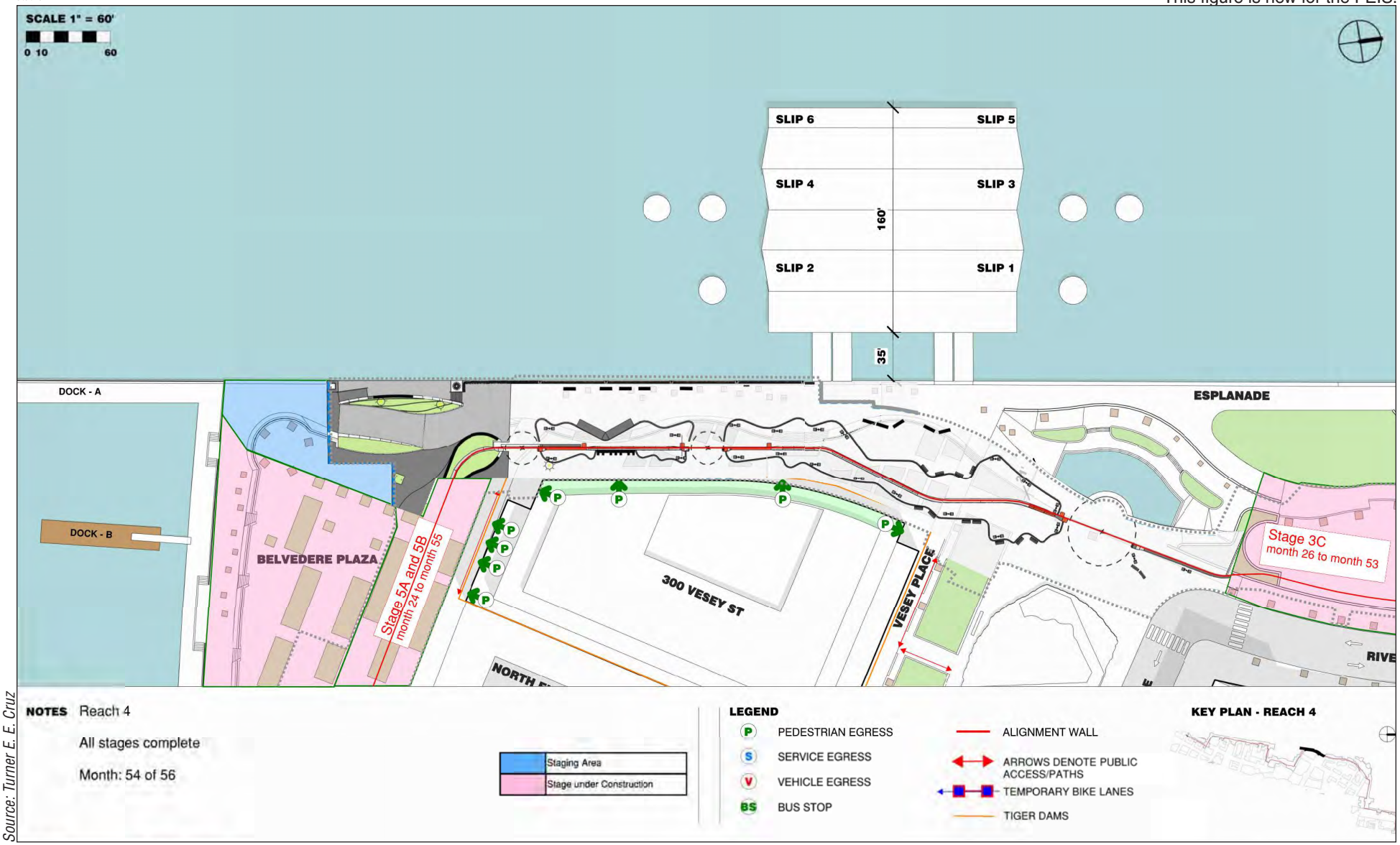


Source: Turner E. E. Cruz

MPT Plan - Reach 4

Figure H.1-68

This figure is new for the FEIS.

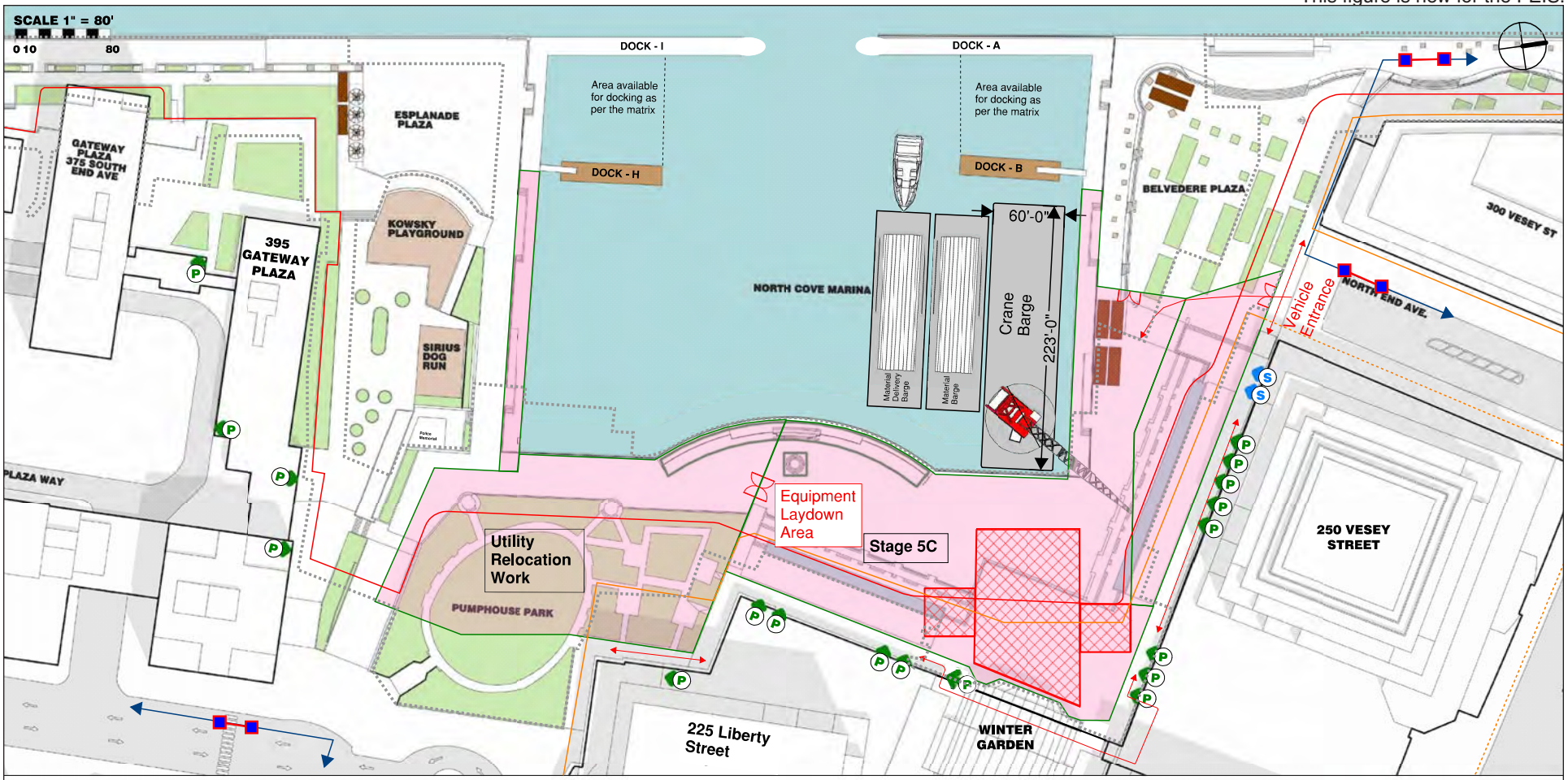


Source: Turner E. E. Cruz

MPT Plan - Reach 4

Figure H.1-69

This figure is new for the FEIS.



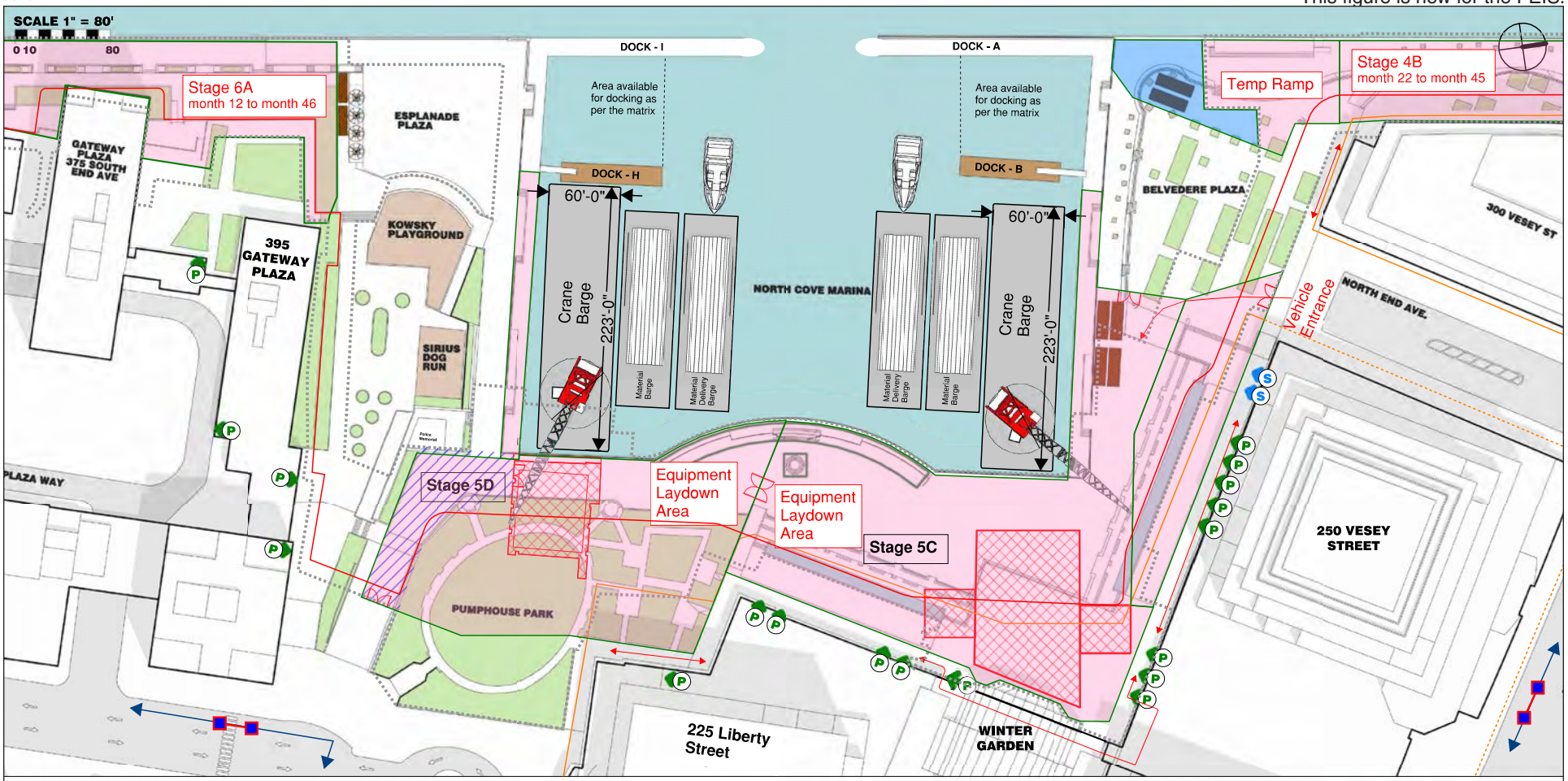
Source: Turner E. E. Cruz

MPT Plan - Reach 5

Figure H.1-70

5.5.25

This figure is new for the FEIS.



NOTES Reach 5

Phase 2 - Continue 5C waterside and 5C landside, Start 5D waterside, 5D landside

Duration: 17 months

Months - 7 thru 23 of 56

	Staging Area
	Stage under Construction

LEGEND

- (P) PEDESTRIAN EGRESS
- (S) SERVICE EGRESS
- (V) VEHICLE EGRESS
- (BS) BUS STOP
- ALIGNMENT WALL
- ARROWS DENOTE PUBLIC ACCESS/PATHS
- TEMPORARY BIKE LANES
- TIGER DAMS

KEY PLAN - REACH 5



Source: Turner E. E. Cruz

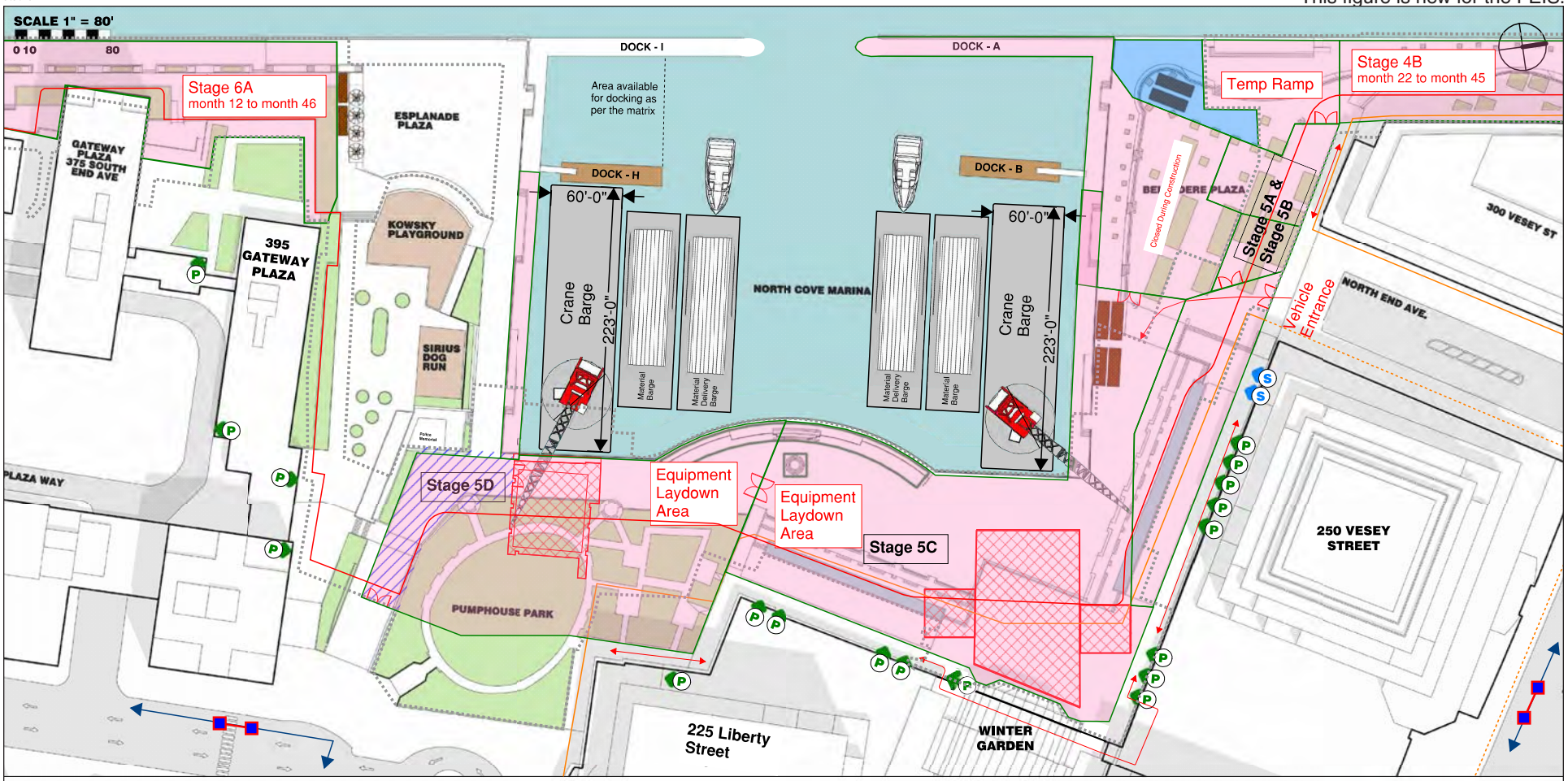
MPT Plan - Reach 5

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-71

5.5.25

This figure is new for the FEIS.



NOTES

Reach 5

Phase 3 - Continue Stage 5C waterside, 5C landside, 5D waterside, 5D landside, Start stages 5A and 5B.

Duration: 7 months

Months - 24 thru 30 of 56

	Staging Area
	Stage under Construction

LEGEND

- (P) PEDESTRIAN EGRESS
- (S) SERVICE EGRESS
- (V) VEHICLE EGRESS
- (BS) BUS STOP
- ALIGNMENT WALL
- ARROWS DENOTE PUBLIC ACCESS/PATHS
- TEMPORARY BIKE LANES
- TIGER DAMS

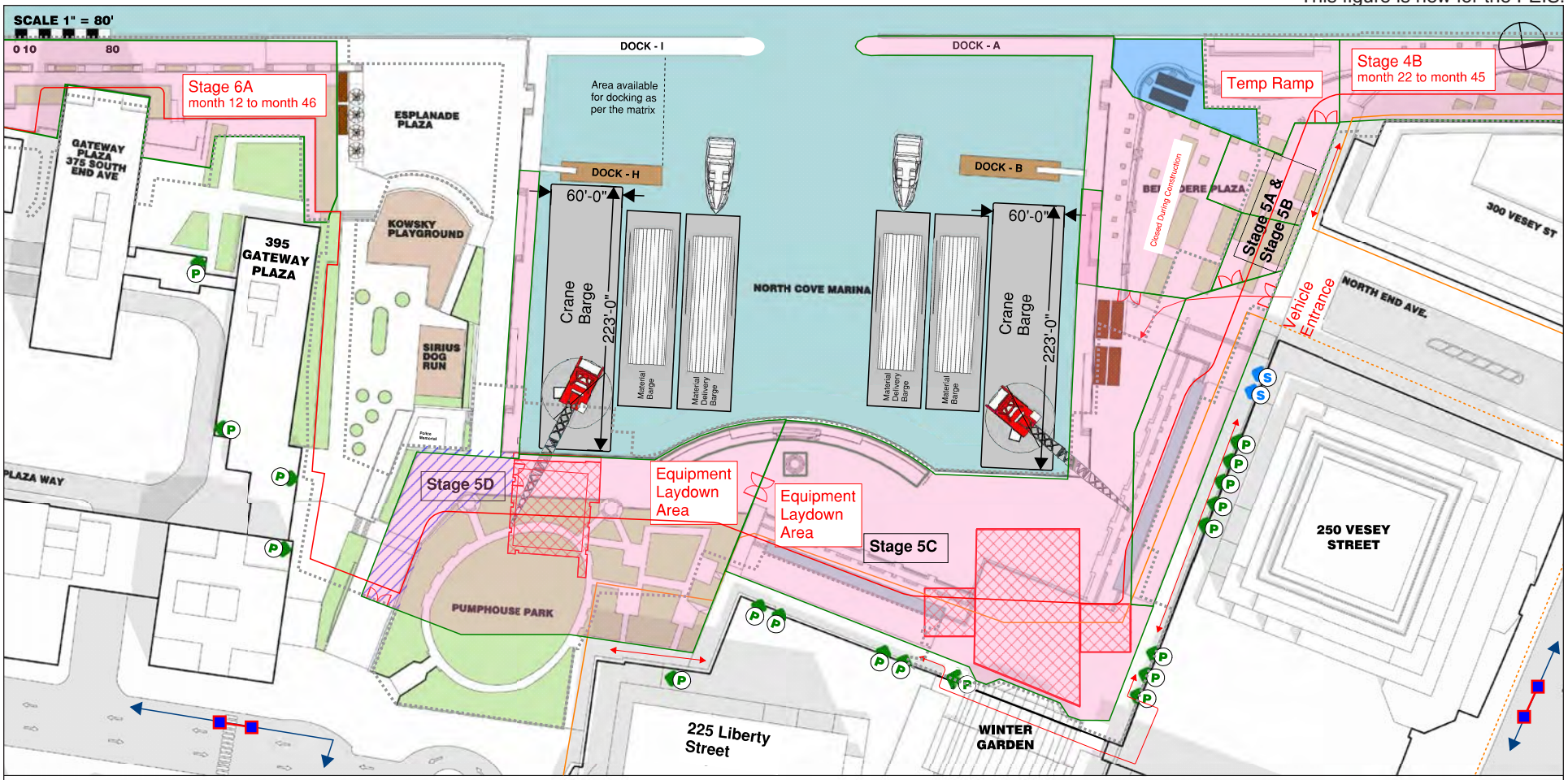
KEY PLAN - REACH 5



Source: Turner E. E. Cruz

MPT Plan - Reach 5

This figure is new for the FEIS.



NOTES

Reach 5

Phase 3 - Continue Stage 5C waterside, 5C landside, 5D waterside, 5D landside, Start stages 5A and 5B.

Duration: 7 months

Months - 24 thru 30 of 56

	Staging Area
	Stage under Construction

LEGEND

- (P) PEDESTRIAN EGRESS
- (S) SERVICE EGRESS
- (V) VEHICLE EGRESS
- (BS) BUS STOP
- ALIGNMENT WALL
- ARROWS DENOTE PUBLIC ACCESS/PATHS
- TEMPORARY BIKE LANES
- TIGER DAMS

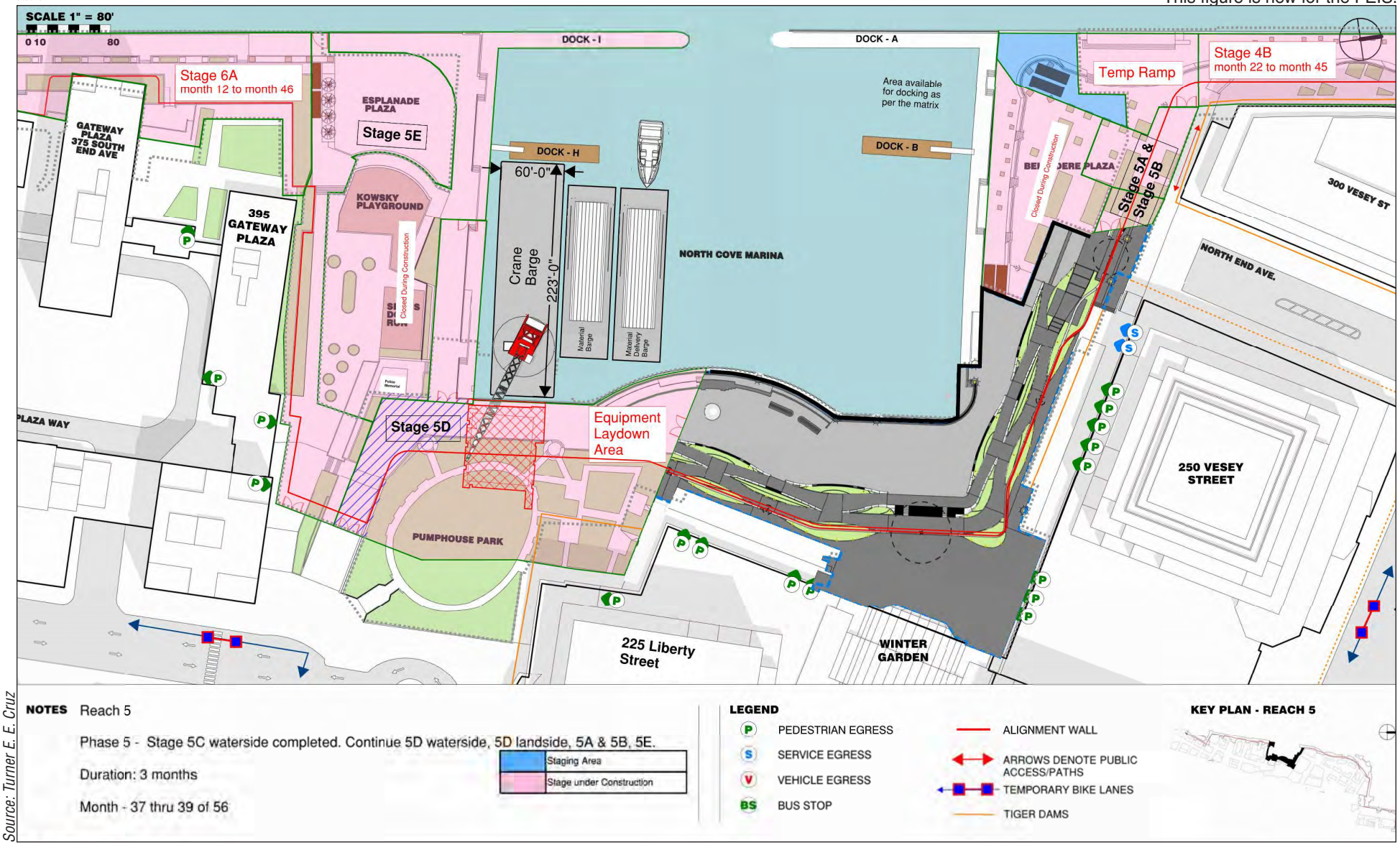
KEY PLAN - REACH 5

Source: Turner E. E. Cruz

MPT Plan - Reach 5

5.5.25

This figure is new for the FEIS.



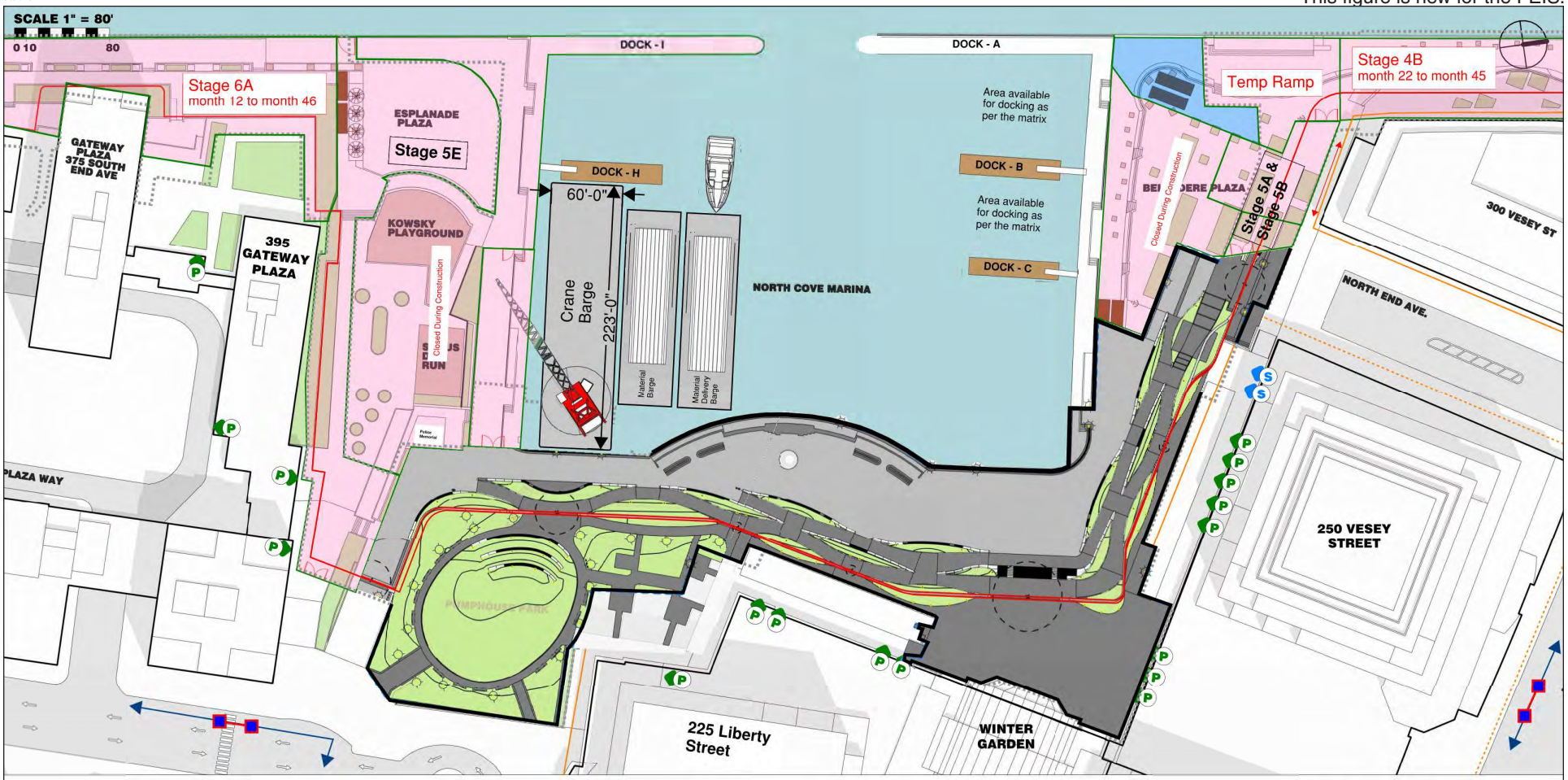
Source: Turner E. E. Cruz

MPT Plan - Reach 5

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-74

This figure is new for the FEIS.

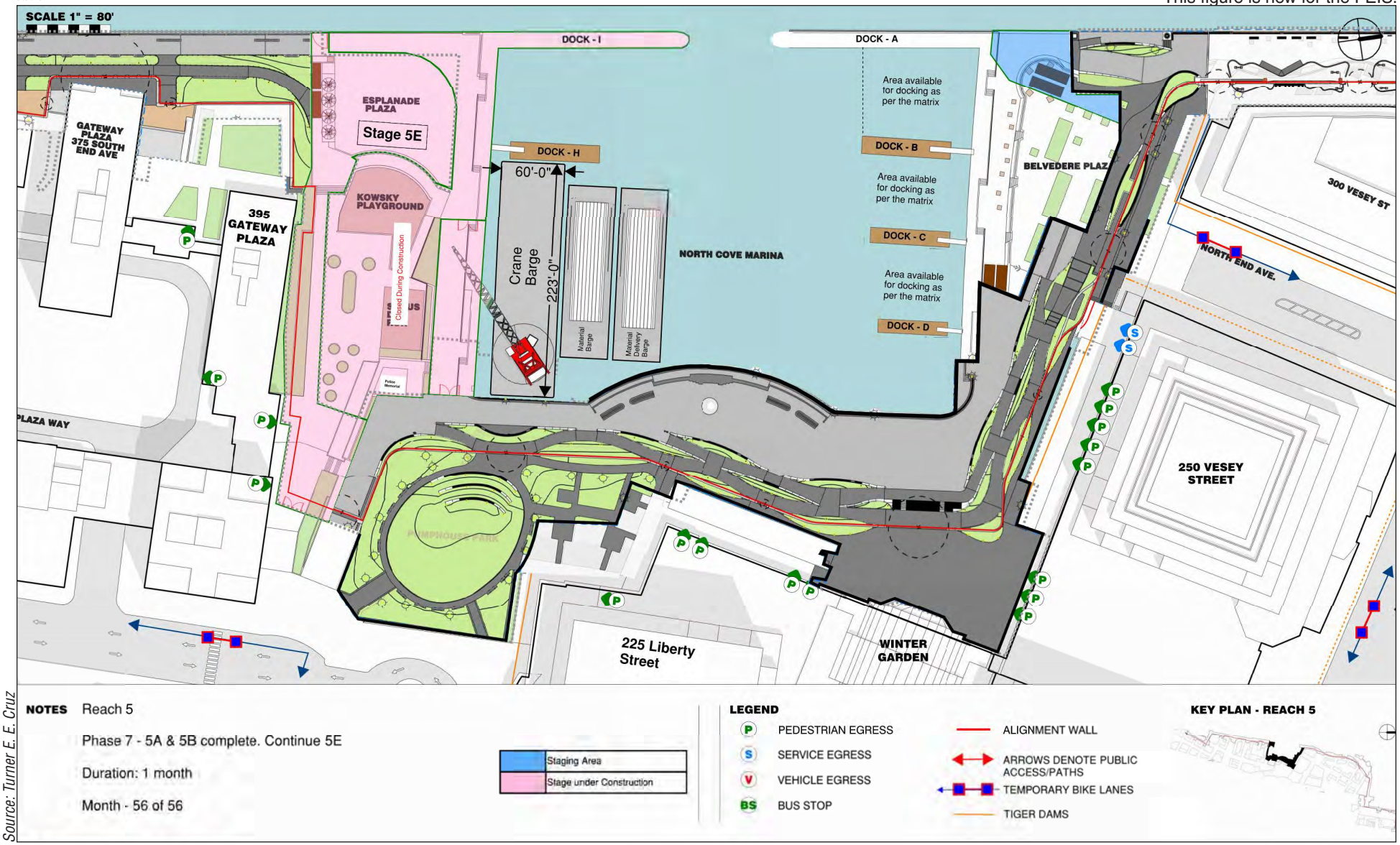


Source: Turner E. E. Cruz

MPT Plan - Reach 5

Figure H.1-75

This figure is new for the FEIS.

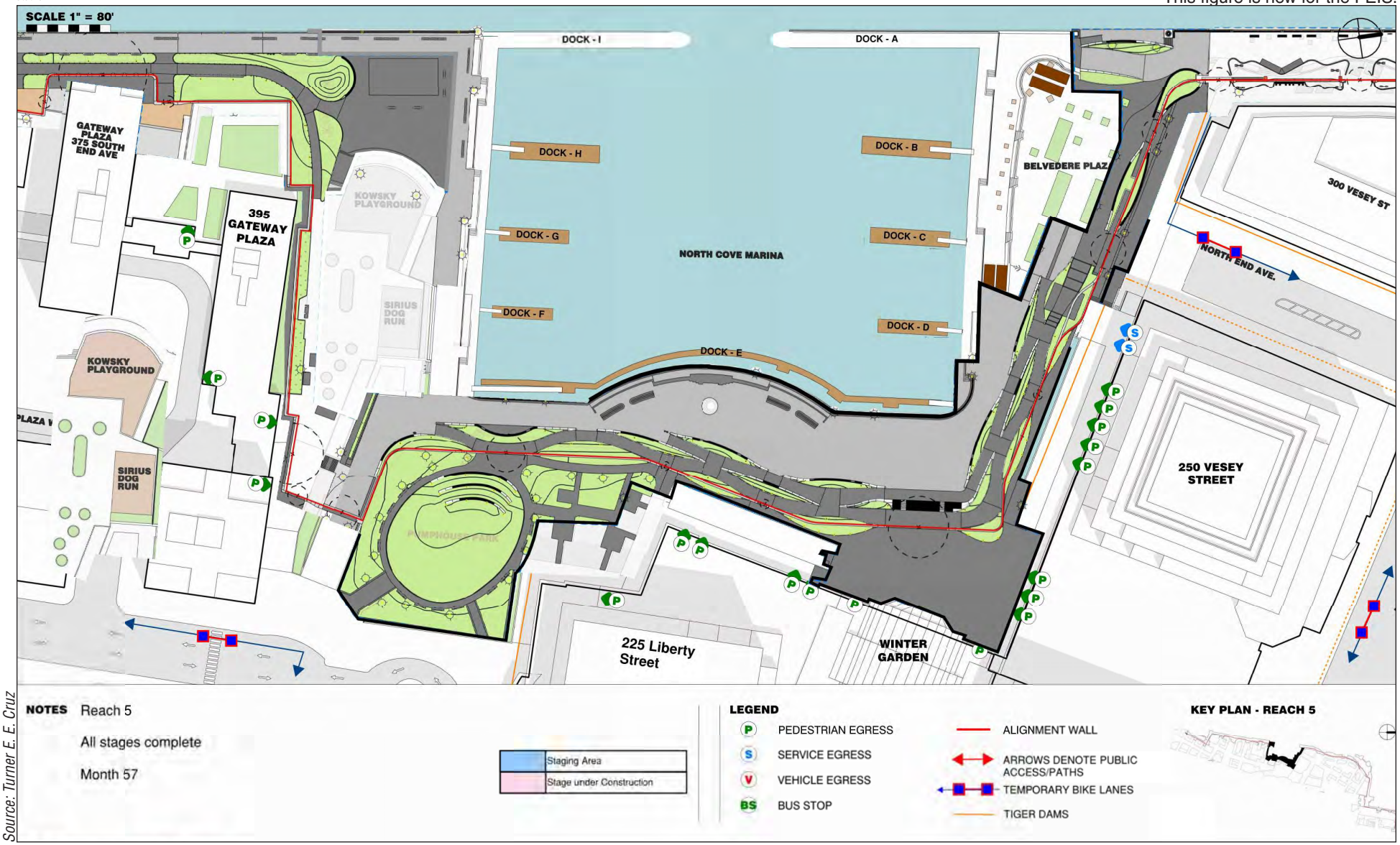


Source: Turner E. E. Cruz

MPT Plan - Reach 5

Figure H.1-76

This figure is new for the FEIS.

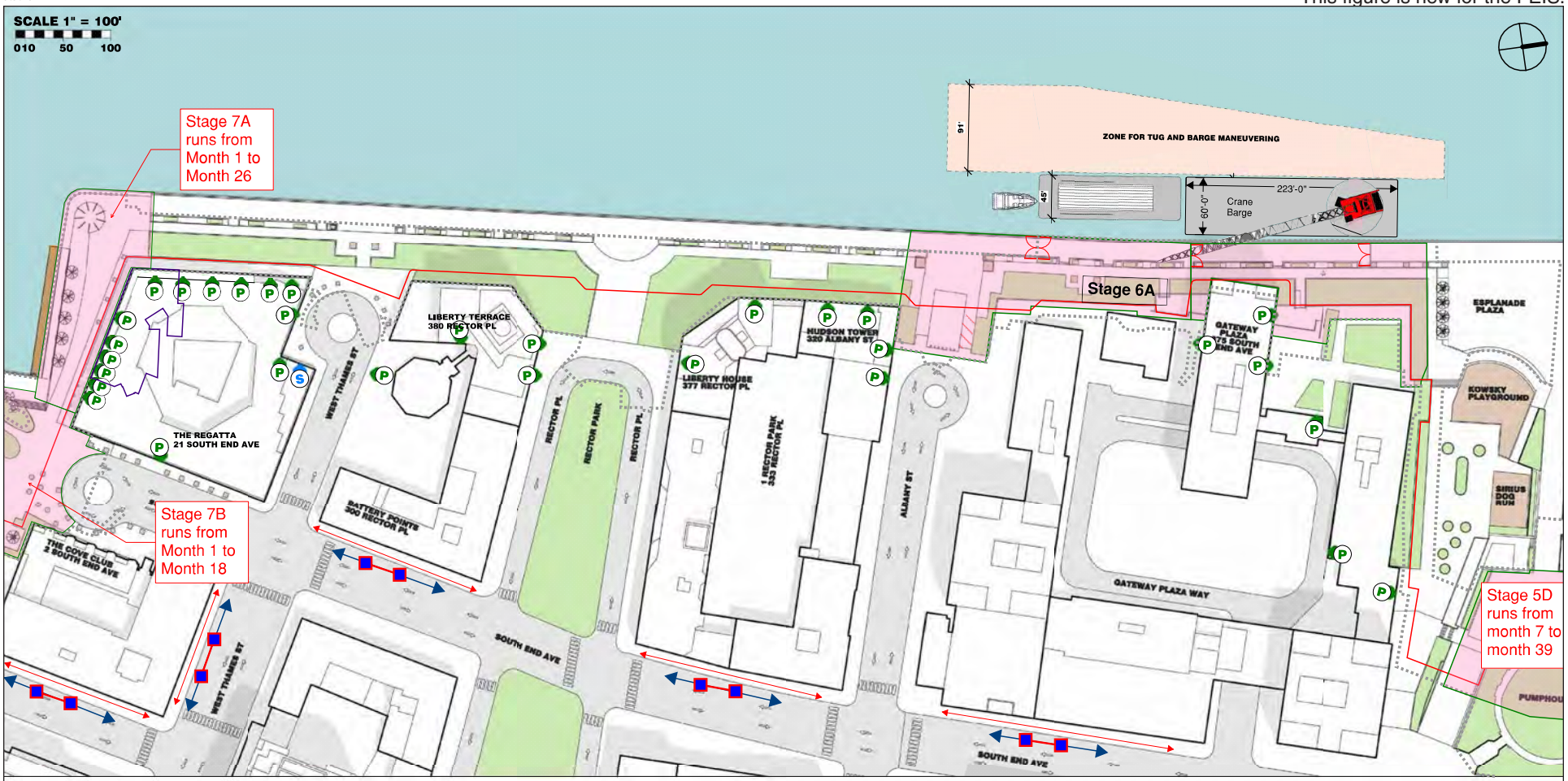


Source: Turner E. E. Cruz

MPT Plan - Reach 5

Figure H.1-77

This figure is new for the FEIS.



NOTES Reach 6

Phase 1 - Start Stage 6A

Duration: 14 months

Months - 12 thru 25 of 56

Staging Area

Stage under Construction

LEGEND

- (P) PEDESTRIAN EGRESS
- (S) SERVICE EGRESS
- (V) VEHICLE EGRESS
- BS BUS STOP
- ALIGNMENT WALL
- ARROWS DENOTE PUBLIC ACCESS/PATHS
- TEMPORARY BIKE LANES

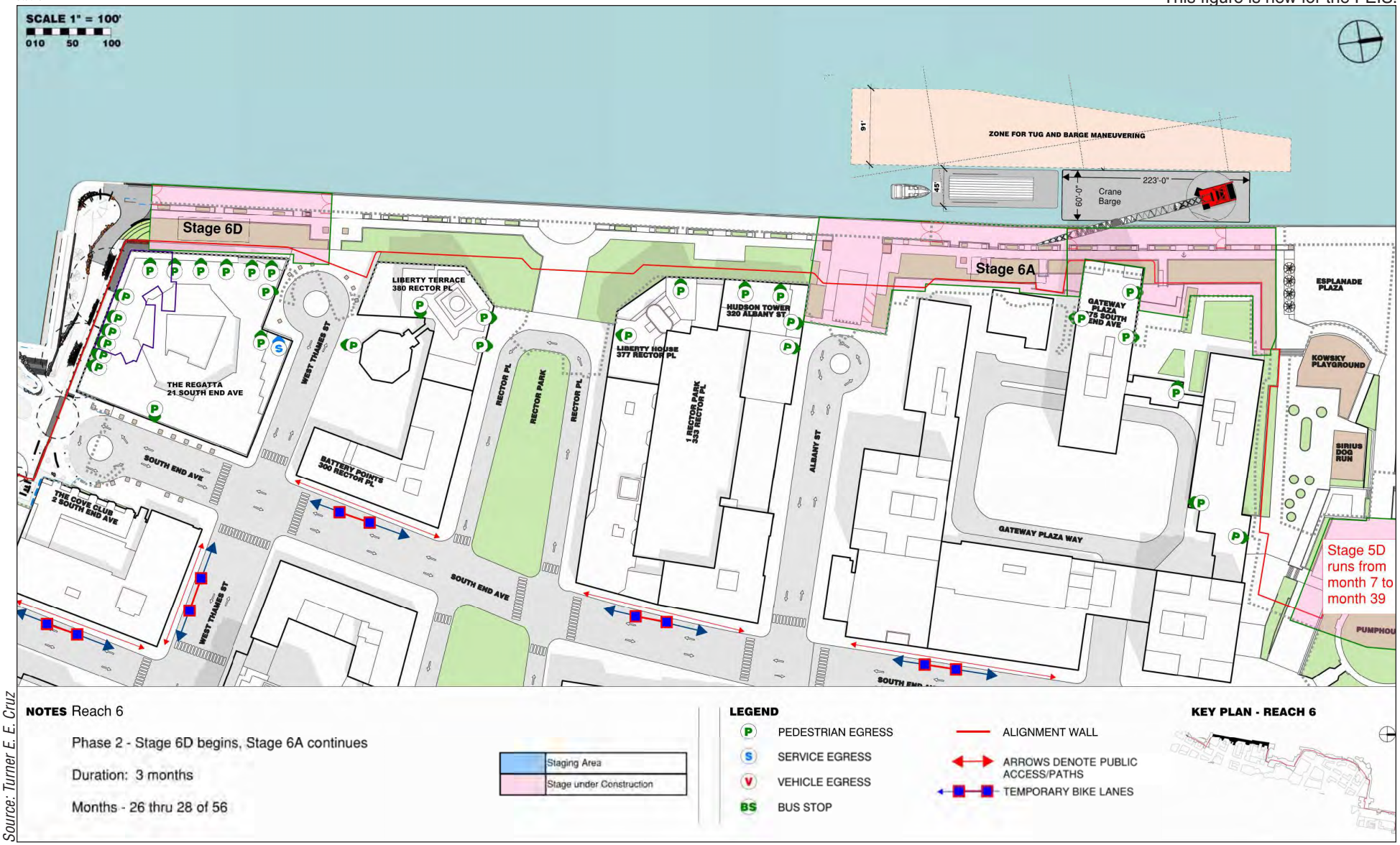
KEY PLAN - REACH 6



Source: Turner E. E. Cruz

MPT Plan - Reach 6

This figure is new for the FEIS.

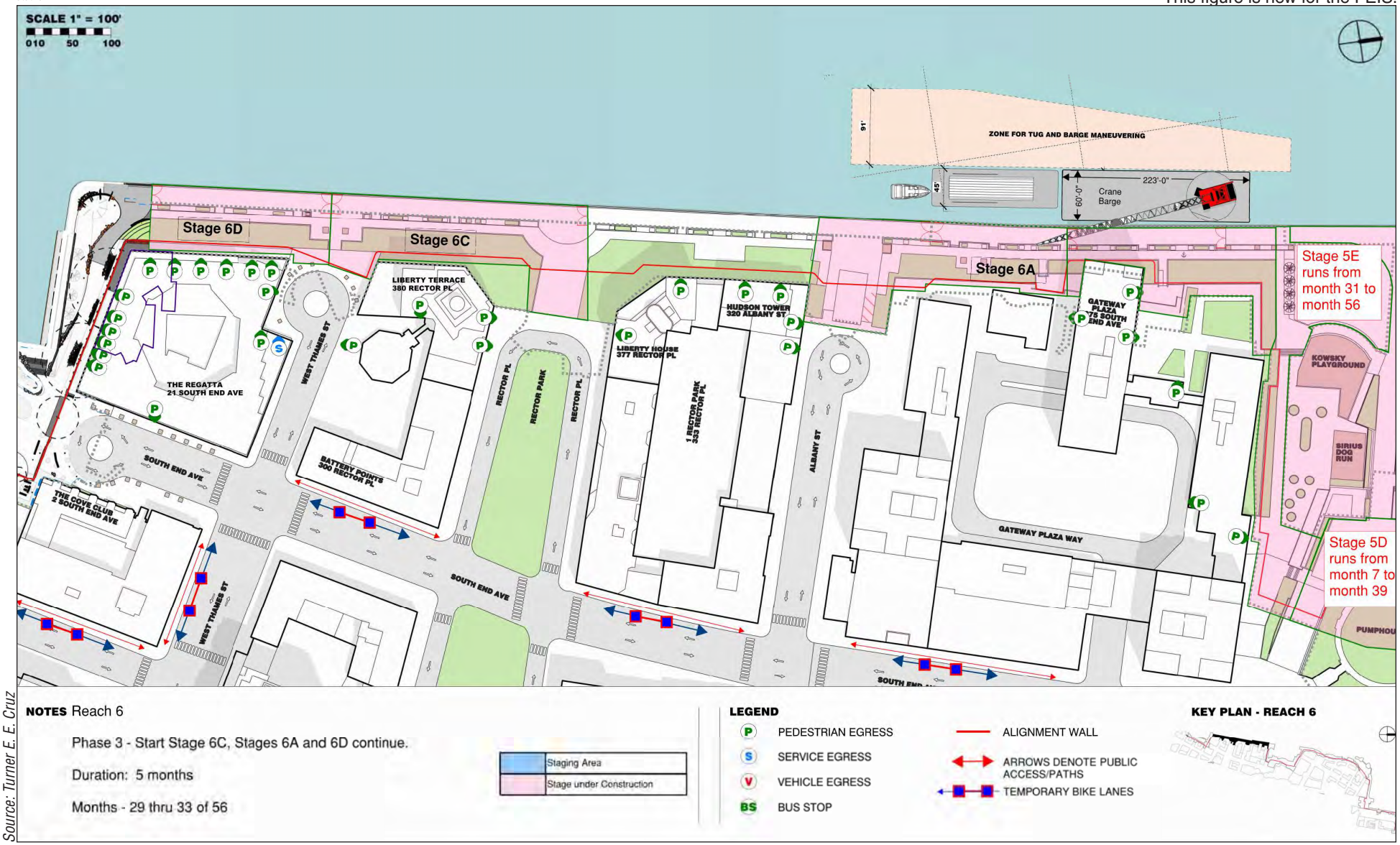


Source: Turner E. E. Cruz

MPT Plan - Reach 6

Figure H.1-79

This figure is new for the FEIS.

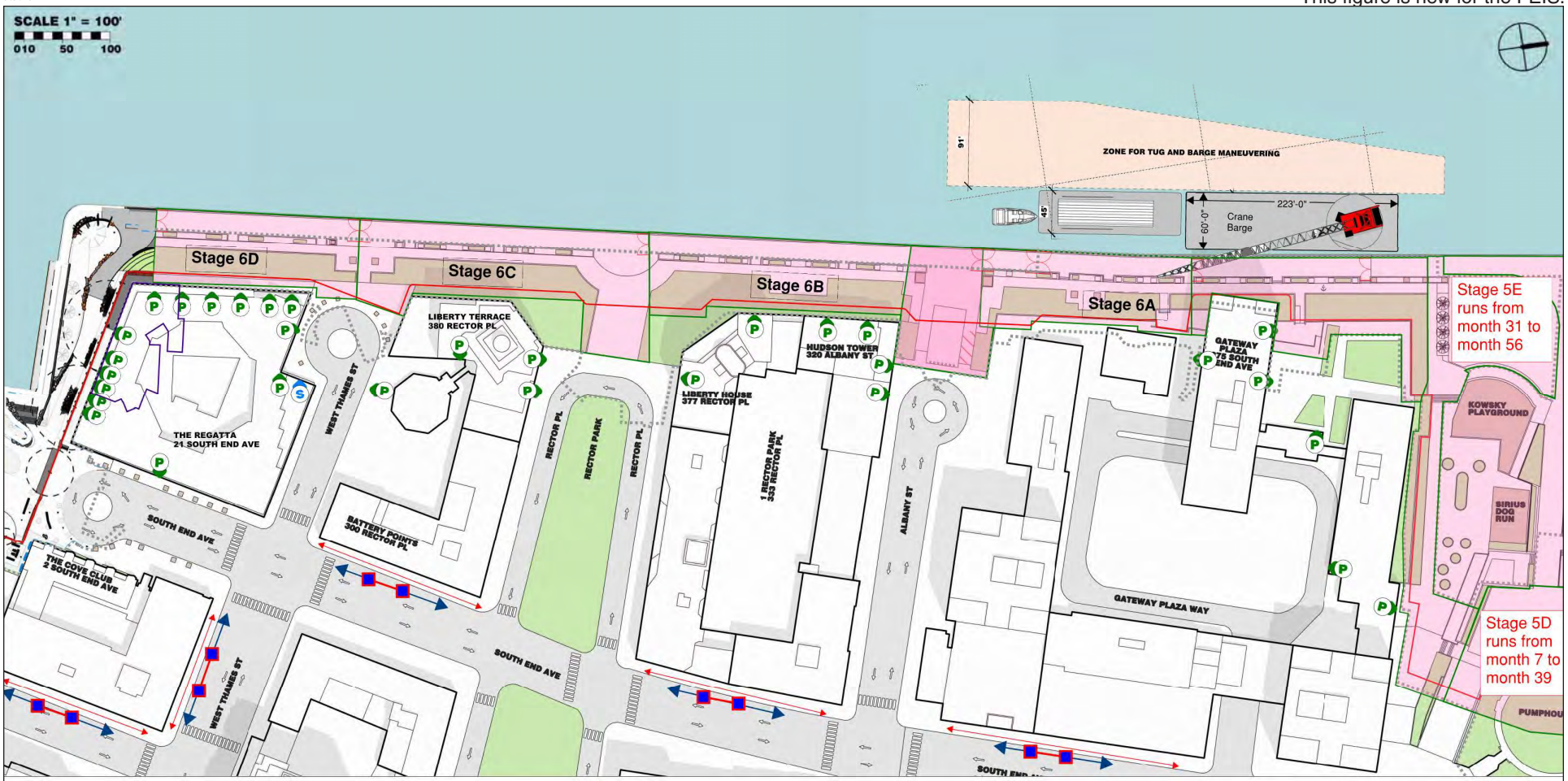


Source: Turner E. E. Cruz

MPT Plan - Reach 6

Figure H.1-80

This figure is new for the FEIS.



NOTES Reach 6

Phase 4 - Start Stage 6B, Stages 6A, 6D, and 6C continue.

Duration: 5 months

Months - 34 thru 38 of 56

Staging Area

Stage under Construction

LEGEND

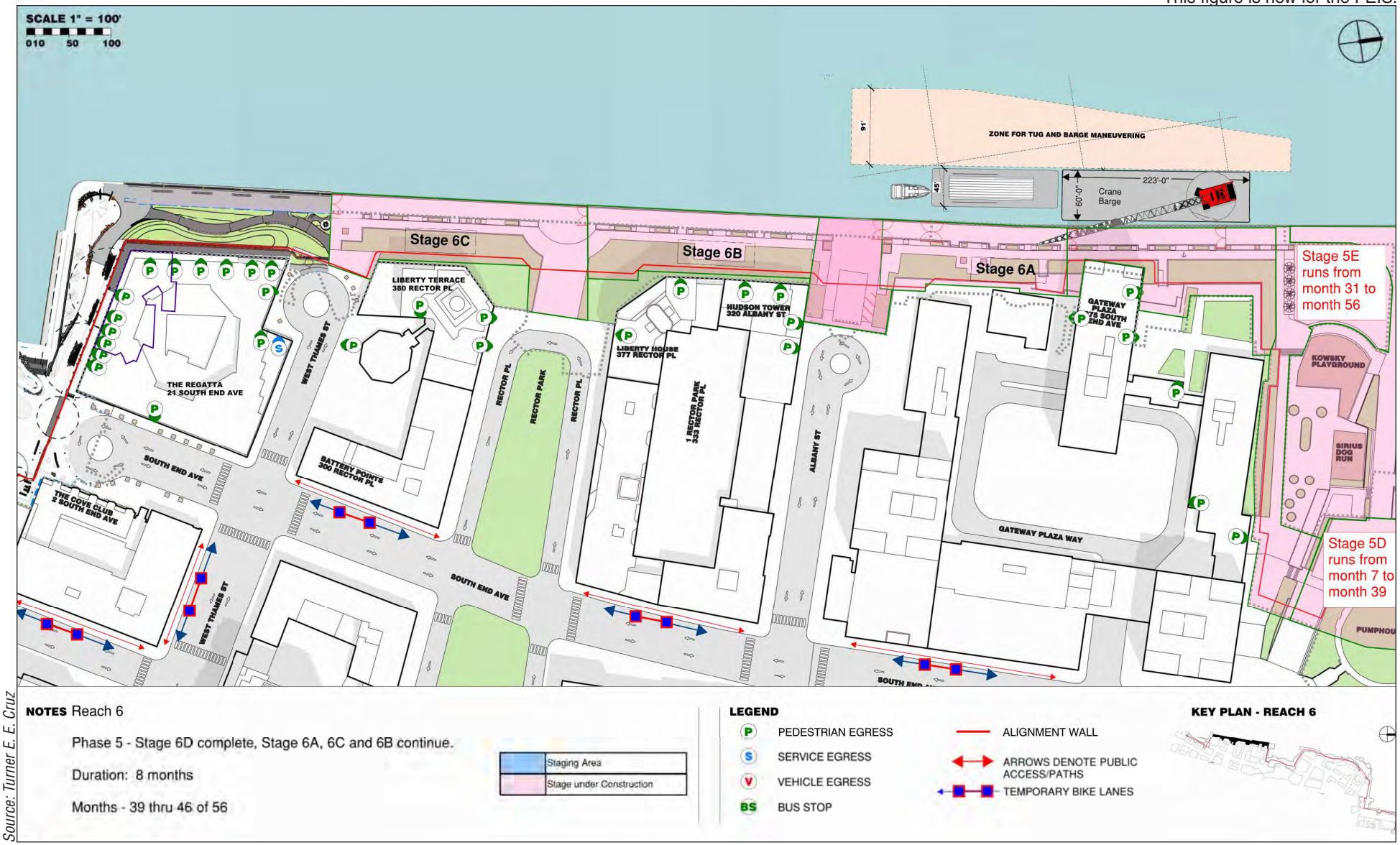
- P — PEDESTRIAN EGRESS
- S — SERVICE EGRESS
- V — VEHICLE EGRESS
- BS — BUS STOP
- ALIGNMENT WALL
- ARROWS DENOTE PUBLIC ACCESS/PATHS
- TEMPORARY BIKE LANES

KEY PLAN - REACH 6

Source: Turner E. E. Cruz

MPT Plan - Reach 6

This figure is new for the FEIS.

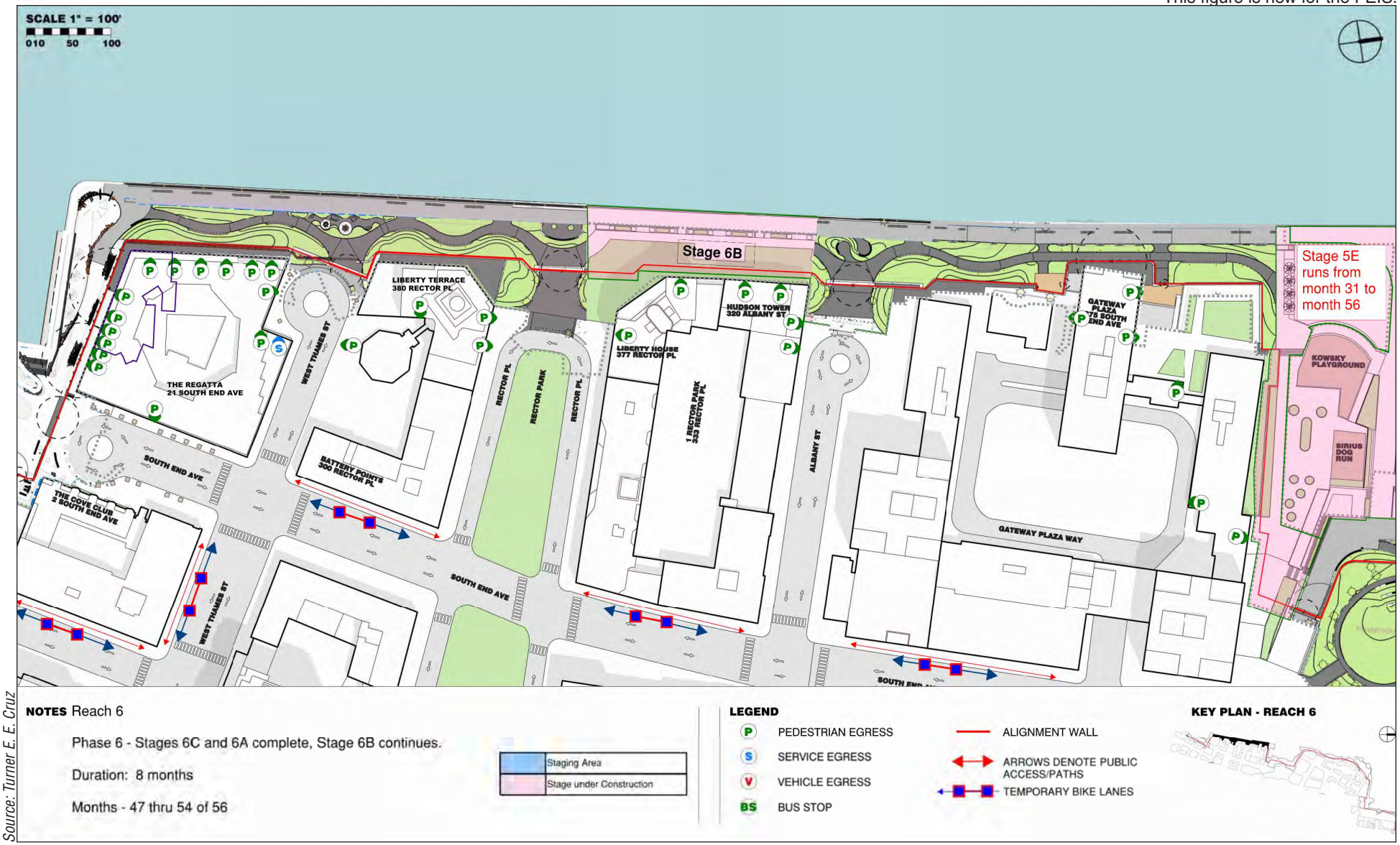


Source: Turner E. E. Cruz

MPT Plan - Reach 6

Figure H.1-82

This figure is new for the FEIS.

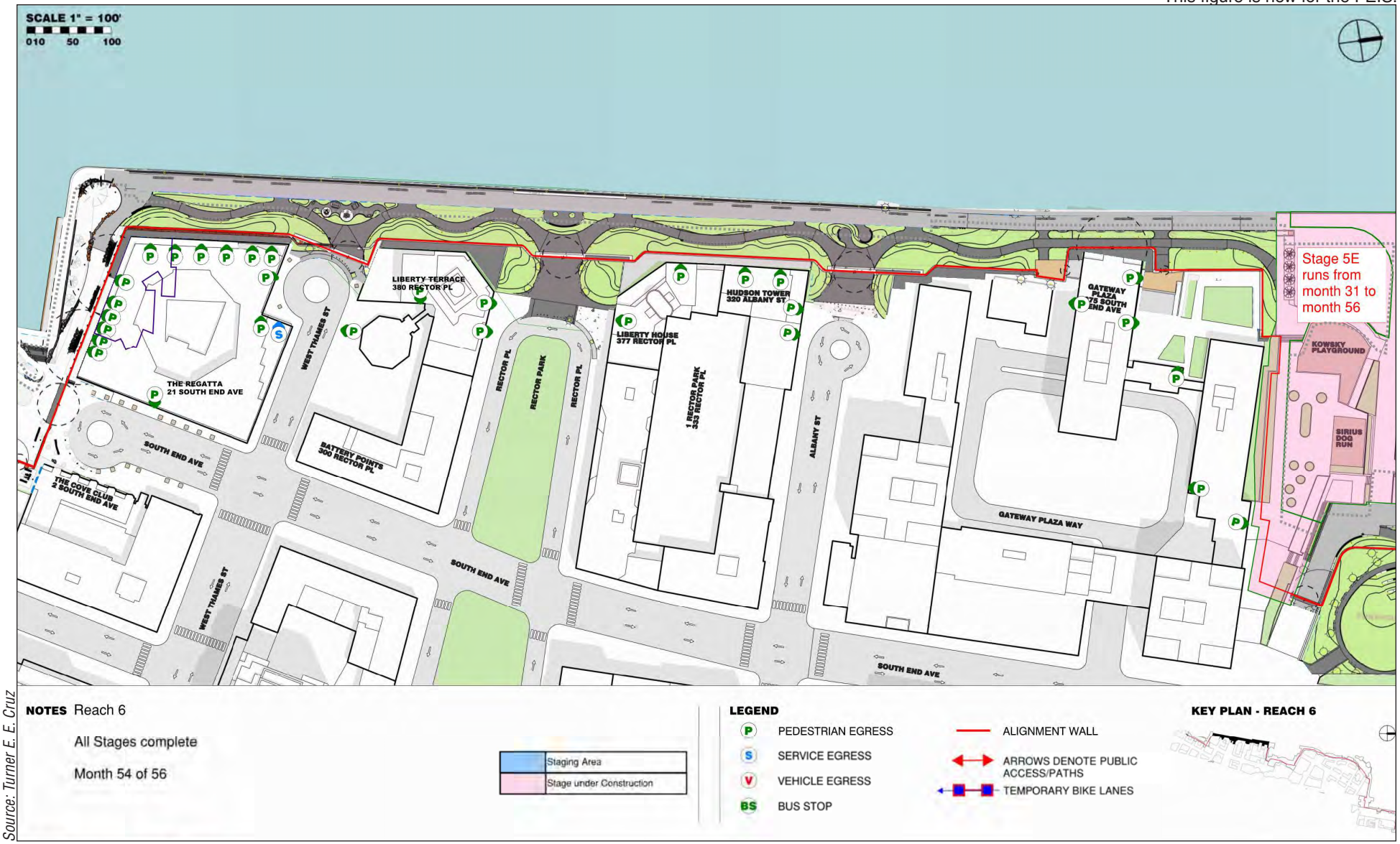


Source: Turner E. E. Cruz

MPT Plan - Reach 6

Figure H.1-83

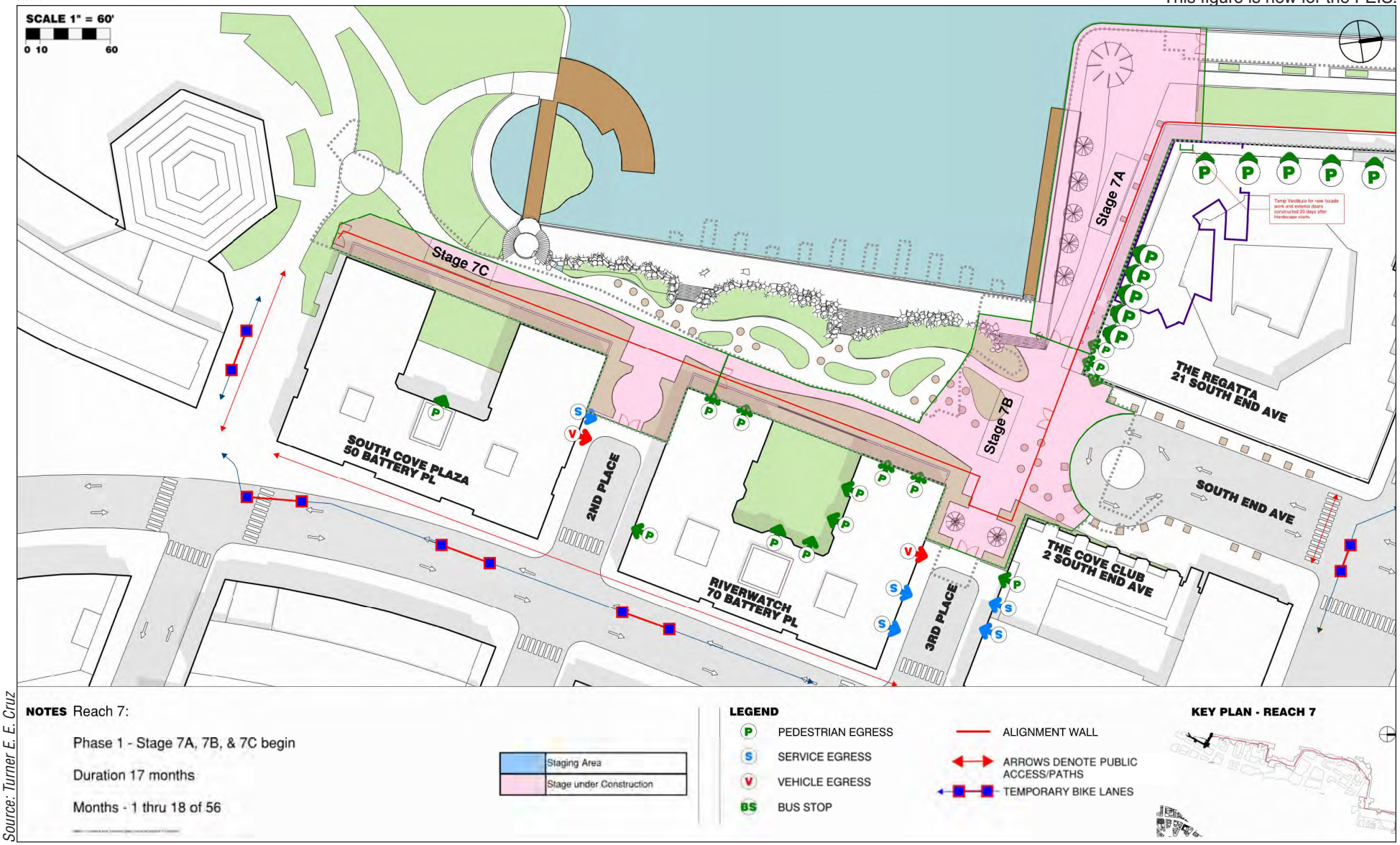
This figure is new for the FEIS.



Source: Turner E. E. Cruz

MPT Plan - Reach 6

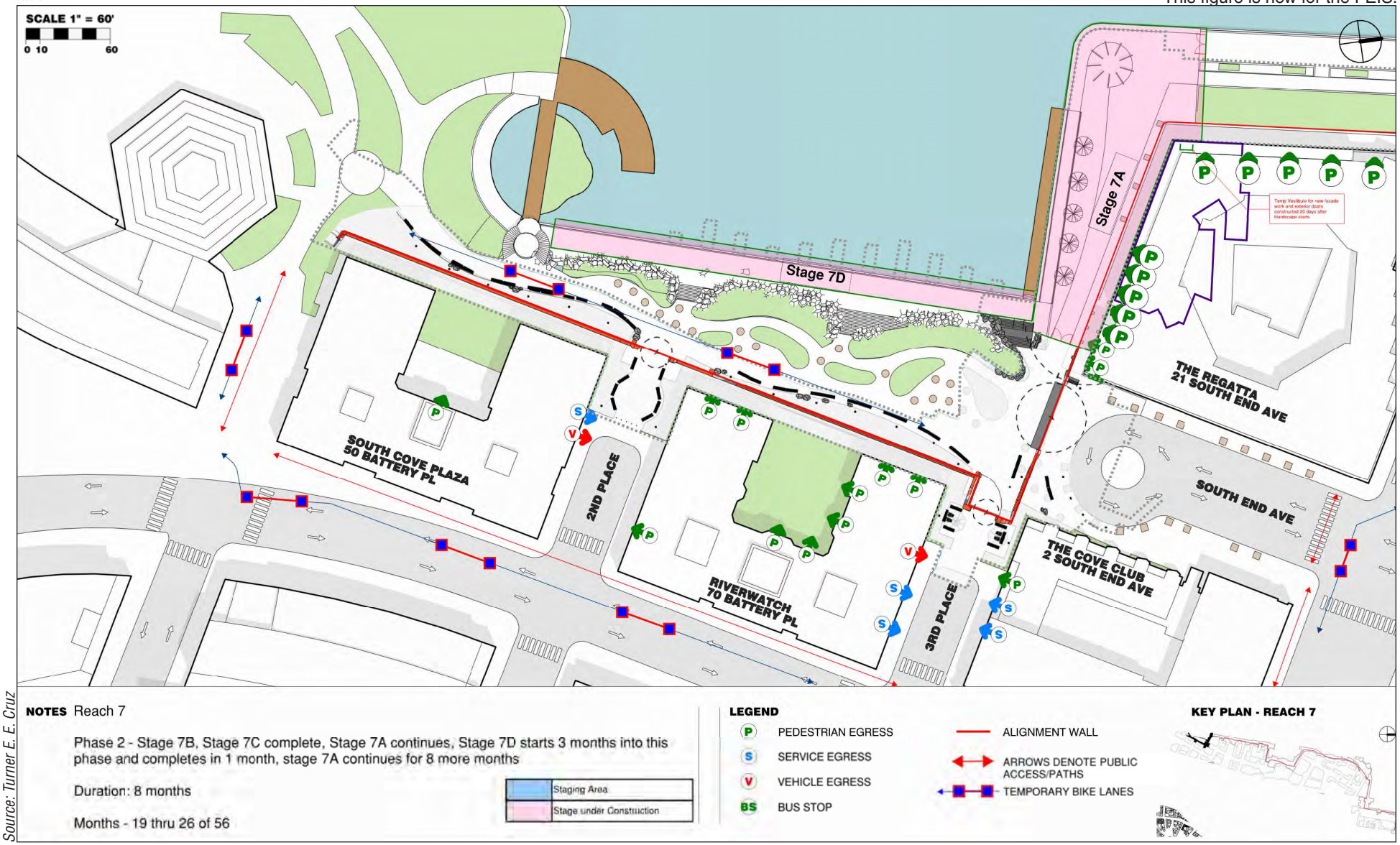
This figure is new for the FEIS.



Source: Turner E. E. Cruz

MPT Plan - Reach 7

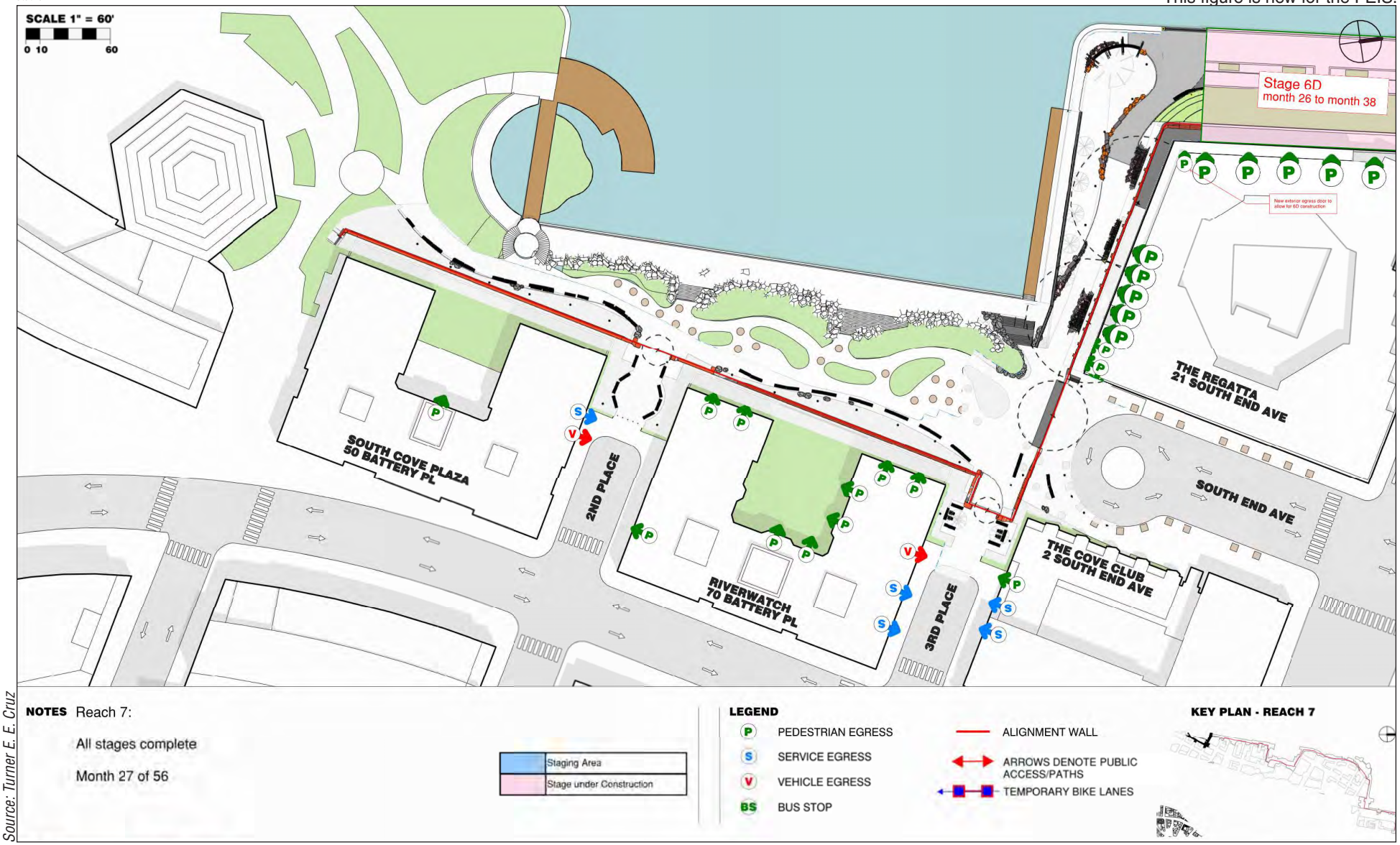
This figure is new for the FEIS.



Source: Turner E. E. Cruz

MPT Plan - Reach 7

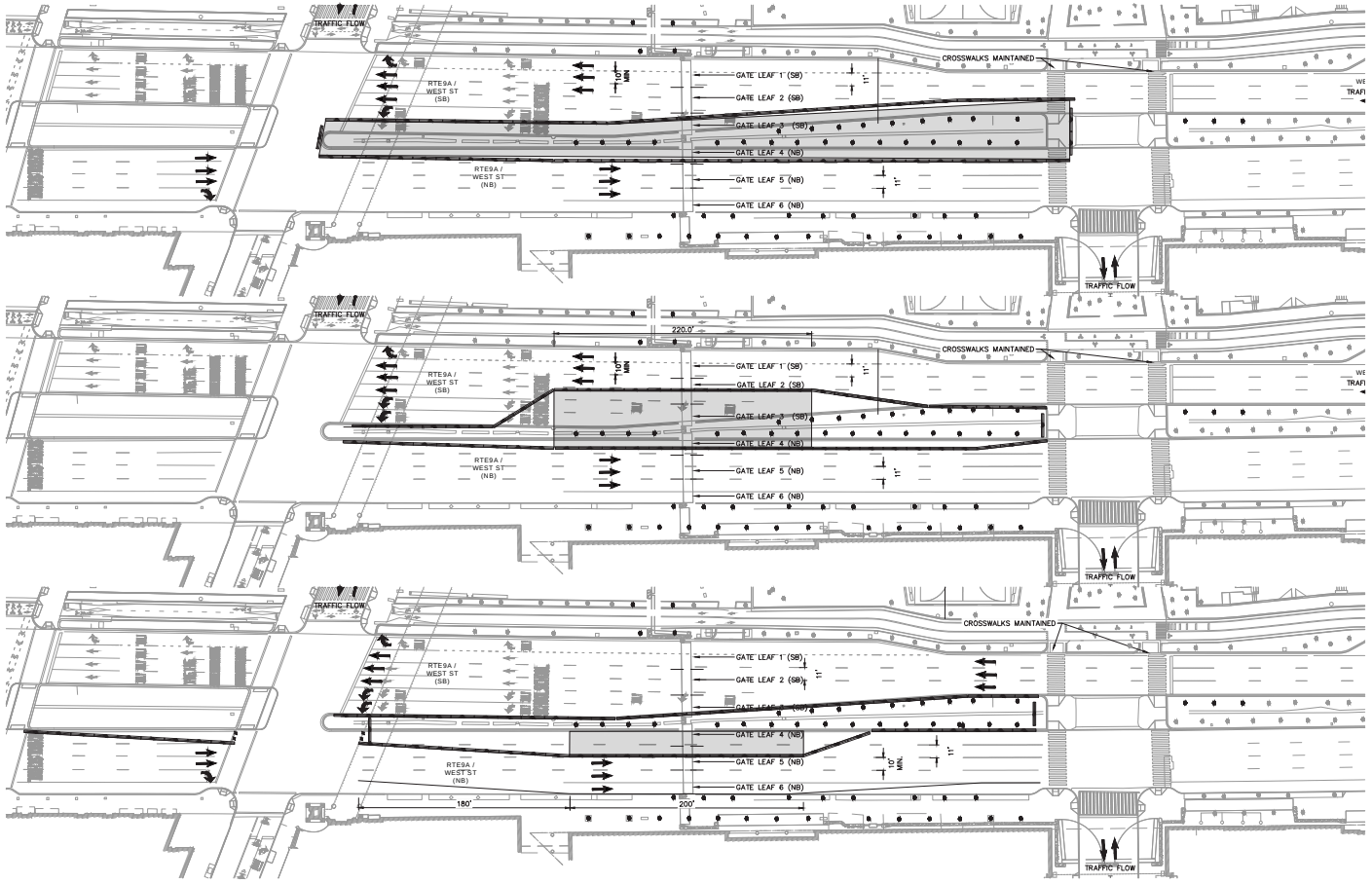
This figure is new for the FEIS.



Source: Turner E. E. Cruz

MPT Plan - Reach 7

This figure is new for the FEIS.

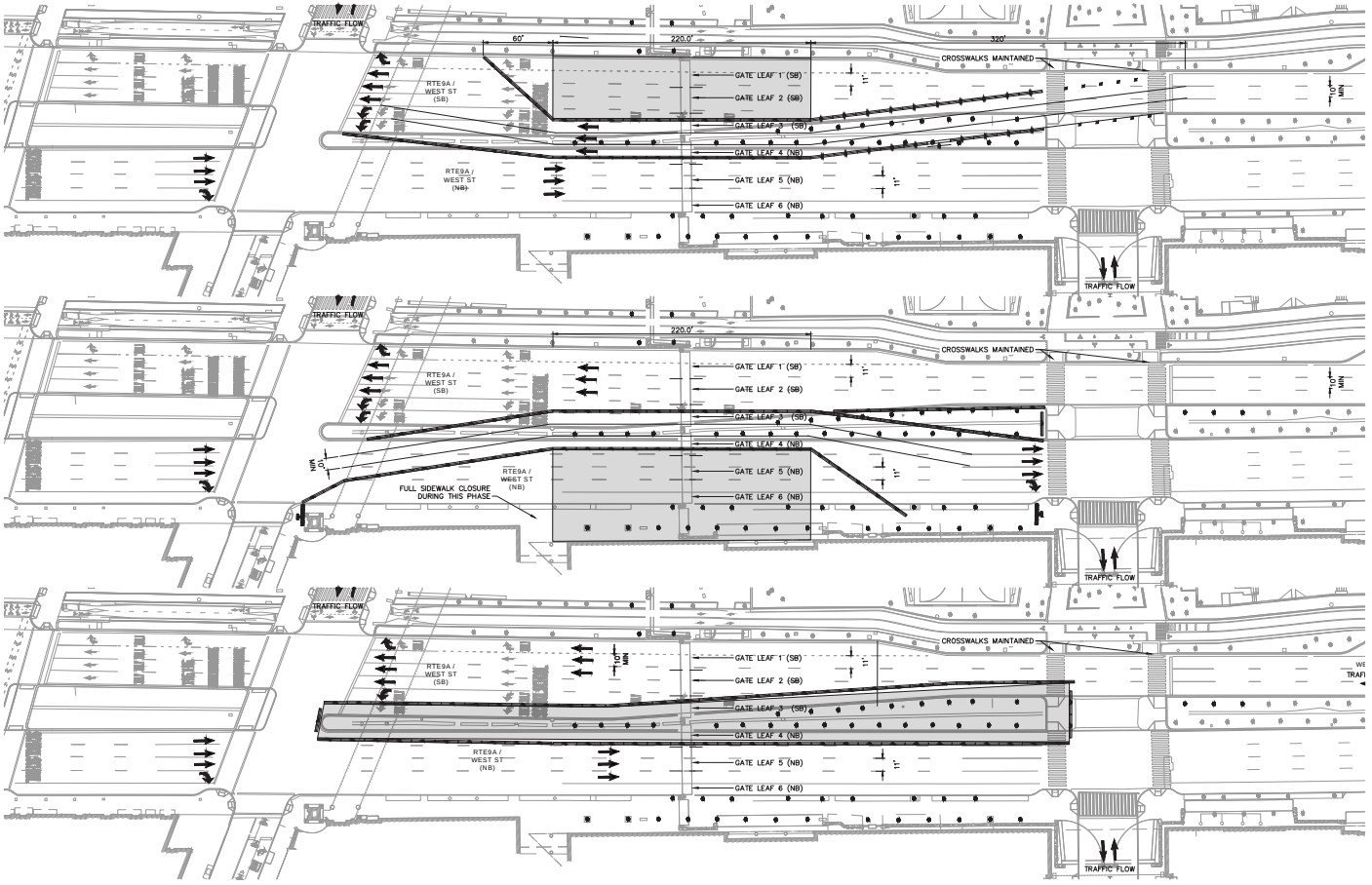


Source: Arcadis

Maintenence and Protection of Traffic
Rt 9A Gates

Figure H.1-88a

This figure is new for the FEIS.

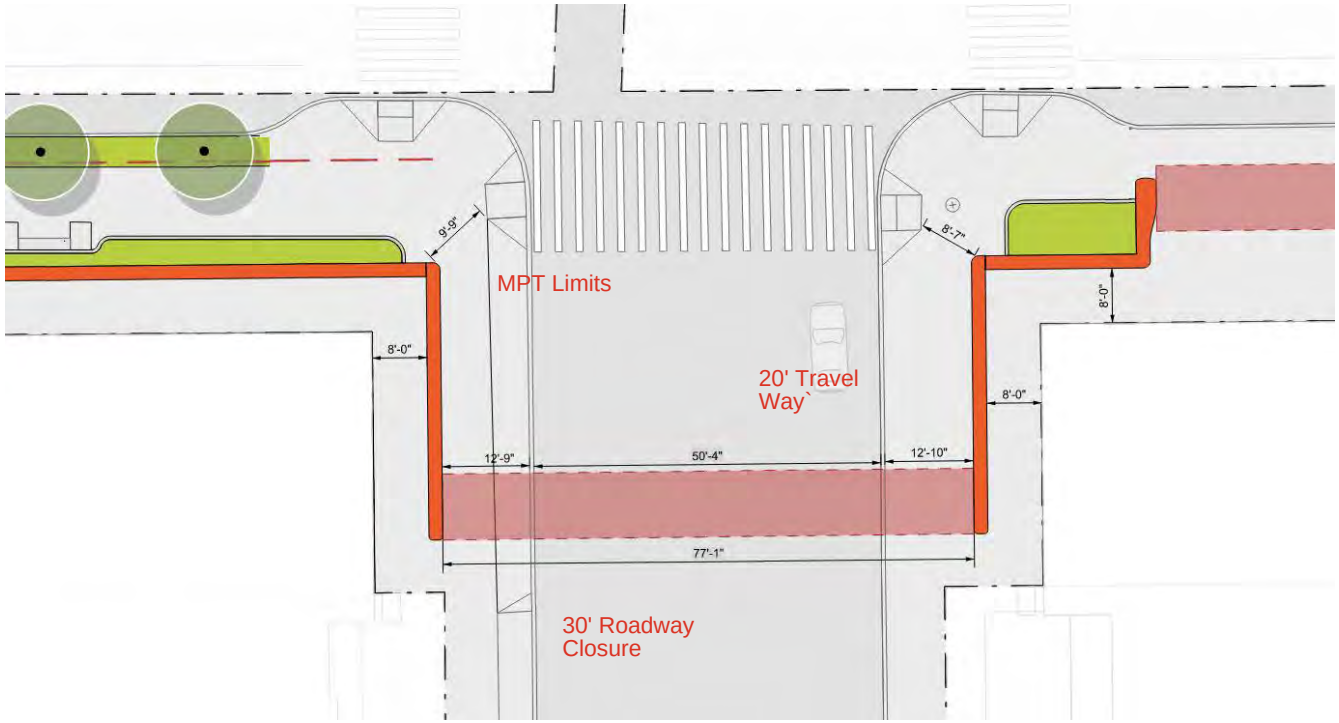


Source: Arcadis

Maintenence and Protection of Traffic
Rt 9A Gates

Figure H.1-88b

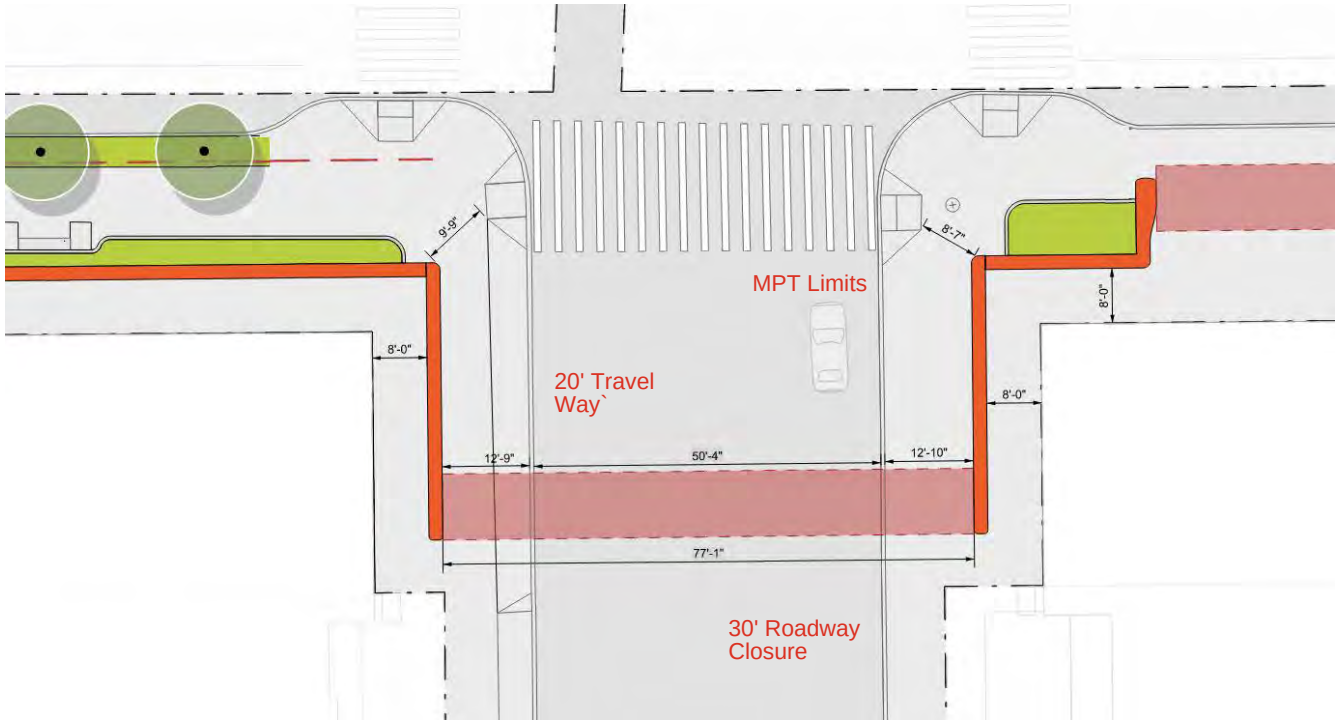
This figure is new for the FEIS.



Phase 1 MPT Concept
Route 9A / Harrison Street
Flip Up Gate Crossing

Figure H.1-89a

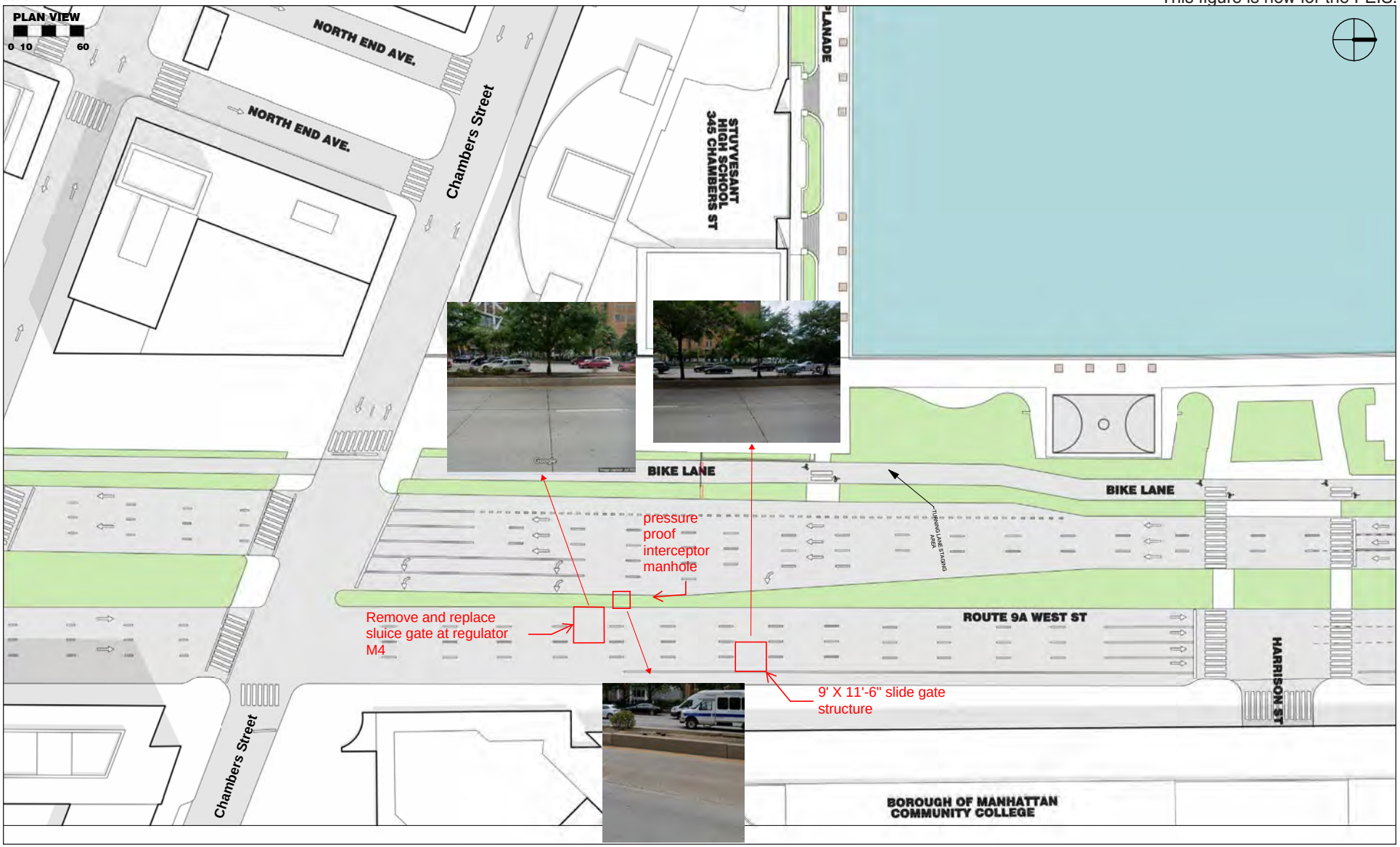
This figure is new for the FEIS.



Phase 2 MPT Concept
Route 9A / Harrison Street
Flip Up Gate Crossing

Figure H.1-89b

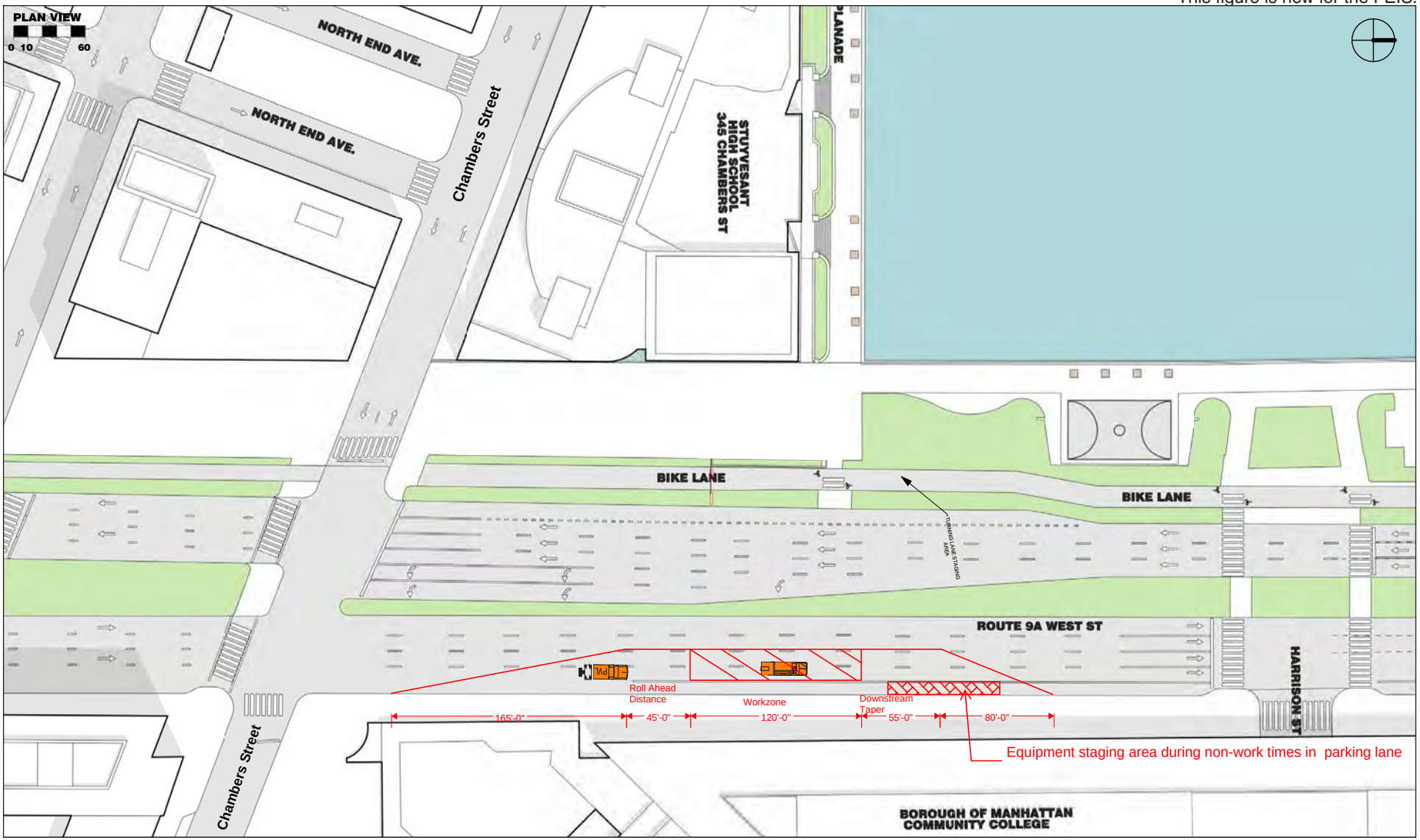
This figure is new for the FEIS.



Key Plan - Existing Conditions

Figure H.1-90a

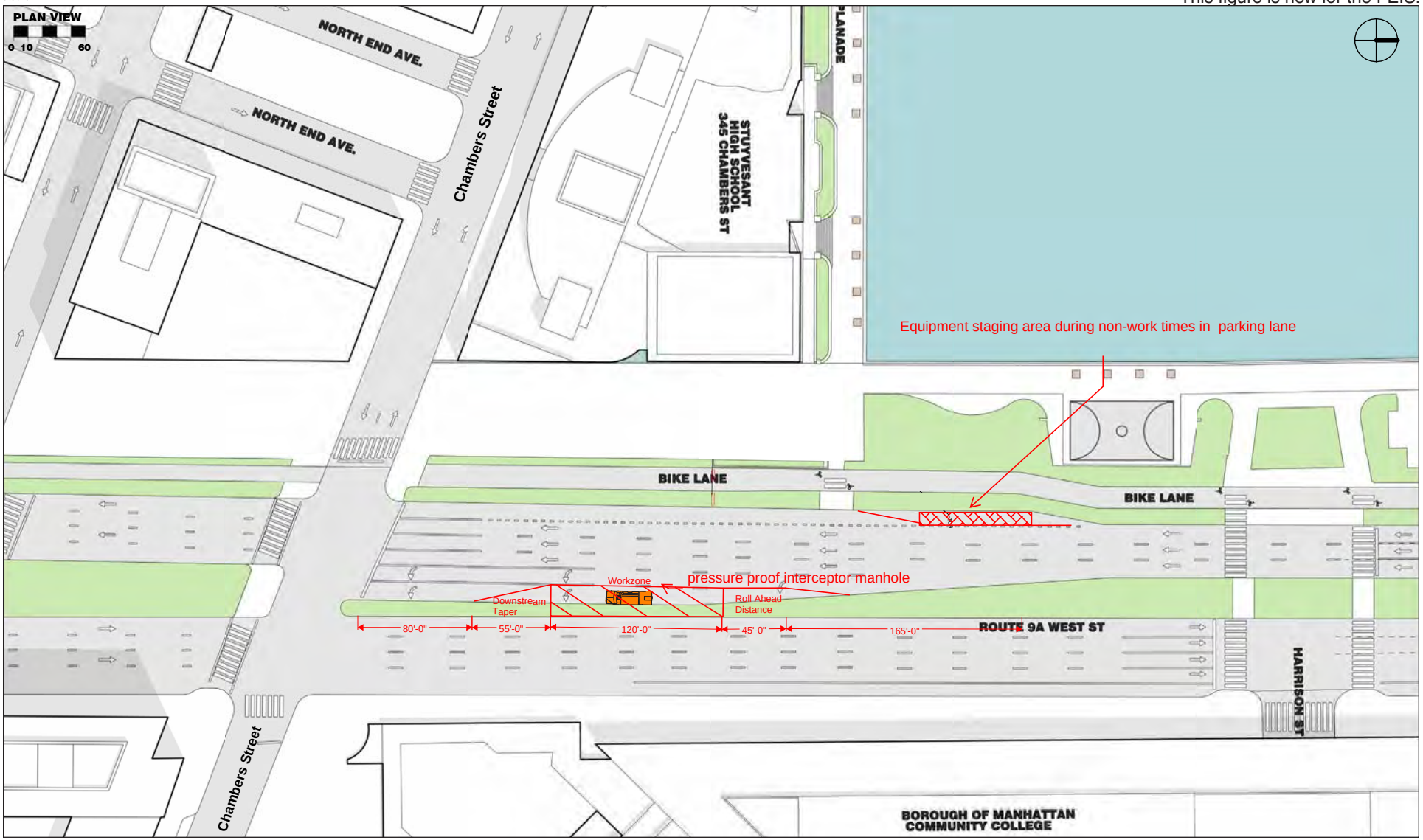
This figure is new for the FEIS.



Plan - Install New Slide Gate Structure

Figure H.1-90b

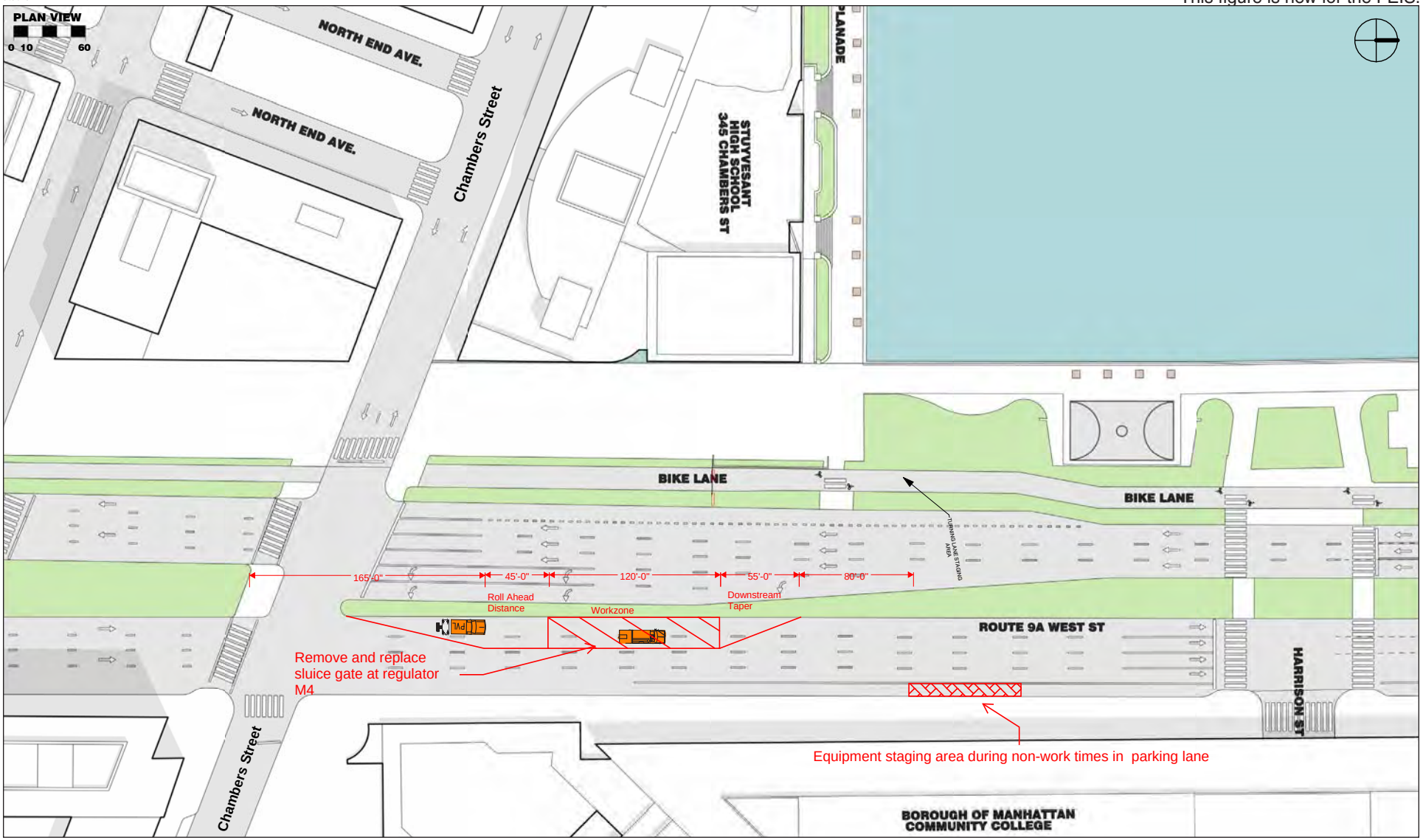
This figure is new for the FEIS.



Plan - Pressure Proof Manhole Structure

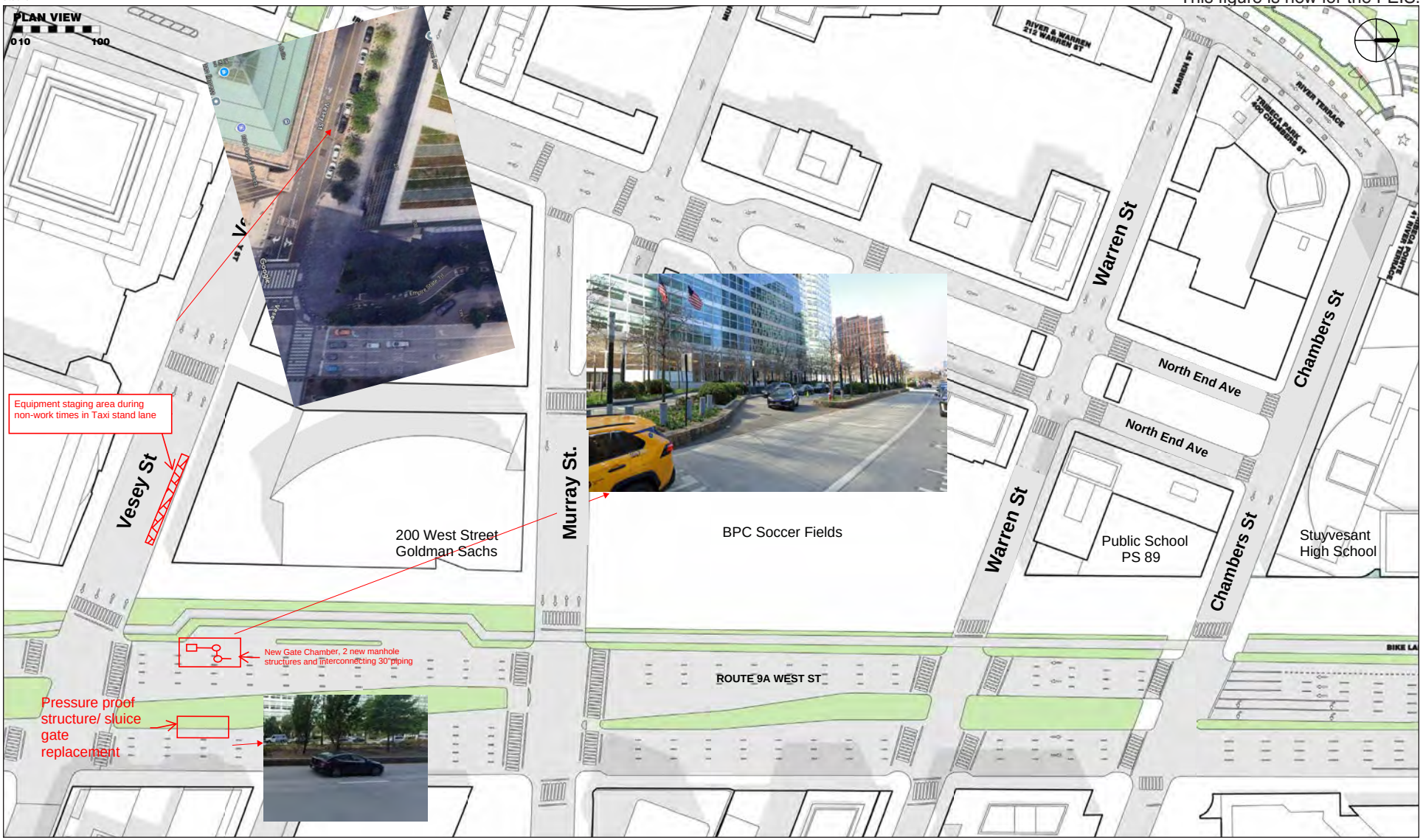
Figure H.1-90c

This figure is new for the FEIS.



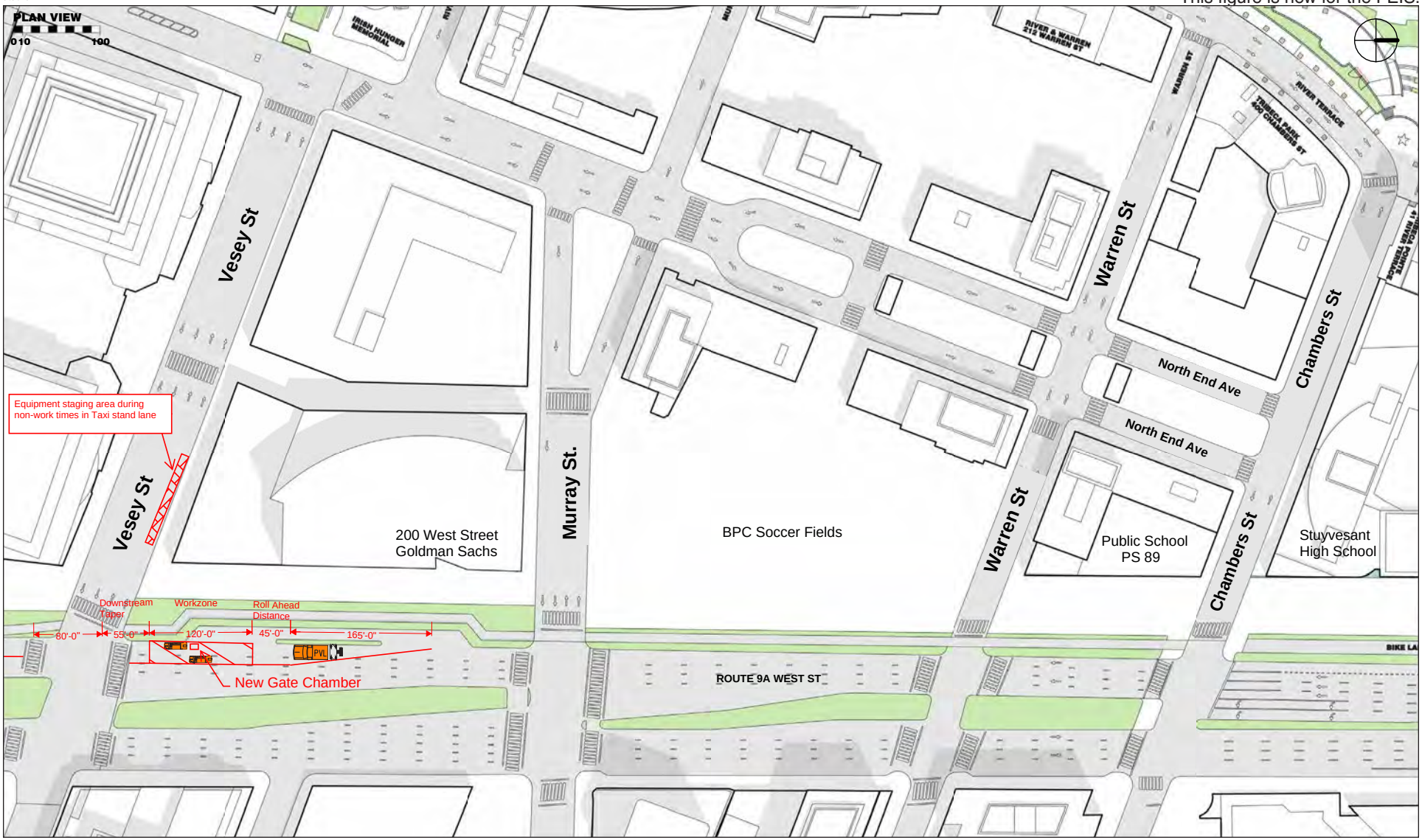
Key Plan - Remove and Replace Sluice Gate

This figure is new for the FEIS.



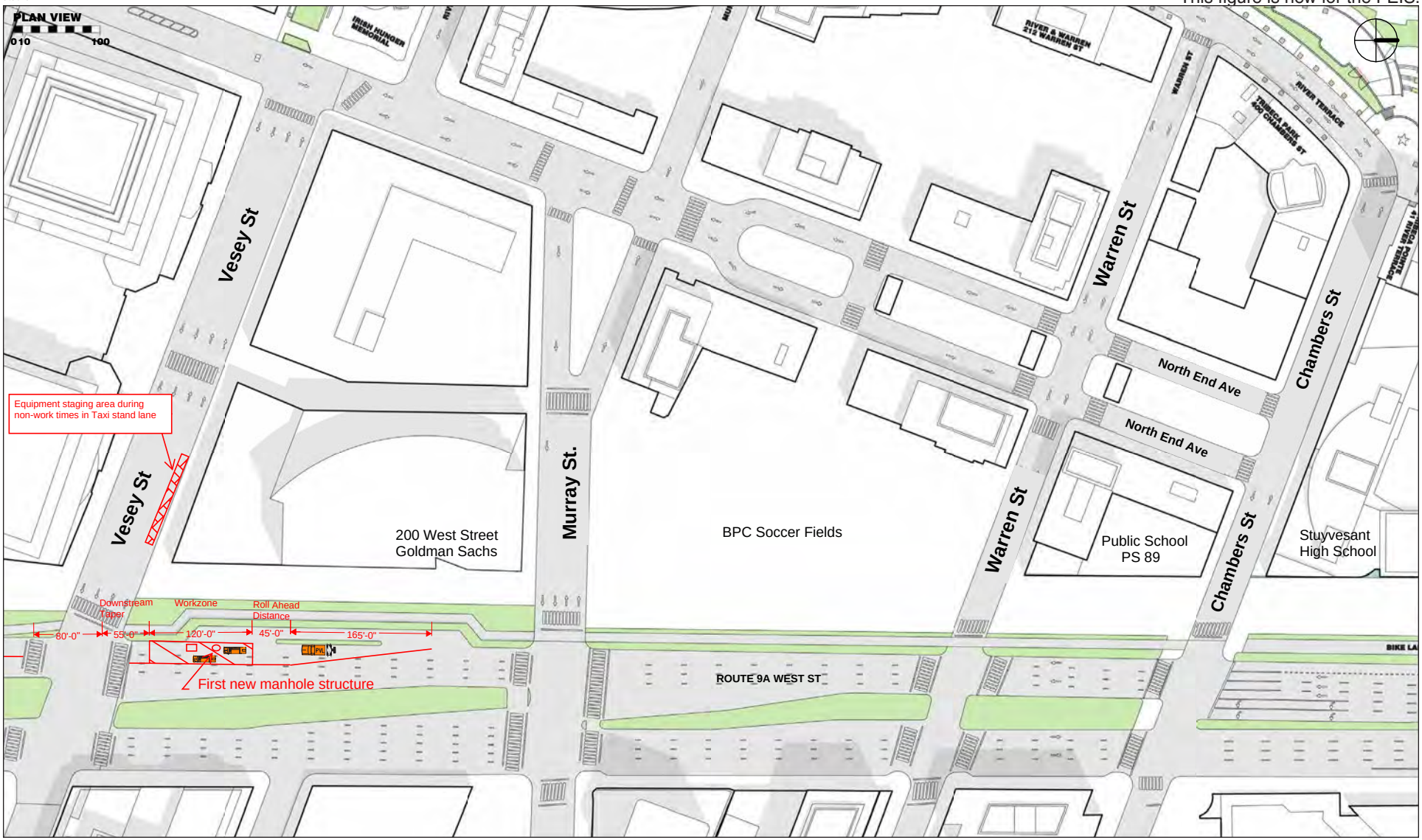
Key Plan - Existing Conditions

This figure is new for the FEIS.



Key Plan - Install New Gate Chamber

This figure is new for the FEIS.

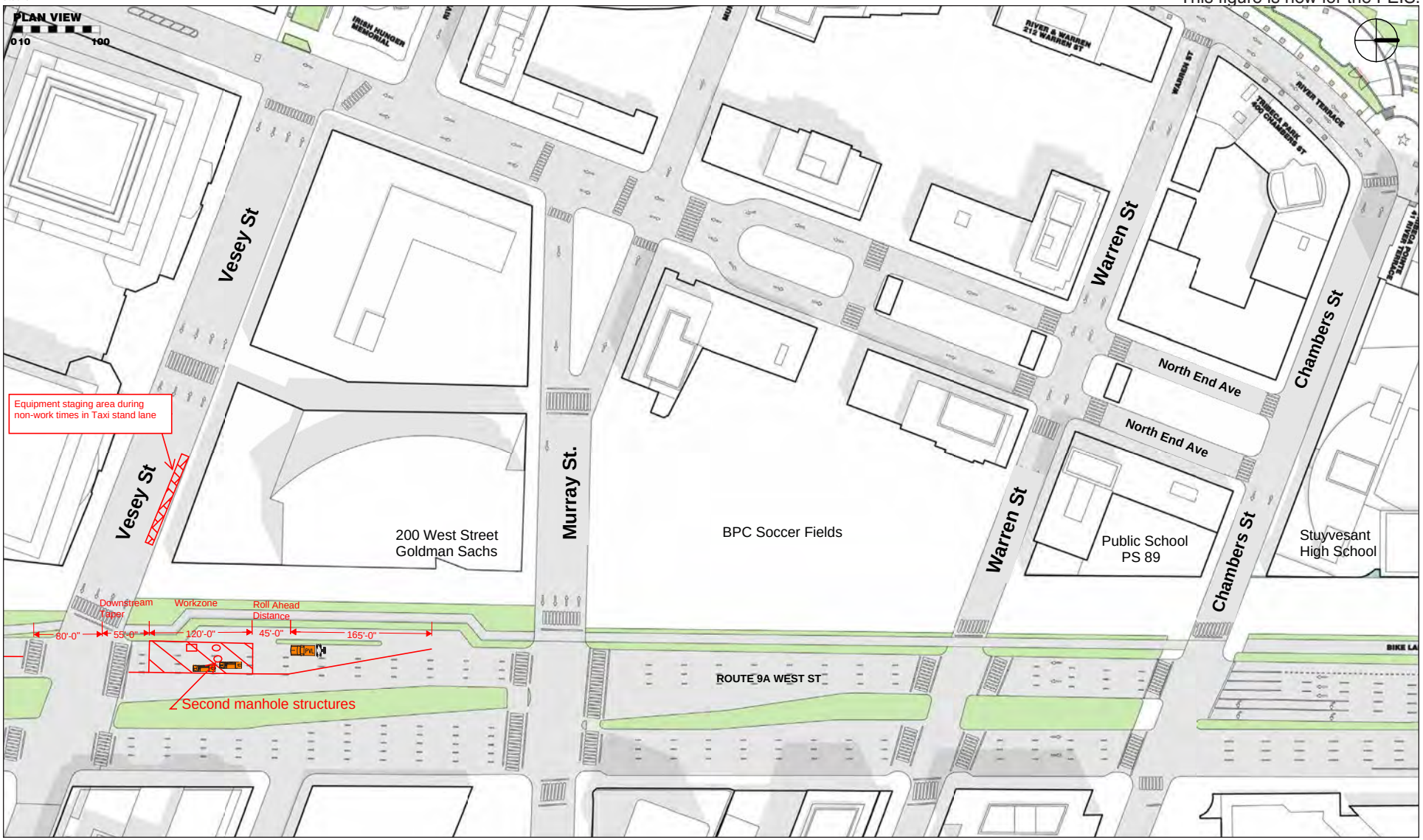


Key Plan - New Manhole Structures

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-90g

This figure is new for the FEIS.

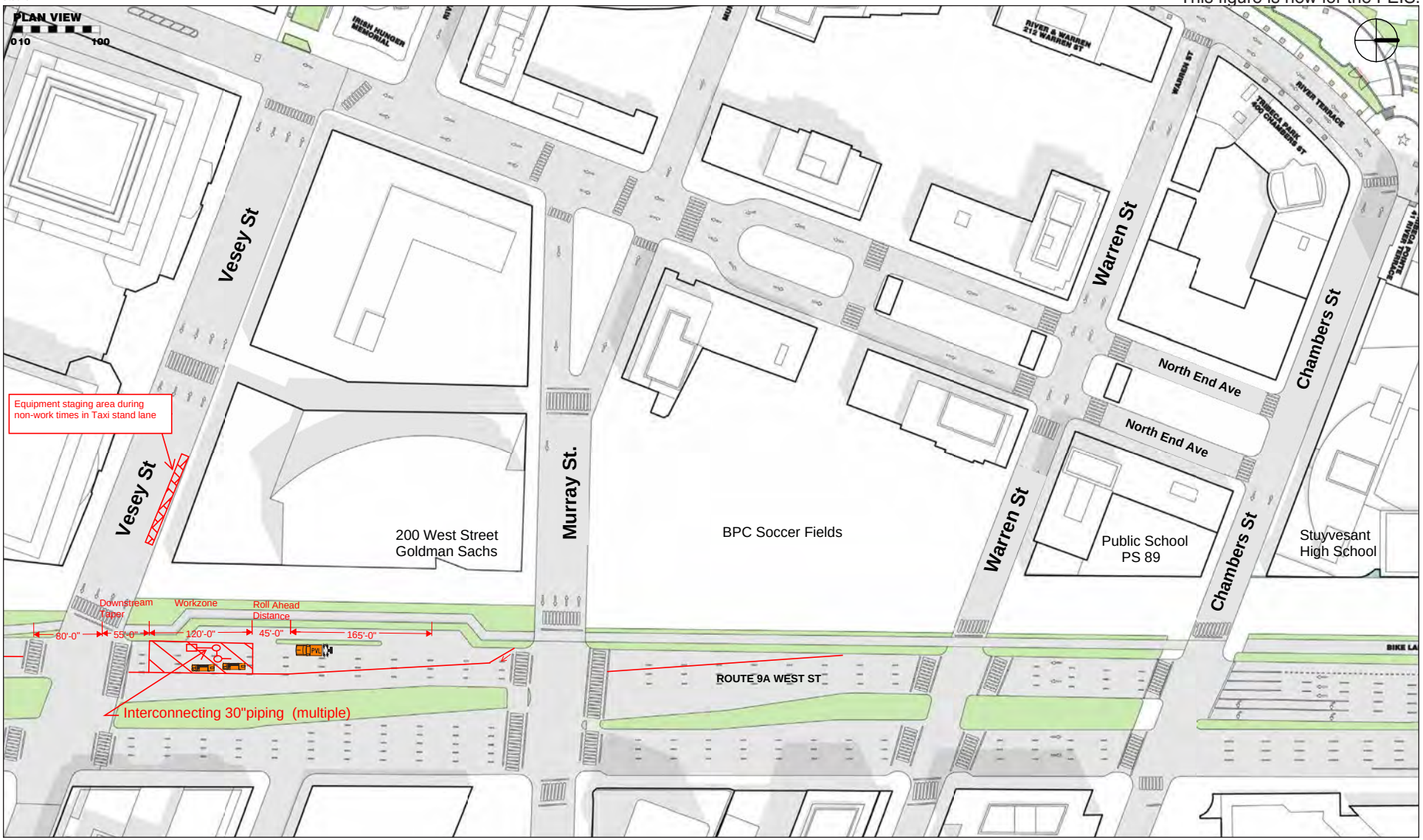


Key Plan - Second Manhole Structure

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-90h

This figure is new for the FEIS.



Key Plan - Interconnecting Piping

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-90i

This figure is new for the FEIS.

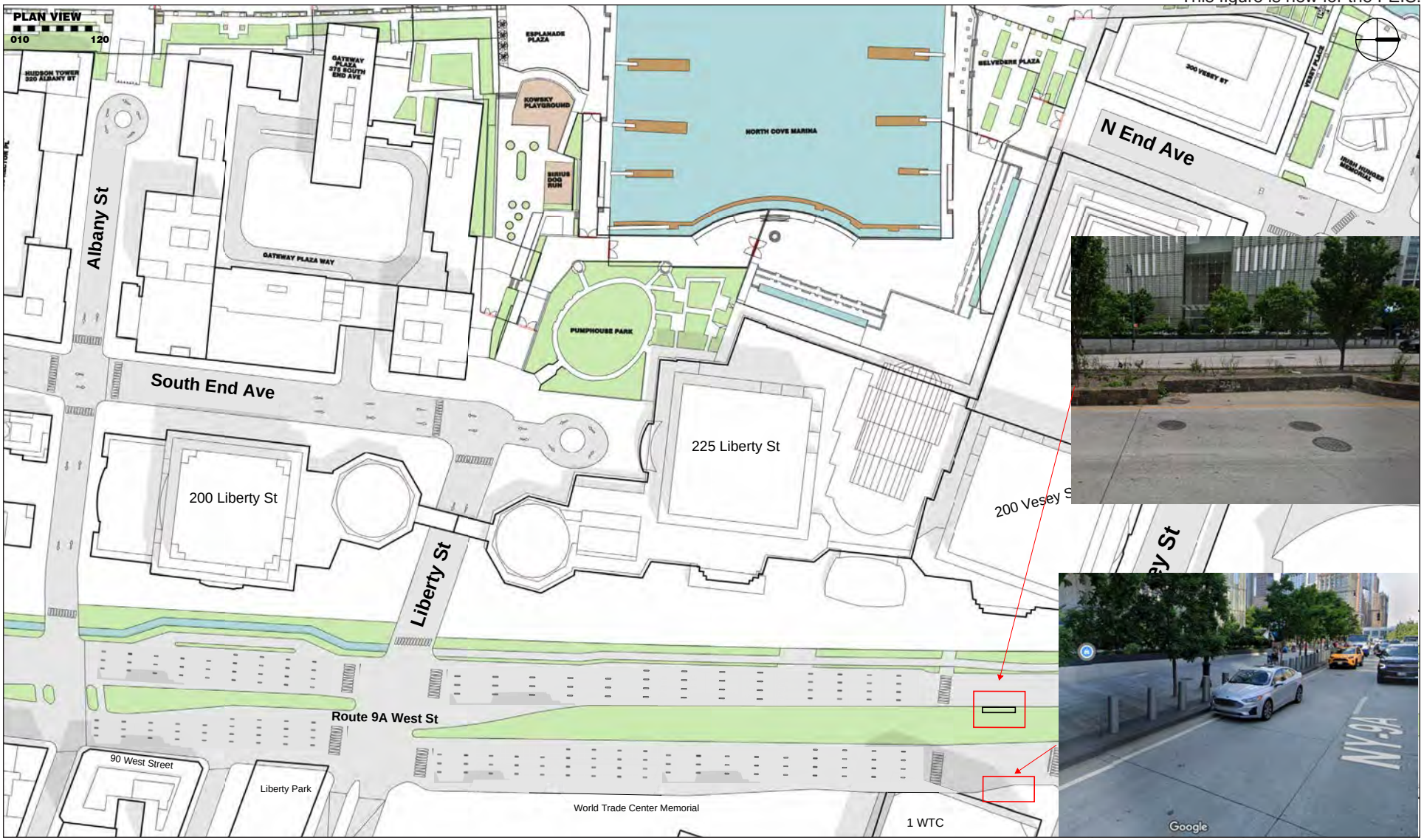


Key Plan - Pressure Proof Structure

NORTH/WEST BATTERY PARK CITY RESILIENCY

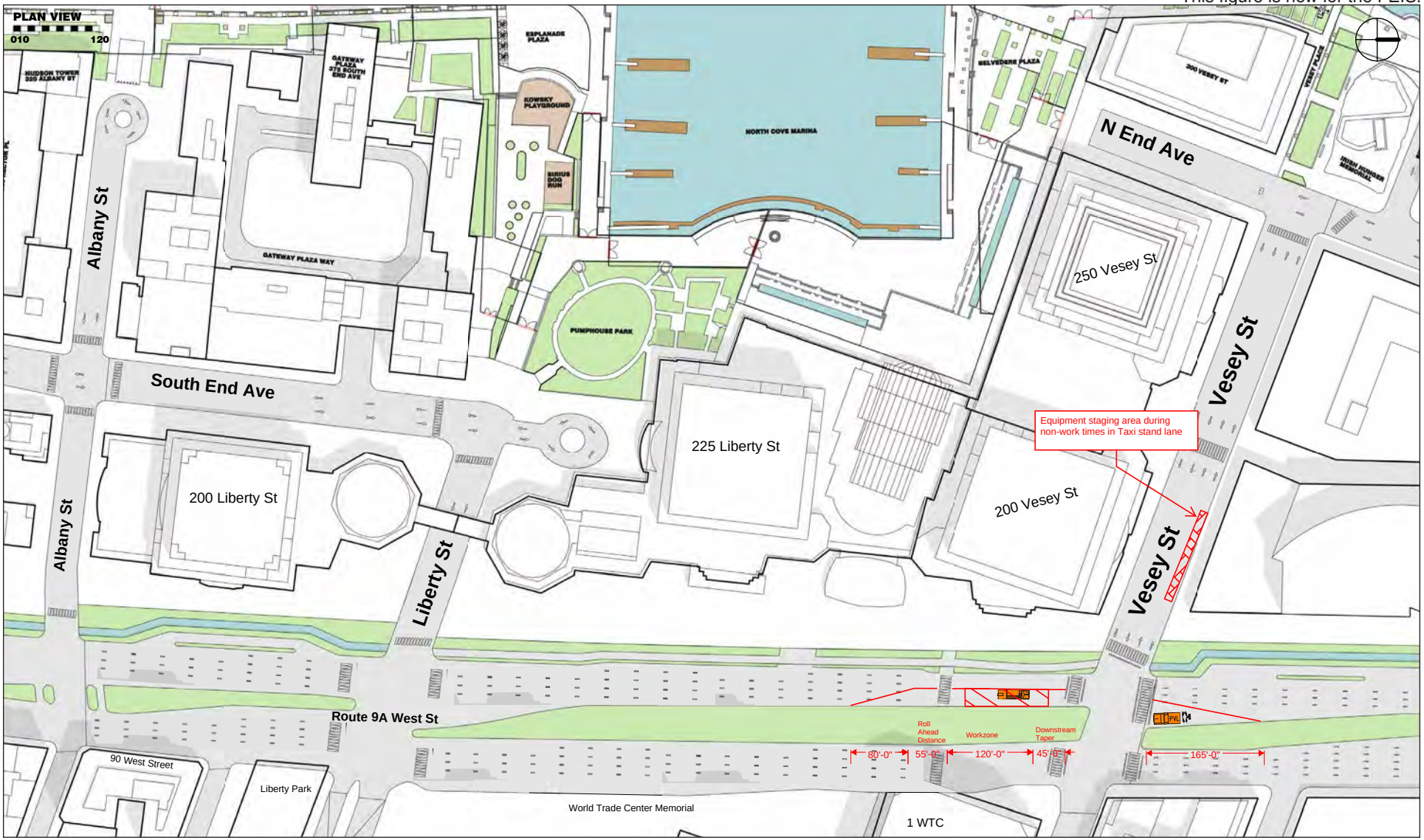
Figure H.1-90j

This figure is new for the FEIS.



Proposed Interior Drainage Early Work

This figure is new for the FEIS.

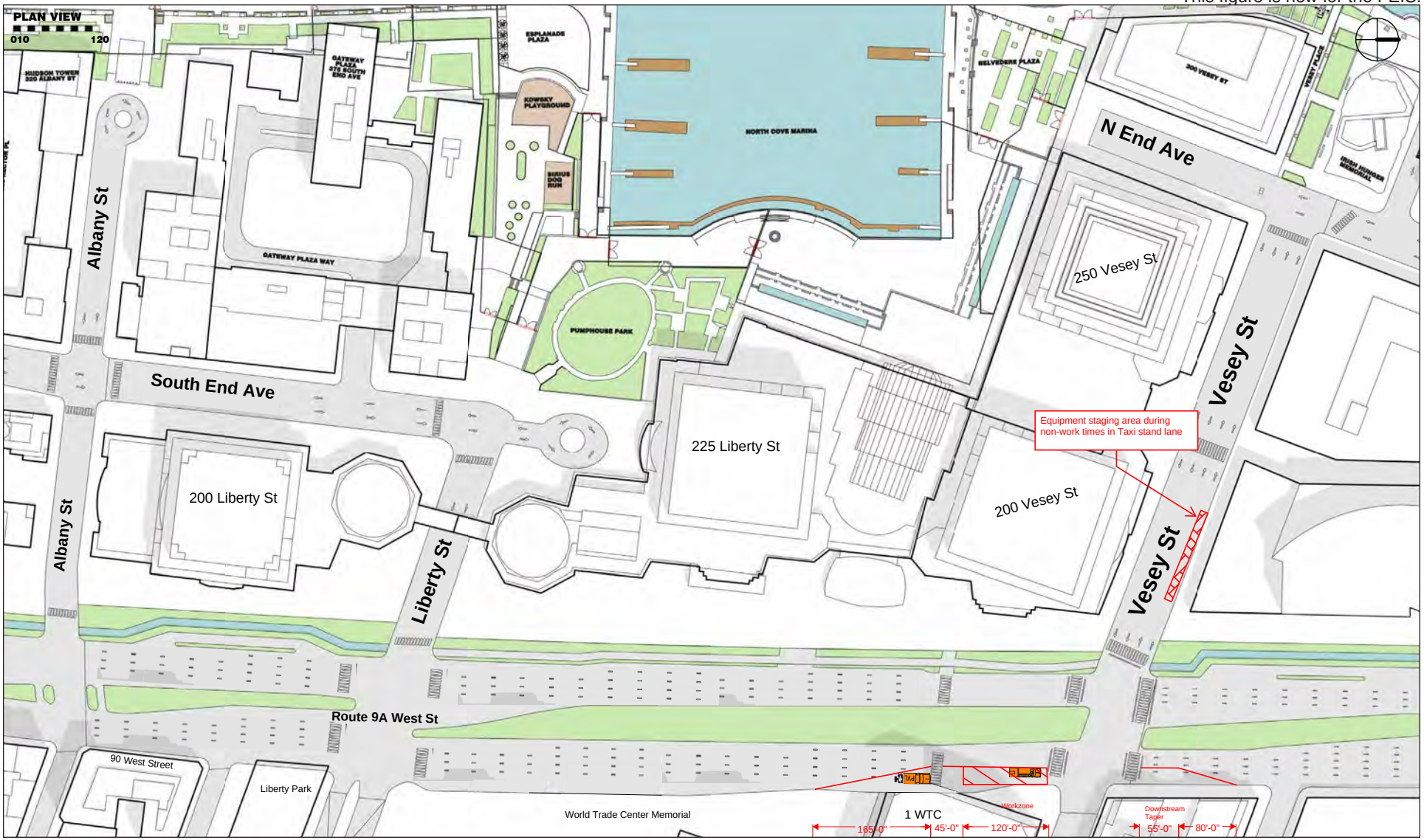


Proposed Interior Drainage Early Work

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-90I

This figure is new for the FEIS.

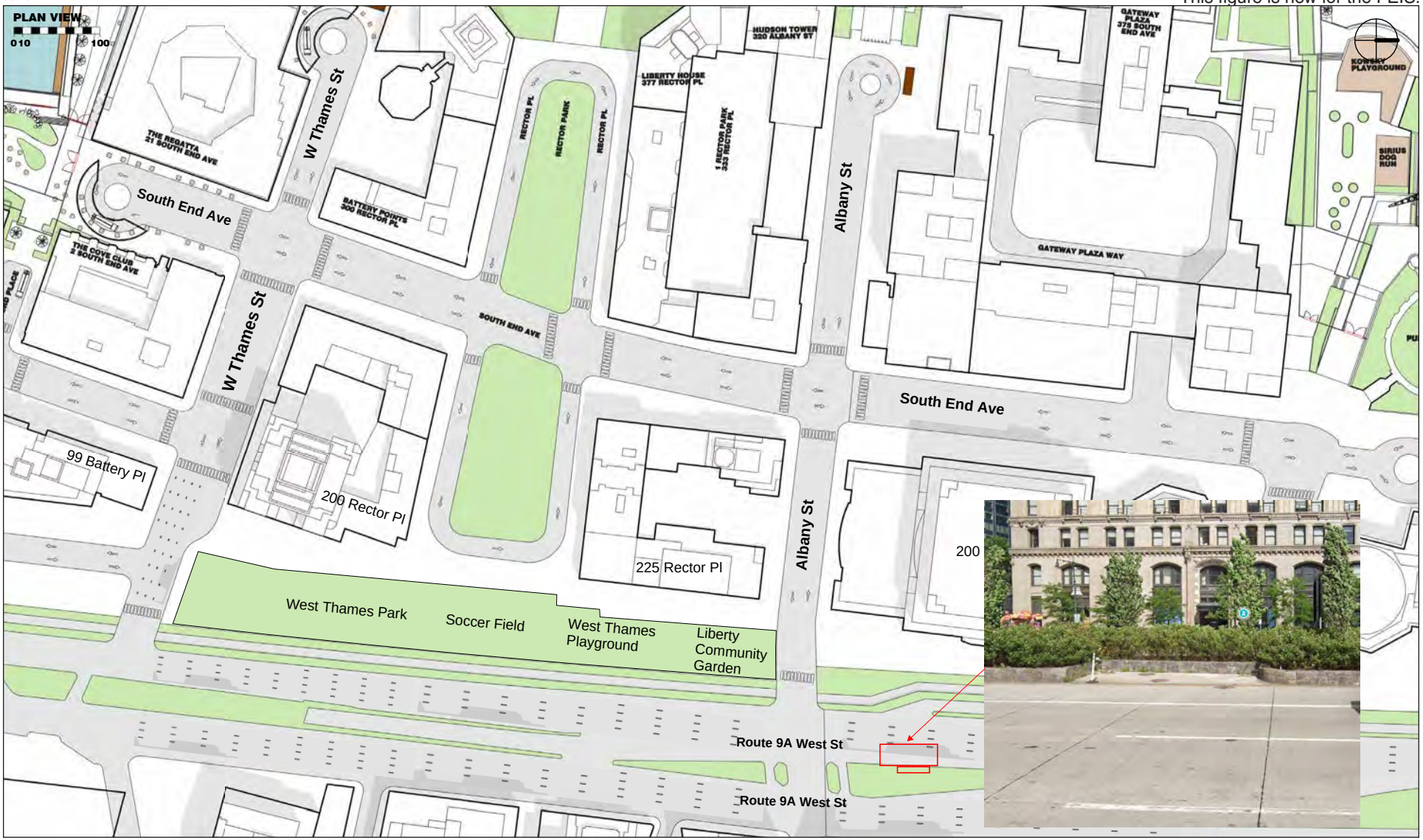


Proposed Interior Drainage Early Work

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-90m

This figure is new for the FEIS.

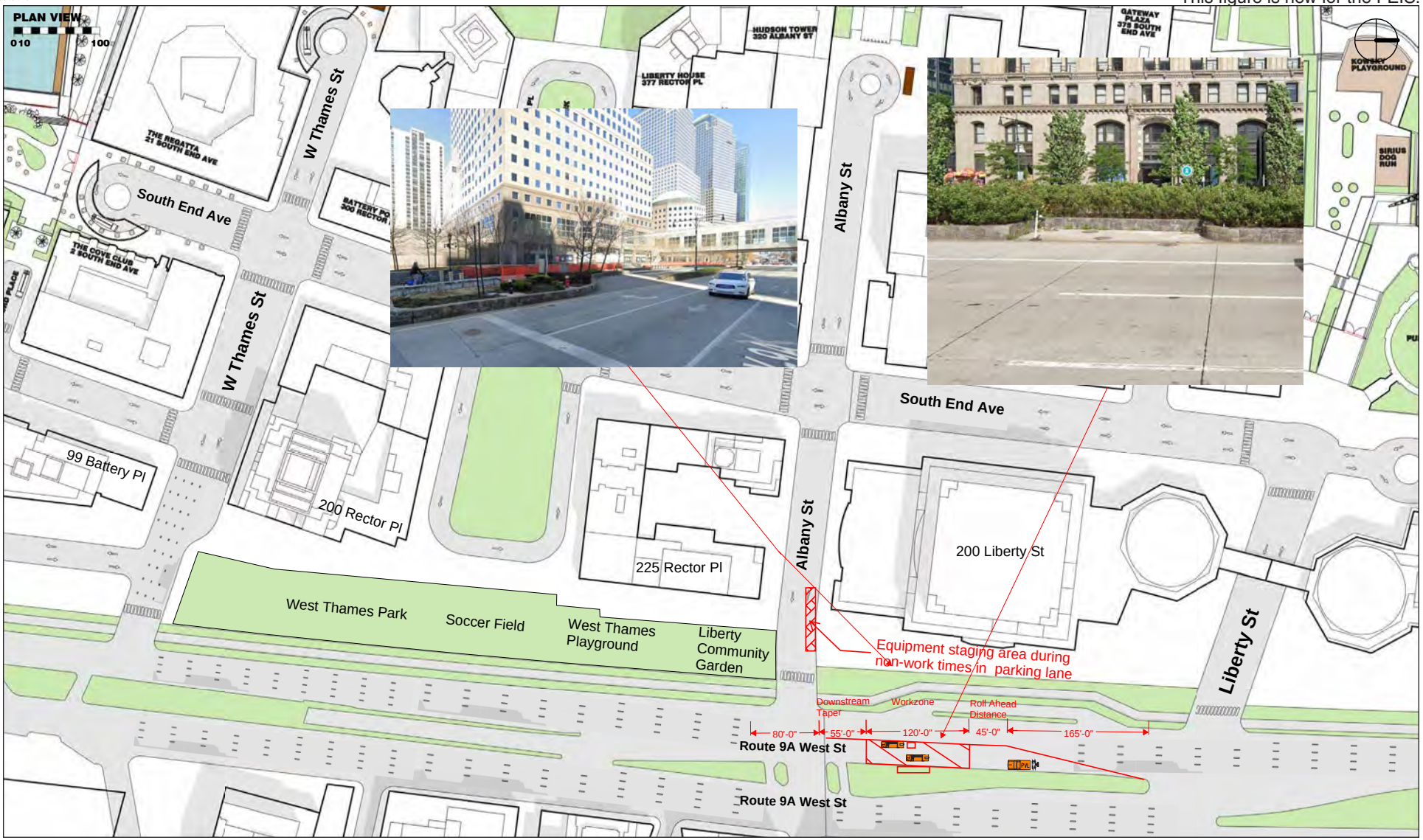


Proposed Interior Drainage Early Work

NORTH/WEST BATTERY PARK CITY RESILIENCY

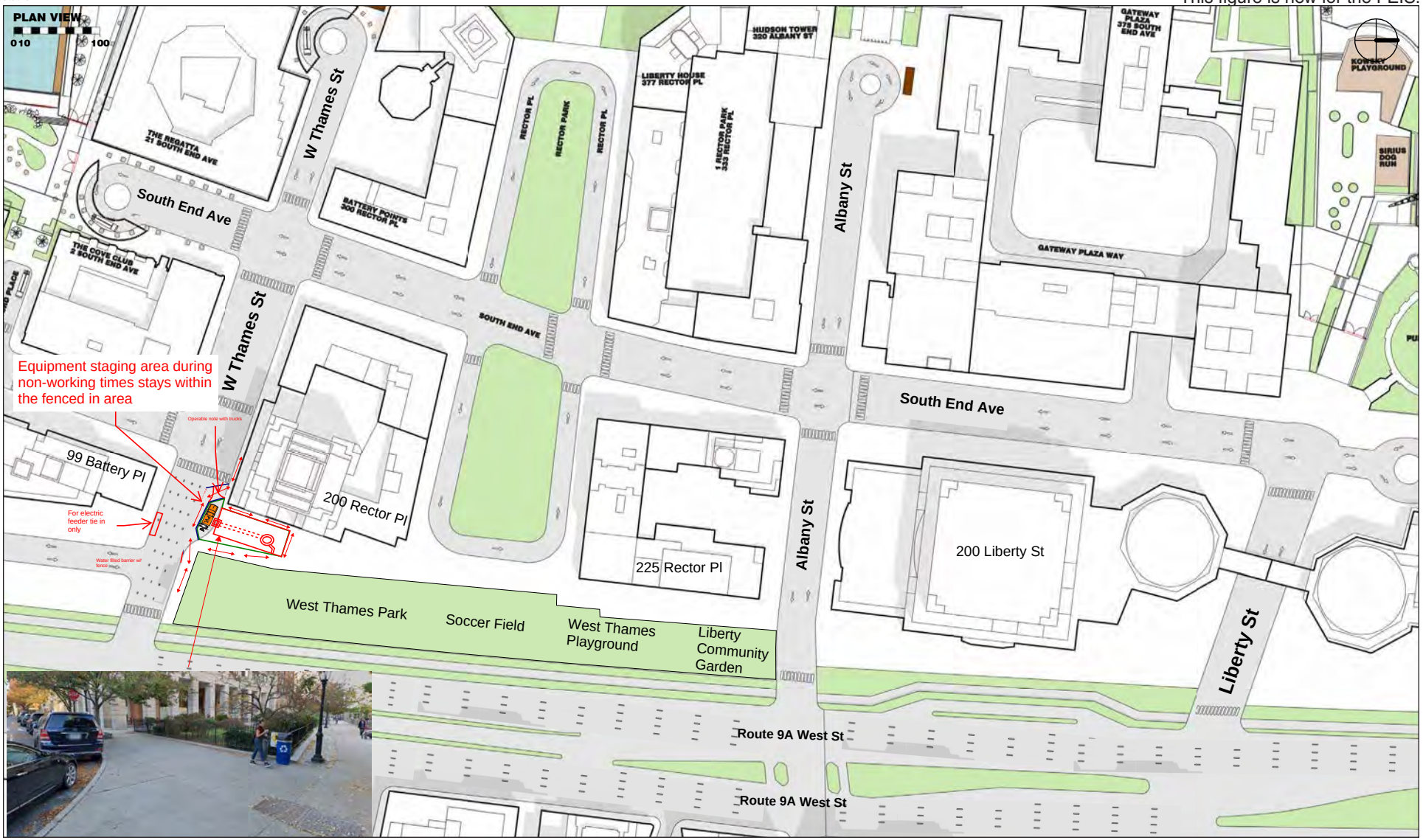
Figure H.1-90n

This figure is new for the FEIS.



Proposed Interior Drainage Early Work

This figure is new for the FEIS.



Proposed Interior Drainage Early Work

Figure H.1-90p

This figure is new for the FEIS.



Proposed Interior Drainage Early Work

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-90q

This figure is new for the FEIS.



NOTES

Step 1: Perform work on west sidewalk, set up pedestrian walkway in "no parking lane"
Step 2: Perform work in "no parking" and southbound lane
Step 3: Perform work in North bound lane

LEGEND

- (P) PEDESTRIAN EGRESS
- (S) SERVICE EGRESS
- (V) VEHICLE EGRESS
- (BS) BUS STOP
- Construction fence enclosure

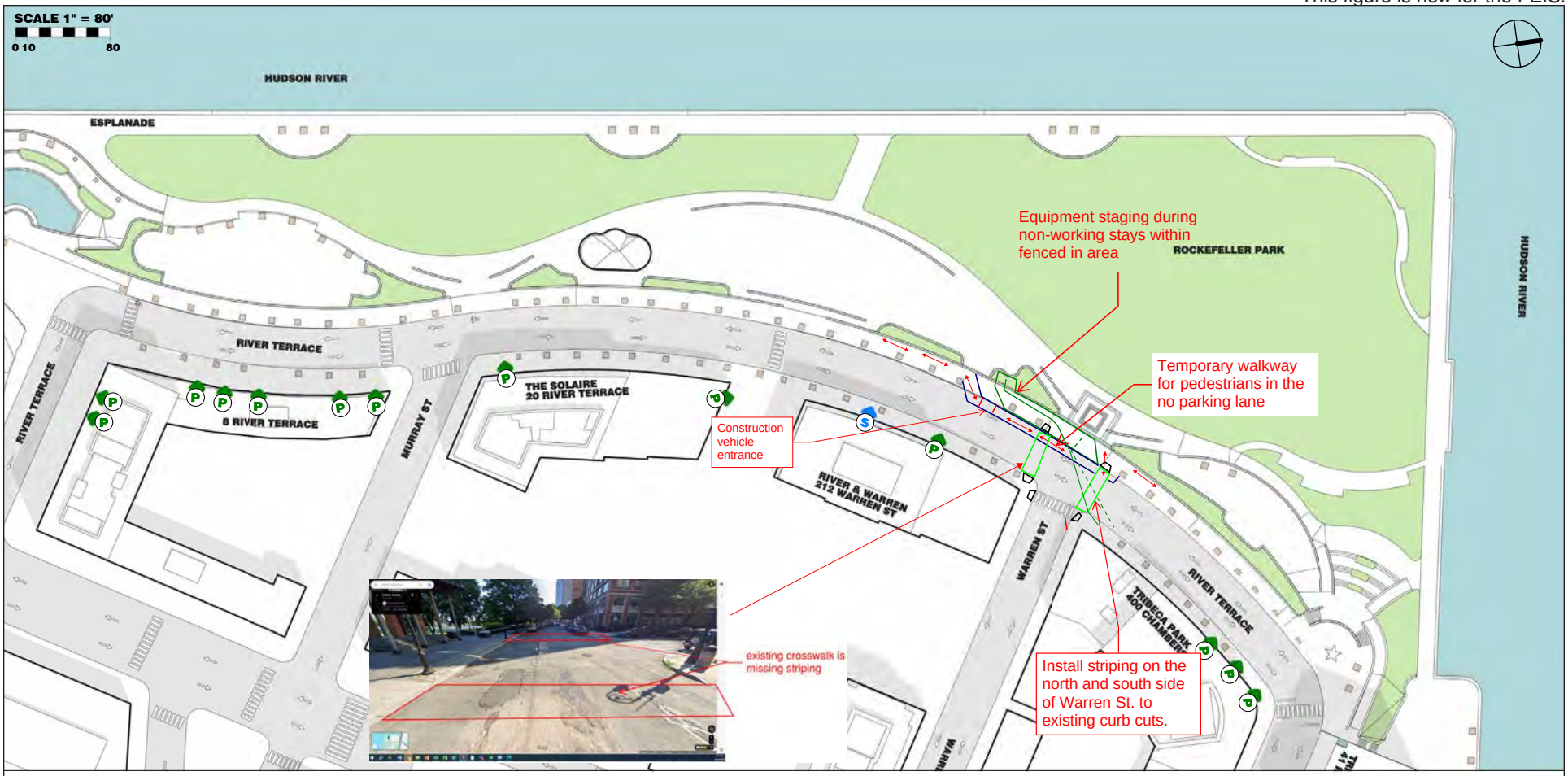
KEY PLAN - REACH 3

Key Plan - Existing Conditions

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-90r

This figure is new for the FEIS.



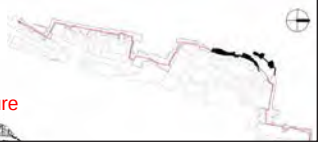
NOTES

Step 1: Perform work on west sidewalk, set up pedestrian walkway in "no parking lane"
Step 2: Perform work in "no parking" and southbound lane
Step 3: Perform work in North bound lane

LEGEND

- (P) PEDESTRIAN EGRESS
- (S) SERVICE EGRESS
- (V) VEHICLE EGRESS
- (BS) BUS STOP
- Temporary crosswalk
- Pedestrian flow path
- Construction fence enclosure

KEY PLAN - REACH 3

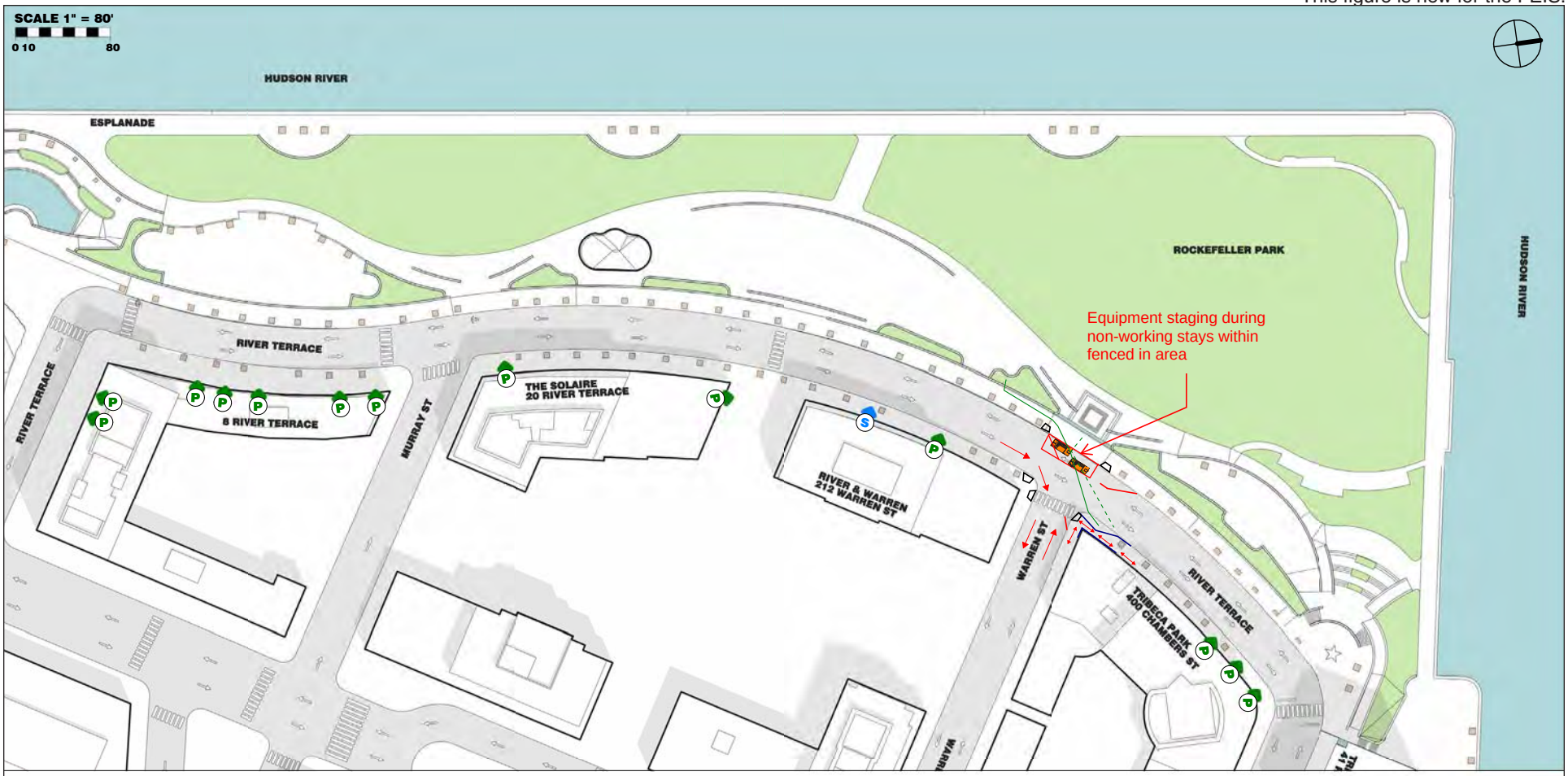


Plan - Work on West Sidewalk

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-90s

This figure is new for the FEIS.



NOTES

Step 1: Perform work on west sidewalk, set up pedestrian walkway in "no parking lane"
Step 2: Perform work in "no parking" and southbound lane
Step 3: Perform work in North bound lane

LEGEND

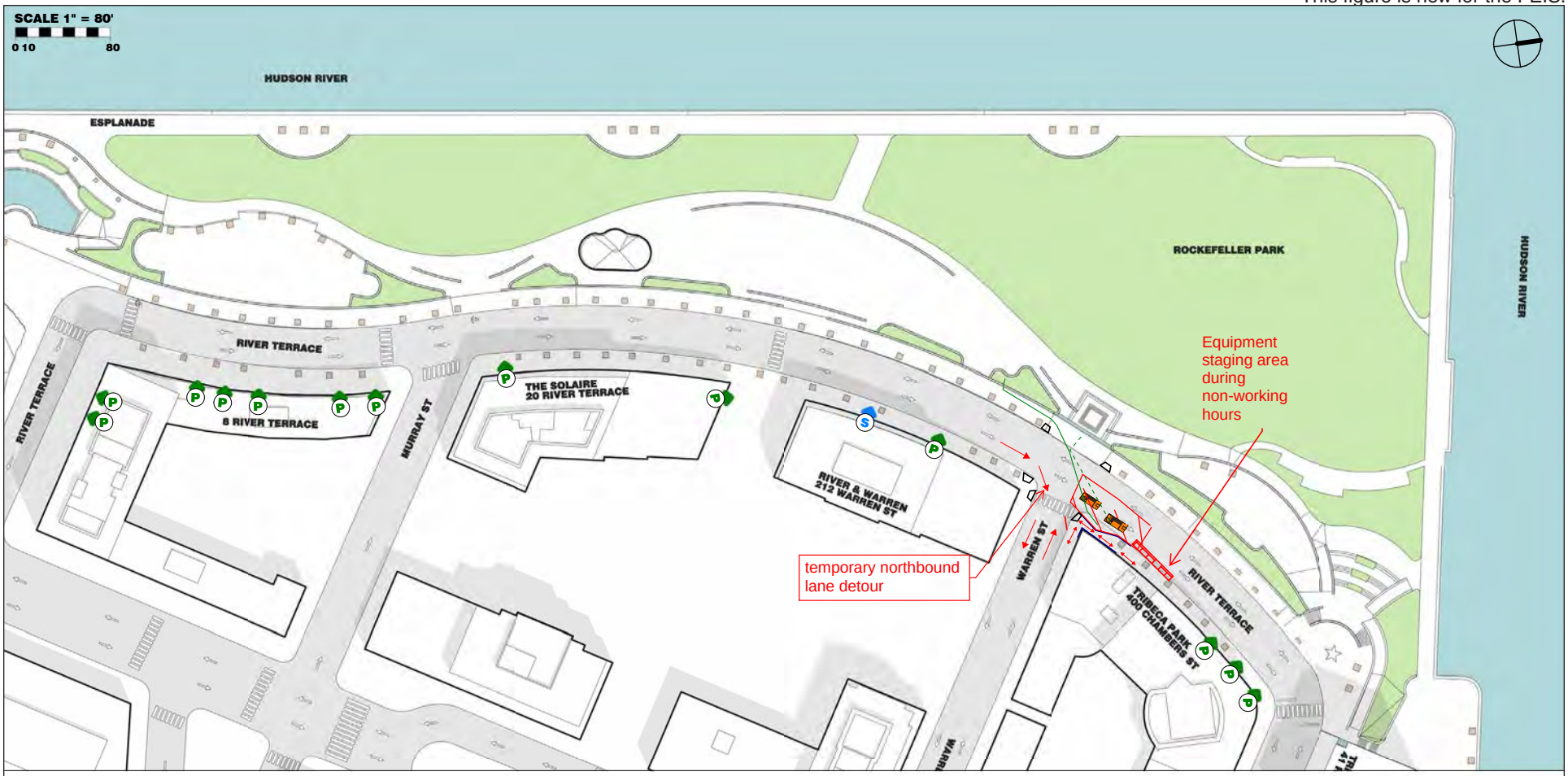
- (P) PEDESTRIAN EGRESS
- (S) SERVICE EGRESS
- (V) VEHICLE EGRESS
- (BS) BUS STOP
- Construction fence enclosure

KEY PLAN - REACH 3



Plan - Work in Southbound Lane

This figure is new for the FEIS.



NOTES

Step 1: Perform work on west sidewalk, set up pedestrian walkway in "no parking lane"
Step 2: Perform work in "no parking" and southbound lane
Step 3: Perform work in North bound lane

LEGEND

- (P) PEDESTRIAN EGRESS
- (S) SERVICE EGRESS
- (V) VEHICLE EGRESS
- (BS) BUS STOP
- Temporary enclosure

KEY PLAN - REACH 3

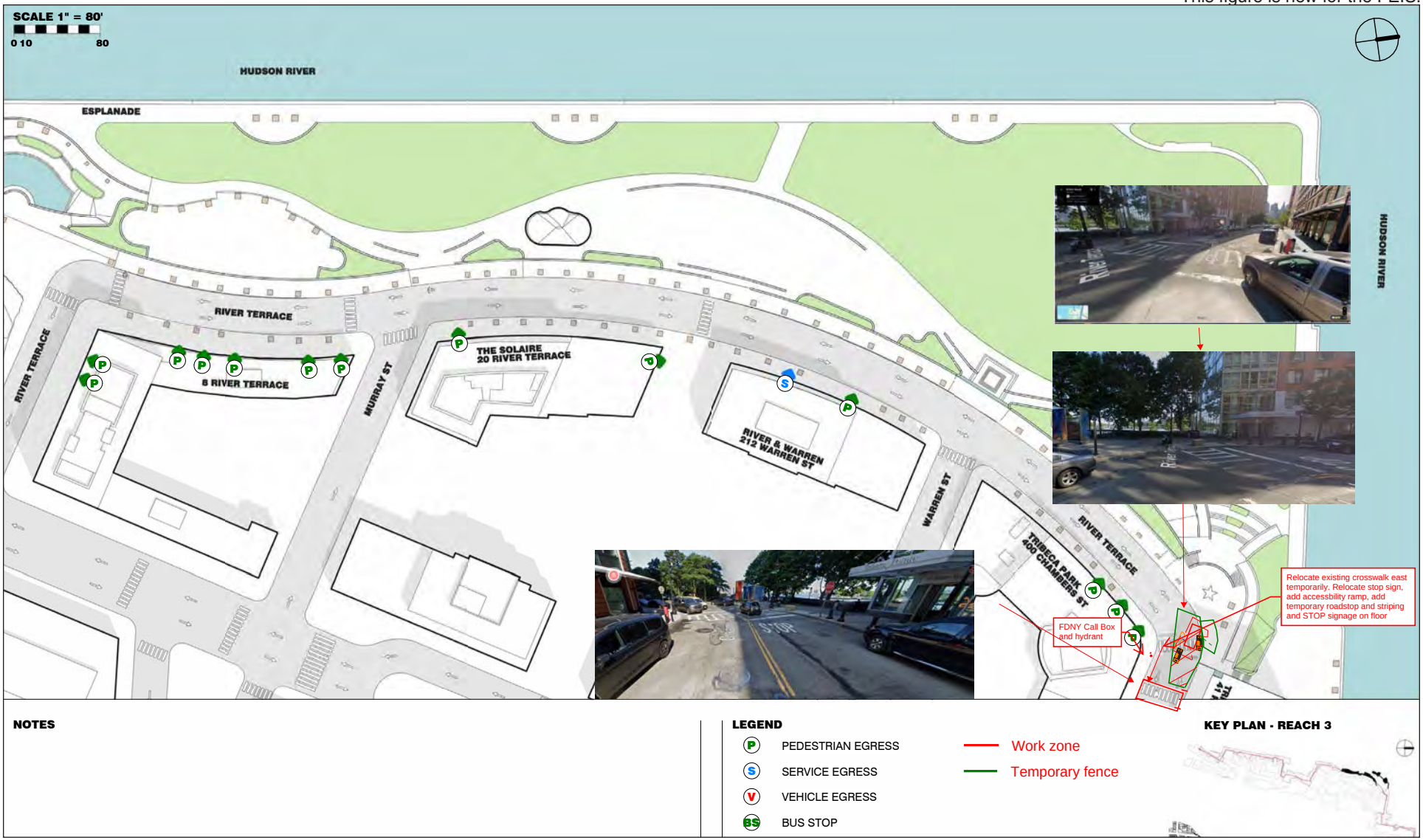


Plan - Work in Northbound Lane

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-90u

This figure is new for the FEIS.



NOTES

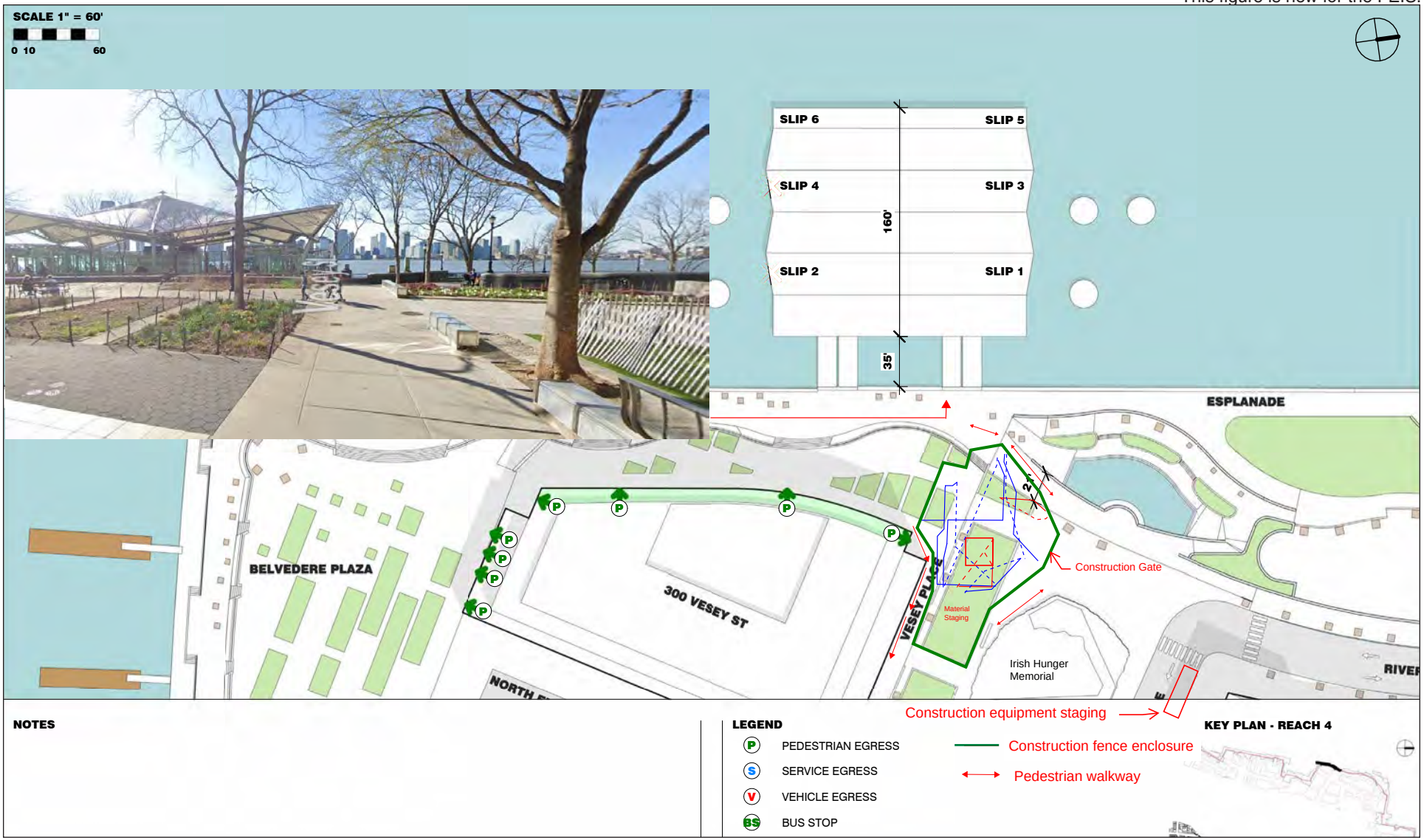
LEGEND

- P PEDESTRIAN EGRESS
- S SERVICE EGRESS
- V VEHICLE EGRESS
- BS BUS STOP
- Work zone
- Temporary fence

KEY PLAN - REACH 3

Plan - Chambers Street and River Terrace

This figure is new for the FEIS.

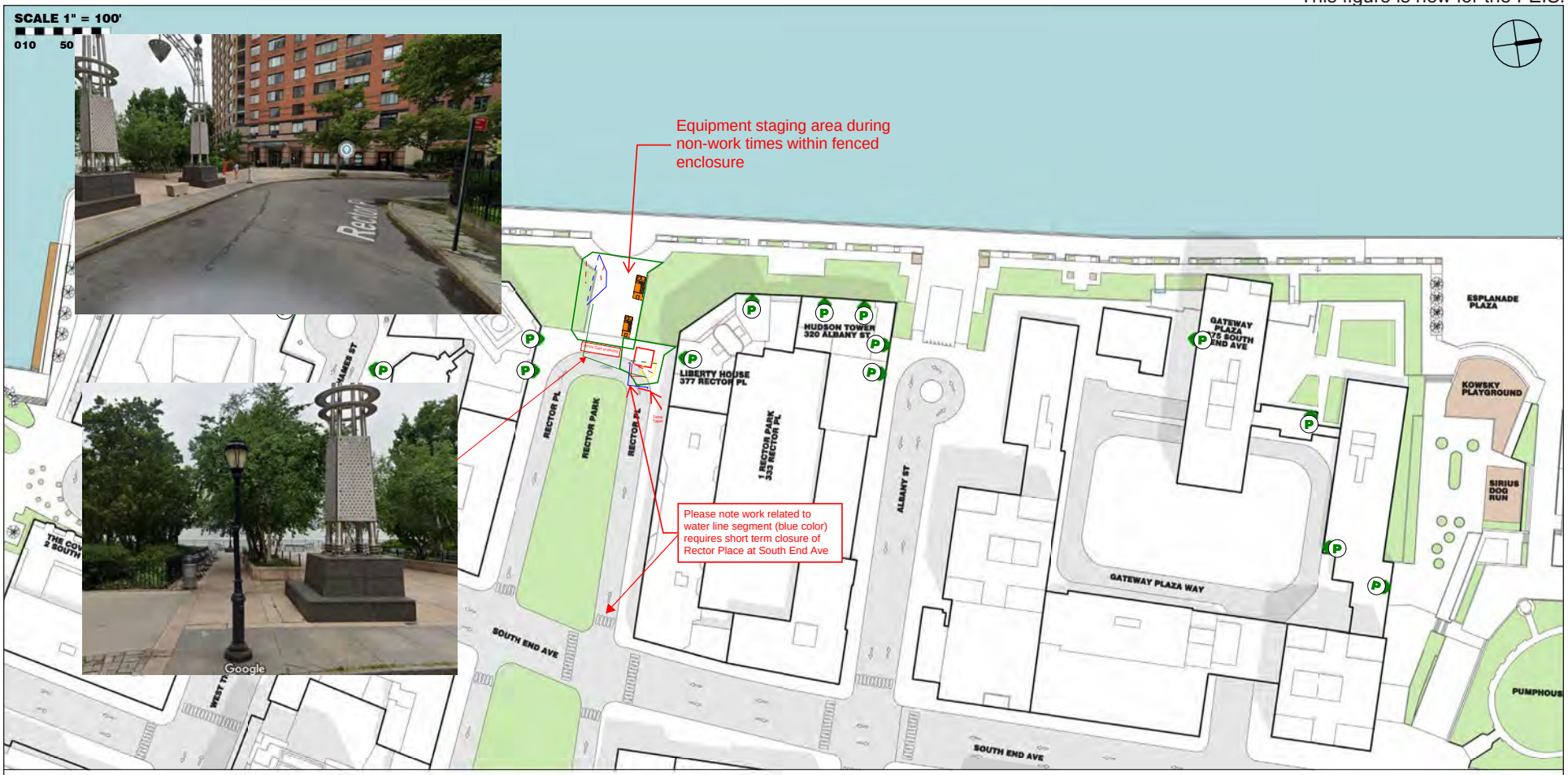


Plan - Tide Gate at Vesey Place SCO

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-90w

This figure is new for the FEIS.



NOTES

LEGEND

- (P) PEDESTRIAN EGRESS
- (S) SERVICE EGRESS
- (V) VEHICLE EGRESS
- (BS) BUS STOP
- Construction fence enclosure
- Pedestrian walkway

KEY PLAN - REACH 6

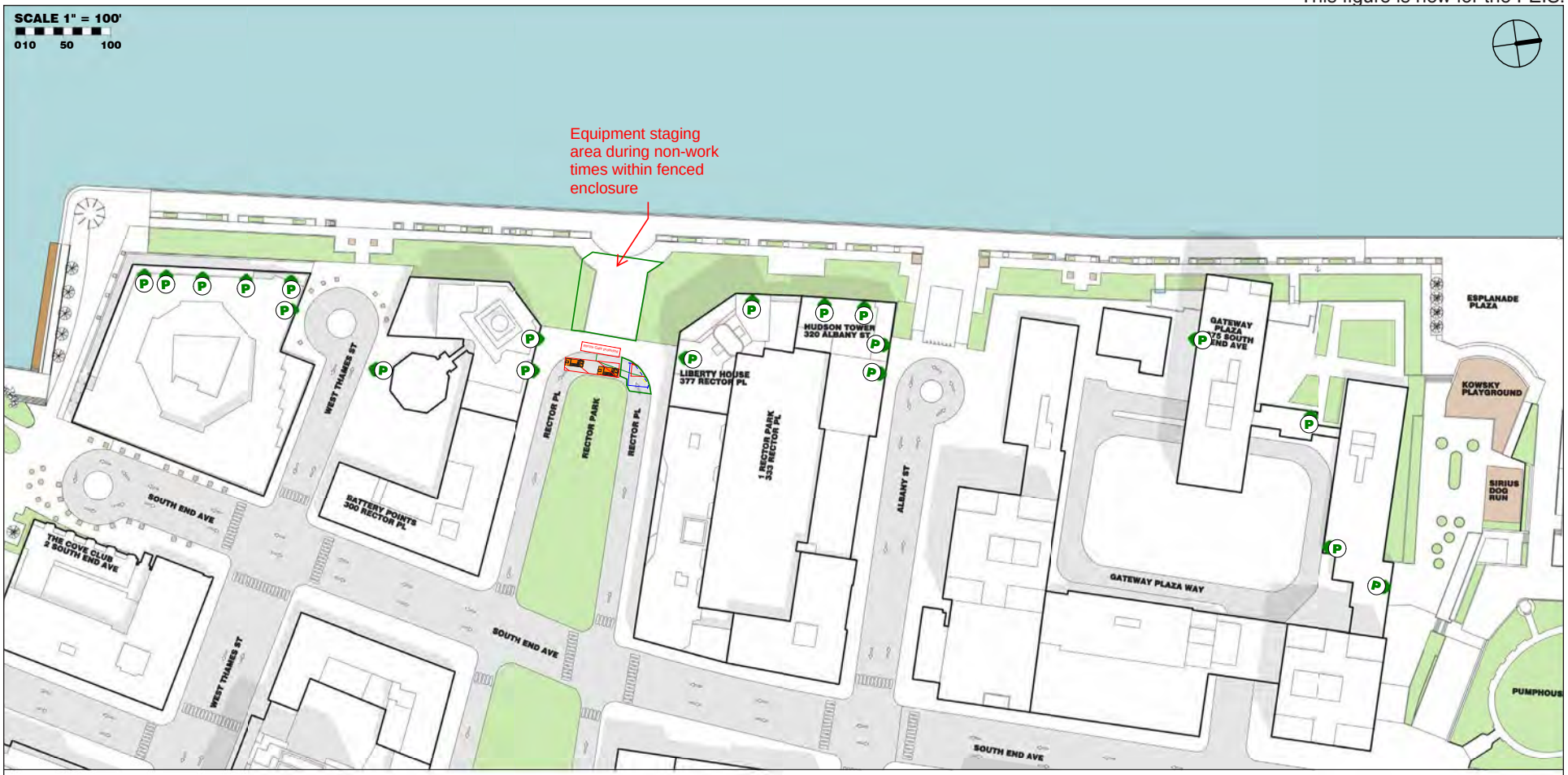


Plan - Tide Gate at Rector Place CSO

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-90x

This figure is new for the FEIS.



NOTES

LEGEND

- (P) PEDESTRIAN EGRESS
- (S) SERVICE EGRESS
- (V) VEHICLE EGRESS
- (BS) BUS STOP
- Construction fence enclosure
- Pedestrian walkway

KEY PLAN - REACH 6

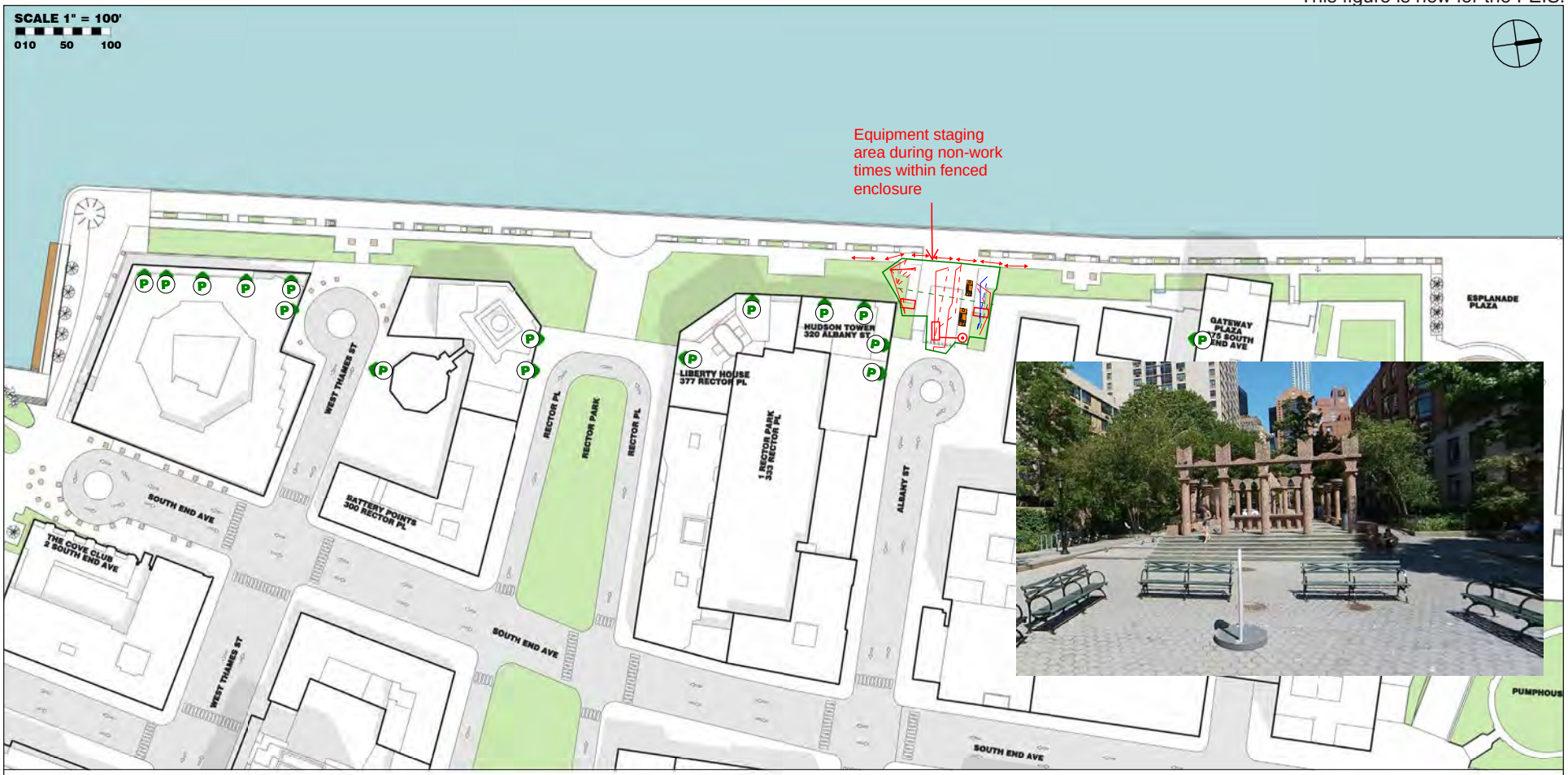


Plan -Rector Place Temporary Street Closure

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-90y

This figure is new for the FEIS.



NOTES

LEGEND

- (P) PEDESTRIAN EGRESS
- (S) SERVICE EGRESS
- (V) VEHICLE EGRESS
- (BS) BUS STOP
- Construction fence enclosure
- Pedestrian walkway

KEY PLAN - REACH 6



Plan - Tide Gate at Albany Street CSO

NORTH/WEST BATTERY PARK CITY RESILIENCY

Figure H.1-90z

West Battery Park Resiliency

GHG Emission Calculations

Summary & Results

	2025	2026	2027	2028	2029	2030	Total Emissions
	gallons						
Total Gas Consumption (gal)	3,162	54,849	66,620	62,326	26,207	2,214	215,378
On-Site	*0*	*35,786*	*44,334*	*44,160*	*14,952*	*0*	*139,232*
Transportation	*3,162*	*19,063*	*22,285*	*18,166*	*11,255*	*2,214*	*76,146*
Total Diesel Consumption [Trucks and Equip] (gal)	93,624	1,129,166	1,456,848	1,327,806	758,284	180,484	4,946,214
On-Site Equipment	*0*	*551,646*	*772,246*	*744,079*	*378,538*	*100,965*	*2,547,474*
On-Site Truck	*947*	*5,561*	*6,776*	*5,544*	*3,337*	*752*	*22,916*
Transportation	*92,678*	*571,959*	*677,826*	*578,184*	*376,410*	*78,767*	*2,375,823*
Total Diesel Consumption [Tug] (gal)	0	0	0	0	0	0	747,780
On-Site Manuevering	*0*	*0*	*0*	*0*	*0*	*0*	*324,226*
Transit	*0*	*0*	*0*	*0*	*0*	*0*	*423,555*
Total Propane Consumption (gal)	0	214	2,985	4,648	5,213	2,470	15,529

	2025	2026	2027	2028	2029	2030	Total Emissions
	miles						
Total Workforce VMT	90,832	560,433	673,259	565,745	361,217	72,846	2,324,332
Total Truck VMT	553,466	3,415,705	4,047,933	3,452,878	2,247,895	470,394	14,188,270

	2025	2026	2027	2028	2029	2030	Total Emissions	Total Emissions
	kg CO2e							MT CO2e
Total Equipment Emissions	0	268,418	358,912	367,397	212,425	63,008	1,270,161	1,270
On-Site Truck Idle Emissions	11360	66742	81321	66535	40044	9021	275024	275
Total Workforce Emissions	29121	175157	203743	164806	101157	19642	693626	694
Total Truck Emissions	1031515	6365980	7544288	6435260	4189488	876691	26443222	26,443
Tug Emissions								7,701
Material Emissions								8,825

Table 3.11.6-1

Total Transportation Emissions (metric ton CO_2e)

Vehicle Type	Emissions
On-Site	1,545
Transportation	34,837
Material	8,825
Total	**45,207**

West Battery Park Resiliency

GHG Emission Calculations

DAILY WORKFORCE PROJECTIONS (Persons)

		2025												2026												2027												2028												2029												2030											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
	Workers– All Reaches							0	0	0	215	215	215	305	305	305	325	325	325	335	335	335	375	375	375	370	370	370	405	405	405	415	415	415	415	415	415	410	410	410	370	370	370	300	300	300	275	275	275	235	235	235	235	235	235	210	210	210	185	185	185	140	140	140	35	35	35	0	0	0	0	0	0
2025	**Workers–Reach 1**							0	0	0	10	10	10	30	30	30	40	40	40	40	40	40	40	40	40	40	40	40	45	45	45	55	55	55	55	55	55	45	45	45	45	45	45	40	40	40	40	40	40	30	30	30	30	30	30	10	10	10	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0
2025	**Workers–Reach 2**							0	0	0	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	90	90	90	90	90	90	75	75	75	65	65	65	30	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2028	**Workers–Reach 3**							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	20	20	20	20	20	20	30	30	30	30	30	30	30	40	40	40	45	45	45	65	65	65	55	55	55	10	10	10	0	0	0	0	0	0
2027	**Workers–Reach 4**							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10	20	20	20	55	55	55	55	55	55	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	40	40	40	20	20	20	5	5	5	0	0	0	0	0	0
2025	**Workers–Reach 5**							0	0	0	10	10	10	45	45	45	55	55	55	65	65	65	85	85	85	90	90	90	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	85	85	85	75	75	75	65	65	65	55	55	55	45	45	45	45	45	45	20	20	20	0	0	0	0	0	0
2025	**Workers–Reach 6**							0	0	0	30	30	30	65	65	65	65	65	65	65	65	65	75	75	75	75	75	75	75	75	75	75	75	75	85	85	85	90	90	90	75	75	75	40	40	40	20	20	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2025	**Workers–Reach 7**							0	0	0	75	75	75	75	75	75	75	75	75	75	75	75	65	65	65	55	55	55	40	40	40	30	30	30	10	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2025	**Drainage Improvements**							0	0	0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	20	20	20	0	0	0	0	0	0	0	0	0
2026	**Pump Station**							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	20	20	20	20	30	30	30	30	30	30	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	0	0	0	0	0	0	0	0	0	0	0	0

West Battery Park Resiliency

GHG Emission Calculations

DAILY WORKFORCE PROJECTIONS (Auto Trips)

Modal Split	**29%**
Auto Occupancy	**1.18**

		2024											
Work task	**Start Year**	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Workers– All Reaches													
Workers–Reach 1	2025												
Workers–Reach 2	2025												
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025												
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025												
Pump Station	2026												
	Monthly	0	0	0	0	0	0	0	0	0	0	0	0
	Annual Average	0	0	0	0	0	0	0	0	0	0	0	0

West Battery Park Resiliency

GHG Emission Calculations

DAILY WORKFORCE PROJECTIONS (Auto Trips)

Modal Split	**29%**
Auto Occupancy	**1.18**

		2025											
Work task	**Start Year**	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Workers– All Reaches											53	53	53
Workers–Reach 1	2025										2	2	2
Workers–Reach 2	2025										18	18	18
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025										2	2	2
Workers–Reach 6	2025										7	7	7
Workers–Reach 7	2025										18	18	18
Drainage Improvements	2025										4	4	4
Pump Station	2026												
	Monthly	0	0	0	0	0	0	0	0	0	53	53	53
	Annual Average	0	0	0	0	0	0	0	0	0	4	9	13

West Battery Park Resiliency

GHG Emission Calculations

DAILY WORKFORCE PROJECTIONS (Auto Trips)

Modal Split	**29%**
Auto Occupancy	**1.18**

		2026											
Work task	**Start Year**	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
Workers– All Reaches		75	75	75	80	80	80	82	82	82	92	92	92
Workers–Reach 1	2025	7	7	7	10	10	10	10	10	10	10	10	10
Workers–Reach 2	2025	18	18	18	18	18	18	18	18	18	18	18	18
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025	11	11	11	14	14	14	16	16	16	21	21	21
Workers–Reach 6	2025	16	16	16	16	16	16	16	16	16	18	18	18
Workers–Reach 7	2025	18	18	18	18	18	18	18	18	18	16	16	16
Drainage Improvements	2025	4	4	4	4	4	4	4	4	4	4	4	4
Pump Station	2026										5	5	5
	Monthly	75	75	75	80	80	80	82	82	82	92	92	92
	Annual Average	19	26	32	39	45	52	59	66	73	76	79	82

West Battery Park Resiliency

GHG Emission Calculations

DAILY WORKFORCE PROJECTIONS (Auto Trips)

Modal Split	**29%**
Auto Occupancy	**1.18**

		2027											
Work task	**Start Year**	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27
Workers– All Reaches		91	91	91	100	100	100	102	102	102	102	102	102
Workers–Reach 1	2025	10	10	10	11	11	11	14	14	14	14	14	14
Workers–Reach 2	2025	18	18	18	22	22	22	22	22	22	18	18	18
Workers–Reach 3	2028												
Workers–Reach 4	2027				2	2	2	5	5	5	14	14	14
Workers–Reach 5	2025	22	22	22	25	25	25	25	25	25	25	25	25
Workers–Reach 6	2025	18	18	18	18	18	18	18	18	18	21	21	21
Workers–Reach 7	2025	14	14	14	10	10	10	7	7	7	2	2	2
Drainage Improvements	2025	4	4	4	4	4	4	4	4	4	4	4	4
Pump Station	2026	5	5	5	7	7	7	7	7	7	5	5	5
	Monthly	91	91	91	100	100	100	102	102	102	102	102	102
	Annual Average	84	85	86	88	90	91	93	95	96	97	98	99

West Battery Park Resiliency

GHG Emission Calculations

DAILY WORKFORCE PROJECTIONS (Auto Trips)

Modal Split	**29%**
Auto Occupancy	**1.18**

		2028											
Work task	**Start Year**	Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28
Workers– All Reaches		101	101	101	91	91	91	74	74	74	68	68	68
Workers–Reach 1	2025	11	11	11	11	11	11	10	10	10	10	10	10
Workers–Reach 2	2025	16	16	16	7	7	7						
Workers–Reach 3	2028	5	5	5	5	5	5	5	5	5	7	7	7
Workers–Reach 4	2027	14	14	14	16	16	16	16	16	16	16	16	16
Workers–Reach 5	2025	25	25	25	25	25	25	25	25	25	21	21	21
Workers–Reach 6	2025	22	22	22	18	18	18	10	10	10	5	5	5
Workers–Reach 7	2025												
Drainage Improvements	2025	4	4	4	4	4	4	4	4	4	4	4	4
Pump Station	2026	5	5	5	5	5	5	5	5	5	5	5	5
	Monthly	101	101	101	91	91	91	74	74	74	68	68	68
	Annual Average	99	100	101	100	100	99	97	94	92	89	86	83

West Battery Park Resiliency

GHG Emission Calculations

DAILY WORKFORCE PROJECTIONS (Auto Trips)

Modal Split	**29%**
Auto Occupancy	**1.18**

		2029											
Work task	**Start Year**	Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Jul-29	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29
Workers– All Reaches		58	58	58	58	58	58	52	52	52	45	45	45
Workers–Reach 1	2025	7	7	7	7	7	7	2	2	2			
Workers–Reach 2	2025												
Workers–Reach 3	2028	7	7	7	10	10	10	11	11	11	16	16	16
Workers–Reach 4	2027	16	16	16	16	16	16	16	16	16	10	10	10
Workers–Reach 5	2025	18	18	18	16	16	16	14	14	14	11	11	11
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025	4	4	4	4	4	4	4	4	4	4	4	4
Pump Station	2026	5	5	5	5	5	5	5	5	5	5	5	5
	Monthly	58	58	58	58	58	58	52	52	52	45	45	45
	Annual Average	80	76	73	70	67	64	62	61	59	57	55	53

West Battery Park Resiliency

GHG Emission Calculations

DAILY WORKFORCE PROJECTIONS (Auto Trips)

Modal Split	**29%**
Auto Occupancy	**1.18**

		2030											
Work task	**Start Year**	Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30
Workers– All Reaches		34	34	34	9	9	9						
Workers–Reach 1	2025												
Workers–Reach 2	2025												
Workers–Reach 3	2028	14	14	14	2	2	2						
Workers–Reach 4	2027	5	5	5	1	1	1						
Workers–Reach 5	2025	11	11	11	5	5	5						
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025	5	5	5									
Pump Station	2026												
	Monthly	34	34	34	9	9	9						
	Annual Average	51	49	47	43	39	35	31	26	22	18	15	11

West Battery Park Resiliency

GHG Emission Calculations

DAILY WORKFORCE PROJECTIONS (Auto Trips)

Modal Split	**29%**
Auto Occupancy	**1.18**

		2031											
Work task	**Start Year**	Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Jul-31	Aug-31	Sep-31	Oct-31	Nov-31	Dec-31
Workers– All Reaches													
Workers–Reach 1	2025												
Workers–Reach 2	2025												
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025												
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025												
Pump Station	2026												
	Monthly												
	Annual Average	8	5	2	1	1	0	0	0	0	0	0	0

West Battery Park Resiliency

GHG Emission Calculations

Workforce VMT

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

*

Monthly Vehicle Miles Traveled

		2024											
Work task	**Start Year**	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Workers– All Reaches													
Workers–Reach 1	2025												
Workers–Reach 2	2025												
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025												
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025												
Pump Station	2026												
	Monthly	0	0	0	0	0	0	0	0	0	0	0	0
	Annual												0

Year

	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Annual	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Total	0	90,832	560,433	673,259	565,745	361,217	72,846	0

West Battery Park Resiliency

GHG Emission Calculations

Workforce VMT

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

*

Monthly Vehicle Miles Traveled

		2025											
Work task	**Start Year**	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Workers– All Reaches											30723	28051	32058
Workers–Reach 1	2025										1429	1305	1491
Workers–Reach 2	2025										10717	9785	11183
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025										1429	1305	1491
Workers–Reach 6	2025										4287	3914	4473
Workers–Reach 7	2025										10717	9785	11183
Drainage Improvements	2025										2143	1957	2237
Pump Station	2026												
	Monthly	0	0	0	0	0	0	0	0	0	30723	28051	32058
	Annual												90832

West Battery Park Resiliency

GHG Emission Calculations

Workforce VMT

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

Monthly Vehicle Miles Traveled

		2026											
Work task	**Start Year**	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
Workers– All Reaches		41688	37899	43583	46441	44422	46441	47870	45789	47870	51256	51256	55916
Workers–Reach 1	2025	4101	3728	4287	5716	5467	5716	5716	5467	5716	5467	5467	5964
Workers–Reach 2	2025	10251	9319	10717	10717	10251	10717	10717	10251	10717	10251	10251	11183
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025	6151	5592	6430	7859	7518	7859	9288	8884	9288	11618	11618	12674
Workers–Reach 6	2025	8884	8077	9288	9288	8884	9288	9288	8884	9288	10251	10251	11183
Workers–Reach 7	2025	10251	9319	10717	10717	10251	10717	10717	10251	10717	8884	8884	9692
Drainage Improvements	2025	2050	1864	2143	2143	2050	2143	2143	2050	2143	2050	2050	2237
Pump Station	2026										2734	2734	2982
	Monthly	41688	37899	43583	46441	44422	46441	47870	45789	47870	51256	51256	55916
	Annual												560433

West Battery Park Resiliency

GHG Emission Calculations

Workforce VMT

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

Monthly Vehicle Miles Traveled

		2027											
Work task	**Start Year**	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27
Workers– All Reaches		50573	48274	55170	55357	55357	57873	56724	59302	59302	56724	59302	59302
Workers–Reach 1	2025	5467	5219	5964	6151	6151	6430	7518	7859	7859	7518	7859	7859
Workers–Reach 2	2025	10251	9785	11183	12302	12302	12861	12302	12861	12861	10251	10717	10717
Workers–Reach 3	2028												
Workers–Reach 4	2027				1367	1367	1429	2734	2858	2858	7518	7859	7859
Workers–Reach 5	2025	12302	11742	13420	13668	13668	14290	13668	14290	14290	13668	14290	14290
Workers–Reach 6	2025	10251	9785	11183	10251	10251	10717	10251	10717	10717	11618	12146	12146
Workers–Reach 7	2025	7518	7176	8201	5467	5467	5716	4101	4287	4287	1367	1429	1429
Drainage Improvements	2025	2050	1957	2237	2050	2050	2143	2050	2143	2143	2050	2143	2143
Pump Station	2026	2734	2609	2982	4101	4101	4287	4101	4287	4287	2734	2858	2858
	Monthly	50573	48274	55170	55357	55357	57873	56724	59302	59302	56724	59302	59302
	Annual												673259

West Battery Park Resiliency

GHG Emission Calculations

Workforce VMT

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

Monthly Vehicle Miles Traveled

		2028											
Work task	**Start Year**	Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28
Workers– All Reaches		56040	56040	58587	48274	55170	50573	41005	44733	39141	39296	39296	37588
Workers–Reach 1	2025	6151	6151	6430	5871	6710	6151	5467	5964	5219	5716	5716	5467
Workers–Reach 2	2025	8884	8884	9288	3914	4473	4101						
Workers–Reach 3	2028	2734	2734	2858	2609	2982	2734	2734	2982	2609	4287	4287	4101
Workers–Reach 4	2027	7518	7518	7859	8481	9692	8884	8884	9692	8481	9288	9288	8884
Workers–Reach 5	2025	13668	13668	14290	13047	14911	13668	13668	14911	13047	12146	12146	11618
Workers–Reach 6	2025	12302	12302	12861	9785	11183	10251	5467	5964	5219	2858	2858	2734
Workers–Reach 7	2025												
Drainage Improvements	2025	2050	2050	2143	1957	2237	2050	2050	2237	1957	2143	2143	2050
Pump Station	2026	2734	2734	2858	2609	2982	2734	2734	2982	2609	2858	2858	2734
	Monthly	56040	56040	58587	48274	55170	50573	41005	44733	39141	39296	39296	37588
	Annual												565745

West Battery Park Resiliency

GHG Emission Calculations

Workforce VMT

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

Monthly Vehicle Miles Traveled

		2029											
Work task	**Start Year**	Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Jul-29	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29
Workers– All Reaches		35041	30661	32121	32121	35041	30661	30008	30008	27399	27585	25286	25286
Workers–Reach 1	2025	4473	3914	4101	4101	4473	3914	1429	1429	1305			
Workers–Reach 2	2025												
Workers–Reach 3	2028	4473	3914	4101	5467	5964	5219	6430	6430	5871	9692	8884	8884
Workers–Reach 4	2027	9692	8481	8884	8884	9692	8481	9288	9288	8481	5964	5467	5467
Workers–Reach 5	2025	11183	9785	10251	8884	9692	8481	7859	7859	7176	6710	6151	6151
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025	2237	1957	2050	2050	2237	1957	2143	2143	1957	2237	2050	2050
Pump Station	2026	2982	2609	2734	2734	2982	2609	2858	2858	2609	2982	2734	2734
	Monthly	35041	30661	32121	32121	35041	30661	30008	30008	27399	27585	25286	25286
	Annual												361217

West Battery Park Resiliency

GHG Emission Calculations

Workforce VMT

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

Monthly Vehicle Miles Traveled

		2030											
Work task	**Start Year**	Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30
Workers– All Reaches		20875	18266	19136	5001	5001	4566						
Workers–Reach 1	2025												
Workers–Reach 2	2025												
Workers–Reach 3	2028	8201	7176	7518	1429	1429	1305						
Workers–Reach 4	2027	2982	2609	2734	714	714	652						
Workers–Reach 5	2025	6710	5871	6151	2858	2858	2609						
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025	2982	2609	2734									
Pump Station	2026												
	Monthly	20875	18266	19136	5001	5001	4566	0	0	0	0	0	0
	Annual												72846

West Battery Park Resiliency

GHG Emission Calculations

Workforce VMT

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

Monthly Vehicle Miles Traveled

		2031											
Work task	**Start Year**	Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Jul-31	Aug-31	Sep-31	Oct-31	Nov-31	Dec-31
Workers– All Reaches													
Workers–Reach 1	2025												
Workers–Reach 2	2025												
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025												
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025												
Pump Station	2026												
	Monthly	0	0	0	0	0	0	0	0	0	0	0	0
	Annual												0

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Fuel Consumption

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

Monthly Gallons of Fuel Consumed

		2024											
Work task	**Start Year**	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Workers– All Reaches													
Workers–Reach 1	2025												
Workers–Reach 2	2025												
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025												
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025												
Pump Station	2026												
	Monthly	0	0	0	0	0	0	0	0	0	0	0	0
	Annual												0

	Year							
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Annual	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Total	0	3,162	19,063	22,285	18,166	11,255	2,214	0

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Fuel Consumption

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

Monthly Gallons of Fuel Consumed

		2025											
Work task	**Start Year**	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Workers– All Reaches											1070	977	1116
Workers–Reach 1	2025										50	45	52
Workers–Reach 2	2025										373	341	389
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025										50	45	52
Workers–Reach 6	2025										149	136	156
Workers–Reach 7	2025										373	341	389
Drainage Improvements	2025										75	68	78
Pump Station	2026												
	Monthly	0	0	0	0	0	0	0	0	0	1070	977	1116
	Annual												3162

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Fuel Consumption

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

Monthly Gallons of Fuel Consumed

		2026											
Work task	**Start Year**	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
Workers– All Reaches		1418	1289	1482	1580	1511	1580	1628	1557	1628	1743	1743	1902
Workers–Reach 1	2025	139	127	146	194	186	194	194	186	194	186	186	203
Workers–Reach 2	2025	349	317	365	365	349	365	365	349	365	349	349	380
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025	209	190	219	267	256	267	316	302	316	395	395	431
Workers–Reach 6	2025	302	275	316	316	302	316	316	302	316	349	349	380
Workers–Reach 7	2025	349	317	365	365	349	365	365	349	365	302	302	330
Drainage Improvements	2025	70	63	73	73	70	73	73	70	73	70	70	76
Pump Station	2026										93	93	101
	Monthly	1418	1289	1482	1580	1511	1580	1628	1557	1628	1743	1743	1902
	Annual												19063

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Fuel Consumption

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

Monthly Gallons of Fuel Consumed

		2027											
Work task	**Start Year**	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27
Workers– All Reaches		1674	1598	1826	1832	1832	1916	1878	1963	1963	1878	1963	1963
Workers–Reach 1	2025	181	173	197	204	204	213	249	260	260	249	260	260
Workers–Reach 2	2025	339	324	370	407	407	426	407	426	426	339	355	355
Workers–Reach 3	2028												
Workers–Reach 4	2027				45	45	47	90	95	95	249	260	260
Workers–Reach 5	2025	407	389	444	452	452	473	452	473	473	452	473	473
Workers–Reach 6	2025	339	324	370	339	339	355	339	355	355	385	402	402
Workers–Reach 7	2025	249	238	271	181	181	189	136	142	142	45	47	47
Drainage Improvements	2025	68	65	74	68	68	71	68	71	71	68	71	71
Pump Station	2026	90	86	99	136	136	142	136	142	142	90	95	95
	Monthly	1674	1598	1826	1832	1832	1916	1878	1963	1963	1878	1963	1963
	Annual												22285

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Fuel Consumption

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

Monthly Gallons of Fuel Consumed

		2028											
Work task	**Start Year**	Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28
Workers– All Reaches		1799	1799	1881	1550	1772	1624	1317	1436	1257	1262	1262	1207
Workers–Reach 1	2025	198	198	206	189	215	198	176	192	168	184	184	176
Workers–Reach 2	2025	285	285	298	126	144	132						
Workers–Reach 3	2028	88	88	92	84	96	88	88	96	84	138	138	132
Workers–Reach 4	2027	241	241	252	272	311	285	285	311	272	298	298	285
Workers–Reach 5	2025	439	439	459	419	479	439	439	479	419	390	390	373
Workers–Reach 6	2025	395	395	413	314	359	329	176	192	168	92	92	88
Workers–Reach 7	2025												
Drainage Improvements	2025	66	66	69	63	72	66	66	72	63	69	69	66
Pump Station	2026	88	88	92	84	96	88	88	96	84	92	92	88
	Monthly	1799	1799	1881	1550	1772	1624	1317	1436	1257	1262	1262	1207
	Annual												18166

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Fuel Consumption

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

Monthly Gallons of Fuel Consumed

		2029											
Work task	**Start Year**	Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Jul-29	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29
Workers– All Reaches		1092	955	1001	1001	1092	955	935	935	854	860	788	788
Workers–Reach 1	2025	139	122	128	128	139	122	45	45	41			
Workers–Reach 2	2025												
Workers–Reach 3	2028	139	122	128	170	186	163	200	200	183	302	277	277
Workers–Reach 4	2027	302	264	277	277	302	264	289	289	264	186	170	170
Workers–Reach 5	2025	348	305	319	277	302	264	245	245	224	209	192	192
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025	70	61	64	64	70	61	67	67	61	70	64	64
Pump Station	2026	93	81	85	85	93	81	89	89	81	93	85	85
	Monthly	1092	955	1001	1001	1092	955	935	935	854	860	788	788
	Annual												11255

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Fuel Consumption

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

Monthly Gallons of Fuel Consumed

		2030											
Work task	**Start Year**	Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30
Workers– All Reaches		634	555	582	152	152	139						
Workers–Reach 1	2025												
Workers–Reach 2	2025												
Workers–Reach 3	2028	249	218	228	43	43	40						
Workers–Reach 4	2027	91	79	83	22	22	20						
Workers–Reach 5	2025	204	178	187	87	87	79						
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025	91	79	83									
Pump Station	2026												
	Monthly	634	555	582	152	152	139	0	0	0	0	0	0
	Annual												2214

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Fuel Consumption

Modal Split	**29%**
Auto Occupancy	**1.18**
One-Way Trip Length	**12.64**

Monthly Gallons of Fuel Consumed

		2031											
Work task	**Start Year**	Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Jul-31	Aug-31	Sep-31	Oct-31	Nov-31	Dec-31
Workers– All Reaches													
Workers–Reach 1	2025												
Workers–Reach 2	2025												
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025												
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025												
Pump Station	2026												
	Monthly	0	0	0	0	0	0	0	0	0	0	0	0
	Annual												0

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Emissions

Monthly kg of CO2e Emitted

		2024											
Work task	**Start Year**	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Workers– All Reaches													
Workers–Reach 1	2025												
Workers–Reach 2	2025												
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025												
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025												
Pump Station	2026												
	Monthly	0	0	0	0	0	0	0	0	0	0	0	0
	Annual												0

Year

	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Annual	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Total	0	29,121	175,157	203,743	164,806	101,157	19,642	0

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Emissions

Monthly kg of CO2e Emitted

		2025											
Work task	**Start Year**	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Workers– All Reaches											9850	8993	10278
Workers–Reach 1	2025										458	418	478
Workers–Reach 2	2025										3436	3137	3585
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025										458	418	478
Workers–Reach 6	2025										1374	1255	1434
Workers–Reach 7	2025										3436	3137	3585
Drainage Improvements	2025										687	627	717
Pump Station	2026												
	Monthly	0	0	0	0	0	0	0	0	0	9850	8993	10278
	Annual												29121

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Emissions

Monthly kg of CO2e Emitted

		2026											
Work task	**Start Year**	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
Workers– All Reaches		13029	11845	13621	14515	13884	14515	14961	14311	14961	16020	16020	17476
Workers–Reach 1	2025	1282	1165	1340	1786	1709	1786	1786	1709	1786	1709	1709	1864
Workers–Reach 2	2025	3204	2913	3350	3350	3204	3350	3350	3204	3350	3204	3204	3495
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025	1922	1748	2010	2456	2350	2456	2903	2777	2903	3631	3631	3961
Workers–Reach 6	2025	2777	2524	2903	2903	2777	2903	2903	2777	2903	3204	3204	3495
Workers–Reach 7	2025	3204	2913	3350	3350	3204	3350	3350	3204	3350	2777	2777	3029
Drainage Improvements	2025	641	583	670	670	641	670	670	641	670	641	641	699
Pump Station	2026										854	854	932
	Monthly	13029	11845	13621	14515	13884	14515	14961	14311	14961	16020	16020	17476
	Annual												175157

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Emissions

Monthly kg of CO2e Emitted

		2027											
Work task	**Start Year**	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27
Workers– All Reaches		15304	14609	16696	16752	16752	17514	17166	17946	17946	17166	17946	17946
Workers–Reach 1	2025	1655	1579	1805	1861	1861	1946	2275	2378	2378	2275	2378	2378
Workers–Reach 2	2025	3102	2961	3384	3723	3723	3892	3723	3892	3892	3102	3243	3243
Workers–Reach 3	2028												
Workers–Reach 4	2027				414	414	432	827	865	865	2275	2378	2378
Workers–Reach 5	2025	3723	3553	4061	4136	4136	4324	4136	4324	4324	4136	4324	4324
Workers–Reach 6	2025	3102	2961	3384	3102	3102	3243	3102	3243	3243	3516	3676	3676
Workers–Reach 7	2025	2275	2172	2482	1655	1655	1730	1241	1297	1297	414	432	432
Drainage Improvements	2025	620	592	677	620	620	649	620	649	649	620	649	649
Pump Station	2026	827	790	902	1241	1241	1297	1241	1297	1297	827	865	865
	Monthly	15304	14609	16696	16752	16752	17514	17166	17946	17946	17166	17946	17946
	Annual												203743

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Emissions

Monthly kg of CO2e Emitted

		2028											
Work task	**Start Year**	Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28
Workers– All Reaches		16325	16325	17067	14063	16072	14732	11945	13031	11402	11447	11447	10950
Workers–Reach 1	2025	1792	1792	1873	1710	1955	1792	1593	1737	1520	1665	1665	1593
Workers–Reach 2	2025	2588	2588	2706	1140	1303	1195						
Workers–Reach 3	2028	796	796	833	760	869	796	796	869	760	1249	1249	1195
Workers–Reach 4	2027	2190	2190	2289	2470	2823	2588	2588	2823	2470	2706	2706	2588
Workers–Reach 5	2025	3982	3982	4163	3801	4344	3982	3982	4344	3801	3538	3538	3384
Workers–Reach 6	2025	3584	3584	3746	2851	3258	2986	1593	1737	1520	833	833	796
Workers–Reach 7	2025												
Drainage Improvements	2025	597	597	624	570	652	597	597	652	570	624	624	597
Pump Station	2026	796	796	833	760	869	796	796	869	760	833	833	796
	Monthly	16325	16325	17067	14063	16072	14732	11945	13031	11402	11447	11447	10950
	Annual												164806

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Emissions

Monthly kg of CO2e Emitted

		2029											
Work task	**Start Year**	Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Jul-29	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29
Workers– All Reaches		9813	8586	8995	8995	9813	8586	8404	8404	7673	7725	7081	7081
Workers–Reach 1	2025	1253	1096	1148	1148	1253	1096	400	400	365			
Workers–Reach 2	2025												
Workers–Reach 3	2028	1253	1096	1148	1531	1670	1461	1801	1801	1644	2714	2488	2488
Workers–Reach 4	2027	2714	2375	2488	2488	2714	2375	2601	2601	2375	1670	1531	1531
Workers–Reach 5	2025	3132	2740	2871	2488	2714	2375	2201	2201	2010	1879	1722	1722
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025	626	548	574	574	626	548	600	600	548	626	574	574
Pump Station	2026	835	731	766	766	835	731	800	800	731	835	766	766
	Monthly	9813	8586	8995	8995	9813	8586	8404	8404	7673	7725	7081	7081
	Annual												101157

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Emissions

Monthly kg of CO2e Emitted

		2030											
Work task	**Start Year**	Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30
Workers– All Reaches		5629	4925	5160	1349	1349	1231						
Workers–Reach 1	2025												
Workers–Reach 2	2025												
Workers–Reach 3	2028	2211	1935	2027	385	385	352						
Workers–Reach 4	2027	804	704	737	193	193	176						
Workers–Reach 5	2025	1809	1583	1658	771	771	704						
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025	804	704	737									
Pump Station	2026												
	Monthly	5629	4925	5160	1349	1349	1231	0	0	0	0	0	0
	Annual												19642

West Battery Park Resiliency

GHG Emission Calculations

Workforce Vehicle Emissions

Monthly kg of CO2e Emitted

		2031											
Work task	**Start Year**	Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Jul-31	Aug-31	Sep-31	Oct-31	Nov-31	Dec-31
Workers– All Reaches													
Workers–Reach 1	2025												
Workers–Reach 2	2025												
Workers–Reach 3	2028												
Workers–Reach 4	2027												
Workers–Reach 5	2025												
Workers–Reach 6	2025												
Workers–Reach 7	2025												
Drainage Improvements	2025												
Pump Station	2026												
	Monthly	0	0	0	0	0	0	0	0	0	0	0	0
	Annual												0

West Battery Park Resiliency

GHG Emission Calculations

DAILY TRUCK PROJECTIONS (Trucks)

		1 2025	1 2025	1 2025	2 2025	2 2025	2 2025	3 2025	3 2025	3 2025	4 2025	4 2025	4 2025	1 2026	1 2026	1 2026	2 2026	2 2026	2 2026	3 2026	3 2026	3 2026	4 2026	4 2026	4 2026	1 2027	1 2027	1 2027	2 2027	2 2027	2 2027	3 2027	3 2027	3 2027	4 2027	4 2027	4 2027
		2025												2026												2027											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
	Trucks – All Reaches										105	105	105	150	150	150	155	155	155	160	160	160	180	180	180	180	180	180	200	200	200	200	200	200	195	195	195
2025	**Trucks –Reach 1**										5	5	5	15	15	15	20	20	20	20	20	20	20	20	20	20	20	20	25	25	25	25	25	25	25	25	25
2025	**Trucks –Reach 2**										35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	45	45	45	45	45	45	35	35	35
2028	**Trucks –Reach 3**																																				
2027	**Trucks –Reach 4**																												5	5	5	10	10	10	25	25	25
2025	**Trucks –Reach 5**										5	5	5	25	25	25	25	25	25	30	30	30	40	40	40	45	45	45	45	45	45	45	45	45	45	45	45
2025	**Trucks –Reach 6**										15	15	15	30	30	30	30	30	30	30	30	30	35	35	35	35	35	35	35	35	35	35	35	40	40	40
2025	**Trucks –Reach 7**										35	35	35	35	35	35	35	35	35	35	35	35	30	30	30	25	25	25	20	20	20	15	15	15	5	5	5
2025	**Trucks –Drainage Improvements**										10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
2026	**Trucks –Pump Station**																						10	10	10	10	10	10	15	15	15	15	15	15	10	10	10

West Battery Park Resiliency

GHG Emission Calculations

DAILY TRUCK PROJECTIONS (Trucks)

		1 2028	1 2028	1 2028	2 2028	2 2028	2 ###	3 ###	3 2028	3 ###	4 2028	4 2028	4 2028	1 2029	1 2029	1 2029	2 2029	2 2029	2 2029	3 2029	3 2029	3 2029	4 2029	4 2029	4 2029	1 2030	1 2030	1 2030	2 2030	2 2030	2 2030	3 2030	3 2030	3 2030	4 2030	4 2030	4 2030
		2028												**2029**												**2030**											
		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
		J	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**
	Trucks – All Reaches	200	200	200	180	180	180	145	145	145	135	135	135	115	115	115	115	115	115	105	105	105	95	95	95	70	70	70	20	20	20						
2025	**Trucks –Reach 1**	25	25	25	25	25	25	20	20	20	20	20	20	15	15	15	15	15	15	5	5	5															
2025	**Trucks –Reach 2**	30	30	30	15	15	15																														
2028	**Trucks –Reach 3**	10	10	10	10	10	10	10	10	10	15	15	15	15	15	15	20	20	20	25	25	25	30	30	30	25	25	25	5	5	5						
2027	**Trucks –Reach 4**	25	25	25	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	20	20	20	10	10	10	5	5	5						
2025	**Trucks –Reach 5**	45	45	45	45	45	45	45	45	45	40	40	40	35	35	35	30	30	30	25	25	25	25	25	25	25	25	25	10	10	10						
2025	**Trucks –Reach 6**	45	45	45	35	35	35	20	20	20	10	10	10																								
2025	**Trucks –Reach 7**																																				
2025	**Trucks –Drainage Improvements**	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10									
2026	**Trucks –Pump Station**	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10												

	Reach		
1total trucks	1	total trucks	30.0
1concrete	1	concrete	3.0
1dump	1	dump	4.0
1% concrete	1	**% concrete**	**10%**
1% dump	1	**% dump**	**13%**
2total trucks	2	total trucks	26.0
2concrete	2	concrete	4.0
2dump	2	dump	4.0
2% concrete	2	**% concrete**	**15%**
2% dump	2	**% dump**	**15%**
3total trucks	3	total trucks	26.0
3concrete	3	concrete	3.0
3dump	3	dump	4.0
3% concrete	3	**% concrete**	**12%**
3% dump	3	**% dump**	**15%**

West Battery Park Resiliency
GHG Emission Calculations
DAILY TRUCK PROJECTIONS (Truck Trips)

Work task	Start Year	Truck Type	2024 Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	2025 Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Trucks –Reach 1	2025																									
		CT																						1	1	1
		DT																						1	1	1
		TT																						3	3	3
Trucks –Reach 2	2025																									
		CT																						5	5	5
		DT																						5	5	5
		TT																						25	25	25
Trucks –Reach 3	2028																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 4	2027																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 5	2025																									
		CT																						1	1	1
		DT																						1	1	1
		TT																						3	3	3
Trucks –Reach 6	2025																									
		CT																						2	2	2
		DT																						2	2	2
		TT																						11	11	11
Trucks –Reach 7	2025																									
		CT																						5	5	5
		DT																						5	5	5
		TT																						25	25	25
Trucks –Drainage Improvements	2025																									
		CT																								
		DT																						5	5	5
		TT																						5	5	5
Trucks –Pump Station	2026																									
		CT																								
		DT																								
		TT																								
		Monthly	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,415	2,205	2,520
		Annual												0												7,140

	Year							
	0	1	2	3	4	5	6	7
Annual	2024	2025	2026	2027	2028	2029	2030	2031
Total	0	7,140	43,410	52,320	44,355	28,905	6,030	0

		2024 Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	2025 Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Monthly	CT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	322	294	336
	DT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	437	399	456
	TT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,656	1,512	1,728

Annual	CT												0												952
	DT												0												1,292
	TT												0												4,896

	Year								
	0	1	2	3	4	5	6	7	
	2024	2025	2026	2027	2028	2029	2030	2031	
CT	0	952	5,516	6,751	5,442	3,159	737	0	22,557
DT	0	1,292	7,405	9,923	8,468	6,119	1,139	0	34,346
TT	0	4,896	30,489	35,646	30,445	19,627	4,154	0	125,257

West Battery Park Resiliency

GHG Emission Calculations

DAILY TRUCK PROJECTIONS (Truck Trips)

			2026												2027											
Work task	**Start Year**	**Truck Type**	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27
Trucks –Reach 1	2025																									
		CT	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3
		DT	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		TT	11	11	11	15	15	15	15	15	15	15	15	15	15	15	15	19	19	19	19	19	19	19	19	19
Trucks –Reach 2	2025																									
		CT	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	7	7	7	7	7	7	5	5	5
		DT	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	7	7	7	7	7	7	5	5	5
		TT	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	31	31	31	31	31	31	25	25	25
Trucks –Reach 3	2028																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 4	2027																									
		CT																1	1	1	1	1	1	4	4	4
		DT																1	1	1	1	1	1	4	4	4
		TT																3	3	3	8	8	8	17	17	17
Trucks –Reach 5	2025																									
		CT	4	4	4	4	4	4	4	4	4	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7
		DT	4	4	4	4	4	4	4	4	4	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7
		TT	17	17	17	17	17	17	22	22	22	28	28	28	31	31	31	31	31	31	31	31	31	31	31	31
Trucks –Reach 6	2025																									
		CT	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6
		DT	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6
		TT	22	22	22	22	22	22	22	22	22	25	25	25	25	25	25	25	25	25	25	25	25	28	28	28
Trucks –Reach 7	2025																									
		CT	5	5	5	5	5	5	5	5	5	4	4	4	4	4	4	3	3	3	2	2	2	1	1	1
		DT	5	5	5	5	5	5	5	5	5	4	4	4	4	4	4	3	3	3	2	2	2	1	1	1
		TT	25	25	25	25	25	25	25	25	25	22	22	22	17	17	17	14	14	14	11	11	11	3	3	3
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
		TT	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Trucks –Pump Station	2026																									
		CT																								
		DT										5	5	5	5	5	5	8	8	8	8	8	8	5	5	5
		TT										5	5	5	5	5	5	7	7	7	7	7	7	5	5	5
		Monthly	3,300	3,000	3,450	3,565	3,410	3,565	3,680	3,520	3,680	3,960	3,960	4,320	3,960	3,780	4,320	4,400	4,400	4,600	4,400	4,600	4,600	4,290	4,485	4,485
		Annual												43,410												52,320

Monthly	CT	440	400	460	460	440	460	460	440	460	484	484	528	506	483	552	572	572	598	550	575	575	572	598	598
	DT	550	500	575	598	572	598	598	572	598	726	726	792	748	714	816	858	858	897	836	874	874	792	828	828
	TT	2,310	2,100	2,415	2,507	2,398	2,507	2,622	2,508	2,622	2,750	2,750	3,000	2,706	2,583	2,952	2,970	2,970	3,105	3,014	3,151	3,151	2,926	3,059	3,059

Annual	CT												5,516													6,751
	DT												7,405													9,923
	TT												30,489													35,646

West Battery Park Resiliency

GHG Emission Calculations

DAILY TRUCK PROJECTIONS (Truck Trips)

Work task	Start Year	Truck Type	2028 Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28	2029 Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Jul-29	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29
Trucks –Reach 1	2025																									
		CT	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1			
		DT	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	1	1	1			
		TT	19	19	19	19	19	19	15	15	15	15	15	15	11	11	11	11	11	11	3	3	3			
Trucks –Reach 2	2025																									
		CT	5	5	5	2	2	2																		
		DT	5	5	5	2	2	2																		
		TT	20	20	20	11	11	11																		
Trucks –Reach 3	2028																									
		CT	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3
		DT	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	4	4	4	5	5	5
		TT	7	7	7	7	7	7	7	7	7	11	11	11	11	11	11	15	15	15	18	18	18	22	22	22
Trucks –Reach 4	2027																									
		CT	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3
		DT	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3
		TT	17	17	17	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	14	14	14
Trucks –Reach 5	2025																									
		CT	7	7	7	7	7	7	7	7	7	6	6	6	5	5	5	4	4	4	4	4	4	4	4	4
		DT	7	7	7	7	7	7	7	7	7	6	6	6	5	5	5	4	4	4	4	4	4	4	4	4
		TT	31	31	31	31	31	31	31	31	31	28	28	28	25	25	25	22	22	22	17	17	17	17	17	17
Trucks –Reach 6	2025																									
		CT	7	7	7	5	5	5	3	3	3	1	1	1												
		DT	7	7	7	5	5	5	3	3	3	1	1	1												
		TT	31	31	31	25	25	25	14	14	14	8	8	8												
Trucks –Reach 7	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
		TT	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Trucks –Pump Station	2026																									
		CT																								
		DT	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
		TT	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
		Monthly	4,400	4,400	4,600	3,780	4,320	3,960	3,190	3,480	3,045	3,105	3,105	2,970	2,760	2,415	2,530	2,530	2,760	2,415	2,415	2,415	2,205	2,280	2,090	2,090
		Annual												44,355												28,905

		2028 Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28	2029 Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Jul-29	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29
Monthly	CT	594	594	621	462	528	484	374	408	357	345	345	330	312	273	286	264	288	252	276	276	252	240	220	220
	DT	836	836	874	693	792	726	638	696	609	598	598	572	552	483	506	506	552	483	529	529	483	528	484	484
	TT	2,970	2,970	3,105	2,625	3,000	2,750	2,178	2,376	2,079	2,162	2,162	2,068	1,896	1,659	1,738	1,760	1,920	1,680	1,610	1,610	1,470	1,512	1,386	1,386
Annual	CT												5,442												3,159
	DT												8,468												6,119
	TT												30,445												19,627

West Battery Park Resiliency

GHG Emission Calculations

DAILY TRUCK PROJECTIONS (Truck Trips)

Work task	Start Year	Truck Type	2030 Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30	2031 Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Jul-31	Aug-31	Sep-31	Oct-31	Nov-31	Dec-31
Trucks –Reach 1	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 2	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 3	2028																									
		CT	3	3	3	1	1	1																		
		DT	4	4	4	1	1	1																		
		TT	18	18	18	3	3	3																		
Trucks –Reach 4	2027																									
		CT	1	1	1	1	1	1																		
		DT	1	1	1	1	1	1																		
		TT	8	8	8	3	3	3																		
Trucks –Reach 5	2025																									
		CT	4	4	4	1	1	1																		
		DT	4	4	4	1	1	1																		
		TT	17	17	17	8	8	8																		
Trucks –Reach 6	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 7	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	5	5	5																					
		TT	5	5	5																					
Trucks –Pump Station	2026																									
		CT																								
		DT																								
		TT																								
		Monthly	1,680	1,470	1,540	460	460	420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Annual												6,030												0

		2030 Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30	2031 Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Jul-31	Aug-31	Sep-31	Oct-31	Nov-31	Dec-31
Monthly	CT	192	168	176	69	69	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DT	336	294	308	69	69	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TT	1,152	1,008	1,056	322	322	294	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Annual	CT	737	0
	DT	1,139	0
	TT	4,154	0

West Battery Park Resiliency

GHG Emission Calculations

Truck VMT

Truck Type	Round Trip	One-Way	Description
DT	40		Dump Truck
CT	12.8	6.4	Concrete Truck
TT	100		Tractor Trailor

Monthly Truck VMT

Work task	Start Year	Truck Type	2024 Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	2025 Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Trucks –Reach 1	2025																									
		CT																						294	269	307
		DT																						920	840	960
		TT																						6,900	6,300	7,200
Trucks –Reach 2	2025																									
		CT																						1,472	1,344	1,536
		DT																						4,600	4,200	4,800
		TT																						57,500	52,500	60,000
Trucks –Reach 3	2028																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 4	2027																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 5	2025																									
		CT																						294	269	307
		DT																						920	840	960
		TT																						6,900	6,300	7,200
Trucks –Reach 6	2025																									
		CT																						589	538	614
		DT																						1,840	1,680	1,920
		TT																						25,300	23,100	26,400
Trucks –Reach 7	2025																									
		CT																						1,472	1,344	1,536
		DT																						4,600	4,200	4,800
		TT																						57,500	52,500	60,000
Trucks –Drainage Improvements	2025																									
		CT																								
		DT																						4,600	4,200	4,800
		TT																						11,500	10,500	12,000
Trucks –Pump Station	2026																									
		CT																								
		DT																								
		TT																								
		Monthly	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	187202	170923	195341
		Annual												0												553466

Year

	0	1	2	3	4	5	6	7
	2024	2025	2026	2027	2028	2029	2030	2031
Annual Total	0	553,466	3,415,705	4,047,933	3,452,878	2,247,895	470,394	0

		Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Monthly	CT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,122	3,763	4,301
	DT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17,480	15,960	18,240
	TT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	165,600	151,200	172,800
Annual	CT												0												12,186
	DT												0												51,680
	TT												0												489,600

Year

	0	1	2	3	4	5	6	7	
	0	0	0	0	0	0	0	0	
CT	0	12,186	70,605	86,413	69,658	40,435	9,434	0	288,730
DT	0	51,680	296,200	396,920	338,720	244,760	45,560	0	1,373,840
TT	0	489,600	3,048,900	3,564,600	3,044,500	1,962,700	415,400	0	12,525,700

West Battery Park Resiliency

GHG Emission Calculations

Truck VMT

Truck Type	Round Trip	One-Way
DT	40	
CT	12.8	6.4
TT	100	

Monthly Truck VMT

Work task	Start Year	Truck Type	2026 Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	2027 Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27
Trucks –Reach 1	2025																									
		CT	563	512	589	589	563	589	589	563	589	563	563	614	563	538	614	845	845	883	845	883	883	845	883	883
		DT	1,760	1,600	1,840	2,760	2,640	2,760	2,760	2,640	2,760	2,640	2,640	2,880	2,640	2,520	2,880	2,640	2,640	2,760	2,640	2,760	2,760	2,640	2,760	2,760
		TT	24,200	22,000	25,300	34,500	33,000	34,500	34,500	33,000	34,500	33,000	33,000	36,000	33,000	31,500	36,000	41,800	41,800	43,700	41,800	43,700	43,700	41,800	43,700	43,700
Trucks –Reach 2	2025																									
		CT	1,408	1,280	1,472	1,472	1,408	1,472	1,472	1,408	1,472	1,408	1,408	1,536	1,408	1,344	1,536	1,971	1,971	2,061	1,971	2,061	2,061	1,408	1,472	1,472
		DT	4,400	4,000	4,600	4,600	4,400	4,600	4,600	4,400	4,600	4,400	4,400	4,800	4,400	4,200	4,800	6,160	6,160	6,440	6,160	6,440	6,440	4,400	4,600	4,600
		TT	55,000	50,000	57,500	57,500	55,000	57,500	57,500	55,000	57,500	55,000	55,000	60,000	55,000	52,500	60,000	68,200	68,200	71,300	68,200	71,300	71,300	55,000	57,500	57,500
Trucks –Reach 3	2028																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 4	2027																									
		CT																282	282	294	282	294	294	1,126	1,178	1,178
		DT																880	880	920	880	920	920	3,520	3,680	3,680
		TT																6,600	6,600	6,900	17,600	18,400	18,400	37,400	39,100	39,100
Trucks –Reach 5	2025																									
		CT	1,126	1,024	1,178	1,178	1,126	1,178	1,178	1,126	1,178	1,690	1,690	1,843	1,971	1,882	2,150	1,971	1,971	2,061	1,971	2,061	2,061	1,971	2,061	2,061
		DT	3,520	3,200	3,680	3,680	3,520	3,680	3,680	3,520	3,680	5,280	5,280	5,760	6,160	5,880	6,720	6,160	6,160	6,440	6,160	6,440	6,440	6,160	6,440	6,440
		TT	37,400	34,000	39,100	39,100	37,400	39,100	50,600	48,400	50,600	61,600	61,600	67,200	68,200	65,100	74,400	68,200	68,200	71,300	68,200	71,300	71,300	68,200	71,300	71,300
Trucks –Reach 6	2025																									
		CT	1,126	1,024	1,178	1,178	1,126	1,178	1,178	1,126	1,178	1,408	1,408	1,536	1,408	1,344	1,536	1,408	1,408	1,472	1,408	1,472	1,472	1,690	1,766	1,766
		DT	3,520	3,200	3,680	3,680	3,520	3,680	3,680	3,520	3,680	4,400	4,400	4,800	4,400	4,200	4,800	4,400	4,400	4,600	4,400	4,600	4,600	5,280	5,520	5,520
		TT	48,400	44,000	50,600	50,600	48,400	50,600	50,600	48,400	50,600	55,000	55,000	60,000	55,000	52,500	60,000	55,000	55,000	57,500	55,000	57,500	57,500	61,600	64,400	64,400
Trucks –Reach 7	2025																									
		CT	1,408	1,280	1,472	1,472	1,408	1,472	1,472	1,408	1,472	1,126	1,126	1,229	1,126	1,075	1,229	845	845	883	563	589	589	282	294	294
		DT	4,400	4,000	4,600	4,600	4,400	4,600	4,600	4,400	4,600	3,520	3,520	3,840	3,520	3,360	3,840	2,640	2,640	2,760	1,760	1,840	1,840	880	920	920
		TT	55,000	50,000	57,500	57,500	55,000	57,500	57,500	55,000	57,500	48,400	48,400	52,800	37,400	35,700	40,800	30,800	30,800	32,200	24,200	25,300	25,300	6,600	6,900	6,900
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	4,400	4,000	4,600	4,600	4,400	4,600	4,600	4,400	4,600	4,400	4,400	4,800	4,400	4,200	4,800	4,400	4,400	4,600	4,400	4,600	4,600	4,400	4,600	4,600
		TT	11,000	10,000	11,500	11,500	11,000	11,500	11,500	11,000	11,500	11,000	11,000	12,000	11,000	10,500	12,000	11,000	11,000	11,500	11,000	11,500	11,500	11,000	11,500	11,500
Trucks –Pump Station	2026																									
		CT																								
		DT										4,400	4,400	4,800	4,400	4,200	4,800	7,040	7,040	7,360	7,040	7,360	7,360	4,400	4,600	4,600
		TT										11,000	11,000	12,000	11,000	10,500	12,000	15,400	15,400	16,100	15,400	16,100	16,100	11,000	11,500	11,500
		Monthly	258632	235120	270388	280508	268312	280508	292008	279312	292008	310235	310235	338438	306997	293042	334906	338642	338642	354034	341880	357420	357420	331602	346674	346674
		Annual												3415705												4047933

Monthly	CT	5,632	5,120	5,888	5,888	5,632	5,888	5,888	5,632	5,888	6,195	6,195	6,758	6,477	6,182	7,066	7,322	7,322	7,654	7,040	7,360	7,360	7,322	7,654	7,654
	DT	22,000	20,000	23,000	23,920	22,880	23,920	23,920	22,880	23,920	29,040	29,040	31,680	29,920	28,560	32,640	34,320	34,320	35,880	33,440	34,960	34,960	31,680	33,120	33,120
	TT	231,000	210,000	241,500	250,700	239,800	250,700	262,200	250,800	262,200	275,000	275,000	300,000	270,600	258,300	295,200	297,000	297,000	310,500	301,400	315,100	315,100	292,600	305,900	305,900
Annual	CT												70,605												86,413
	DT												296,200												396,920
	TT												3,048,900												3,564,600

West Battery Park Resiliency

GHG Emission Calculations

Truck VMT

Truck Type	Round Trip	One-Way
DT	40	
CT	12.8	6.4
TT	100	

Monthly Truck VMT

Work task	Start Year	Truck Type	2028 Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28	2029 Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Jul-29	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29
Trucks –Reach 1	2025																									
		CT	845	845	883	806	922	845	563	614	538	589	589	563	614	538	563	563	614	538	294	294	269			
		DT	2,640	2,640	2,760	2,520	2,880	2,640	2,640	2,880	2,520	2,760	2,760	2,640	1,920	1,680	1,760	1,760	1,920	1,680	920	920	840			
		TT	41,800	41,800	43,700	39,900	45,600	41,800	33,000	36,000	31,500	34,500	34,500	33,000	26,400	23,100	24,200	24,200	26,400	23,100	6,900	6,900	6,300			
Trucks –Reach 2	2025																									
		CT	1,408	1,408	1,472	538	614	563																		
		DT	4,400	4,400	4,600	1,680	1,920	1,760																		
		TT	44,000	44,000	46,000	23,100	26,400	24,200																		
Trucks –Reach 3	2028																									
		CT	282	282	294	269	307	282	282	307	269	589	589	563	614	538	563	563	614	538	883	883	806	922	845	845
		DT	1,760	1,760	1,840	1,680	1,920	1,760	1,760	1,920	1,680	1,840	1,840	1,760	1,920	1,680	1,760	2,640	2,880	2,520	3,680	3,680	3,360	4,800	4,400	4,400
		TT	15,400	15,400	16,100	14,700	16,800	15,400	15,400	16,800	14,700	25,300	25,300	24,200	26,400	23,100	24,200	33,000	36,000	31,500	41,400	41,400	37,800	52,800	48,400	48,400
Trucks –Reach 4	2027																									
		CT	1,126	1,126	1,178	1,075	1,229	1,126	1,126	1,229	1,075	1,178	1,178	1,126	1,229	1,075	1,126	1,126	1,229	1,075	1,178	1,178	1,075	922	845	845
		DT	3,520	3,520	3,680	3,360	3,840	3,520	3,520	3,840	3,360	3,680	3,680	3,520	3,840	3,360	3,520	3,520	3,840	3,360	3,680	3,680	3,360	2,880	2,640	2,640
		TT	37,400	37,400	39,100	46,200	52,800	48,400	48,400	52,800	46,200	50,600	50,600	48,400	52,800	46,200	48,400	48,400	52,800	46,200	50,600	50,600	46,200	33,600	30,800	30,800
Trucks –Reach 5	2025																									
		CT	1,971	1,971	2,061	1,882	2,150	1,971	1,971	2,150	1,882	1,766	1,766	1,690	1,536	1,344	1,408	1,126	1,229	1,075	1,178	1,178	1,075	1,229	1,126	1,126
		DT	6,160	6,160	6,440	5,880	6,720	6,160	6,160	6,720	5,880	5,520	5,520	5,280	4,800	4,200	4,400	3,520	3,840	3,360	3,680	3,680	3,360	3,840	3,520	3,520
		TT	68,200	68,200	71,300	65,100	74,400	68,200	68,200	74,400	65,100	64,400	64,400	61,600	60,000	52,500	55,000	48,400	52,800	46,200	39,100	39,100	35,700	40,800	37,400	37,400
Trucks –Reach 6	2025																									
		CT	1,971	1,971	2,061	1,344	1,536	1,408	845	922	806	294	294	282												
		DT	6,160	6,160	6,440	4,200	4,800	4,400	2,640	2,880	2,520	920	920	880												
		TT	68,200	68,200	71,300	52,500	60,000	55,000	30,800	33,600	29,400	18,400	18,400	17,600												
Trucks –Reach 7	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	4,400	4,400	4,600	4,200	4,800	4,400	4,400	4,800	4,200	4,600	4,600	4,400	4,800	4,200	4,400	4,400	4,800	4,200	4,600	4,600	4,200	4,800	4,400	4,400
		TT	11,000	11,000	11,500	10,500	12,000	11,000	11,000	12,000	10,500	11,500	11,500	11,000	12,000	10,500	11,000	11,000	12,000	10,500	11,500	11,500	10,500	12,000	11,000	11,000
Trucks –Pump Station	2026																									
		CT																								
		DT	4,400	4,400	4,600	4,200	4,800	4,400	4,400	4,800	4,200	4,600	4,600	4,400	4,800	4,200	4,400	4,400	4,800	4,200	4,600	4,600	4,200	4,800	4,400	4,400
		TT	11,000	11,000	11,500	10,500	12,000	11,000	11,000	12,000	10,500	11,500	11,500	11,000	12,000	10,500	11,000	11,000	12,000	10,500	11,500	11,500	10,500	12,000	11,000	11,000
		Monthly	338043	338043	353409	296134	338438	310235	248107	270662	236830	244536	244536	233904	215674	188714	197701	199619	217766	190546	185693	185693	169546	175392	160776	160776
		Annual												3452878												2247895

Monthly	CT	7,603	7,603	7,949	5,914	6,758	6,195	4,787	5,222	4,570	4,416	4,416	4,224	3,994	3,494	3,661	3,379	3,686	3,226	3,533	3,533	3,226	3,072	2,816	2,816
	DT	33,440	33,440	34,960	27,720	31,680	29,040	25,520	27,840	24,360	23,920	23,920	22,880	22,080	19,320	20,240	20,240	22,080	19,320	21,160	21,160	19,320	21,120	19,360	19,360
	TT	297,000	297,000	310,500	262,500	300,000	275,000	217,800	237,600	207,900	216,200	216,200	206,800	189,600	165,900	173,800	176,000	192,000	168,000	161,000	161,000	147,000	151,200	138,600	138,600
Annual	CT												69,658												40,435
	DT												338,720												244,760
	TT												3,044,500												1,962,700

West Battery Park Resiliency
GHG Emission Calculations
Truck VMT

Truck Type	Round Trip	One-Way
DT	40	
CT	12.8	6.4
TT	100	

Monthly Truck VMT

Work task	Start Year	Truck Type	2030 Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30	2031 Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Jul-31	Aug-31	Sep-31	Oct-31	Nov-31	Dec-31
Trucks –Reach 1	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 2	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 3	2028																									
		CT	922	806	845	294	294	269																		
		DT	3,840	3,360	3,520	920	920	840																		
		TT	43,200	37,800	39,600	6,900	6,900	6,300																		
Trucks –Reach 4	2027																									
		CT	307	269	282	294	294	269																		
		DT	960	840	880	920	920	840																		
		TT	19,200	16,800	17,600	6,900	6,900	6,300																		
Trucks –Reach 5	2025																									
		CT	1,229	1,075	1,126	294	294	269																		
		DT	3,840	3,360	3,520	920	920	840																		
		TT	40,800	35,700	37,400	18,400	18,400	16,800																		
Trucks –Reach 6	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 7	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	4,800	4,200	4,400																					
		TT	12,000	10,500	11,000																					
Trucks –Pump Station	2026																									
		CT																								
		DT																								
		TT																								
		Monthly	131098	114710	120173	35843	35843	32726	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Annual												470394												0

		2030 Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30	2031 Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Jul-31	Aug-31	Sep-31	Oct-31	Nov-31	Dec-31
Monthly	CT	2,458	2,150	2,253	883	883	806	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DT	13,440	11,760	12,320	2,760	2,760	2,520	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TT	115,200	100,800	105,600	32,200	32,200	29,400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual	CT												9,434												0
	DT												45,560												0
	TT												415,400												0

West Battery Park Resiliency

GHG Emission Calculations

Truck Travel Fuel Consumption

Monthly Gallons of Fuel Consumed

Work task	Start Year	Truck Type	2024 Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	2025 Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Trucks –Reach 1	2025																									
		CT																						49.30	45.01	51.44
		DT																						154.05	140.66	160.75
		TT																						1,155.40	1,054.93	1,205.64
Trucks –Reach 2	2025																									
		CT																						246.49	225.05	257.20
		DT																						770.27	703.29	803.76
		TT																						9,628.37	8,791.12	10,046.99
Trucks –Reach 3	2028																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 4	2027																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 5	2025																									
		CT																						49.30	45.01	51.44
		DT																						154.05	140.66	160.75
		TT																						1,155.40	1,054.93	1,205.64
Trucks –Reach 6	2025																									
		CT																						98.59	90.02	102.88
		DT																						308.11	281.32	321.50
		TT																						4,236.48	3,868.09	4,420.68
Trucks –Reach 7	2025																									
		CT																						246.49	225.05	257.20
		DT																						770.27	703.29	803.76
		TT																						9,628.37	8,791.12	10,046.99
Trucks –Drainage Improvements	2025																									
		CT																								
		DT																						770.27	703.29	803.76
		TT																						1,925.67	1,758.22	2,009.40
Trucks –Pump Station	2026																									
		CT																								
		DT																								
		TT																								
		Monthly	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31347	28621	32710
		Annual												0												92678

Year

	0	1	2	3	4	5	6	7	
Annual	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	
Total	0	92,678	571,959	677,826	578,184	376,410	78,767	0	#######

West Battery Park Resiliency

GHG Emission Calculations
Truck Travel Fuel Consumption

Monthly Gallons of Fuel Consumed

Work task	Start Year	Truck Type	2026 Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	2027 Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27
Trucks –Reach 1	2025																									
		CT	94.31	85.73	98.59	98.59	94.31	98.59	98.59	94.31	98.59	94.31	94.31	102.88	94.31	90.02	102.88	141.46	141.46	147.89	141.46	147.89	147.89	141.46	147.89	147.89
		DT	294.71	267.92	308.11	462.16	442.07	462.16	462.16	442.07	462.16	442.07	442.07	482.26	442.07	421.97	482.26	442.07	442.07	462.16	442.07	462.16	462.16	442.07	462.16	462.16
		TT	4,052.29	3,683.90	4,236.48	5,777.02	5,525.84	5,777.02	#######	5,525.84	5,777.02	5,525.84	5,525.84	6,028.19	5,525.84	5,274.67	6,028.19	6,999.40	6,999.40	7,317.56	#######	7,317.56	7,317.56	6,999.40	7,317.56	7,317.56
Trucks –Reach 2	2025																									
		CT	235.77	214.34	246.49	246.49	235.77	246.49	246.49	235.77	246.49	235.77	235.77	257.20	235.77	225.05	257.20	330.08	330.08	345.08	330.08	345.08	345.08	235.77	246.49	246.49
		DT	736.78	669.80	770.27	770.27	736.78	770.27	770.27	736.78	770.27	736.78	736.78	803.76	736.78	703.29	803.76	1,031.49	1,031.49	1,078.38	#######	1,078.38	1,078.38	736.78	770.27	770.27
		TT	9,209.74	8,372.49	9,628.37	9,628.37	9,209.74	9,628.37	#######	9,209.74	9,628.37	9,209.74	9,209.74	10,046.99	9,209.74	8,791.12	#######	#######	11,420.08	#######	#######	11,939.17	11,939.17	9,209.74	9,628.37	9,628.37
Trucks –Reach 3	2028																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 4	2027																									
		CT																47.15	47.15	49.30	47.15	49.30	49.30	188.62	197.19	197.19
		DT																147.36	147.36	154.05	147.36	154.05	154.05	589.42	616.22	616.22
		TT																1,105.17	1,105.17	1,155.40	#######	3,081.08	3,081.08	6,262.62	6,547.29	6,547.29
Trucks –Reach 5	2025																									
		CT	188.62	171.47	197.19	197.19	188.62	197.19	197.19	188.62	197.19	282.92	282.92	308.64	330.08	315.07	360.08	330.08	330.08	345.08	330.08	345.08	345.08	330.08	345.08	345.08
		DT	589.42	535.84	616.22	616.22	589.42	616.22	616.22	589.42	616.22	884.14	884.14	964.51	1,031.49	984.61	1,125.26	1,031.49	1,031.49	1,078.38	#######	1,078.38	1,078.38	1,031.49	1,078.38	1,078.38
		TT	6,262.62	5,693.29	6,547.29	6,547.29	6,262.62	6,547.29	#######	8,104.57	8,472.96	#######	10,314.91	11,252.63	#######	10,900.98	#######	#######	11,420.08	#######	#######	11,939.17	11,939.17	#######	11,939.17	11,939.17
Trucks –Reach 6	2025																									
		CT	188.62	171.47	197.19	197.19	188.62	197.19	197.19	188.62	197.19	235.77	235.77	257.20	235.77	225.05	257.20	235.77	235.77	246.49	235.77	246.49	246.49	282.92	295.78	295.78
		DT	589.42	535.84	616.22	616.22	589.42	616.22	616.22	589.42	616.22	736.78	736.78	803.76	736.78	703.29	803.76	736.78	736.78	770.27	736.78	770.27	770.27	884.14	924.32	924.32
		TT	8,104.57	7,367.79	8,472.96	8,472.96	8,104.57	8,472.96	#######	8,104.57	8,472.96	9,209.74	9,209.74	10,046.99	9,209.74	8,791.12	#######	9,209.74	9,209.74	9,628.37	#######	9,628.37	9,628.37	#######	10,783.77	10,783.77
Trucks –Reach 7	2025																									
		CT	235.77	214.34	246.49	246.49	235.77	246.49	246.49	235.77	246.49	188.62	188.62	205.76	188.62	180.04	205.76	141.46	141.46	147.89	94.31	98.59	98.59	47.15	49.30	49.30
		DT	736.78	669.80	770.27	770.27	736.78	770.27	770.27	736.78	770.27	589.42	589.42	643.01	589.42	562.63	643.01	442.07	442.07	462.16	294.71	308.11	308.11	147.36	154.05	154.05
		TT	9,209.74	8,372.49	9,628.37	9,628.37	9,209.74	9,628.37	#######	9,209.74	9,628.37	8,104.57	8,104.57	8,841.35	6,262.62	5,977.96	6,831.95	5,157.45	5,157.45	5,391.88	#######	4,236.48	4,236.48	1,105.17	1,155.40	1,155.40
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	736.78	669.80	770.27	770.27	736.78	770.27	770.27	736.78	770.27	736.78	736.78	803.76	736.78	703.29	803.76	736.78	736.78	770.27	736.78	770.27	770.27	736.78	770.27	770.27
		TT	1,841.95	1,674.50	1,925.67	1,925.67	1,841.95	1,925.67	#######	1,841.95	1,925.67	1,841.95	1,841.95	2,009.40	1,841.95	1,758.22	2,009.40	1,841.95	1,841.95	1,925.67	#######	1,925.67	1,925.67	1,841.95	1,925.67	1,925.67
Trucks –Pump Station	2026																									
		CT																								
		DT										736.78	736.78	803.76	736.78	703.29	803.76	1,178.85	1,178.85	1,232.43	#######	1,232.43	1,232.43	736.78	770.27	770.27
		TT										1,841.95	1,841.95	2,009.40	1,841.95	1,758.22	2,009.40	2,578.73	2,578.73	2,695.94	#######	2,695.94	2,695.94	1,841.95	1,925.67	1,925.67
		Monthly	43308	39371	45276	46971	44929	46971	48897	46771	48897	51949	51949	56671	51407	49070	56080	56705	56705	59283	57248	59850	59850	55527	58051	58051
		Annual												571959												677826

West Battery Park Resiliency

GHG Emission Calculations
Truck Travel Fuel Consumption

Monthly Gallons of Fuel Consumed

			2028												2029											
Work task	**Start Year**	**Truck Type**	Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28	Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Jul-29	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29
Trucks –Reach 1	2025																									
		CT	141.46	141.46	147.89	135.03	154.32	141.46	94.31	102.88	90.02	98.59	98.59	94.31	102.88	90.02	94.31	94.31	102.88	90.02	49.30	49.30	45.01			
		DT	442.07	442.07	462.16	421.97	482.26	442.07	442.07	482.26	421.97	462.16	462.16	442.07	321.50	281.32	294.71	294.71	321.50	281.32	154.05	154.05	140.66			
		TT	6,999.40	6,999.40	7,317.56	6,681.25	7,635.71	6,999.40	#######	6,028.19	5,274.67	5,777.02	5,777.02	5,525.84	4,420.68	3,868.09	4,052.29	4,052.29	4,420.68	3,868.09	#######	1,155.40	1,054.93			
Trucks –Reach 2	2025																									
		CT	235.77	235.77	246.49	90.02	102.88	94.31																		
		DT	736.78	736.78	770.27	281.32	321.50	294.71																		
		TT	7,367.79	7,367.79	7,702.69	3,868.09	4,420.68	4,052.29																		
Trucks –Reach 3	2028																									
		CT	47.15	47.15	49.30	45.01	51.44	47.15	47.15	51.44	45.01	98.59	98.59	94.31	102.88	90.02	94.31	94.31	102.88	90.02	147.89	147.89	135.03	154.32	141.46	141.46
		DT	294.71	294.71	308.11	281.32	321.50	294.71	294.71	321.50	281.32	308.11	308.11	294.71	321.50	281.32	294.71	442.07	482.26	421.97	616.22	616.22	562.63	803.76	736.78	736.78
		TT	2,578.73	2,578.73	2,695.94	2,461.51	2,813.16	2,578.73	#######	2,813.16	2,461.51	4,236.48	4,236.48	4,052.29	4,420.68	3,868.09	4,052.29	5,525.84	6,028.19	5,274.67	#######	6,932.42	6,329.60	8,841.35	8,104.57	8,104.57
Trucks –Reach 4	2027																									
		CT	188.62	188.62	197.19	180.04	205.76	188.62	188.62	205.76	180.04	197.19	197.19	188.62	205.76	180.04	188.62	188.62	205.76	180.04	197.19	197.19	180.04	154.32	141.46	141.46
		DT	589.42	589.42	616.22	562.63	643.01	589.42	589.42	643.01	562.63	616.22	616.22	589.42	643.01	562.63	589.42	589.42	643.01	562.63	616.22	616.22	562.63	482.26	442.07	442.07
		TT	6,262.62	6,262.62	6,547.29	7,736.18	8,841.35	8,104.57	#######	8,841.35	7,736.18	8,472.96	8,472.96	8,104.57	8,841.35	7,736.18	8,104.57	8,104.57	8,841.35	7,736.18	#######	8,472.96	7,736.18	5,626.31	5,157.45	5,157.45
Trucks –Reach 5	2025																									
		CT	330.08	330.08	345.08	315.07	360.08	330.08	330.08	360.08	315.07	295.78	295.78	282.92	257.20	225.05	235.77	188.62	205.76	180.04	197.19	197.19	180.04	205.76	188.62	188.62
		DT	1,031.49	1,031.49	1,078.38	984.61	1,125.26	1,031.49	#######	1,125.26	984.61	924.32	924.32	884.14	803.76	703.29	736.78	589.42	643.01	562.63	616.22	616.22	562.63	643.01	589.42	589.42
		TT	#######	11,420.08	#######	#######	12,458.27	#######	#######	12,458.27	10,900.98	#######	10,783.77	10,314.91	#######	8,791.12	9,209.74	8,104.57	8,841.35	7,736.18	#######	6,547.29	5,977.96	6,831.95	6,262.62	6,262.62
Trucks –Reach 6	2025																									
		CT	330.08	330.08	345.08	225.05	257.20	235.77	141.46	154.32	135.03	49.30	49.30	47.15												
		DT	1,031.49	1,031.49	1,078.38	703.29	803.76	736.78	442.07	482.26	421.97	154.05	154.05	147.36												
		TT	#######	11,420.08	#######	8,791.12	10,046.99	9,209.74	#######	5,626.31	4,923.03	3,081.08	3,081.08	2,947.12												
Trucks –Reach 7	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	736.78	736.78	770.27	703.29	803.76	736.78	736.78	803.76	703.29	770.27	770.27	736.78	803.76	703.29	736.78	736.78	803.76	703.29	770.27	770.27	703.29	803.76	736.78	736.78
		TT	1,841.95	1,841.95	1,925.67	1,758.22	2,009.40	1,841.95	#######	2,009.40	1,758.22	1,925.67	1,925.67	1,841.95	2,009.40	1,758.22	1,841.95	1,841.95	2,009.40	1,758.22	#######	1,925.67	1,758.22	2,009.40	1,841.95	1,841.95
Trucks –Pump Station	2026																									
		CT																								
		DT	736.78	736.78	770.27	703.29	803.76	736.78	736.78	803.76	703.29	770.27	770.27	736.78	803.76	703.29	736.78	736.78	803.76	703.29	770.27	770.27	703.29	803.76	736.78	736.78
		TT	1,841.95	1,841.95	1,925.67	1,758.22	2,009.40	1,841.95	#######	2,009.40	1,758.22	1,925.67	1,925.67	1,841.95	2,009.40	1,758.22	1,841.95	1,841.95	2,009.40	1,758.22	#######	1,925.67	1,758.22	2,009.40	1,841.95	1,841.95
		Monthly	56605	56605	59178	49588	56671	51949	41546	45322	39657	40948	40948	39167	36115	31600	33105	33426	36465	31907	31094	31094	28390	29369	26922	26922
		Annual												578184												376410

West Battery Park Resiliency

GHG Emission Calculations
Truck Travel Fuel Consumption

Monthly Gallons of Fuel Consumed

Work task	Start Year	Truck Type	2030 Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30	2031 Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Jul-31	Aug-31	Sep-31	Oct-31	Nov-31	Dec-31
Trucks –Reach 1	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 2	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 3	2028																									
		CT	154.32	135.03	141.46	49.30	49.30	45.01																		
		DT	643.01	562.63	589.42	154.05	154.05	140.66																		
		TT	7,233.83	6,329.60	6,631.01	1,155.40	1,155.40	1,054.93																		
Trucks –Reach 4	2027																									
		CT	51.44	45.01	47.15	49.30	49.30	45.01																		
		DT	160.75	140.66	147.36	154.05	154.05	140.66																		
		TT	3,215.04	2,813.16	2,947.12	1,155.40	1,155.40	1,054.93																		
Trucks –Reach 5	2025																									
		CT	205.76	180.04	188.62	49.30	49.30	45.01																		
		DT	643.01	562.63	589.42	154.05	154.05	140.66																		
		TT	6,831.95	5,977.96	6,262.62	3,081.08	3,081.08	2,813.16																		
Trucks –Reach 6	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 7	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	803.76	703.29	736.78																					
		TT	2,009.40	1,758.22	1,841.95																					
Trucks –Pump Station	2026																									
		CT																								
		DT																								
		TT																								
		Monthly	21952	19208	20123	6002	6002	5480	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Annual												78767												0

West Battery Park Resiliency

GHG Emission Calculations
Truck Travel Emissions

Monthly kg of CO2e Emitted

Work task	Start Year	Truck Type	2024												2025											
			Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Trucks –Reach 1	2025																									
		CT																						548.68	500.97	572.54
		DT																						1,714.64	1,565.54	1,789.19
		TT																						12,859.79	11,741.55	13,418.92
Trucks –Reach 2	2025																									
		CT																						2,743.42	2,504.86	2,862.70
		DT																						8,573.20	7,827.70	8,945.94
		TT																						107,164.95	97,846.26	111,824.30
Trucks –Reach 3	2028																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 4	2027																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 5	2025																									
		CT																						548.68	500.97	572.54
		DT																						1,714.64	1,565.54	1,789.19
		TT																						12,859.79	11,741.55	13,418.92
Trucks –Reach 6	2025																									
		CT																						1,097.37	1,001.95	1,145.08
		DT																						3,429.28	3,131.08	3,578.38
		TT																						47,152.58	43,052.36	49,202.69
Trucks –Reach 7	2025																									
		CT																						2,743.42	2,504.86	2,862.70
		DT																						8,573.20	7,827.70	8,945.94
		TT																						107,164.95	97,846.26	111,824.30
Trucks –Drainage Improvements	2025																									
		CT																								
		DT																						8,573.20	7,827.70	8,945.94
		TT																						21,432.99	19,569.25	22,364.86
Trucks –Pump Station	2026																									
		CT																								
		DT																								
		TT																								
		Monthly	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	348895	318556	364064
		Annual												0												1031515

Year

	0	1	2	3	4	5	6	7
Annual	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Total	0	1,031,515	6,365,980	7,544,288	6,435,260	########	876,691	0

West Battery Park Resiliency

GHG Emission Calculations
Truck Travel Emissions

Monthly kg of CO2e Emitted

Work task	Start Year	Truck Type	2026 Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	2027 Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27
Trucks –Reach 1	2025																									
		CT	1,049.66	954.23	1,097.37	1,097.37	1,049.66	1,097.37	1,097.37	1,049.66	1,097.37	1,049.66	1,049.66	1,145.08	1,049.66	1,001.95	1,145.08	1,574.49	1,574.49	1,646.05	1,574.49	1,646.05	1,646.05	1,574.49	1,646.05	1,646.05
		DT	3,280.18	2,981.98	3,429.28	5,143.92	4,920.27	5,143.92	5,143.92	4,920.27	5,143.92	4,920.27	4,920.27	5,367.57	4,920.27	4,696.62	5,367.57	4,920.27	4,920.27	5,143.92	4,920.27	5,143.92	5,143.92	4,920.27	5,143.92	5,143.92
		TT	45,102.47	41,002.24	47,152.58	64,298.97	61,503.37	64,298.97	64,298.97	61,503.37	64,298.97	61,503.37	61,503.37	67,094.58	61,503.37	58,707.76	67,094.58	77,904.26	77,904.26	81,445.37	77,904.26	81,445.37	81,445.37	#######	81,445.37	81,445.37
Trucks –Reach 2	2025																									
		CT	2,624.14	2,385.59	2,743.42	2,743.42	2,624.14	2,743.42	2,743.42	2,624.14	2,743.42	2,624.14	2,624.14	2,862.70	2,624.14	2,504.86	2,862.70	3,673.80	3,673.80	3,840.79	3,673.80	3,840.79	3,840.79	2,624.14	2,743.42	2,743.42
		DT	8,200.45	7,454.95	8,573.20	8,573.20	8,200.45	8,573.20	8,573.20	8,200.45	8,573.20	8,200.45	8,200.45	8,945.94	8,200.45	7,827.70	8,945.94	11,480.63	11,480.63	12,002.47	11,480.63	12,002.47	12,002.47	8,200.45	8,573.20	8,573.20
		TT	102,505.61	93,186.92	107,164.95	107,164.95	102,505.61	107,164.95	107,164.95	102,505.61	107,164.95	102,505.61	102,505.61	111,824.30	102,505.61	97,846.26	111,824.30	127,106.95	127,106.95	132,884.54	127,106.95	132,884.54	########	#######	########	########
Trucks –Reach 3	2028																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 4	2027																									
		CT																524.83	524.83	548.68	524.83	548.68	548.68	2,099.31	2,194.74	2,194.74
		DT																1,640.09	1,640.09	1,714.64	1,640.09	1,714.64	1,714.64	6,560.36	6,858.56	6,858.56
		TT																12,300.67	12,300.67	12,859.79	32,801.79	34,292.79	34,292.79	#######	72,872.17	72,872.17
Trucks –Reach 5	2025																									
		CT	2,099.31	1,908.47	2,194.74	2,194.74	2,099.31	2,194.74	2,194.74	2,099.31	2,194.74	3,148.97	3,148.97	3,435.24	3,673.80	3,506.81	4,007.78	3,673.80	3,673.80	3,840.79	3,673.80	3,840.79	3,840.79	3,673.80	3,840.79	3,840.79
		DT	6,560.36	5,963.96	6,858.56	6,858.56	6,560.36	6,858.56	6,858.56	6,560.36	6,858.56	9,840.54	9,840.54	10,735.13	11,480.63	10,958.78	12,524.32	11,480.63	11,480.63	12,002.47	11,480.63	12,002.47	12,002.47	#######	12,002.47	12,002.47
		TT	69,703.81	63,367.10	72,872.17	72,872.17	69,703.81	72,872.17	94,305.16	90,204.94	94,305.16	114,806.28	114,806.28	125,243.22	127,106.95	121,329.37	138,662.13	127,106.95	127,106.95	132,884.54	127,106.95	132,884.54	########	########	########	########
Trucks –Reach 6	2025																									
		CT	2,099.31	1,908.47	2,194.74	2,194.74	2,099.31	2,194.74	2,194.74	2,099.31	2,194.74	2,624.14	2,624.14	2,862.70	2,624.14	2,504.86	2,862.70	2,624.14	2,624.14	2,743.42	2,624.14	2,743.42	2,743.42	3,148.97	3,292.11	3,292.11
		DT	6,560.36	5,963.96	6,858.56	6,858.56	6,560.36	6,858.56	6,858.56	6,560.36	6,858.56	8,200.45	8,200.45	8,945.94	8,200.45	7,827.70	8,945.94	8,200.45	8,200.45	8,573.20	8,200.45	8,573.20	8,573.20	9,840.54	10,287.84	10,287.84
		TT	90,204.94	82,004.49	94,305.16	94,305.16	90,204.94	94,305.16	94,305.16	90,204.94	94,305.16	102,505.61	102,505.61	111,824.30	102,505.61	97,846.26	111,824.30	102,505.61	102,505.61	107,164.95	102,505.61	107,164.95	########	########	########	########
Trucks –Reach 7	2025																									
		CT	2,624.14	2,385.59	2,743.42	2,743.42	2,624.14	2,743.42	2,743.42	2,624.14	2,743.42	2,099.31	2,099.31	2,290.16	2,099.31	2,003.89	2,290.16	1,574.49	1,574.49	1,646.05	1,049.66	1,097.37	1,097.37	524.83	548.68	548.68
		DT	8,200.45	7,454.95	8,573.20	8,573.20	8,200.45	8,573.20	8,573.20	8,200.45	8,573.20	6,560.36	6,560.36	7,156.76	6,560.36	6,262.16	7,156.76	4,920.27	4,920.27	5,143.92	3,280.18	3,429.28	3,429.28	1,640.09	1,714.64	1,714.64
		TT	102,505.61	93,186.92	107,164.95	107,164.95	102,505.61	107,164.95	107,164.95	102,505.61	107,164.95	90,204.94	90,204.94	98,405.38	69,703.81	66,535.46	76,040.52	57,403.14	57,403.14	60,012.37	45,102.47	47,152.58	47,152.58	#######	12,859.79	12,859.79
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	8,200.45	7,454.95	8,573.20	8,573.20	8,200.45	8,573.20	8,573.20	8,200.45	8,573.20	8,200.45	8,200.45	8,945.94	8,200.45	7,827.70	8,945.94	8,200.45	8,200.45	8,573.20	8,200.45	8,573.20	8,573.20	8,200.45	8,573.20	8,573.20
		TT	20,501.12	18,637.38	21,432.99	21,432.99	20,501.12	21,432.99	21,432.99	20,501.12	21,432.99	20,501.12	20,501.12	22,364.86	20,501.12	19,569.25	22,364.86	20,501.12	20,501.12	21,432.99	20,501.12	21,432.99	21,432.99	#######	21,432.99	21,432.99
Trucks –Pump Station	2026																									
		CT																								
		DT										8,200.45	8,200.45	8,945.94	8,200.45	7,827.70	8,945.94	13,120.72	13,120.72	13,717.11	13,120.72	13,717.11	13,717.11	8,200.45	8,573.20	8,573.20
		TT										20,501.12	20,501.12	22,364.86	20,501.12	19,569.25	22,364.86	28,701.57	28,701.57	30,006.19	28,701.57	30,006.19	30,006.19	#######	21,432.99	21,432.99
		Monthly	482022	438202	503932	522794	500063	522794	544227	520564	544227	578197	578197	630761	572162	546154	624176	631139	631139	659827	637175	666137	666137	618019	646110	646110
		Annual												6365980												7544288

West Battery Park Resiliency

GHG Emission Calculations
Truck Travel Emissions

Monthly kg of CO2e Emitted

Work task	Start Year	Truck Type	2028 Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28	2029 Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Jul-29	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29
Trucks –Reach 1	2025																									
		CT	1,574.49	1,574.49	1,646.05	1,502.92	1,717.62	1,574.49	#######	1,145.08	1,001.95	1,097.37	1,097.37	1,049.66	1,145.08	1,001.95	1,049.66	1,049.66	1,145.08	1,001.95	548.68	548.68	500.97			
		DT	4,920.27	4,920.27	5,143.92	4,696.62	5,367.57	4,920.27	#######	5,367.57	4,696.62	5,143.92	5,143.92	4,920.27	3,578.38	3,131.08	3,280.18	3,280.18	3,578.38	3,131.08	#######	1,714.64	1,565.54			
		TT	#######	77,904.26	#######	#######	84,986.47	#######	#######	67,094.58	58,707.76	#######	64,298.97	61,503.37	#######	43,052.36	#######	#######	49,202.69	#######	#######	12,859.79	11,741.55			
Trucks –Reach 2	2025																									
		CT	2,624.14	2,624.14	2,743.42	1,001.95	1,145.08	1,049.66																		
		DT	8,200.45	8,200.45	8,573.20	3,131.08	3,578.38	3,280.18																		
		TT	#######	82,004.49	#######	#######	49,202.69	#######																		
Trucks –Reach 3	2028																									
		CT	524.83	524.83	548.68	500.97	572.54	524.83	524.83	572.54	500.97	1,097.37	1,097.37	1,049.66	1,145.08	1,001.95	1,049.66	1,049.66	1,145.08	1,001.95	#######	1,646.05	1,502.92	1,717.62	1,574.49	1,574.49
		DT	3,280.18	3,280.18	3,429.28	3,131.08	3,578.38	3,280.18	#######	3,578.38	3,131.08	3,429.28	3,429.28	3,280.18	3,578.38	3,131.08	3,280.18	4,920.27	5,367.57	4,696.62	#######	6,858.56	6,262.16	8,945.94	8,200.45	8,200.45
		TT	#######	28,701.57	#######	#######	31,310.80	#######	#######	31,310.80	27,396.95	#######	47,152.58	45,102.47	#######	43,052.36	#######	#######	67,094.58	#######	#######	77,158.77	70,449.31	#######	90,204.94	90,204.94
Trucks –Reach 4	2027																									
		CT	2,099.31	2,099.31	2,194.74	2,003.89	2,290.16	2,099.31	#######	2,290.16	2,003.89	2,194.74	2,194.74	2,099.31	2,290.16	2,003.89	2,099.31	2,099.31	2,290.16	2,003.89	#######	2,194.74	2,003.89	1,717.62	1,574.49	1,574.49
		DT	6,560.36	6,560.36	6,858.56	6,262.16	7,156.76	6,560.36	#######	7,156.76	6,262.16	6,858.56	6,858.56	6,560.36	7,156.76	6,262.16	6,560.36	6,560.36	7,156.76	6,262.16	#######	6,858.56	6,262.16	5,367.57	4,920.27	4,920.27
		TT	#######	69,703.81	#######	#######	98,405.38	#######	#######	98,405.38	86,104.71	#######	94,305.16	90,204.94	#######	86,104.71	#######	#######	98,405.38	#######	#######	94,305.16	86,104.71	#######	57,403.14	57,403.14
Trucks –Reach 5	2025																									
		CT	3,673.80	3,673.80	3,840.79	3,506.81	4,007.78	3,673.80	#######	4,007.78	3,506.81	3,292.11	3,292.11	3,148.97	2,862.70	2,504.86	2,624.14	2,099.31	2,290.16	2,003.89	#######	2,194.74	2,003.89	2,290.16	2,099.31	2,099.31
		DT	#######	11,480.63	#######	#######	12,524.32	#######	#######	12,524.32	10,958.78	#######	10,287.84	9,840.54	8,945.94	7,827.70	8,200.45	6,560.36	7,156.76	6,262.16	#######	6,858.56	6,262.16	7,156.76	6,560.36	6,560.36
		TT	#######	#######	#######	#######	#######	#######	#######	#######	#######	#######	#######	#######	#######	97,846.26	#######	#######	98,405.38	#######	#######	72,872.17	66,535.46	#######	69,703.81	69,703.81
Trucks –Reach 6	2025																									
		CT	3,673.80	3,673.80	3,840.79	2,504.86	2,862.70	2,624.14	#######	1,717.62	1,502.92	548.68	548.68	524.83												
		DT	#######	11,480.63	#######	7,827.70	8,945.94	8,200.45	#######	5,367.57	4,696.62	1,714.64	1,714.64	1,640.09												
		TT	#######	#######	#######	#######	#######	#######	#######	62,621.61	54,793.91	#######	34,292.79	32,801.79												
Trucks –Reach 7	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	8,200.45	8,200.45	8,573.20	7,827.70	8,945.94	8,200.45	#######	8,945.94	7,827.70	8,573.20	8,573.20	8,200.45	8,945.94	7,827.70	8,200.45	8,200.45	8,945.94	7,827.70	#######	8,573.20	7,827.70	8,945.94	8,200.45	8,200.45
		TT	#######	20,501.12	#######	#######	22,364.86	#######	#######	22,364.86	19,569.25	#######	21,432.99	20,501.12	#######	19,569.25	#######	#######	22,364.86	#######	#######	21,432.99	19,569.25	#######	20,501.12	20,501.12
Trucks –Pump Station	2026																									
		CT																								
		DT	8,200.45	8,200.45	8,573.20	7,827.70	8,945.94	8,200.45	#######	8,945.94	7,827.70	8,573.20	8,573.20	8,200.45	8,945.94	7,827.70	8,200.45	8,200.45	8,945.94	7,827.70	#######	8,573.20	7,827.70	8,945.94	8,200.45	8,200.45
		TT	#######	20,501.12	#######	#######	22,364.86	#######	#######	22,364.86	19,569.25	#######	21,432.99	20,501.12	#######	19,569.25	#######	#######	22,364.86	#######	#######	21,432.99	19,569.25	#######	20,501.12	20,501.12
		Monthly	630024	630024	658662	551916	630761	578197	462407	504444	441388	455751	455751	435936	401959	351714	368463	372038	405860	355127	346083	346083	315989	326885	299644	299644
		Annual												6435260												4189488

West Battery Park Resiliency

GHG Emission Calculations
Truck Travel Emissions

Monthly kg of CO2e Emitted

Work task	Start Year	Truck Type	2030 Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30	2031 Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Jul-31	Aug-31	Sep-31	Oct-31	Nov-31	Dec-31
Trucks –Reach 1	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 2	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 3	2028																									
		CT	1,717.62	1,502.92	1,574.49	548.68	548.68	500.97																		
		DT	7,156.76	6,262.16	6,560.36	1,714.64	1,714.64	1,565.54																		
		TT	#######	70,449.31	#######	#######	12,859.79	#######																		
Trucks –Reach 4	2027																									
		CT	572.54	500.97	524.83	548.68	548.68	500.97																		
		DT	1,789.19	1,565.54	1,640.09	1,714.64	1,714.64	1,565.54																		
		TT	#######	31,310.80	#######	#######	12,859.79	#######																		
Trucks –Reach 5	2025																									
		CT	2,290.16	2,003.89	2,099.31	548.68	548.68	500.97																		
		DT	7,156.76	6,262.16	6,560.36	1,714.64	1,714.64	1,565.54																		
		TT	#######	66,535.46	#######	#######	34,292.79	#######																		
Trucks –Reach 6	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 7	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	8,945.94	7,827.70	8,200.45																					
		TT	#######	19,569.25	#######																					
Trucks –Pump Station	2026																									
		CT																								
		DT																								
		TT																								
		Monthly	244332	213790	223971	66802	66802	60993	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Annual												876691												0

West Battery Park Resiliency

GHG Emission Calculations

Truck On-Site Idle Hours

Truck Type	Idle Time (hr)	
DT	0.05	Dump Truck
CT	1	Concrete Truck
TT	0.05	Tractor Trailor

Monthly Idle Hours

			2024												2025											
Work task	**Start Year**	**Truck Type**	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Trucks –Reach 1	2025																									
		CT																						23.00	21.00	24.00
		DT																						1.15	1.05	1.20
		TT																						3.45	3.15	3.60
Trucks –Reach 2	2025																									
		CT																						115.00	105.00	120.00
		DT																						5.75	5.25	6.00
		TT																						28.75	26.25	30.00
Trucks –Reach 3	2028																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 4	2027																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 5	2025																									
		CT																						23.00	21.00	24.00
		DT																						1.15	1.05	1.20
		TT																						3.45	3.15	3.60
Trucks –Reach 6	2025																									
		CT																						46.00	42.00	48.00
		DT																						2.30	2.10	2.40
		TT																						12.65	11.55	13.20
Trucks –Reach 7	2025																									
		CT																						115.00	105.00	120.00
		DT																						5.75	5.25	6.00
		TT																						28.75	26.25	30.00
Trucks –Drainage Improvements	2025																									
		CT																								
		DT																						5.75	5.25	6.00
		TT																						5.75	5.25	6.00
Trucks –Pump Station	2026																									
		CT																								
		DT																								
		TT																								
		Monthly	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	427	390	445
		Annual												0												1261

Year

	0	1	2	3	4	5	6	7	
Annual	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	
Total	0	1,261	7,411	9,029	7,388	4,446	1,002	0	**30,537**

West Battery Park Resiliency

GHG Emission Calculations
Truck On-Site Idle Hours

Truck Type	Idle Time (hr)	
DT	0.05	Dump Truck
CT	1	Concrete Truck
TT	0.05	Tractor Trailor

Monthly Idle Hours

Work task	Start Year	Truck Type	2026 Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	2027 Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27
Trucks –Reach 1	2025																									
		CT	44.00	40.00	46.00	46.00	44.00	46.00	46.00	44.00	46.00	44.00	44.00	48.00	44.00	42.00	48.00	66.00	66.00	69.00	66.00	69.00	69.00	66.00	69.00	69.00
		DT	2.20	2.00	2.30	3.45	3.30	3.45	3.45	3.30	3.45	3.30	3.30	3.60	3.30	3.15	3.60	3.30	3.30	3.45	3.30	3.45	3.45	3.30	3.45	3.45
		TT	12.10	11.00	12.65	17.25	16.50	17.25	17.25	16.50	17.25	16.50	16.50	18.00	16.50	15.75	18.00	20.90	20.90	21.85	20.90	21.85	21.85	20.90	21.85	21.85
Trucks –Reach 2	2025																									
		CT	110.00	100.00	115.00	115.00	110.00	115.00	115.00	110.00	115.00	110.00	110.00	120.00	110.00	105.00	120.00	154.00	154.00	161.00	154.00	161.00	161.00	110.00	115.00	115.00
		DT	5.50	5.00	5.75	5.75	5.50	5.75	5.75	5.50	5.75	5.50	5.50	6.00	5.50	5.25	6.00	7.70	7.70	8.05	7.70	8.05	8.05	5.50	5.75	5.75
		TT	27.50	25.00	28.75	28.75	27.50	28.75	28.75	27.50	28.75	27.50	27.50	30.00	27.50	26.25	30.00	34.10	34.10	35.65	34.10	35.65	35.65	27.50	28.75	28.75
Trucks –Reach 3	2028																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 4	2027																									
		CT																22.00	22.00	23.00	22.00	23.00	23.00	88.00	92.00	92.00
		DT																1.10	1.10	1.15	1.10	1.15	1.15	4.40	4.60	4.60
		TT																3.30	3.30	3.45	8.80	9.20	9.20	18.70	19.55	19.55
Trucks –Reach 5	2025																									
		CT	88.00	80.00	92.00	92.00	88.00	92.00	92.00	88.00	92.00	132.00	132.00	144.00	154.00	147.00	168.00	154.00	154.00	161.00	154.00	161.00	161.00	154.00	161.00	161.00
		DT	4.40	4.00	4.60	4.60	4.40	4.60	4.60	4.40	4.60	6.60	6.60	7.20	7.70	7.35	8.40	7.70	7.70	8.05	7.70	8.05	8.05	7.70	8.05	8.05
		TT	18.70	17.00	19.55	19.55	18.70	19.55	25.30	24.20	25.30	30.80	30.80	33.60	34.10	32.55	37.20	34.10	34.10	35.65	34.10	35.65	35.65	34.10	35.65	35.65
Trucks –Reach 6	2025																									
		CT	88.00	80.00	92.00	92.00	88.00	92.00	92.00	88.00	92.00	110.00	110.00	120.00	110.00	105.00	120.00	110.00	110.00	115.00	110.00	115.00	115.00	132.00	138.00	138.00
		DT	4.40	4.00	4.60	4.60	4.40	4.60	4.60	4.40	4.60	5.50	5.50	6.00	5.50	5.25	6.00	5.50	5.50	5.75	5.50	5.75	5.75	6.60	6.90	6.90
		TT	24.20	22.00	25.30	25.30	24.20	25.30	25.30	24.20	25.30	27.50	27.50	30.00	27.50	26.25	30.00	27.50	27.50	28.75	27.50	28.75	28.75	30.80	32.20	32.20
Trucks –Reach 7	2025																									
		CT	110.00	100.00	115.00	115.00	110.00	115.00	115.00	110.00	115.00	88.00	88.00	96.00	88.00	84.00	96.00	66.00	66.00	69.00	44.00	46.00	46.00	22.00	23.00	23.00
		DT	5.50	5.00	5.75	5.75	5.50	5.75	5.75	5.50	5.75	4.40	4.40	4.80	4.40	4.20	4.80	3.30	3.30	3.45	2.20	2.30	2.30	1.10	1.15	1.15
		TT	27.50	25.00	28.75	28.75	27.50	28.75	28.75	27.50	28.75	24.20	24.20	26.40	18.70	17.85	20.40	15.40	15.40	16.10	12.10	12.65	12.65	3.30	3.45	3.45
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	5.50	5.00	5.75	5.75	5.50	5.75	5.75	5.50	5.75	5.50	5.50	6.00	5.50	5.25	6.00	5.50	5.50	5.75	5.50	5.75	5.75	5.50	5.75	5.75
		TT	5.50	5.00	5.75	5.75	5.50	5.75	5.75	5.50	5.75	5.50	5.50	6.00	5.50	5.25	6.00	5.50	5.50	5.75	5.50	5.75	5.75	5.50	5.75	5.75
Trucks –Pump Station	2026																									
		CT																								
		DT										5.50	5.50	6.00	5.50	5.25	6.00	8.80	8.80	9.20	8.80	9.20	9.20	5.50	5.75	5.75
		TT										5.50	5.50	6.00	5.50	5.25	6.00	7.70	7.70	8.05	7.70	8.05	8.05	5.50	5.75	5.75
		Monthly	583	530	610	615	589	615	621	594	621	658	658	718	679	648	740	763	763	798	743	776	776	758	792	792
		Annual												7411												9029

West Battery Park Resiliency

GHG Emission Calculations
Truck On-Site Idle Hours

Truck Type	Idle Time (hr)	
DT	0.05	Dump Truck
CT	1	Concrete Truck
TT	0.05	Tractor Trailor

Monthly Idle Hours

			2028												2029											
Work task	**Start Year**	**Truck Type**	Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28	Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Jul-29	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29
Trucks –Reach 1	2025																									
		CT	66.00	66.00	69.00	63.00	72.00	66.00	44.00	48.00	42.00	46.00	46.00	44.00	48.00	42.00	44.00	44.00	48.00	42.00	23.00	23.00	21.00			
		DT	3.30	3.30	3.45	3.15	3.60	3.30	3.30	3.60	3.15	3.45	3.45	3.30	2.40	2.10	2.20	2.20	2.40	2.10	1.15	1.15	1.05			
		TT	20.90	20.90	21.85	19.95	22.80	20.90	16.50	18.00	15.75	17.25	17.25	16.50	13.20	11.55	12.10	12.10	13.20	11.55	3.45	3.45	3.15			
Trucks –Reach 2	2025																									
		CT	110.00	110.00	115.00	42.00	48.00	44.00																		
		DT	5.50	5.50	5.75	2.10	2.40	2.20																		
		TT	22.00	22.00	23.00	11.55	13.20	12.10																		
Trucks –Reach 3	2028																									
		CT	22.00	22.00	23.00	21.00	24.00	22.00	22.00	24.00	21.00	46.00	46.00	44.00	48.00	42.00	44.00	44.00	48.00	42.00	69.00	69.00	63.00	72.00	66.00	66.00
		DT	2.20	2.20	2.30	2.10	2.40	2.20	2.20	2.40	2.10	2.30	2.30	2.20	2.40	2.10	2.20	3.30	3.60	3.15	4.60	4.60	4.20	6.00	5.50	5.50
		TT	7.70	7.70	8.05	7.35	8.40	7.70	7.70	8.40	7.35	12.65	12.65	12.10	13.20	11.55	12.10	16.50	18.00	15.75	20.70	20.70	18.90	26.40	24.20	24.20
Trucks –Reach 4	2027																									
		CT	88.00	88.00	92.00	84.00	96.00	88.00	88.00	96.00	84.00	92.00	92.00	88.00	96.00	84.00	88.00	88.00	96.00	84.00	92.00	92.00	84.00	72.00	66.00	66.00
		DT	4.40	4.40	4.60	4.20	4.80	4.40	4.40	4.80	4.20	4.60	4.60	4.40	4.80	4.20	4.40	4.40	4.80	4.20	4.60	4.60	4.20	3.60	3.30	3.30
		TT	18.70	18.70	19.55	23.10	26.40	24.20	24.20	26.40	23.10	25.30	25.30	24.20	26.40	23.10	24.20	24.20	26.40	23.10	25.30	25.30	23.10	16.80	15.40	15.40
Trucks –Reach 5	2025																									
		CT	154.00	154.00	161.00	147.00	168.00	154.00	154.00	168.00	147.00	138.00	138.00	132.00	120.00	105.00	110.00	88.00	96.00	84.00	92.00	92.00	84.00	96.00	88.00	88.00
		DT	7.70	7.70	8.05	7.35	8.40	7.70	7.70	8.40	7.35	6.90	6.90	6.60	6.00	5.25	5.50	4.40	4.80	4.20	4.60	4.60	4.20	4.80	4.40	4.40
		TT	34.10	34.10	35.65	32.55	37.20	34.10	34.10	37.20	32.55	32.20	32.20	30.80	30.00	26.25	27.50	24.20	26.40	23.10	19.55	19.55	17.85	20.40	18.70	18.70
Trucks –Reach 6	2025																									
		CT	154.00	154.00	161.00	105.00	120.00	110.00	66.00	72.00	63.00	23.00	23.00	22.00												
		DT	7.70	7.70	8.05	5.25	6.00	5.50	3.30	3.60	3.15	1.15	1.15	1.10												
		TT	34.10	34.10	35.65	26.25	30.00	27.50	15.40	16.80	14.70	9.20	9.20	8.80												
Trucks –Reach 7	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	5.50	5.50	5.75	5.25	6.00	5.50	5.50	6.00	5.25	5.75	5.75	5.50	6.00	5.25	5.50	5.50	6.00	5.25	5.75	5.75	5.25	6.00	5.50	5.50
		TT	5.50	5.50	5.75	5.25	6.00	5.50	5.50	6.00	5.25	5.75	5.75	5.50	6.00	5.25	5.50	5.50	6.00	5.25	5.75	5.75	5.25	6.00	5.50	5.50
Trucks –Pump Station	2026																									
		CT																								
		DT	5.50	5.50	5.75	5.25	6.00	5.50	5.50	6.00	5.25	5.75	5.75	5.50	6.00	5.25	5.50	5.50	6.00	5.25	5.75	5.75	5.25	6.00	5.50	5.50
		TT	5.50	5.50	5.75	5.25	6.00	5.50	5.50	6.00	5.25	5.75	5.75	5.50	6.00	5.25	5.50	5.50	6.00	5.25	5.75	5.75	5.25	6.00	5.50	5.50
		Monthly	784	784	820	628	718	658	515	562	491	483	483	462	434	380	398	377	412	360	383	383	350	342	314	314
		Annual												7388												4446

West Battery Park Resiliency

GHG Emission Calculations
Truck On-Site Idle Hours

Truck Type	Idle Time (hr)	
DT	0.05	Dump Truck
CT	1	Concrete Truck
TT	0.05	Tractor Trailor

Monthly Idle Hours

Work task	Start Year	Truck Type	2030 Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30	2031 Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Jul-31	Aug-31	Sep-31	Oct-31	Nov-31	Dec-31
Trucks –Reach 1	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 2	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 3	2028																									
		CT	72.00	63.00	66.00	23.00	23.00	21.00																		
		DT	4.80	4.20	4.40	1.15	1.15	1.05																		
		TT	21.60	18.90	19.80	3.45	3.45	3.15																		
Trucks –Reach 4	2027																									
		CT	24.00	21.00	22.00	23.00	23.00	21.00																		
		DT	1.20	1.05	1.10	1.15	1.15	1.05																		
		TT	9.60	8.40	8.80	3.45	3.45	3.15																		
Trucks –Reach 5	2025																									
		CT	96.00	84.00	88.00	23.00	23.00	21.00																		
		DT	4.80	4.20	4.40	1.15	1.15	1.05																		
		TT	20.40	17.85	18.70	9.20	9.20	8.40																		
Trucks –Reach 6	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 7	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	6.00	5.25	5.50																					
		TT	6.00	5.25	5.50																					
Trucks –Pump Station	2026																									
		CT																								
		DT																								
		TT																								
		Monthly	266	233	244	89	89	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Annual												1002												0

West Battery Park Resiliency

GHG Emission Calculations
Truck On-Site Idle Fuel Consumption

Monthly kg of CO2e Emitted

Work task	Start Year	Truck Type	2024												2025											
			Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Trucks –Reach 1	2025																									
		CT																						17.26	15.76	18.01
		DT																						0.86	0.79	0.90
		TT																						2.59	2.36	2.70
Trucks –Reach 2	2025																									
		CT																						86.30	78.80	90.05
		DT																						4.32	3.94	4.50
		TT																						21.58	19.70	22.51
Trucks –Reach 3	2028																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 4	2027																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 5	2025																									
		CT																						17.26	15.76	18.01
		DT																						0.86	0.79	0.90
		TT																						2.59	2.36	2.70
Trucks –Reach 6	2025																									
		CT																						34.52	31.52	36.02
		DT																						1.73	1.58	1.80
		TT																						9.49	8.67	9.91
Trucks –Reach 7	2025																									
		CT																						86.30	78.80	90.05
		DT																						4.32	3.94	4.50
		TT																						21.58	19.70	22.51
Trucks –Drainage Improvements	2025																									
		CT																								
		DT																						4.32	3.94	4.50
		TT																						4.32	3.94	4.50
Trucks –Pump Station	2026																									
		CT																								
		DT																								
		TT																								
		Monthly	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	320	292	334
		Annual												0												947

Year

	0	1	2	3	4	5	6	7	
Annual	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	
Total	0	947	5,561	6,776	5,544	3,337	752	0	22,916

West Battery Park Resiliency

GHG Emission Calculations

Truck On-Site Idle Fuel Consumption

Monthly kg of CO2e Emitted

			2026												2027											
Work task	**Start Year**	**Truck Type**	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27
Trucks –Reach 1	2025																									
		CT	33.02	30.02	34.52	34.52	33.02	34.52	34.52	33.02	34.52	33.02	33.02	36.02	33.02	31.52	36.02	49.53	49.53	51.78	49.53	51.78	51.78	49.53	51.78	51.78
		DT	1.65	1.50	1.73	2.59	2.48	2.59	2.59	2.48	2.59	2.48	2.48	2.70	2.48	2.36	2.70	2.48	2.48	2.59	2.48	2.59	2.59	2.48	2.59	2.59
		TT	9.08	8.25	9.49	12.95	12.38	12.95	12.95	12.38	12.95	12.38	12.38	13.51	12.38	11.82	13.51	15.68	15.68	16.40	15.68	16.40	16.40	15.68	16.40	16.40
Trucks –Reach 2	2025																									
		CT	82.55	75.04	86.30	86.30	82.55	86.30	86.30	82.55	86.30	82.55	82.55	90.05	82.55	78.80	90.05	115.57	115.57	120.82	115.57	120.82	120.82	82.55	86.30	86.30
		DT	4.13	3.75	4.32	4.32	4.13	4.32	4.32	4.13	4.32	4.13	4.13	4.50	4.13	3.94	4.50	5.78	5.78	6.04	5.78	6.04	6.04	4.13	4.32	4.32
		TT	20.64	18.76	21.58	21.58	20.64	21.58	21.58	20.64	21.58	20.64	20.64	22.51	20.64	19.70	22.51	25.59	25.59	26.75	25.59	26.75	26.75	20.64	21.58	21.58
Trucks –Reach 3	2028																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 4	2027																									
		CT																16.51	16.51	17.26	16.51	17.26	17.26	66.04	69.04	69.04
		DT																0.83	0.83	0.86	0.83	0.86	0.86	3.30	3.45	3.45
		TT																2.48	2.48	2.59	6.60	6.90	6.90	14.03	14.67	14.67
Trucks –Reach 5	2025																									
		CT	66.04	60.04	69.04	69.04	66.04	69.04	69.04	66.04	69.04	99.06	99.06	108.06	115.57	110.31	126.07	115.57	115.57	120.82	115.57	120.82	120.82	115.57	120.82	120.82
		DT	3.30	3.00	3.45	3.45	3.30	3.45	3.45	3.30	3.45	4.95	4.95	5.40	5.78	5.52	6.30	5.78	5.78	6.04	5.78	6.04	6.04	5.78	6.04	6.04
		TT	14.03	12.76	14.67	14.67	14.03	14.67	18.99	18.16	18.99	23.11	23.11	25.21	25.59	24.43	27.92	25.59	25.59	26.75	25.59	26.75	26.75	25.59	26.75	26.75
Trucks –Reach 6	2025																									
		CT	66.04	60.04	69.04	69.04	66.04	69.04	69.04	66.04	69.04	82.55	82.55	90.05	82.55	78.80	90.05	82.55	82.55	86.30	82.55	86.30	86.30	99.06	103.56	103.56
		DT	3.30	3.00	3.45	3.45	3.30	3.45	3.45	3.30	3.45	4.13	4.13	4.50	4.13	3.94	4.50	4.13	4.13	4.32	4.13	4.32	4.32	4.95	5.18	5.18
		TT	18.16	16.51	18.99	18.99	18.16	18.99	18.99	18.16	18.99	20.64	20.64	22.51	20.64	19.70	22.51	20.64	20.64	21.58	20.64	21.58	21.58	23.11	24.16	24.16
Trucks –Reach 7	2025																									
		CT	82.55	75.04	86.30	86.30	82.55	86.30	86.30	82.55	86.30	66.04	66.04	72.04	66.04	63.04	72.04	49.53	49.53	51.78	33.02	34.52	34.52	16.51	17.26	17.26
		DT	4.13	3.75	4.32	4.32	4.13	4.32	4.32	4.13	4.32	3.30	3.30	3.60	3.30	3.15	3.60	2.48	2.48	2.59	1.65	1.73	1.73	0.83	0.86	0.86
		TT	20.64	18.76	21.58	21.58	20.64	21.58	21.58	20.64	21.58	18.16	18.16	19.81	14.03	13.40	15.31	11.56	11.56	12.08	9.08	9.49	9.49	2.48	2.59	2.59
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	4.13	3.75	4.32	4.32	4.13	4.32	4.32	4.13	4.32	4.13	4.13	4.50	4.13	3.94	4.50	4.13	4.13	4.32	4.13	4.32	4.32	4.13	4.32	4.32
		TT	4.13	3.75	4.32	4.32	4.13	4.32	4.32	4.13	4.32	4.13	4.13	4.50	4.13	3.94	4.50	4.13	4.13	4.32	4.13	4.32	4.32	4.13	4.32	4.32
Trucks –Pump Station	2026																									
		CT																								
		DT										4.13	4.13	4.50	4.13	3.94	4.50	6.60	6.60	6.90	6.60	6.90	6.90	4.13	4.32	4.32
		TT										4.13	4.13	4.50	4.13	3.94	4.50	5.78	5.78	6.04	5.78	6.04	6.04	4.13	4.32	4.32
		Monthly	438	398	457	462	442	462	466	446	466	494	494	539	509	486	556	573	573	599	557	583	583	569	595	595
		Annual												5561												6776

West Battery Park Resiliency

GHG Emission Calculations
Truck On-Site Idle Fuel Consumption

Monthly kg of CO_2e Emitted

			2028												2029											
Work task	**Start Year**	**Truck Type**	Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28	Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Jul-29	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29
Trucks –Reach 1	2025																									
		CT	49.53	49.53	51.78	47.28	54.03	49.53	33.02	36.02	31.52	34.52	34.52	33.02	36.02	31.52	33.02	33.02	36.02	31.52	17.26	17.26	15.76			
		DT	2.48	2.48	2.59	2.36	2.70	2.48	2.48	2.70	2.36	2.59	2.59	2.48	1.80	1.58	1.65	1.65	1.80	1.58	0.86	0.86	0.79			
		TT	15.68	15.68	16.40	14.97	17.11	15.68	12.38	13.51	11.82	12.95	12.95	12.38	9.91	8.67	9.08	9.08	9.91	8.67	2.59	2.59	2.36			
Trucks –Reach 2	2025																									
		CT	82.55	82.55	86.30	31.52	36.02	33.02																		
		DT	4.13	4.13	4.32	1.58	1.80	1.65																		
		TT	16.51	16.51	17.26	8.67	9.91	9.08																		
Trucks –Reach 3	2028																									
		CT	16.51	16.51	17.26	15.76	18.01	16.51	16.51	18.01	15.76	34.52	34.52	33.02	36.02	31.52	33.02	33.02	36.02	31.52	51.78	51.78	47.28	54.03	49.53	49.53
		DT	1.65	1.65	1.73	1.58	1.80	1.65	1.65	1.80	1.58	1.73	1.73	1.65	1.80	1.58	1.65	2.48	2.70	2.36	3.45	3.45	3.15	4.50	4.13	4.13
		TT	5.78	5.78	6.04	5.52	6.30	5.78	5.78	6.30	5.52	9.49	9.49	9.08	9.91	8.67	9.08	12.38	13.51	11.82	15.53	15.53	14.18	19.81	18.16	18.16
Trucks –Reach 4	2027																									
		CT	66.04	66.04	69.04	63.04	72.04	66.04	66.04	72.04	63.04	69.04	69.04	66.04	72.04	63.04	66.04	66.04	72.04	63.04	69.04	69.04	63.04	54.03	49.53	49.53
		DT	3.30	3.30	3.45	3.15	3.60	3.30	3.30	3.60	3.15	3.45	3.45	3.30	3.60	3.15	3.30	3.30	3.60	3.15	3.45	3.45	3.15	2.70	2.48	2.48
		TT	14.03	14.03	14.67	17.34	19.81	18.16	18.16	19.81	17.34	18.99	18.99	18.16	19.81	17.34	18.16	18.16	19.81	17.34	18.99	18.99	17.34	12.61	11.56	11.56
Trucks –Reach 5	2025																									
		CT	115.57	115.57	120.82	110.31	126.07	115.57	115.57	126.07	110.31	103.56	103.56	99.06	90.05	78.80	82.55	66.04	72.04	63.04	69.04	69.04	63.04	72.04	66.04	66.04
		DT	5.78	5.78	6.04	5.52	6.30	5.78	5.78	6.30	5.52	5.18	5.18	4.95	4.50	3.94	4.13	3.30	3.60	3.15	3.45	3.45	3.15	3.60	3.30	3.30
		TT	25.59	25.59	26.75	24.43	27.92	25.59	25.59	27.92	24.43	24.16	24.16	23.11	22.51	19.70	20.64	18.16	19.81	17.34	14.67	14.67	13.40	15.31	14.03	14.03
Trucks –Reach 6	2025																									
		CT	115.57	115.57	120.82	78.80	90.05	82.55	49.53	54.03	47.28	17.26	17.26	16.51												
		DT	5.78	5.78	6.04	3.94	4.50	4.13	2.48	2.70	2.36	0.86	0.86	0.83												
		TT	25.59	25.59	26.75	19.70	22.51	20.64	11.56	12.61	11.03	6.90	6.90	6.60												
Trucks –Reach 7	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	4.13	4.13	4.32	3.94	4.50	4.13	4.13	4.50	3.94	4.32	4.32	4.13	4.50	3.94	4.13	4.13	4.50	3.94	4.32	4.32	3.94	4.50	4.13	4.13
		TT	4.13	4.13	4.32	3.94	4.50	4.13	4.13	4.50	3.94	4.32	4.32	4.13	4.50	3.94	4.13	4.13	4.50	3.94	4.32	4.32	3.94	4.50	4.13	4.13
Trucks –Pump Station	2026																									
		CT																								
		DT	4.13	4.13	4.32	3.94	4.50	4.13	4.13	4.50	3.94	4.32	4.32	4.13	4.50	3.94	4.13	4.13	4.50	3.94	4.32	4.32	3.94	4.50	4.13	4.13
		TT	4.13	4.13	4.32	3.94	4.50	4.13	4.13	4.50	3.94	4.32	4.32	4.13	4.50	3.94	4.13	4.13	4.50	3.94	4.32	4.32	3.94	4.50	4.13	4.13
		Monthly	589	589	615	471	539	494	386	421	369	362	362	347	326	285	299	283	309	270	287	287	262	257	235	235
		Annual												5544												3337

West Battery Park Resiliency

GHG Emission Calculations
Truck On-Site Idle Fuel Consumption

Monthly kg of CO2e Emitted

Work task	Start Year	Truck Type	2030												2031											
			Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30	Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Jul-31	Aug-31	Sep-31	Oct-31	Nov-31	Dec-31
Trucks –Reach 1	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 2	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 3	2028																									
		CT	54.03	47.28	49.53	17.26	17.26	15.76																		
		DT	3.60	3.15	3.30	0.86	0.86	0.79																		
		TT	16.21	14.18	14.86	2.59	2.59	2.36																		
Trucks –Reach 4	2027																									
		CT	18.01	15.76	16.51	17.26	17.26	15.76																		
		DT	0.90	0.79	0.83	0.86	0.86	0.79																		
		TT	7.20	6.30	6.60	2.59	2.59	2.36																		
Trucks –Reach 5	2025																									
		CT	72.04	63.04	66.04	17.26	17.26	15.76																		
		DT	3.60	3.15	3.30	0.86	0.86	0.79																		
		TT	15.31	13.40	14.03	6.90	6.90	6.30																		
Trucks –Reach 6	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 7	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	4.50	3.94	4.13																					
		TT	4.50	3.94	4.13																					
Trucks –Pump Station	2026																									
		CT																								
		DT																								
		TT																								
		Monthly	200	175	183	66	66	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Annual												752												0

West Battery Park Resiliency

GHG Emission Calculations
Truck On-Site Idle Emissions

Monthly kg of CO2e Emitted

Work task	Start Year	Truck Type	2024												2025											
			Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25
Trucks –Reach 1	2025																									
		CT																						207.14	189.13	216.15
		DT																						10.36	9.46	10.81
		TT																						31.07	28.37	32.42
Trucks –Reach 2	2025																									
		CT																						1,035.72	945.65	1,080.75
		DT																						51.79	47.28	54.04
		TT																						258.93	236.41	270.19
Trucks –Reach 3	2028																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 4	2027																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 5	2025																									
		CT																						207.14	189.13	216.15
		DT																						10.36	9.46	10.81
		TT																						31.07	28.37	32.42
Trucks –Reach 6	2025																									
		CT																						414.29	378.26	432.30
		DT																						20.71	18.91	21.61
		TT																						113.93	104.02	118.88
Trucks –Reach 7	2025																									
		CT																						1,035.72	945.65	1,080.75
		DT																						51.79	47.28	54.04
		TT																						258.93	236.41	270.19
Trucks –Drainage Improvements	2025																									
		CT																								
		DT																						51.79	47.28	54.04
		TT																						51.79	47.28	54.04
Trucks –Pump Station	2026																									
		CT																								
		DT																								
		TT																								
		Monthly	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3843	3508	4010
		Annual												0												11360

Year

	0	1	2	3	4	5	6	7
Annual	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Total	0	11,360	66,742	81,321	66,535	40,044	9,021	0

West Battery Park Resiliency

GHG Emission Calculations
Truck On-Site Idle Emissions

Monthly kg of CO2e Emitted

			2026												2027											
Work task	**Start Year**	**Truck Type**	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27
Trucks –Reach 1	2025																									
		CT	396.27	360.25	414.29	414.29	396.27	414.29	414.29	396.27	414.29	396.27	396.27	432.30	396.27	378.26	432.30	594.41	594.41	621.43	594.41	621.43	621.43	594.41	621.43	621.43
		DT	19.81	18.01	20.71	31.07	29.72	31.07	31.07	29.72	31.07	29.72	29.72	32.42	29.72	28.37	32.42	29.72	29.72	31.07	29.72	31.07	31.07	29.72	31.07	31.07
		TT	108.98	99.07	113.93	155.36	148.60	155.36	155.36	148.60	155.36	148.60	148.60	162.11	148.60	141.85	162.11	188.23	188.23	196.79	188.23	196.79	196.79	188.23	196.79	196.79
Trucks –Reach 2	2025																									
		CT	990.68	900.62	1,035.72	1,035.72	990.68	1,035.72	######	990.68	1,035.72	990.68	990.68	1,080.75	990.68	945.65	1,080.75	1,386.96	1,386.96	1,450.00	######	1,450.00	1,450.00	990.68	1,035.72	1,035.72
		DT	49.53	45.03	51.79	51.79	49.53	51.79	51.79	49.53	51.79	49.53	49.53	54.04	49.53	47.28	54.04	69.35	69.35	72.50	69.35	72.50	72.50	49.53	51.79	51.79
		TT	247.67	225.16	258.93	258.93	247.67	258.93	258.93	247.67	258.93	247.67	247.67	270.19	247.67	236.41	270.19	307.11	307.11	321.07	307.11	321.07	321.07	247.67	258.93	258.93
Trucks –Reach 3	2028																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 4	2027																									
		CT																198.14	198.14	207.14	198.14	207.14	207.14	792.55	828.57	828.57
		DT																9.91	9.91	10.36	9.91	10.36	10.36	39.63	41.43	41.43
		TT																29.72	29.72	31.07	79.25	82.86	82.86	168.42	176.07	176.07
Trucks –Reach 5	2025																									
		CT	792.55	720.50	828.57	828.57	792.55	828.57	828.57	792.55	828.57	1,188.82	1,188.82	1,296.90	1,386.96	1,323.91	1,513.04	1,386.96	1,386.96	1,450.00	######	1,450.00	1,450.00	1,386.96	1,450.00	1,450.00
		DT	39.63	36.02	41.43	41.43	39.63	41.43	41.43	39.63	41.43	59.44	59.44	64.84	69.35	66.20	75.65	69.35	69.35	72.50	69.35	72.50	72.50	69.35	72.50	72.50
		TT	168.42	153.11	176.07	176.07	168.42	176.07	227.86	217.95	227.86	277.39	277.39	302.61	307.11	293.15	335.03	307.11	307.11	321.07	307.11	321.07	321.07	307.11	321.07	321.07
Trucks –Reach 6	2025																									
		CT	792.55	720.50	828.57	828.57	792.55	828.57	828.57	792.55	828.57	990.68	990.68	1,080.75	990.68	945.65	1,080.75	990.68	990.68	1,035.72	990.68	1,035.72	1,035.72	1,188.82	1,242.86	1,242.86
		DT	39.63	36.02	41.43	41.43	39.63	41.43	41.43	39.63	41.43	49.53	49.53	54.04	49.53	47.28	54.04	49.53	49.53	51.79	49.53	51.79	51.79	59.44	62.14	62.14
		TT	217.95	198.14	227.86	227.86	217.95	227.86	227.86	217.95	227.86	247.67	247.67	270.19	247.67	236.41	270.19	247.67	247.67	258.93	247.67	258.93	258.93	277.39	290.00	290.00
Trucks –Reach 7	2025																									
		CT	990.68	900.62	1,035.72	1,035.72	990.68	1,035.72	######	990.68	1,035.72	792.55	792.55	864.60	792.55	756.52	864.60	594.41	594.41	621.43	396.27	414.29	414.29	198.14	207.14	207.14
		DT	49.53	45.03	51.79	51.79	49.53	51.79	51.79	49.53	51.79	39.63	39.63	43.23	39.63	37.83	43.23	29.72	29.72	31.07	19.81	20.71	20.71	9.91	10.36	10.36
		TT	247.67	225.16	258.93	258.93	247.67	258.93	258.93	247.67	258.93	217.95	217.95	237.76	168.42	160.76	183.73	138.70	138.70	145.00	108.98	113.93	113.93	29.72	31.07	31.07
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	49.53	45.03	51.79	51.79	49.53	51.79	51.79	49.53	51.79	49.53	49.53	54.04	49.53	47.28	54.04	49.53	49.53	51.79	49.53	51.79	51.79	49.53	51.79	51.79
		TT	49.53	45.03	51.79	51.79	49.53	51.79	51.79	49.53	51.79	49.53	49.53	54.04	49.53	47.28	54.04	49.53	49.53	51.79	49.53	51.79	51.79	49.53	51.79	51.79
Trucks –Pump Station	2026																									
		CT																								
		DT										49.53	49.53	54.04	49.53	47.28	54.04	79.25	79.25	82.86	79.25	82.86	82.86	49.53	51.79	51.79
		TT										49.53	49.53	54.04	49.53	47.28	54.04	69.35	69.35	72.50	69.35	72.50	72.50	49.53	51.79	51.79
		Monthly	5251	4773	5489	5541	5300	5541	5593	5350	5593	5924	5924	6463	6113	5835	6668	6875	6875	7188	6687	6991	6991	6826	7136	7136
		Annual												66742												81321

West Battery Park Resiliency

GHG Emission Calculations
Truck On-Site Idle Emissions

Monthly kg of CO2e Emitted

			2028												2029											
Work task	**Start Year**	**Truck Type**	Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28	Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Jul-29	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29
Trucks –Reach 1	2025																									
		CT	594.41	594.41	621.43	567.39	648.45	594.41	396.27	432.30	378.26	414.29	414.29	396.27	432.30	378.26	396.27	396.27	432.30	378.26	207.14	207.14	189.13			
		DT	29.72	29.72	31.07	28.37	32.42	29.72	29.72	32.42	28.37	31.07	31.07	29.72	21.61	18.91	19.81	19.81	21.61	18.91	10.36	10.36	9.46			
		TT	188.23	188.23	196.79	179.67	205.34	188.23	148.60	162.11	141.85	155.36	155.36	148.60	118.88	104.02	108.98	108.98	118.88	104.02	31.07	31.07	28.37			
Trucks –Reach 2	2025																									
		CT	990.68	990.68	1,035.72	378.26	432.30	396.27																		
		DT	49.53	49.53	51.79	18.91	21.61	19.81																		
		TT	198.14	198.14	207.14	104.02	118.88	108.98																		
Trucks –Reach 3	2028																									
		CT	198.14	198.14	207.14	189.13	216.15	198.14	198.14	216.15	189.13	414.29	414.29	396.27	432.30	378.26	396.27	396.27	432.30	378.26	621.43	621.43	567.39	648.45	594.41	594.41
		DT	19.81	19.81	20.71	18.91	21.61	19.81	19.81	21.61	18.91	20.71	20.71	19.81	21.61	18.91	19.81	29.72	32.42	28.37	41.43	41.43	37.83	54.04	49.53	49.53
		TT	69.35	69.35	72.50	66.20	75.65	69.35	69.35	75.65	66.20	113.93	113.93	108.98	118.88	104.02	108.98	148.60	162.11	141.85	186.43	186.43	170.22	237.76	217.95	217.95
Trucks –Reach 4	2027																									
		CT	792.55	792.55	828.57	756.52	864.60	792.55	792.55	864.60	756.52	828.57	828.57	792.55	864.60	756.52	792.55	792.55	864.60	756.52	828.57	828.57	756.52	648.45	594.41	594.41
		DT	39.63	39.63	41.43	37.83	43.23	39.63	39.63	43.23	37.83	41.43	41.43	39.63	43.23	37.83	39.63	39.63	43.23	37.83	41.43	41.43	37.83	32.42	29.72	29.72
		TT	168.42	168.42	176.07	208.04	237.76	217.95	217.95	237.76	208.04	227.86	227.86	217.95	237.76	208.04	217.95	217.95	237.76	208.04	227.86	227.86	208.04	151.30	138.70	138.70
Trucks –Reach 5	2025																									
		CT	1,386.96	1,386.96	1,450.00	1,323.91	1,513.04	1,386.96	######	1,513.04	1,323.91	1,242.86	1,242.86	1,188.82	1,080.75	945.65	990.68	792.55	864.60	756.52	828.57	828.57	756.52	864.60	792.55	792.55
		DT	69.35	69.35	72.50	66.20	75.65	69.35	69.35	75.65	66.20	62.14	62.14	59.44	54.04	47.28	49.53	39.63	43.23	37.83	41.43	41.43	37.83	43.23	39.63	39.63
		TT	307.11	307.11	321.07	293.15	335.03	307.11	307.11	335.03	293.15	290.00	290.00	277.39	270.19	236.41	247.67	217.95	237.76	208.04	176.07	176.07	160.76	183.73	168.42	168.42
Trucks –Reach 6	2025																									
		CT	1,386.96	1,386.96	1,450.00	945.65	1,080.75	990.68	594.41	648.45	567.39	207.14	207.14	198.14												
		DT	69.35	69.35	72.50	47.28	54.04	49.53	29.72	32.42	28.37	10.36	10.36	9.91												
		TT	307.11	307.11	321.07	236.41	270.19	247.67	138.70	151.30	132.39	82.86	82.86	79.25												
Trucks –Reach 7	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	49.53	49.53	51.79	47.28	54.04	49.53	49.53	54.04	47.28	51.79	51.79	49.53	54.04	47.28	49.53	49.53	54.04	47.28	51.79	51.79	47.28	54.04	49.53	49.53
		TT	49.53	49.53	51.79	47.28	54.04	49.53	49.53	54.04	47.28	51.79	51.79	49.53	54.04	47.28	49.53	49.53	54.04	47.28	51.79	51.79	47.28	54.04	49.53	49.53
Trucks –Pump Station	2026																									
		CT																								
		DT	49.53	49.53	51.79	47.28	54.04	49.53	49.53	54.04	47.28	51.79	51.79	49.53	54.04	47.28	49.53	49.53	54.04	47.28	51.79	51.79	47.28	54.04	49.53	49.53
		TT	49.53	49.53	51.79	47.28	54.04	49.53	49.53	54.04	47.28	51.79	51.79	49.53	54.04	47.28	49.53	49.53	54.04	47.28	51.79	51.79	47.28	54.04	49.53	49.53
		Monthly	7064	7064	7385	5655	6463	5924	4636	5058	4426	4350	4350	4161	3912	3423	3586	3398	3707	3244	3449	3449	3149	3080	2823	2823
		Annual												66535												40044

West Battery Park Resiliency

GHG Emission Calculations
Truck On-Site Idle Emissions

Monthly kg of CO2e Emitted

Work task	Start Year	Truck Type	2030 Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30	2031 Jan-31	Feb-31	Mar-31	Apr-31	May-31	Jun-31	Jul-31	Aug-31	Sep-31	Oct-31	Nov-31	Dec-31
Trucks –Reach 1	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 2	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 3	2028																									
		CT	648.45	567.39	594.41	207.14	207.14	189.13																		
		DT	43.23	37.83	39.63	10.36	10.36	9.46																		
		TT	194.53	170.22	178.32	31.07	31.07	28.37																		
Trucks –Reach 4	2027																									
		CT	216.15	189.13	198.14	207.14	207.14	189.13																		
		DT	10.81	9.46	9.91	10.36	10.36	9.46																		
		TT	86.46	75.65	79.25	31.07	31.07	28.37																		
Trucks –Reach 5	2025																									
		CT	864.60	756.52	792.55	207.14	207.14	189.13																		
		DT	43.23	37.83	39.63	10.36	10.36	9.46																		
		TT	183.73	160.76	168.42	82.86	82.86	75.65																		
Trucks –Reach 6	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Reach 7	2025																									
		CT																								
		DT																								
		TT																								
Trucks –Drainage Improvements	2025																									
		CT																								
		DT	54.04	47.28	49.53																					
		TT	54.04	47.28	49.53																					
Trucks –Pump Station	2026																									
		CT																								
		DT																								
		TT																								
		Monthly	2399	2099	2199	798	798	728	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Annual												9021												0

West Battery Park Resiliency
GHG Emission Calculations
Equipment Projections

Project Name: West Battery Park Resiliency Alternative 8b
Location: Manhattan, NY
Project Type: _____
Chart: Non-Road Equipment Activity

Work task	Location	Start Date	End Date	Shift	Equipment Type	Equipment Code	Details	Engine type	Size (hp)	Qty	Notes	Daily use	Average Use	Reach
test pits / excavation around utils /misc dem	Reach 1	Feb-26	Oct-28		Air Compressor - 185 CFM			Diesel	49	1.0		20%	58%	1
mini piles	Reach 1	Feb-26	Oct-28		Air Compressor - 1600 CFM			Diesel	540	1.0		75%	58%	1
wall finishes	Reach 1	Jun-27	Mar-30		Sandblasting Machine			Air	150	1.0		50%	58%	1
	Reach 1				Bulldozer D3K2 17k XL Series III			Diesel	104				58%	1
landscape	Reach 1	Jun-27	Mar-30		CAT 304			Diesel	40.2	1.0		75%	58%	1
landscape / small trench	Reach 1	Jun-27	Mar-30		CAT 311			Diesel	70	1.0		5%	58%	1
landscape / small trench	Reach 1	Jun-27	Mar-30		CAT 315			Diesel	139	1.0		10%	58%	1
load/unload	Reach 1	Feb-26	Mar-30		CAT 318			Diesel	169	1.0		50%	58%	1
trench - total duration	Reach 1	Feb-26	Mar-30		CAT 320			Diesel	169	1.0		75%	58%	1
	Reach 1				CAT 330			Diesel	235				58%	1
deep trench - seepage in land	Reach 1	Feb-26	Oct-28		CAT 349			Diesel	432	1.0		40%	58%	1
rubber tire backhoe/loader - all duration	Reach 1	Feb-26	Mar-30		Loader - 1.5 CY 450E-WHEEL			Diesel	124	1.0		75%	58%	1
landscape	Reach 1	Jun-27	Mar-30		CAT 272C (279D Skidsteer)			Diesel	72.9	1.0		75%	58%	1
concrete/landscape	Reach 1	Feb-26	Oct-28		Concrete Buggie - 23 CFT			Diesel	18	1.0		75%	58%	1
seepage / mini piles / jet grout	Reach 1	Feb-26	Oct-28		Concrete Pump Trailer Mounted - 50 YPR			Diesel	400	1.0		50%	58%	1
hardscape	Reach 1	Jun-27	Mar-30		Concrete Mixer - 16 CF			Gas	13	1.0		50%	58%	1
drilled elements / concretecaps/walls	Reach 1	Feb-26	Oct-28		Concrete Pump Boom - 92' Putzmeister			Diesel	395	1.0		20%	58%	1
	Reach 1				Concrete Pump Boom - 118' Putzmeister			Diesel	485				58%	1
	Reach 1				Concrete Pump Boom - 136' Putzmeister			Diesel	485				58%	1
rebar / landscape	Reach 1	Feb-26	Oct-28		Crane 18 Ton - Tadano 150XL			Diesel	172	1.0		50%	58%	1
	Reach 1				Crane 35 Ton - Tadano 350XL			Diesel	235				58%	1
	Reach 1				Crane 100 Ton - Grove TM9100			Diesel	400				58%	1
	Reach 1				Crawler Crane 100T - Liebherr HS855HD			Diesel	603				58%	1
	Reach 1				Crawler Crane 300T - LR1300			Diesel	603				58%	1
Misc. tools	Reach 1	Feb-26	Mar-30		Concrete Saw (65 HP) - 15" Cut Target Pro 65 Road Saw			Diesel	47	1.0		5%	58%	1
mini piles / seepage barrier ifdrilled elemen	Reach 1	Feb-26	Oct-28		Bauer BG28/Comacchio MC15P			Diesel	420	1.0		75%	58%	1
	Reach 1				Bauer BG40			Diesel	580				58%	1
all demo, curbs, walls	Reach 1	Feb-26	Oct-28		CAT320 Hoe Ram w/ 4500FLB Hammer			Diesel	169	1.0		20%	58%	1
	Reach 1				CAT 345 Hoe Ram w/ V56			Diesel	345				58%	1
pavement demo	Reach 1	Feb-26	Oct-28		Jack Hammer/Pavement breaker				0	1.0		10%	58%	1
minor demo, landscape	Reach 1	Jun-27	Mar-30		Bobcat 272C Hoe Ram			Diesel	94	1.0		50%	58%	1
	Reach 1				Diamond wire sawcut			Electric	0				58%	1
landscape	Reach 1	Jun-27	Mar-30		Forklift 4000			Propane	62	1.0		50%	58%	1
landscape	Reach 1	Jun-27	Mar-30		Forklift 8000			Propane	97	1.0		50%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Generator 60 KW			Diesel	102	1.0		100%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Generator 125 KW			Diesel	215	1.0		100%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Loader - WHEEL 950H 4CY Bucket			Diesel	202	1.0		30%	58%	1
walls	Reach 1	Jun-27	Mar-30		Genie S-40 (4x4) w/ Oscillator			Diesel	48	1.0		30%	58%	1
walls	Reach 1	Jun-27	Mar-30		Genie S-60 (4x4)			Diesel	48	2.0		50%	58%	1
	Reach 1				Car Float - 362x42x11				0				58%	1
platform demo & construction	Reach 1	Feb-26	Oct-28		Tug Inland 40'			Diesel	800	0.0		5%	20%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Pressure Washer 5000 PSI			Gas	24	1.0		50%	58%	1
utility, drainage	Reach 1	Feb-26	Oct-28		Arrow Board			Battery/Solar	50/110	10.0		100%	58%	1
utility, work in or close to roadway	Reach 1	Feb-26	Oct-28		Attenuator - Vehicle Mounted			Battery/Solar	115/230	4.0		100%	58%	1
steel sheets, goes with 100 toncrane	Reach 1	Feb-26	Oct-28		Vibratory Hammer 100T			Diesel	350	1.0		50%	58%	1
	Reach 1				CAT 345 w/ ICE 216 w/ Power Pack			Diesel / Diesel	345				58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Pump - 3" Submersible			Electric	8.5	4.0		100%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Pump - 4" Trash 18,000 GPH			Gas	22	1.0		100%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Pump - 6" Trash 33,000 GPH			Diesel	24	1.0		100%	58%	1
mini roller, utilities, back fill, allduration	Reach 1	Feb-26	Mar-30		CAT CB-224D (47")			Diesel	31	1.0		50%	58%	1
roadway, subgrade	Reach 1	Feb-26	Mar-30		Roller IR SD115D (84")			Diesel	174	1.0		50%	58%	1
walk behind all duration	Reach 1	Feb-26	Mar-30		Wacker RT820 (32")			Diesel	18	1.0		25%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Baker Tank 20,000 G				0	1.0		100%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		10 Wheel Dump Truck			Diesel	200-360	4.0		75%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Flat Bed - 30,000 LB			Trailer	0	2.0			58%	1
deliveries landscape / hardscape	Reach 1	Feb-26	Mar-30		Boom Truck 16000 LB Lift			Diesel	405-510	1.0		10%	58%	1
all duration for equipment moves /deliveries	Reach 1	Feb-26	Mar-30		Tractor w/High Flat 20T			Diesel	330-560	1.0		20%	58%	1
all duration for equipment moves	Reach 1	Feb-26	Mar-30		Low Bed w/Tractor 50T			Diesel	330-560	1.0		20%	58%	1
utility, work in or close to roadway	Reach 1	Feb-26	Mar-30		Tractor w/Attenuator			Diesel	300	4.0		75%	58%	1
utility work, excavation,	Reach 1	Feb-26	Mar-30		Vacuum Truck 9CY			Diesel	400-500	1.0		25%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Pick up 4x4			Gas	325	2.0		100%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Pick up w/Arrow Board			Gas	325	1.0		100%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Mechanics Truck 1T			Gas	335	1.0		100%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Mobil Sweeper 4CY			Diesel (Truck)/D	215	1.0		100%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Welders Truck			Diesel	335	1.0		50%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Van			Gas	275-310	1.0		100%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Foreman Pick up			Gas	325	5.0		100%	58%	1
Misc. support equipment	Reach 1	Feb-26	Mar-30		Welders 300 AMP Big 40			Diesel	27	2.0		50%	58%	1
test pits / excavation around utils /misc dem	Reach 2	Feb-26	Feb-28		Air Compressor - 185 CFM			Diesel	49	1.0		20%	58%	2
mini piles	Reach 2	Feb-26	Feb-28		Air Compressor - 1600 CFM			Diesel	540	1.0		75%	58%	2
wall finishes	Reach 2	Feb-27	Feb-29		Sandblasting Machine			Air	150	1.0		50%	58%	2
park drainage / landscape / berm	Reach 2	Feb-27	Feb-29		Bulldozer D3K2 17k XL Series III			Diesel	104	1.0		50%	58%	2
landscape	Reach 2	Feb-27	Feb-29		CAT 304			Diesel	40.2	1.0		75%	58%	2
landscape / small trench	Reach 2	Feb-27	Feb-29		CAT 311			Diesel	70	1.0		5%	58%	2
landscape / small trench	Reach 2	Feb-27	Feb-29		CAT 315			Diesel	139	1.0		10%	58%	2
load/unload	Reach 2	Feb-26	Feb-29		CAT 318			Diesel	169	1.0		50%	58%	2
trench - total duration	Reach 2	Feb-26	Feb-29		CAT 320			Diesel	169	1.0		75%	58%	2
	Reach 2				CAT 330			Diesel	235				58%	2
deep trench - seepage in land	Reach 2	Feb-26	Feb-28		CAT 349			Diesel	432	1.0		40%	58%	2
rubber tire backhoe/loader - allduration	Reach 2	Feb-26	Feb-29		Loader - 1.5 CY 450E-WHEEL			Diesel	124	1.0		75%	58%	2
landscape	Reach 2	Feb-27	Feb-29		CAT 272C (279D Skidsteer)			Diesel	72.9	1.0		75%	58%	2
concrete/landscape	Reach 2	Feb-26	Feb-28		Concrete Buggie - 23 CFT			Diesel	18	1.0		75%	58%	2
seepage / mini piles / jet grout	Reach 2	Feb-26	Feb-28		Concrete Pump Trailer Mounted - 50 YPR			Diesel	400	1.0		50%	58%	2
hardscape	Reach 2	Feb-27	Feb-29		Concrete Mixer - 16 CF			Gas	13	1.0		50%	58%	2
drilled elements / concretecaps/walls	Reach 2	Feb-26	Feb-28		Concrete Pump Boom - 92' Putzmeister			Diesel	395	1.0		20%	58%	2
	Reach 2				Concrete Pump Boom - 118' Putzmeister			Diesel	485				58%	2
platform replacement locations	Reach 2	Feb-26	Feb-28		Concrete Pump Boom - 136' Putzmeister			Diesel	485	1.0		50%	58%	2
rebar / landscape	Reach 2	Feb-26	Feb-28		Crane 18 Ton - Tadano 150XL			Diesel	172	1.0		50%	58%	2
drainage structures	Reach 2	Feb-26	Feb-29		Crane 35 Ton - Tadano 350XL			Diesel	235	1.0		75%	58%	2
drilled shaft cages / demoplatforms / set pre	Reach 2	Feb-26	Feb-28		Crane 100 Ton - Grove TM9100			Diesel	400	1.0		75%	58%	2
drilled shaft cages / demoplatforms / set pre	Reach 2	Feb-26	Feb-28		Crawler Crane 100T - Liebherr HS855HD			Diesel	603	1.0		50%	58%	2
drilled shaft cages / demoplatforms / set pre	Reach 2	Feb-26	Feb-28		Crawler Crane 300T - LR1300			Diesel	603	1.0		50%	58%	2
Misc. tools	Reach 2	Feb-26	Feb-29		Concrete Saw (65 HP) - 15" Cut Target Pro 65 Road Saw			Diesel	47	1.0		5%	58%	2
mini piles / seepage barrier ifdrilled elemen	Reach 2	Feb-26	Feb-28		Bauer BG28/Comacchio MC15P			Diesel	420	1.0		75%	58%	2
drilled shafts	Reach 2	Feb-26	Feb-28		Bauer BG40			Diesel	580	2.0		75%	58%	2
all demo, curbs, walls	Reach 2	Feb-26	Feb-28		CAT320 Hoe Ram w/ 4500FLB Hammer			Diesel	169	1.0		20%	58%	2
platform demo	Reach 2	Feb-26	Feb-28		CAT 345 Hoe Ram w/ V56			Diesel	345	1.0		33%	58%	2
pavement demo	Reach 2	Feb-26	Feb-28		Jack Hammer/Pavement breaker				0	1.0		10%	58%	2
minor demo, landscape	Reach 2	Feb-27	Feb-29		Bobcat 272C Hoe Ram			Diesel	94	1.0		50%	58%	2
goes with 125KW/215 HPgenerator, demo pla	Reach 2	Feb-26	Feb-28		Diamond wire sawcut			Electric	0	1.0		50%	58%	2
landscape	Reach 2	Feb-27	Feb-29		Forklift 4000			Propane	62	1.0		50%	58%	2
landscape	Reach 2	Feb-27	Feb-29		Forklift 8000			Propane	97	1.0		50%	58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Generator 60 KW			Diesel	102	1.0		100%	58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Generator 125 KW			Diesel	215	1.0		100%	58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Loader - WHEEL 950H 4CY Bucket			Diesel	202	1.0		30%	58%	2
walls	Reach 2	Feb-27	Feb-29		Genie S-40 (4x4) w/ Oscillator			Diesel	48	1.0		30%	58%	2
walls	Reach 2	Feb-27	Feb-29		Genie S-60 (4x4)			Diesel	48	2.0		50%	58%	2
platform replacement locations	Reach 2	Feb-26	Feb-28		Car Float - 362x42x11				0	2.0		50%	58%	2
platform demo & construction	Reach 2	Feb-26	Feb-28		Tug Inland 40'			Diesel	800	1.0		5%	20%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Pressure Washer 5000 PSI			Gas	24	1.0		50%	58%	2
	Reach 2				Arrow Board			Battery/Solar	50/110				58%	2
	Reach 2				Attenuator - Vehicle Mounted			Battery/Solar	115/230				58%	2
steel sheets, goes with 100 toncrane	Reach 2	Feb-26	Feb-28		Vibratory Hammer 100T			Diesel	350	1.0		50%	58%	2
	Reach 2				CAT 345 w/ ICE 216 w/ Power Pack			Diesel / Diesel	345				58%	2

West Battery Park Resiliency

GHG Emission Calculations
Equipment Projections

Project Name: West Battery Park Resiliency Alternative 8b
Location: Manhattan, NY
Project Type:
Chart: Non-Road Equipment Activity

Work task	Location	Start Date	End Date	Shift	Equipment Type	Equipment Code	Details	Engine type	Size (hp)	Qty	Notes	Daily use	Average Use	Reach
Misc. support equipment	Reach 2	Feb-26	Feb-29		Pump - 3" Submersible			Electric	8.5	4.0		100%	58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Pump - 4" Trash 18,000 GPH			Gas	22	1.0		100%	58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Pump - 6" Trash 33,000 GPH			Diesel	24	1.0		100%	58%	2
mini roller, utilities, back fill, allduration	Reach 2	Feb-26	Feb-29		CAT CB-224D (47")			Diesel	31	1.0		50%	58%	2
roadway, subgrade	Reach 2	Feb-26	Feb-29		Roller IR SD115D (84")			Diesel	174	1.0		50%	58%	2
walk behind all duration	Reach 2	Feb-26	Feb-29		Wacker RT820 (32")			Diesel	18	1.0		25%	58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Baker Tank 20,000 G				0	1.0		100%	58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		10 Wheel Dump Truck			Diesel	200-360	4.0		75%	58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Flat Bed - 30,000 LB			Trailer	0	2.0		50%	58%	2
deliveries landscape / hardscape	Reach 2	Feb-26	Feb-29		Boom Truck 16000 LB Lift			Diesel	405-510	1.0		10%	58%	2
all duration for equipment moves /deliveries	Reach 2	Feb-26	Feb-29		Tractor w/High Flat 20T			Diesel	330-560	1.0		20%	58%	2
all duration for equipment moves	Reach 2	Feb-26	Feb-29		Low Bed w/Tractor 50T			Diesel	330-560	1.0		20%	58%	2
	Reach 2				Tractor w/Attenuator			Diesel	300				58%	2
utility work, excavation,	Reach 2	Feb-26	Feb-29		Vacuum Truck 9CY			Diesel	400-500	1.0		25%	58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Pick up 4x4			Gas	325	2.0		100%	58%	2
	Reach 2				Pick up w/Arrow Board			Gas	325				58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Mechanics Truck 1T			Gas	335	1.0		100%	58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Mobil Sweeper 4CY			Diesel (Truck)/D	215	1.0		100%	58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Welders Truck			Diesel	335	1.0		50%	58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Van			Gas	275-310	1.0		100%	58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Foreman Pick up			Gas	325	5.0		100%	58%	2
Misc. support equipment	Reach 2	Feb-26	Feb-29		Welders 300 AMP Big 40			Diesel	27	2.0		50%	58%	2
test pits / excavation around utils /misc dem	Reach 3	Mar-28	Sep-29		Air Compressor - 185 CFM			Diesel	49	1.0		20%	58%	3
mini piles	Reach 3	Mar-28	Sep-29		Air Compressor - 1600 CFM			Diesel	540	1.0		75%	58%	3
wall finishes	Reach 3	Dec-28	Jul-30		Sandblasting Machine			Air	150	1.0		50%	58%	3
park drainage / landscape / berm	Reach 3	Dec-28	Jul-30		Bulldozer D3K2 17k XL Series III			Diesel	104	1.0		50%	58%	3
landscape	Reach 3	Dec-28	Jul-30		CAT 304			Diesel	40.2	1.0		75%	58%	3
landscape / small trench	Reach 3	Dec-28	Jul-30		CAT 311			Diesel	70	1.0		5%	58%	3
landscape / small trench	Reach 3	Dec-28	Jul-30		CAT 315			Diesel	139	1.0		10%	58%	3
load/unload	Reach 3	Mar-28	Jul-30		CAT 318			Diesel	169	1.0		50%	58%	3
trench - total duration	Reach 3	Mar-28	Jul-30		CAT 320			Diesel	169	1.0		75%	58%	3
	Reach 3				CAT 330			Diesel	235				58%	3
deep trench - seepage in land	Reach 3	Mar-28	Sep-29		CAT 349			Diesel	432	1.0		40%	58%	3
rubber tire backhoe/loader - allduration	Reach 3	Mar-28	Jul-30		Loader - 1.5 CY 450E-WHEEL			Diesel	124	1.0		75%	58%	3
landscape	Reach 3	Dec-28	Jul-30		CAT 272C (279D Skidsteer)			Diesel	72.9	1.0		75%	58%	3
concrete/landscape	Reach 3	Mar-28	Sep-29		Concrete Buggie - 23 CFT			Diesel	18	1.0		75%	58%	3
seepage / mini piles / jet grout	Reach 3	Mar-28	Sep-29		Concrete Pump Trailer Mounted - 50 YPR			Diesel	400	1.0		50%	58%	3
hardscape	Reach 3	Dec-28	Jul-30		Concrete Mixer - 16 CF			Gas	13	1.0		50%	58%	3
drilled elements / concretecaps/walls	Reach 3	Mar-28	Sep-29		Concrete Pump Boom - 92' Putzmeister			Diesel	395	1.0		20%	58%	3
	Reach 3				Concrete Pump Boom - 118' Putzmeister			Diesel	485				58%	3
	Reach 3				Concrete Pump Boom - 136' Putzmeister			Diesel	485				58%	3
rebar / landscape	Reach 3	Mar-28	Sep-29		Crane 18 Ton - Tadano 150XL			Diesel	172	1.0		50%	58%	3
drainage structures	Reach 3	Mar-28	Jul-30		Crane 35 Ton - Tadano 350XL			Diesel	235	1.0		75%	58%	3
	Reach 3				Crane 100 Ton - Grove TM9100			Diesel	400				58%	3
	Reach 3				Crawler Crane 100T - Liebherr HS855HD			Diesel	603				58%	3
	Reach 3				Crawler Crane 300T - LR1300			Diesel	603				58%	3
Misc. tools	Reach 3	Mar-28	Jul-30		Concrete Saw (65 HP) - 15" Cut Target Pro 6S Road Saw			Diesel	47	1.0		5%	58%	3
mini piles / seepage barrier ifdrilled element	Reach 3	Mar-28	Sep-29		Bauer BG28/Comacchio MC15P			Diesel	420	1.0		75%	58%	3
	Reach 3				Bauer BG40			Diesel	580				58%	3
all demo, curbs, walls	Reach 3	Mar-28	Sep-29		CAT320 Hoe Ram w/ 4500FLB Hammer			Diesel	169	1.0		20%	58%	3
	Reach 3				CAT 345 Hoe Ram w/ V56			Diesel	345				58%	3
pavement demo	Reach 3	Mar-28	Sep-29		Jack Hammer/Pavement breaker				0	1.0		10%	58%	3
minor demo, landscape	Reach 3	Dec-28	Jul-30		Bobcat 272C Hoe Ram			Diesel	94	1.0		50%	58%	3
goes with 125KW/215 HPgenerator, demo pla	Reach 3	Mar-28	Sep-29		Diamond wire sawcut			Electric	0	1.0		50%	58%	3
landscape	Reach 3	Dec-28	Jul-30		Forklift 4000			Propane	62	1.0		50%	58%	3
landscape	Reach 3	Dec-28	Jul-30		Forklift 8000			Propane	97	1.0		50%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Generator 60 KW			Diesel	102	1.0		100%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Generator 125 KW			Diesel	215	1.0		100%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Loader - WHEEL 950H 4CY Bucket			Diesel	202	1.0		30%	58%	3
walls	Reach 3	Dec-28	Jul-30		Genie S-40 (4x4) w/ Oscillator			Diesel	48	1.0		30%	58%	3
walls	Reach 3	Dec-28	Jul-30		Genie S-60 (4x4)			Diesel	48	2.0		50%	58%	3
	Reach 3				Car Float - 362x42x11				0				58%	3
	Reach 3				Tug Inland 40'			Diesel	800					3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Pressure Washer 5000 PSI			Gas	24	1.0		50%	58%	3
utility, drainage	Reach 3	Mar-28	Sep-29		Arrow Board			Battery/Solar	50/110	2.0		50%	58%	3
	Reach 3				Attenuator - Vehicle Mounted			Battery/Solar	115/230				58%	3
steel sheets, goes with 100 toncrane	Reach 3	Mar-28	Sep-29		Vibratory Hammer 100T			Diesel	350	1.0		50%	58%	3
steel sheeting	Reach 3	Mar-28	Sep-29		CAT 345 w/ ICE 216 w/ Power Pack			Diesel / Diesel	345	1.0		50%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Pump - 3" Submersible			Electric	8.5	4.0		100%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Pump - 4" Trash 18,000 GPH			Gas	22	1.0		100%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Pump - 6" Trash 33,000 GPH			Diesel	24	1.0		100%	58%	3
mini roller, utilities, back fill, allduration	Reach 3	Mar-28	Jul-30		CAT CB-224D (47")			Diesel	31	1.0		50%	58%	3
roadway, subgrade	Reach 3	Mar-28	Jul-30		Roller IR SD115D (84")			Diesel	174	1.0		50%	58%	3
walk behind all duration	Reach 3	Mar-28	Jul-30		Wacker RT820 (32")			Diesel	18	1.0		25%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Baker Tank 20,000 G				0	1.0		100%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		10 Wheel Dump Truck			Diesel	200-360	4.0		75%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Flat Bed - 30,000 LB			Trailer	0	2.0		50%	58%	3
deliveries landscape / hardscape	Reach 3	Mar-28	Jul-30		Boom Truck 16000 LB Lift			Diesel	405-510	1.0		10%	58%	3
all duration for equipment moves /deliveries	Reach 3	Mar-28	Jul-30		Tractor w/High Flat 20T			Diesel	330-560	1.0		20%	58%	3
all duration for equipment moves	Reach 3	Mar-28	Jul-30		Low Bed w/Tractor 50T			Diesel	330-560	1.0		20%	58%	3
	Reach 3				Tractor w/Attenuator			Diesel	300				58%	3
utility work, excavation,	Reach 3	Mar-28	Jul-30		Vacuum Truck 9CY			Diesel	400-500	1.0		25%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Pick up 4x4			Gas	325	2.0		100%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Pick up w/Arrow Board			Gas	325	1.0		50%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Mechanics Truck 1T			Gas	335	1.0		100%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Mobil Sweeper 4CY			Diesel (Truck)/D	215	1.0		100%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Welders Truck			Diesel	335	1.0		50%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Van			Gas	275-310	1.0		100%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Foreman Pick up			Gas	325	5.0		100%	58%	3
Misc. support equipment	Reach 3	Mar-28	Jul-30		Welders 300 AMP Big 40			Diesel	27	2.0		50%	58%	3
test pits / excavation around utils /misc dem	Reach 4	Nov-27	Jul-29		Air Compressor - 185 CFM			Diesel	49	1.0		20%	58%	4
mini piles	Reach 4	Nov-27	Jul-29		Air Compressor - 1600 CFM			Diesel	540	1.0		75%	58%	4
wall finishes	Reach 4	Sep-28	Jun-30		Sandblasting Machine			Air	150	1.0		50%	58%	4
park drainage / landscape / berm	Reach 4	Sep-28	Jun-30		Bulldozer D3K2 17k XL Series III			Diesel	104	1.0		50%	58%	4
landscape	Reach 4	Sep-28	Jun-30		CAT 304			Diesel	40.2	1.0		75%	58%	4
landscape / small trench	Reach 4	Sep-28	Jun-30		CAT 311			Diesel	70	1.0		5%	58%	4
landscape / small trench	Reach 4	Sep-28	Jun-30		CAT 315			Diesel	139	1.0		10%	58%	4
load/unload	Reach 4	Nov-27	Jun-30		CAT 318			Diesel	169	1.0		50%	58%	4
trench - total duration	Reach 4	Nov-27	Jun-30		CAT 320			Diesel	169	1.0		75%	58%	4
	Reach 4				CAT 330			Diesel	235				58%	4
deep trench - seepage in land	Reach 4	Nov-27	Jul-29		CAT 349			Diesel	432	1.0		40%	58%	4
rubber tire backhoe/loader - allduration	Reach 4	Nov-27	Jun-30		Loader - 1.5 CY 450E-WHEEL			Diesel	124	1.0		75%	58%	4
landscape	Reach 4	Sep-28	Jun-30		CAT 272C (279D Skidsteer)			Diesel	72.9	1.0		75%	58%	4
concrete/landscape	Reach 4	Nov-27	Jul-29		Concrete Buggie - 23 CFT			Diesel	18	1.0		75%	58%	4
seepage / mini piles / jet grout	Reach 4	Nov-27	Jul-29		Concrete Pump Trailer Mounted - 50 YPR			Diesel	400	1.0		50%	58%	4
hardscape	Reach 4	Sep-28	Jun-30		Concrete Mixer - 16 CF			Gas	13	1.0		50%	58%	4
drilled elements / concretecaps/walls	Reach 4	Nov-27	Jul-29		Concrete Pump Boom - 92' Putzmeister			Diesel	395	1.0		20%	58%	4
platform replacement locations	Reach 4	Nov-27	Jul-29		Concrete Pump Boom - 118' Putzmeister			Diesel	485	1.0		20%	58%	4
	Reach 4				Concrete Pump Boom - 136' Putzmeister			Diesel	485				58%	4
rebar / landscape	Reach 4	Nov-27	Jul-29		Crane 18 Ton - Tadano 150XL			Diesel	172	1.0		50%	58%	4
drainage structures	Reach 4	Nov-27	Jun-30		Crane 35 Ton - Tadano 350XL			Diesel	235	1.0		75%	58%	4
drilled shaft cages / demo platforms / set pre	Reach 4	Nov-27	Jul-29		Crane 100 Ton - Grove TM9100			Diesel	400	1.0		75%	58%	4
drilled shaft cages / demoplatforms / set pre	Reach 4	Nov-27	Jul-29		Crawler Crane 100T - Liebherr HS855HD			Diesel	603	1.0		50%	58%	4
drilled shaft cages / demoplatforms / set pre	Reach 4	Nov-27	Jul-29		Crawler Crane 300T - LR1300			Diesel	603	1.0		50%	58%	4

West Battery Park Resiliency

GHG Emission Calculations
Equipment Projections

Project Name: West Battery Park Resiliency Alternative 8b
Location: Manhattan, NY
Project Type: _____
Chart: Non-Road Equipment Activity

Work task	Location	Start Date	End Date	Shift	Equipment Type	Equipment Code	Details	Engine type	Size (hp)	Qty	Notes	Daily use	Average Use	Reach
Misc. tools	Reach 4	Nov-27	Jun-30		Concrete Saw (65 HP) - 15" Cut Target Pro 65 Road Saw			Diesel	47	1.0		5%	58%	4
mini piles / seepage barrier ifdrilled element	Reach 4	Nov-27	Jul-29		Bauer BG28/Comacchio MC15P			Diesel	420	1.0		75%	58%	4
drilled shafts	Reach 4	Nov-27	Jul-29		Bauer BG40			Diesel	580	2.0		75%	58%	4
all demo, curbs, walls	Reach 4	Nov-27	Jul-29		CAT320 Hoe Ram w/ 4500FLB Hammer			Diesel	169	1.0		20%	58%	4
platform demo	Reach 4	Feb-26	Jul-29		CAT 345 Hoe Ram w/ V56			Diesel	345	1.0		33%	58%	4
pavement demo	Reach 4	Nov-27	Jul-29		Jack Hammer/Pavement breaker				0	1.0		10%	58%	4
minor demo, landscape	Reach 4	Sep-28	Jun-30		Bobcat 272C Hoe Ram			Diesel	94	1.0		50%	58%	4
goes with 125KW/215 HPgenerator, demo platform	Reach 4	Nov-27	Jul-29		Diamond wire sawcut			Electric	0	1.0		50%	58%	4
landscape	Reach 4	Sep-28	Jun-30		Forklift 4000			Propane	62	1.0		50%	58%	4
landscape	Reach 4	Sep-28	Jun-30		Forklift 8000			Propane	97	1.0		50%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Generator 60 KW			Diesel	102	1.0		100%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Generator 125 KW			Diesel	215	1.0		100%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Loader - WHEEL 950H 4CY Bucket			Diesel	202	1.0		30%	58%	4
walls	Reach 4	Sep-28	Jun-30		Genie S-40 (4x4) w/ Oscillator			Diesel	48	1.0		30%	58%	4
walls	Reach 4	Sep-28	Jun-30		Genie S-60 (4x4)			Diesel	48	2.0		50%	58%	4
platform replacement locations	Reach 4	Nov-27	Jul-29		Car Float - 362x42x11				0	2.0		50%	58%	4
platform demo & construction	Reach 4	Nov-27	Jul-29		Tug Inland 40'			Diesel	800	1.0		5%	20%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Pressure Washer 5000 PSI			Gas	24	1.0		50%	58%	4
utility, drainage	Reach 4	Nov-27	Jul-29		Arrow Board			Battery/Solar	50/110	2.0		50%	58%	4
	Reach 4				Attenuator - Vehicle Mounted			Battery/Solar	115/230				58%	4
steel sheets, goes with 100 toncrane	Reach 4	Nov-27	Jul-29		Vibratory Hammer 100T			Diesel	350	1.0		50%	58%	4
	Reach 4				CAT 345 w/ ICE 216 w/ Power Pack			Diesel / Diesel	345				58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Pump - 3" Submersible			Electric	8.5	4.0		100%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Pump - 4" Trash 18,000 GPH			Gas	22	1.0		100%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Pump - 6" Trash 33,000 GPH			Diesel	24	1.0		100%	58%	4
mini roller, utilities, back fill, allduration	Reach 4	Nov-27	Jun-30		CAT CB-224D (47")			Diesel	31	1.0		50%	58%	4
roadway, subgrade	Reach 4	Nov-27	Jun-30		Roller IR SD115D (84")			Diesel	174	1.0		50%	58%	4
walk behind all duration	Reach 4	Nov-27	Jun-30		Wacker RT820 (32")			Diesel	18	1.0		25%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Baker Tank 20,000 G				0	1.0		100%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		10 Wheel Dump Truck			Diesel	200-360	4.0		75%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Flat Bed - 30,000 LB			Trailer	0	2.0		50%	58%	4
deliveries landscape / hardscape	Reach 4	Nov-27	Jun-30		Boom Truck 16000 LB Lift			Diesel	405-510	1.0		10%	58%	4
all duration for equipment moves /deliveries	Reach 4	Nov-27	Jun-30		Tractor w/High Flat 20T			Diesel	330-560	1.0		20%	58%	4
all duration for equipment moves	Reach 4	Nov-27	Jun-30		Low Bed w/Tractor 50T			Diesel	330-560	1.0		20%	58%	4
	Reach 4				Tractor w/Attenuator			Diesel	300				58%	4
utility work, excavation,	Reach 4	Nov-27	Jun-30		Vacuum Truck 9CY			Diesel	400-500	1.0		25%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Pick up 4x4			Gas	325	2.0		100%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Pick up w/Arrow Board			Gas	325	1.0		100%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Mechanics Truck 1T			Gas	335	1.0		100%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Mobil Sweeper 4CY			Diesel (Truck)/D	215	1.0		100%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Welders Truck			Diesel	335	1.0		50%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Van			Gas	275-310	1.0		100%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Foreman Pick up			Gas	325	5.0		100%	58%	4
Misc. support equipment	Reach 4	Nov-27	Jun-30		Welders 300 AMP Big 40			Diesel	27	2.0		50%	58%	4
test pits / excavation around utils /misc dem	Reach 5	Feb-26	Feb-29		Air Compressor - 185 CFM			Diesel	49	1.0		20%	58%	5
mini piles	Reach 5	Feb-26	Feb-29		Air Compressor - 1600 CFM			Diesel	540	1.0		75%	58%	5
wall finishes	Reach 5	Aug-27	Sep-30		Sandblasting Machine			Air	150	1.0		50%	58%	5
park drainage / landscape / berm	Reach 5	Aug-27	Sep-30		Bulldozer D3K2 17k XL Series III			Diesel	104	1.0		50%	58%	5
landscape	Reach 5	Aug-27	Sep-30		CAT 304			Diesel	40.2	1.0		75%	58%	5
landscape / small trench	Reach 5	Aug-27	Sep-30		CAT 311			Diesel	70	1.0		5%	58%	5
landscape / small trench	Reach 5	Aug-27	Sep-30		CAT 315			Diesel	139	1.0		10%	58%	5
load/unload	Reach 5	Feb-26	Sep-30		CAT 318			Diesel	169	1.0		50%	58%	5
trench - total duration	Reach 5	Feb-26	Sep-30		CAT 320			Diesel	169	1.0		75%	58%	5
	Reach 5				CAT 330			Diesel	235				58%	5
deep trench - seepage in land	Reach 5	Feb-26	Feb-29		CAT 349			Diesel	432	1.0		40%	58%	5
rubber tire backhoe/loader - allduration	Reach 5	Feb-26	Sep-30		Loader - 1.5 CY 450E-WHEEL			Diesel	124	1.0		75%	58%	5
landscape	Reach 5	Aug-27	Sep-30		CAT 272C (279D Skidsteer)			Diesel	72.9	1.0		75%	58%	5
concrete/landscape	Reach 5	Feb-26	Feb-29		Concrete Buggie - 23 CFT			Diesel	18	1.0		75%	58%	5
seepage / mini piles / jet grout	Reach 5	Feb-26	Feb-29		Concrete Pump Trailer Mounted - 50 YPR			Diesel	400	1.0		50%	58%	5
hardscape	Reach 5	Aug-27	Sep-30		Concrete Mixer - 16 CF			Gas	13	1.0		50%	58%	5
drilled elements / concretecaps/walls	Reach 5	Feb-26	Feb-29		Concrete Pump Boom - 92' Putzmeister			Diesel	395	1.0		20%	58%	5
platform replacement locations	Reach 5	Feb-26	Feb-29		Concrete Pump Boom - 118' Putzmeister			Diesel	485	1.0		20%	58%	5
	Reach 5				Concrete Pump Boom - 136' Putzmeister			Diesel	485				58%	5
rebar / landscape	Reach 5	Feb-26	Feb-29		Crane 18 Ton - Tadano 150XL			Diesel	172	1.0		50%	58%	5
drainage structures	Reach 5	Feb-26	Sep-30		Crane 35 Ton - Tadano 350XL			Diesel	235	1.0		75%	58%	5
drilled shaft cages / demoplatforms / set precast/vibratory sheeting	Reach 5	Feb-26	Feb-29		Crane 100 Ton - Grove TM9100			Diesel	400	1.0		75%	58%	5
drilled shaft cages / demoplatforms / set precast/vibratory sheeting	Reach 5	Feb-26	Feb-29		Crawler Crane 100T - Liebherr HS855HD			Diesel	603	1.0		50%	58%	5
drilled shaft cages / demoplatforms / set precast	Reach 5	Feb-26	Feb-29		Crawler Crane 300T - LR1300			Diesel	603	1.0		50%	58%	5
Misc. tools	Reach 5	Feb-26	Sep-30		Concrete Saw (65 HP) - 15" Cut Target Pro 65 Road Saw			Diesel	47	1.0		5%	58%	5
mini piles / seepage barrier ifdrilled element	Reach 5	Feb-26	Feb-29		Bauer BG28/Comacchio MC15P			Diesel	420	1.0		75%	58%	5
drilled shafts	Reach 5	Feb-26	Feb-29		Bauer BG40			Diesel	580	2.0		75%	58%	5
all demo, curbs, walls	Reach 5	Feb-26	Feb-29		CAT320 Hoe Ram w/ 4500FLB Hammer			Diesel	169	1.0		20%	58%	5
platform demo	Reach 5	Feb-26	Feb-29		CAT 345 Hoe Ram w/ V56			Diesel	345	1.0		33%	58%	5
pavement demo	Reach 5	Feb-26	Feb-29		Jack Hammer/Pavement breaker				0	1.0		10%	58%	5
minor demo, landscape	Reach 5	Aug-27	Sep-30		Bobcat 272C Hoe Ram			Diesel	94	1.0		50%	58%	5
goes with 125KW/215 HPgenerator, demo platform	Reach 5	Feb-26	Feb-29		Diamond wire sawcut			Electric	0	1.0		50%	58%	5
landscape	Reach 5	Aug-27	Sep-30		Forklift 4000			Propane	62	1.0		50%	58%	5
landscape	Reach 5	Aug-27	Sep-30		Forklift 8000			Propane	97	1.0		50%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Generator 60 KW			Diesel	102	1.0		100%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Generator 125 KW			Diesel	215	1.0		100%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Loader - WHEEL 950H 4CY Bucket			Diesel	202	1.0		30%	58%	5
walls	Reach 5	Aug-27	Sep-30		Genie S-40 (4x4) w/ Oscillator			Diesel	48	1.0		30%	58%	5
walls	Reach 5	Aug-27	Sep-30		Genie S-60 (4x4)			Diesel	48	2.0		50%	58%	5
platform replacement locations	Reach 5	Feb-26	Feb-29		Car Float - 362x42x11				0	2.0		50%	58%	5
platform demo & construction	Reach 5	Feb-26	Feb-29		Tug Inland 40'			Diesel	800	1.0		5%	20%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Pressure Washer 5000 PSI			Gas	24	1.0		50%	58%	5
utility, drainage	Reach 5	Feb-26	Feb-29		Arrow Board			Battery/Solar	50/110	2.0		50%	58%	5
	Reach 5				Attenuator - Vehicle Mounted			Battery/Solar	115/230				58%	5
steel sheets, goes with 100 toncrane	Reach 5	Feb-26	Feb-29		Vibratory Hammer 100T			Diesel	350	1.0		50%	58%	5
	Reach 5				CAT 345 w/ ICE 216 w/ Power Pack			Diesel / Diesel	345				58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Pump - 3" Submersible			Electric	8.5	4.0		100%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Pump - 4" Trash 18,000 GPH			Gas	22	1.0		100%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Pump - 6" Trash 33,000 GPH			Diesel	24	1.0		100%	58%	5
mini roller, utilities, back fill, allduration	Reach 5	Feb-26	Sep-30		CAT CB-224D (47")			Diesel	31	1.0		50%	58%	5
roadway, subgrade	Reach 5	Feb-26	Sep-30		Roller IR SD115D (84")			Diesel	174	1.0		50%	58%	5
walk behind all duration	Reach 5	Feb-26	Sep-30		Wacker RT820 (32")			Diesel	18	1.0		25%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Baker Tank 20,000 G				0	1.0		100%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		10 Wheel Dump Truck			Diesel	200-360	4.0		75%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Flat Bed - 30,000 LB			Trailer	0	2.0		50%	58%	5
deliveries landscape / hardscape	Reach 5	Feb-26	Sep-30		Boom Truck 16000 LB Lift			Diesel	405-510	1.0		10%	58%	5
all duration for equipment moves /deliveries	Reach 5	Feb-26	Sep-30		Tractor w/High Flat 20T			Diesel	330-560	1.0		20%	58%	5
all duration for equipment moves	Reach 5	Feb-26	Sep-30		Low Bed w/Tractor 50T			Diesel	330-560	1.0		20%	58%	5
	Reach 5				Tractor w/Attenuator			Diesel	300				58%	5
utility work, excavation,	Reach 5	Feb-26	Sep-30		Vacuum Truck 9CY			Diesel	400-500	1.0		25%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Pick up 4x4			Gas	325	2.0		100%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Pick up w/Arrow Board			Gas	325	1.0		50%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Mechanics Truck 1T			Gas	335	1.0		100%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Mobil Sweeper 4CY			Diesel (Truck)/D	215	1.0		100%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Welders Truck			Diesel	335	1.0		50%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Van			Gas	275-310	1.0		100%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Foreman Pick up			Gas	325	5.0		100%	58%	5
Misc. support equipment	Reach 5	Feb-26	Sep-30		Welders 300 AMP Big 40			Diesel	27	2.0		50%	58%	5
test pits / excavation around utils /misc dem	Reach 6	Jan-27	May-29		Air Compressor - 185 CFM			Diesel	49	1.0		20%	58%	6
mini piles	Reach 6	Jan-27	May-29		Air Compressor - 1600 CFM			Diesel	540	1.0		75%	58%	6

West Battery Park Resiliency

GHG Emission Calculations
Equipment Projections

Project Name: West Battery Park Resiliency Alternative 8b
Location: Manhattan, NY
Project Type: _____
Chart: Non-Road Equipment Activity

Work task	Location	Start Date	End Date	Shift	Equipment Type	Equipment Code	Details	Engine type	Size (hp)	Qty	Notes	Daily use	Average Use	Reach
wall finishes	Reach 6	Mar-28	Jul-30		Sandblasting Machine			Air	150	1.0		50%	58%	6
park drainage / landscape / berm	Reach 6	Mar-28	Jul-30		Bulldozer D3K2 17k XL Series III			Diesel	104	1.0		50%	58%	6
landscape	Reach 6	Mar-28	Jul-30		CAT 304			Diesel	40.2	1.0		75%	58%	6
landscape / small trench	Reach 6	Mar-28	Jul-30		CAT 311			Diesel	70	1.0		5%	58%	6
landscape / small trench	Reach 6	Mar-28	Jul-30		CAT 315			Diesel	139	1.0		10%	58%	6
load/unload	Reach 6	Jan-27	Jul-30		CAT 318			Diesel	169	1.0		50%	58%	6
trench - total duration	Reach 6	Jan-27	Jul-30		CAT 320			Diesel	169	1.0		75%	58%	6
	Reach 6				CAT 330			Diesel	235				58%	6
deep trench - seepage in land	Reach 6	Jan-27	May-29		CAT 349			Diesel	432	1.0		40%	58%	6
rubber tire backhoe/loader - allduration	Reach 6	Jan-27	Jul-30		Loader - 1.5 CY 450E-WHEEL			Diesel	124	1.0		75%	58%	6
landscape	Reach 6	Mar-28	Jul-30		CAT 272C (279D Skidsteer)			Diesel	72.9	1.0		75%	58%	6
concrete/landscape	Reach 6	Jan-27	May-29		Concrete Buggie - 23 CFT			Diesel	18	1.0		75%	58%	6
seepage / mini piles / jet grout	Reach 6	Jan-27	May-29		Concrete Pump Trailer Mounted - 50 YPR			Diesel	400	1.0		50%	58%	6
hardscape	Reach 6	Mar-28	Jul-30		Concrete Mixer - 16 CF			Gas	13	1.0		50%	58%	6
drilled elements / concretecaps/walls	Reach 6	Jan-27	May-29		Concrete Pump Boom - 92' Putzmeister			Diesel	395	1.0		20%	58%	6
platform replacement locations	Reach 6	Jan-27	May-29		Concrete Pump Boom - 118' Putzmeister			Diesel	485	1.0		20%	58%	6
	Reach 6				Concrete Pump Boom - 136' Putzmeister			Diesel	485				58%	6
rebar / landscape	Reach 6	Jan-27	May-29		Crane 18 Ton - Tadano 150XL			Diesel	172	1.0		50%	58%	6
drainage structures	Reach 6	Jan-27	Jul-30		Crane 35 Ton - Tadano 350XL			Diesel	235	1.0		75%	58%	6
drilled shaft cages / demoplatforms / set pre	Reach 6	Jan-27	May-29		Crane 100 Ton - Grove TM9100			Diesel	400	1.0		75%	58%	6
drilled shaft cages / demoplatforms / set pre	Reach 6	Jan-27	May-29		Crawler Crane 100T - Liebherr HS855HD			Diesel	603	1.0		50%	58%	6
drilled shaft cages / demoplatforms / set pre	Reach 6	Jan-27	May-29		Crawler Crane 300T - LR1300			Diesel	603	1.0		50%	58%	6
Misc. tools	Reach 6	Jan-27	Jul-30		Concrete Saw (65 HP) - 15" Cut Target Pro 65 Road Saw			Diesel	47	1.0		5%	58%	6
mini piles / seepage barrier if drilled elemen	Reach 6	Jan-27	May-29		Bauer BG28/Comacchio MC15P			Diesel	420	1.0		75%	58%	6
drilled shafts	Reach 6	Jan-27	May-29		Bauer BG40			Diesel	580	2.0		75%	58%	6
all demo, curbs, walls	Reach 6	Jan-27	May-29		CAT320 Hoe Ram w/ 4500FLB Hammer			Diesel	169	1.0		20%	58%	6
platform demo	Reach 6	Feb-26	May-29		CAT 345 Hoe Ram w/ V56			Diesel	345	1.0		33%	58%	6
pavement demo	Reach 6	Jan-27	May-29		Jack Hammer/Pavement breaker				0	1.0		10%	58%	6
minor demo, landscape	Reach 6	Mar-28	Jul-30		Bobcat 272C Hoe Ram			Diesel	94	1.0		50%	58%	6
goes with 125KW/215 HPgenerator, demo pl	Reach 6	Jan-27	May-29		Diamond wire sawcut			Electric	0	1.0		50%	58%	6
landscape	Reach 6	Mar-28	Jul-30		Forklift 4000			Propane	62	1.0		50%	58%	6
landscape	Reach 6	Mar-28	Jul-30		Forklift 8000			Propane	97	1.0		50%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Generator 60 KW			Diesel	102	1.0		100%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Generator 125 KW			Diesel	215	1.0		100%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Loader - WHEEL 950H 4CY Bucket			Diesel	202	1.0		30%	58%	6
walls	Reach 6	Mar-28	Jul-30		Genie S-40 (4x4) w/ Oscillator			Diesel	48	1.0		30%	58%	6
walls	Reach 6	Mar-28	Jul-30		Genie S-60 (4x4)			Diesel	48	2.0		50%	58%	6
platform replacement locations	Reach 6	Jan-27	May-29		Car Float - 362x42x11				0	2.0		50%	58%	6
platform demo & construction	Reach 6	Jan-27	May-29		Tug Inland 40'			Diesel	800	1.0		5%	20%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Pressure Washer 5000 PSI			Gas	24	1.0		50%	58%	6
utility, drainage	Reach 6	Jan-27	May-29		Arrow Board			Battery/Solar	50/110	2.0		50%	58%	6
	Reach 6				Attenuator - Vehicle Mounted			Battery/Solar	115/230				58%	6
steel sheets, goes with 100 toncrane	Reach 6	Jan-27	May-29		Vibratory Hammer 100T			Diesel	350	1.0		50%	58%	6
	Reach 6				CAT 345 w/ ICE 216 w/ Power Pack			Diesel / Diesel	345				58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Pump - 3" Submersible			Electric	8.5	4.0		100%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Pump - 4" Trash 18,000 GPH			Gas	22	1.0		100%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Pump - 6" Trash 33,000 GPH			Diesel	24	1.0		100%	58%	6
mini roller, utilities, back fill, allduration	Reach 6	Jan-27	Jul-30		CAT CB-224D (47")			Diesel	31	1.0		50%	58%	6
roadway, subgrade	Reach 6	Jan-27	Jul-30		Roller IR SD115D (84")			Diesel	174	1.0		50%	58%	6
walk behind all duration	Reach 6	Jan-27	Jul-30		Wacker RT820 (32")			Diesel	18	1.0		25%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Baker Tank 20,000 G				0	1.0		100%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		10 Wheel Dump Truck			Diesel	200-360	4.0		75%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Flat Bed - 30,000 LB			Trailer	0	2.0		50%	58%	6
deliveries landscape / hardscape	Reach 6	Jan-27	Jul-30		Boom Truck 16000 LB Lift			Diesel	405-510	1.0		10%	58%	6
all duration for equipment moves /deliveries	Reach 6	Jan-27	Jul-30		Tractor w/High Flat 20T			Diesel	330-560	1.0		20%	58%	6
all duration for equipment moves	Reach 6	Jan-27	Jul-30		Low Bed w/Tractor 50T			Diesel	330-560	1.0		20%	58%	6
	Reach 6				Tractor w/Attenuator			Diesel	300				58%	6
utility work, excavation,	Reach 6	Jan-27	Jul-30		Vacuum Truck 9CY			Diesel	400-500	1.0		25%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Pick up 4x4			Gas	325	2.0		100%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Pick up w/Arrow Board			Gas	325	1.0		50%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Mechanics Truck 1T			Gas	335	1.0		100%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Mobil Sweeper 4CY			Diesel (Truck)/D	215	1.0		100%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Welders Truck			Diesel	335	1.0		50%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Van			Gas	275-310	1.0		100%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Foreman Pick up			Gas	325	5.0		100%	58%	6
Misc. support equipment	Reach 6	Jan-27	Jul-30		Welders 300 AMP Big 40			Diesel	27	2.0		50%	58%	6
test pits / excavation around utils /misc dem	Reach 7	Feb-26	Jun-27		Air Compressor - 185 CFM			Diesel	49	1.0		20%	58%	7
mini piles	Reach 7	Feb-26	Jun-27		Air Compressor - 1600 CFM			Diesel	540	1.0		75%	58%	7
wall finishes	Reach 7	Oct-26	Mar-28		Sandblasting Machine			Air	150	1.0		50%	58%	7
park drainage / landscape / berm	Reach 7	Oct-26	Mar-28		Bulldozer D3K2 17k XL Series III			Diesel	104	1.0		50%	58%	7
landscape	Reach 7	Oct-26	Mar-28		CAT 304			Diesel	40.2	1.0		75%	58%	7
landscape / small trench	Reach 7	Oct-26	Mar-28		CAT 311			Diesel	70	1.0		5%	58%	7
landscape / small trench	Reach 7	Oct-26	Mar-28		CAT 315			Diesel	139	1.0		10%	58%	7
load/unload	Reach 7	Feb-26	Mar-28		CAT 318			Diesel	169	1.0		50%	58%	7
trench - total duration	Reach 7	Feb-26	Mar-28		CAT 320			Diesel	169	1.0		75%	58%	7
	Reach 7				CAT 330			Diesel	235				58%	7
deep trench - seepage in land	Reach 7	Feb-26	Jun-27		CAT 349			Diesel	432	1.0		40%	58%	7
rubber tire backhoe/loader - allduration	Reach 7	Feb-26	Mar-28		Loader - 1.5 CY 450E-WHEEL			Diesel	124	1.0		75%	58%	7
landscape	Reach 7	Oct-26	Mar-28		CAT 272C (279D Skidsteer)			Diesel	72.9	1.0		75%	58%	7
concrete/landscape	Reach 7	Feb-26	Jun-27		Concrete Buggie - 23 CFT			Diesel	18	1.0		75%	58%	7
seepage / mini piles / jet grout	Reach 7	Feb-26	Jun-27		Concrete Pump Trailer Mounted - 50 YPR			Diesel	400	1.0		50%	58%	7
hardscape	Reach 7	Oct-26	Mar-28		Concrete Mixer - 16 CF			Gas	13	1.0		50%	58%	7
drilled elements / concretecaps/walls	Reach 7	Feb-26	Jun-27		Concrete Pump Boom - 92' Putzmeister			Diesel	395	1.0		20%	58%	7
platform replacement locations	Reach 7	Feb-26	Jun-27		Concrete Pump Boom - 118' Putzmeister			Diesel	485	1.0		20%	58%	7
	Reach 7				Concrete Pump Boom - 136' Putzmeister			Diesel	485				58%	7
rebar / landscape	Reach 7	Feb-26	Jun-27		Crane 18 Ton - Tadano 150XL			Diesel	172	1.0		50%	58%	7
drainage structures	Reach 7	Feb-26	Mar-28		Crane 35 Ton - Tadano 350XL			Diesel	235	1.0		75%	58%	7
drilled shaft cages / demo platforms/ set pre	Reach 7	Feb-26	Jun-27		Crane 100 Ton - Grove TM9100			Diesel	400	1.0		75%	58%	7
drilled shaft cages / demo platforms/ set pre	Reach 7	Feb-26	Jun-27		Crawler Crane 100T - Liebherr HS855HD			Diesel	603	1.0		50%	58%	7
drilled shaft cages / demo platforms/ set pre	Reach 7	Feb-26	Jun-27		Crawler Crane 300T - LR1300			Diesel	603	1.0		50%	58%	7
Misc. tools	Reach 7	Feb-26	Mar-28		Concrete Saw (65 HP) - 15" Cut Target Pro 65 Road Saw			Diesel	47	1.0		5%	58%	7
mini piles / seepage barrier if drilledelemen	Reach 7	Feb-26	Jun-27		Bauer BG28/Comacchio MC15P			Diesel	420	1.0		75%	58%	7
drilled shafts	Reach 7	Feb-26	Jun-27		Bauer BG40			Diesel	580	2.0		75%	58%	7
all demo, curbs, walls	Reach 7	Feb-26	Jun-27		CAT320 Hoe Ram w/ 4500FLB Hammer			Diesel	169	1.0		20%	58%	7
platform demo	Reach 7	Feb-26	Jun-27		CAT 345 Hoe Ram w/ V56			Diesel	345	1.0		33%	58%	7
pavement demo	Reach 7	Feb-26	Jun-27		Jack Hammer/Pavement breaker				0	1.0		10%	58%	7
minor demo, landscape	Reach 7	Oct-26	Mar-28		Bobcat 272C Hoe Ram			Diesel	94	1.0		50%	58%	7
goes with 125KW/215 HP generator,demo pl	Reach 7	Feb-26	Jun-27		Diamond wire sawcut			Electric	0	1.0		50%	58%	7
landscape	Reach 7	Oct-26	Mar-28		Forklift 4000			Propane	62	1.0		50%	58%	7
landscape	Reach 7	Oct-26	Mar-28		Forklift 8000			Propane	97	1.0		50%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Generator 60 KW			Diesel	102	1.0		100%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Generator 125 KW			Diesel	215	1.0		100%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Loader - WHEEL 950H 4CY Bucket			Diesel	202	1.0		30%	58%	7
walls	Reach 7	Oct-26	Mar-28		Genie S-40 (4x4) w/ Oscillator			Diesel	48	1.0		30%	58%	7
walls	Reach 7	Oct-26	Mar-28		Genie S-60 (4x4)			Diesel	48	2.0		50%	58%	7
platform replacement locations	Reach 7	Feb-26	Jun-27		Car Float - 362x42x11				0	2.0		50%	58%	7
platform demo & construction	Reach 7	Feb-26	Jun-27		Tug Inland 40'			Diesel	800	1.0		5%	20%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Pressure Washer 5000 PSI			Gas	24	1.0		50%	58%	7
utility, drainage	Reach 7	Feb-26	Jun-27		Arrow Board			Battery/Solar	50/110	2.0		50%	58%	7
	Reach 7				Attenuator - Vehicle Mounted			Battery/Solar	115/230				58%	7
steel sheets, goes with 100 toncrane	Reach 7	Feb-26	Jun-27		Vibratory Hammer 100T			Diesel	350	1.0		50%	58%	7
	Reach 7				CAT 345 w/ ICE 216 w/ Power Pack			Diesel / Diesel	345				58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Pump - 3" Submersible			Electric	8.5	4.0		100%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Pump - 4" Trash 18,000 GPH			Gas	22	1.0		100%	58%	7

West Battery Park Resiliency
GHG Emission Calculations
Equipment Projections

Project Name: **West Battery Park Resiliency** Alternative 8b
Location: Manhattan, NY
Project Type: _____
Chart: **Non-Road Equipment Activity**

Work task	Location	Start Date	End Date	Shift	Equipment Type	Equipment Code	Details	Engine type	Size (hp)	Qty	Notes	Daily use	Average Use	Reach
Misc. support equipment	Reach 7	Feb-26	Mar-28		Pump - 6" Trash 33,000 GPH			Diesel	24	1.0		100%	58%	7
mini roller, utilities, back fill, allduration	Reach 7	Feb-26	Mar-28		CAT CB-224D (47")			Diesel	31	1.0		50%	58%	7
roadway, subgrade	Reach 7	Feb-26	Mar-28		Roller IR SD115D (84")			Diesel	174	1.0		50%	58%	7
walk behind all duration	Reach 7	Feb-26	Mar-28		Wacker RT820 (32")			Diesel	18	1.0		25%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Baker Tank 20,000 G				0	1.0		100%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		10 Wheel Dump Truck			Diesel	200-360	4.0		75%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Flat Bed - 30,000 LB			Trailer	0	2.0		50%	58%	7
deliveries landscape / hardscape	Reach 7	Feb-26	Mar-28		Boom Truck 16000 LB Lift			Diesel	405-510	1.0		10%	58%	7
all duration for equipment moves /deliveries	Reach 7	Feb-26	Mar-28		Tractor w/High Flat 20T			Diesel	330-560	1.0		20%	58%	7
all duration for equipment moves	Reach 7	Feb-26	Mar-28		Low Bed w/Tractor 50T			Diesel	330-560	1.0		20%	58%	7
	Reach 7				Tractor w/Attenuator			Diesel	300				58%	7
utility work, excavation,	Reach 7	Feb-26	Mar-28		Vacuum Truck 9CY			Diesel	400-500	1.0		25%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Pick up 4x4			Gas	325	2.0		100%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Pick up w/Arrow Board			Gas	325	1.0		50%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Mechanics Truck 1T			Gas	335	1.0		100%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Mobil Sweeper 4CY			Diesel (Truck)/D	215	1.0		100%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Welders Truck			Diesel	335	1.0		50%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Van			Gas	275-310	1.0		100%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Foreman Pick up			Gas	325	5.0		100%	58%	7
Misc. support equipment	Reach 7	Feb-26	Mar-28		Welders 300 AMP Big 40			Diesel	27	2.0		50%	58%	7

test pits / excavation around utils /misc dem	pump station	Oct-26	Apr-28	Air Compressor - 185 CFM	Diesel	49	1	20%	40%	
mini piles	pump station	Oct-26	Apr-28	Air Compressor - 1600 CFM	Diesel	540	1	75%	40%	
	pump station			Sandblasting Machine	Air	150			40%	
	pump station			Bulldozer D3K2 17k XL Series III	Diesel	104			40%	
	pump station			CAT 304	Diesel	40.2			40%	
	pump station			CAT 311	Diesel	70			40%	
	pump station			CAT 315	Diesel	139			40%	
load/unload	pump station	Oct-26	Jan-29	CAT 318	Diesel	169	1	50%	40%	
	pump station			CAT 320	Diesel	169			40%	
	pump station			CAT 330	Diesel	235			40%	
deep trench - seepage in land	pump station	Oct-26	Apr-28	CAT 349	Diesel	432	1	40%	40%	
	pump station			Loader - 1.5 CY 450E-WHEEL	Diesel	124			40%	
landscape	pump station	Jul-27	Jan-29	CAT 272C (279D Skidsteer)	Diesel	72.9	1	75%	40%	
	pump station			Concrete Buggie - 23 CFT	Diesel	18			40%	
	pump station			Concrete Pump Trailer Mounted -50 YPR		0			40%	
	pump station			Concrete Mixer - 16 CF	Gas	13			40%	
drilled elements / concretecaps/walls	pump station	Oct-26	Apr-28	Concrete Pump Boom - 92'Putzmeister	Diesel	395	1	20%	40%	
	pump station			Concrete Pump Boom - 118'Putzmeister	Diesel	485			40%	
	pump station			Concrete Pump Boom - 136'Putzmeister	Diesel	485			40%	
	pump station			Crane 18 Ton - Tadano 150XL	Diesel	172			40%	
	pump station			Crane 35 Ton - Tadano 350XL	Diesel	235			40%	
drilled shaft cages / demo platforms / set precast/ abutment	pump station	Oct-26	Apr-28	Crane 100 Ton - Grove TM9100	Diesel	400	1	75%	40%	
	pump station			Crawler Crane 100T - Liebherr HS855HD	Diesel	603			40%	
	pump station			Crawler Crane 300T - LR1300	Diesel	603			40%	
Misc. tools	pump station	Oct-26	Jan-29	Concrete Saw (65 HP) - 15" CutTarget Pro 65 Road Saw	Diesel	47	1	5%	40%	
mini piles / seepage barrier if	pump station	Oct-26	Apr-28	Bauer BG28/Comacchio MC15P	Diesel	420	1	75%	40%	
	pump station			Bauer BG40	Diesel	580			40%	
all demo, curbs, walls	pump station	Oct-26	Apr-28	CAT320 Hoe Ram w/ 4500FLBHammer	Diesel	169	1	20%	40%	
	pump station			CAT 345 Hoe Ram w/ V56	Diesel	345			40%	
pavement demo	pump station	Oct-26	Apr-28	Jack Hammer/Pavement breaker		0	1	10%	40%	
	pump station			Bobcat 272C Hoe Ram		0			40%	
goes with 125KW/215 HPgenerator, demo platform	pump station	Oct-26	Apr-28	Diamond wire sawcut	Electric	0	1	50%	40%	
	pump station			Forklift 4000	Propane	62			40%	
	pump station			Forklift 8000	Propane	97			40%	
Misc. support equipment	pump station	Oct-26	Jan-29	Generator 60 KW	Diesel	102	1	100%	40%	
Misc. support equipment	pump station	Oct-26	Jan-29	Generator 125 KW	Diesel	215	1	100%	40%	
Misc. support equipment	pump station	Oct-26	Jan-29	Loader - WHEEL 950H 4CY Bucket	Diesel	202	1	30%	40%	
	pump station			Genie S-40 (4x4) w/ Oscillator	Diesel	48			40%	
walls	pump station	Jul-27	Jan-29	Genie S-60 (4x4)	Diesel	48	1	50%	40%	
	pump station			Car Float - 362x42x11		0			40%	
	pump station			Tug Inland 40'	Diesel	800			40%	
Misc. support equipment	pump station	Oct-26	Jan-29	Pressure Washer 5000 PSI	Gas	24	1	50%	40%	
	pump station			Arrow Board	Battery/Solar	50/110			40%	
	pump station			Attenuator - Vehicle Mounted	Battery/Solar	115/230			40%	
	pump station			Vibratory Hammer 100T	Diesel	350			40%	
	pump station			CAT 345 w/ ICE 216 w/ Power Pack	Diesel / Diesel	345			40%	
Misc. support equipment	pump station	Oct-26	Jan-29	Pump - 3" Submersible	Electric	8.5	4	100%	40%	

West Battery Park Resiliency
GHG Emission Calculations
Equipment Projections

Project Name: **West Battery Park Resiliency** Alternative 8b
Location: Manhattan, NY
Project Type: _____
Chart: **Non-Road Equipment Activity**

Work task	Location	Start Date	End Date	Shift	Equipment Type	Equipment Code	Details	Engine type	Size (hp)	Qty	Notes	Daily use	Average Use	Reach
Misc. support equipment	pump station	Oct-26	Jan-29		Pump - 4" Trash 18,000 GPH			Gas	22	1		100%	40%	
Misc. support equipment	pump station	Oct-26	Jan-29		Pump - 6" Trash 33,000 GPH			Diesel	24	1		100%	40%	
mini roller, utilities, back fill, all	pump station	Oct-26	Jan-29		CAT CB-224D (47")			Diesel	31	1		50%	40%	
roadway, subgrade	pump station	Oct-26	Jan-29		Roller IR SD115D (84")			Diesel	174	1		50%	40%	
walk behind all duration	pump station	Oct-26	Jan-29		Wacker RT820 (32")			Diesel	18	1		25%	40%	
Misc. support equipment	pump station	Oct-26	Jan-29		Baker Tank 20,000 G				0	1		100%	40%	
Misc. support equipment	pump station	Oct-26	Jan-29		10 Wheel Dump Truck			Diesel	200-360	4		75%	40%	
Misc. support equipment	pump station	Oct-26	Jan-29		Flat Bed - 30,000 LB			Trailer	0	2		50%	40%	
deliveries landscape / hardscape	pump station	Oct-26	Jan-29		Boom Truck 16000 LB Lift			Diesel	405-510	1		10%	40%	
all duration for equipment moves /deliveries	pump station	Oct-26	Jan-29		Tractor w/High Flat 20T			Diesel	330-560	1		20%	40%	
	pump station				Low Bed w/Tractor 50T			Diesel	330-560				40%	
utility, work in or close to roadway	pump station	Oct-26	Jan-29		Tractor w/Attenuator			Diesel	300	1		20%	40%	
	pump station				Vacuum Truck 9CY			Diesel	400-500				40%	
Misc. support equipment	pump station	Oct-26	Jan-29		Pick up 4x4			Gas	325	2		100%	40%	
	pump station				Pick up w/Arrow Board			Gas	325				40%	
Misc. support equipment	pump station	Oct-26	Jan-29		Mechanics Truck 1T			Gas	335	1		100%	40%	
Misc. support equipment	pump station	Oct-26	Jan-29		Mobil Sweeper 4CY			Diesel (Truck) /Diesel (Sweeper)	215	1		100%	40%	
Misc. support equipment	pump station	Oct-26	Jan-29		Welders Truck			Diesel	335	1		50%	40%	
Misc. support equipment	pump station	Oct-26	Jan-29		Van			Gas	275-310	1		100%	40%	
Misc. support equipment	pump station	Oct-26	Jan-29		Foreman Pick up			Gas	325	5		100%	40%	
Misc. support equipment	pump station	Oct-26	Jan-29		Welders 300 AMP Big 40			Diesel	27	2		50%	40%	

West Battery Park Resiliency

GHG Emission Calculations

Equipment Fuel Consumption

Sample Calculation:

Equipment Emissions: BSFC Factor (gal/hp-hr) * Size (hp) * Quantity * Daily Usage Factor * hr/day

Reach	Task	Start Date	End Date	Equipment	Lookup Code	Engine type	Size (hp)	Qty	Daily use	Average Use	Load	# of Work Hours	BSFC Factor (g/hp-hr)	BSFC Factor (gal/hp-hr)	Short-Term BSFC Factor (gal/day)
West Battery Park Resiliency															
1															
Reach 1	test pits / excavation around utils/	Feb-26	Oct-28	Air Compressor - 185 CFM	AC50	Diesel	49	1	20%	58%	43%	16	185.0656	0.0582	2.276018948
Reach 1	mini piles	Feb-26	Oct-28	Air Compressor - 1600 CFM	AC600	Diesel	540	1	75%	58%	43%	16	166.4683	0.0524	84.60783361
Reach 1	wall finishes	Jun-27	Mar-30	Sandblasting Machine		Air	150	1	50%	58%	0%	16	0	0.0000	0
Reach 1	0			Bulldozer D3K2 17k XL Series III	BD	Diesel	104	0	0%	58%	59%	16	0	0.0000	0
Reach 1	landscape	Jun-27	Mar-30	CAT 304	EX40	Diesel	40.2	1	75%	58%	59%	16	186.8798187	0.0588	9.701910832
Reach 1	landscape / sn	Jun-27	Mar-30	CAT 311	EX75	Diesel	70	1	5%	58%	59%	16	186.8800258	0.0588	1.126259553
Reach 1	landscape / sn	Jun-27	Mar-30	CAT 315	EX175	Diesel	139	1	10%	58%	59%	16	168.2826317	0.0529	4.027742092
Reach 1	load/unload	Feb-26	Mar-30	CAT 318	EX175	Diesel	169	1	50%	58%	59%	16	168.28261	0.0529	24.48519157
Reach 1	trench - total	Feb-26	Mar-30	CAT 320	EX175	Diesel	169	1	75%	58%	59%	16	168.28261	0.0529	36.72778736
Reach 1	0			CAT 330	EX300	Diesel	235	0	0%	58%	59%	16	0	0.0000	0
Reach 1	deep trench -	Feb-26	Oct-28	CAT 349	EX600	Diesel	432	1	40%	58%	59%	16	168.2825502	0.0529	50.07147455
Reach 1	rubber tire ba	Feb-26	Mar-30	Loader - 1.5 CY 450E-WHEEL	L	Diesel	124	1	75%	58%	21%	16	196.4052674	0.0618	11.19466033
Reach 1	landscape	Jun-27	Mar-30	CAT 272C (279D, Skidsteer)	SS75	Diesel	72.9	1	75%	58%	21%	16	218.177689	0.0686	7.310952634
Reach 1	concrete/land	Feb-26	Oct-28	Concrete Buggie - 23 CFT	D	Diesel	18	1	75%	58%	21%	16	218.1776486	0.0686	1.805173156
Reach 1	seepage / min	Feb-26	Oct-28	Concrete Pump Trailer Mounted - 50	CP	Diesel	400	1	50%	58%	59%	16	168.2825729	0.0529	57.95310337
Reach 1	hardscape	Jun-27	Mar-30	Concrete Mixer - 16 CF	CM	Gas	13	1	50%	58%	59%	16	333.3909305	0.1190	4.23567113
Reach 1	drilled elemer	Feb-26	Oct-28	Concrete Pump Boom - 92' Putzmeist	CP	Diesel	395	1	20%	58%	59%	16	168.2825729	0.0529	22.89147583
Reach 1	0			Concrete Pump Boom - 118' Putzmei	CP	Diesel	485	0	0%	58%	59%	16	0	0.0000	0
Reach 1	0			Concrete Pump Boom - 136' Putzmei	CP	Diesel	485	0	0%	58%	59%	16	0	0.0000	0
Reach 1	rebar / landsc	Feb-26	Oct-28	Crane 18 Ton - Tadano 150XL	C175	Diesel	172	1	50%	58%	43%	16	166.4682844	0.0524	17.96610598
Reach 1	0			Crane 35 Ton - Tadano 350XL	C300	Diesel	235	0	0%	58%	43%	16	0	0.0000	0
Reach 1	0			Crane 100 Ton - Grove TM9100	C600	Diesel	400	0	0%	58%	43%	16	0	0.0000	0
Reach 1	0			Crawler Crane 100T - Liebherr HS855	C750	Diesel	603	0	0%	58%	43%	16	0	0.0000	0
Reach 1	0			Crawler Crane 300T - LR1300	C750	Diesel	603	0	0%	58%	43%	16	0	0.0000	0
Reach 1	Misc. tools	Feb-26	Mar-30	Concrete Saw (65 HP) - 15" Cut Targe	CS	Diesel	47	1	5%	58%	59%	16	186.879875	0.0588	0.756202233
Reach 1	mini piles / se	Feb-26	Oct-28	Bauer BG28/Comacchio MC15P	DR	Diesel	420	1	75%	58%	43%	16	166.4682782	0.0524	65.80608339
Reach 1	0			Bauer BG40	DR	Diesel	580	0	0%	58%	43%	16	0	0.0000	0
Reach 1	all demo. curt	Feb-26	Oct-28	CAT320 Hoe Ram w/ 4500FLB Hamm	EX175	Diesel	169	1	20%	58%	59%	16	168.28261	0.0529	9.794076629
Reach 1	0			CAT 345 Hoe Ram w/ V56	EX600	Diesel	345	0	0%	58%	59%	16	0	0.0000	0
Reach 1	pavement der	Feb-26	Oct-28	Jack Hammer/Pavement breaker	POWERED BY	0	0	1	10%	58%	0%	16	0	0.0000	0
Reach 1	minor demo. l	Jun-27	Mar-30	Bobcat 272C Hoe Ram	SS100	Diesel	94	1	50%	58%	21%	16	218.1776324	0.0686	6.284676446
Reach 1	0			Diamond wire sawcut		Electric	0	0	0%	58%	0%	16	0	0.0000	0
Reach 1	landscape	Jun-27	Mar-30	Forklift 4000	FK75	Propane	62	1	50%	58%	30%	16	184.1585023	0.0988	8.525382793
Reach 1	landscape	Jun-27	Mar-30	Forklift 8000	FK100	Propane	97	1	50%	58%	30%	16	184.1583006	0.0988	13.33808428
Reach 1	Misc. support	Feb-26	Mar-30	Generator 60 KW	GE175	Diesel	102	1	100%	58%	43%	16	166.4682643	0.0524	21.30863475
Reach 1	Misc. support	Feb-26	Mar-30	Generator 125 KW	GE300	Diesel	215	1	100%	58%	43%	16	166.4683141	0.0524	44.91527295
Reach 1	Misc. support	Feb-26	Mar-30	Loader - WHEEL 950H 4CY Bucket	L	Diesel	202	1	30%	58%	21%	16	196.4052674	0.0618	7.294585119
Reach 1	walls	Jun-27	Mar-30	Genie S-40 (4x4) w/ Oscillator	AL	Diesel	48	1	30%	58%	21%	16	218.177914	0.0686	1.925520375
Reach 1	walls	Jun-27	Mar-30	Genie S-60 (4x4)	AL	Diesel	48	2	50%	58%	21%	16	218.177914	0.0686	6.41840125
Reach 1	0			Car Float - 362x42x11		0	0	0	0%	58%	0%	16	0	0.0000	0
Reach 1	platform dem	Feb-26	Oct-28	Tug Inland 40'	ACCOUNTED I	Diesel	800	0	5%	20%	80%	16	0	0.0000	0
Reach 1	Misc. support	Feb-26	Mar-30	Pressure Washer 5000 PSI	PW	Gas	24	1	50%	58%	85%	16	333.3922597	0.1190	11.26571519
Reach 1	utility, drainag	Feb-26	Oct-28	Arrow Board		Battery/Sola	50/110	10	100%	58%	0%	16	0	0.0000	0
Reach 1	utility, work ir	Feb-26	Oct-28	Attenuator - Vehicle Mounted		Battery/Sola	115/230	4	100%	58%	0%	16	0	0.0000	0
Reach 1	steel sheets,	Feb-26	Oct-28	Vibratory Hammer 100T	GE600	Diesel	350	1	50%	58%	43%	16	166.4681293	0.0524	36.55890251
Reach 1	0			CAT 345 w/ ICE 216 w/ Power Pack	GE175	Diesel / Dies	345	0	0%	58%	43%	16	0	0.0000	0
Reach 1	Misc. support	Feb-26	Mar-30	Pump - 3" Submersible		Electric	8.5	4	100%	58%	0%	16	0	0.0000	0
Reach 1	Misc. support	Feb-26	Mar-30	Pump - 4" Trash 18,000 GPH	GP	Gas	22	1	100%	58%	69%	16	333.3898343	0.1190	16.765913
Reach 1	Misc. support	Feb-26	Mar-30	Pump - 6" Trash 33,000 GPH	DP	Diesel	24	1	100%	58%	43%	16	185.0653986	0.0582	5.573916657
Reach 1	mini roller, utilities, backfill, all	Feb-26	Mar-30	CAT CB-224D (47")	CO25	Diesel	31	1	50%	58%	43%	16	185.065732	0.0582	3.59982766
Reach 1	roadway, sub	Feb-26	Mar-30	Roller IR SD115D (84")	RL	Diesel	174	1	50%	58%	59%	16	168.2826099	0.0529	25.2096055
Reach 1	walk behind a	Feb-26	Mar-30	Wacker RT820 (32")	WAC	Diesel	18	1	25%	58%	43%	16	185.065732	0.0582	1.045111256
Reach 1	Misc. support	Feb-26	Mar-30	Baker Tank 20,000 G	ACCOUNTED I	0	0	1	100%	58%	0%	16	0	0.0000	0
Reach 1	Misc. support	Feb-26	Mar-30	10 Wheel Dump Truck	ACCOUNTED I	0	200-360	4	75%	58%	0%	16	0	0.0000	0
Reach 1	Misc. support	Feb-26	Mar-30	Flat Bed - 30,000 LB	ACCOUNTED I	0	0	2	0%	58%	0%	16	0	0.0000	0
Reach 1	deliveries lanc	Feb-26	Mar-30	Boom Truck 16000 LB Lift	ACCOUNTED I	0	405-510	1	10%	58%	0%	16	0	0.0000	0
Reach 1	all duration for equipment moves/	Feb-26	Mar-30	Tractor w/High Flat 20T	ACCOUNTED I	0	330-560	1	20%	58%	0%	16	0	0.0000	0
Reach 1	all duration fo	Feb-26	Mar-30	Low Bed w/Tractor 50T	ACCOUNTED I	0	330-560	1	20%	58%	0%	16	0	0.0000	0
Reach 1	utility, work ir	Feb-26	Mar-30	Tractor w/Attenuator	ACCOUNTED I	0	300	4	75%	58%	0%	16	0	0.0000	0
Reach 1	utility work, e	Feb-26	Mar-30	Vacuum Truck 9CY	ACCOUNTED I	0	400-500	1	25%	58%	0%	16	0	0.0000	0
Reach 1	Misc. support	Feb-26	Mar-30	Pick up 4x4	ACCOUNTED I	0	325	2	100%	58%	0%	16	0	0.0000	0
Reach 1	Misc. support	Feb-26	Mar-30	Pick up w/Arrow Board	ORT	Gas	325	1	100%	58%	59%	16	168.2827325	0.0529	94.17388228
Reach 1	Misc. support	Feb-26	Mar-30	Mechanics Truck 1T	ACCOUNTED I	0	335	1	100%	58%	0%	16	0	0.0000	0
Reach 1	Misc. support	Feb-26	Mar-30	Mobil Sweeper 4CY	ACCOUNTED I	0	215	1	100%	58%	0%	16	0	0.0000	0
Reach 1	Misc. support	Feb-26	Mar-30	Welders Truck	ACCOUNTED I	0	335	1	50%	58%	0%	16	0	0.0000	0
Reach 1	Misc. support	Feb-26	Mar-30	Van	ACCOUNTED I	0	275-310	1	100%	58%	0%	16	0	0.0000	0
Reach 1	Misc. support	Feb-26	Mar-30	Foreman Pick up	ACCOUNTED I	0	325	5	100%	58%	0%	16	0	0.0000	0
Reach 1	Misc. support	Feb-26	Mar-30	Welders 300 AMP Big 40	WEL	Diesel	27	2	50%	58%	21%	16	218.1778009	0.0686	3.610348832
2															
Reach 2	test pits / excavation around utils/	Feb-26	Feb-28	Air Compressor - 185 CFM	AC50	Diesel	49	1	20%	58%	43%	8	185.0656409	0.0582	1.138009474
Reach 2	mini piles	Feb-26	Feb-28	Air Compressor - 1600 CFM	AC600	Diesel	540	1	75%	58%	43%	8	166.468302	0.0524	42.30391681
Reach 2	wall finishes	Feb-27	Feb-29	Sandblasting Machine		Air	150	1	50%	58%	0%	8	0	0.0000	0
Reach 2	park drainage	Feb-27	Feb-29	Bulldozer D3K2 17k XL Series III	BD	Diesel	104	1	50%	58%	59%	8	168.2825459	0.0529	7.533902228
Reach 2	landscape	Feb-27	Feb-29	CAT 304	EX40	Diesel	40.2	1	75%	58%	59%	8	186.8798187	0.0588	4.850955416
Reach 2	landscape / sn	Feb-27	Feb-29	CAT 311	EX75	Diesel	70	1	5%	58%	59%	8	186.8800258	0.0588	0.563129777
Reach 2	landscape / sn	Feb-27	Feb-29	CAT 315	EX175	Diesel	139	1	10%	58%	59%	8	168.2826317	0.0529	2.013871046
Reach 2	load/unload	Feb-26	Feb-29	CAT 318	EX175	Diesel	169	1	50%	58%	59%	8	168.28261	0.0529	12.24259579
Reach 2	trench - total	Feb-26	Feb-29	CAT 320	EX175	Diesel	169	1	75%	58%	59%	8	168.28261	0.0529	18.36389368
Reach 2	0			CAT 330	EX300	Diesel	235	0	0%	58%	59%	8	0	0.0000	0
Reach 2	deep trench -	Feb-26	Feb-28	CAT 349	EX600	Diesel	432	1	40%	58%	59%	8	168.2825502	0.0529	25.03573727
Reach 2	rubber tire ba	Feb-26	Feb-29	Loader - 1.5 CY 450E-WHEEL	L	Diesel	124	1	75%	58%	21%	8	196.4052674	0.0618	5.597330165
Reach 2	landscape	Feb-27	Feb-29	CAT 272C (279D, Skidsteer)	SS75	Diesel	72.9	1	75%	58%	21%	8	218.177689	0.0686	3.655476317
Reach 2	concrete/land	Feb-26	Feb-28	Concrete Buggie - 23 CFT	D	Diesel	18	1	75%	58%	21%	8	218.1776486	0.0686	0.902586578
Reach 2	seepage / min	Feb-26	Feb-28	Concrete Pump Trailer Mounted - 50	CP	Diesel	400	1	50%	58%	59%	8	168.2825729	0.0529	28.97655169
Reach 2	hardscape	Feb-27	Feb-29	Concrete Mixer - 16 CF	CM	Gas	13	1	50%	58%	59%	8	333.3909305	0.1190	2.117835565
Reach 2	drilled elemer	Feb-26	Feb-28	Concrete Pump Boom - 92' Putzmeist	CP	Diesel	395	1	20%	58%	59%	8	168.2825729	0.0529	11.44573792
Reach 2	0			Concrete Pump Boom - 118' Putzmei	CP	Diesel	485	0	0%	58%	59%	8	0	0.0000	0
Reach 2	platform repl	Feb-26	Feb-28	Concrete Pump Boom - 136' Putzmei	CP	Diesel	485	1	50%	58%	59%	10	168.2825729	0.0529	43.91758615
Reach 2	rebar / landsc	Feb-26	Feb-28	Crane 18 Ton - Tadano 150XL	C175	Diesel	172	1	50%	58%	43%	10	166.4682844	0.0524	11.22881624
Reach 2	drainage stru	Feb-26	Feb-29	Crane 35 Ton - Tadano 350XL	C300	Diesel	235	1	75%	58%	43%	8	166.4682241	0.0524	18.41002926
Reach 2	drilled shaft cages / demo	Feb-26	Feb-28	Crane 100 Ton - Grove TM9100	C600	Diesel	400	1	75%	58%	43%	10	166.4682941	0.0524	39.17029149
Reach 2	drilled shaft cages / demo	Feb-26	Feb-28	Crawler Crane 100T - Liebherr HS855	C750	Diesel	603	1	50%	58%	43%	10	166.4682771	0.0524	39.36613891
Reach 2	drilled shaft cages / demo	Feb-26	Feb-28	Crawler Crane 300T - LR1300	C750	Diesel	603	1	50%	58%	43%	10	166.4682771	0.0524	39.36613891
Reach 2	Misc. tools	Feb-26	Feb-29	Concrete Saw (65 HP) - 15" Cut Targe	CS	Diesel	47	1	5%	58%	59%	8	186.879875	0.0588	0.378101116
Reach 2	mini piles / se	Feb-26	Feb-28	Bauer BG28/Comacchio MC15P	DR	Diesel	420	1	75%	58%	43%	8	166.4682782	0.0524	32.9030417
Reach 2	drilled shafts	Feb-26	Feb-28	Bauer BG40	DR	Diesel	580	2	75%	58%	43%	8	166.4682782	0.0524	90.87506754
Reach 2	all demo. curt	Feb-26	Feb-28	CAT320 Hoe Ram w/ 4500FLB Hamm	EX175	Diesel	169	1	20%	58%	59%	8	168.28261	0.0529	4.897038315
Reach 2	platform dem	Feb-26	Feb-28	CAT 345 Hoe Ram w/ V56	EX600	Diesel	345	1	33%	58%	59%	10	168.2825502	0.0529	20.61862477
Reach 2	pavement der	Feb-26	Feb-28	Jack Hammer/Pavement breaker	POWERED BY	0	0	1	10%	58%	0%	8	0	0.0000	0
Reach 2	minor demo. l	Feb-27	Feb-29	Bobcat 272C Hoe Ram	SS100	Diesel	94	1	50%	58%	21%	8	218.1776324	0.0686	3.142338223
Reach 2	goes with 125	Feb-26	Feb-28	Diamond wire sawcut		Electric	0	1	50%	58%	0%	10	0	0.0000	0
Reach 2	landscape	Feb-27	Feb-29	Forklift 4000	FK75	Propane	62	1	50%	58%	30%	8	184.1585023	0.0988	4.262691397
Reach 2	landscape	Feb-27	Feb-29	Forklift 8000	FK100	Propane	97	1	50%	58%	30%	8	184.1583006	0.0988	6.669042141
Reach 2	Misc. support	Feb-26	Feb-29	Generator 60 KW	GE175	Diesel	102	1	100%	58%	43%	8	166.4682643	0.0524	10.65431738
Reach 2	Misc. support	Feb-26	Feb-29	Generator 125 KW	GE300	Diesel	215	1	100%	58%	43%	8	166.4683141	0.0524	22.45763647
Reach 2	Misc. support	Feb-26	Feb-29	Loader - WHEEL 950H 4CY Bucket	L	Diesel	202	1	30%	58%	21%	8	196.4052674	0.0618	3.647292559
Reach 2	walls	Feb-27	Feb-29	Genie S-40 (4x4) w/ Oscillator	AL	Diesel	48	1	30%	58%	21%	8	218.177914	0.0686	0.962760188
Reach 2	walls	Feb-27	Feb-29	Genie S-60 (4x4)	AL	Diesel	48	2	50%	58%	21%	8	218.177914	0.0686	3.209200625
Reach 2	platform repl	Feb-26	Feb-28	Car Float - 362x42x11	TOWED BY TI	0	0	2	50%	20%	0%	10	0	0.0000	0
Reach 2	platform dem	Feb-26	Feb-28	Tug Inland 40'	ACCOUNTED I	Diesel	800	1	5%	58%	80%	10	0	0.0000	0
Reach 2	Misc. support	Feb-26	Feb-29	Pressure Washer 5000 PSI	PW	Gas	24	1	50%	58%	85%	8	333.3922597	0.1190	5.632857597
Reach 2	0			Arrow Board		Battery/Sola	50/110	0	0%	58%	0%	8	0	0.0000	0
Reach 2	0			Attenuator - Vehicle Mounted		Battery/Sola	115/230	0	0%	58%	0%	8	0	0.0000	0
Reach 2	steel sheets,	Feb-26	Feb-28	Vibratory Hammer 100T	GE600	Diesel	350	1	50%	58%	43%	8	166.4681293	0.0524	18.27945126
Reach 2	0			CAT 345 w/ ICE 216 w/ Power Pack	GE175	Diesel / Dies	345	0	0%	58%	43%	8	0	0.0000	0
Reach 2	Misc. support	Feb-26	Feb-29	Pump - 3" Submersible		Electric	8.5	4	100%	58%	0%	8	0	0.0000	0
Reach 2	Misc. support	Feb-26	Feb-29	Pump - 4" Trash 18,000 GPH	GP	Gas	22	1	100%	58%	69%	8	333.3898343	0.1190	8.382956498
Reach 2	Misc. support	Feb-26	Feb-29	Pump - 6" Trash 33,000 GPH	DP	Diesel	24	1	100%	58%	43%	8	185.0653986	0.0582	2.786958328
Reach 2	mini roller, utilities, backfill, all	Feb-26	Feb-29	CAT CB-224D (47")	CO25	Diesel	31	1	50%	58%	43%	8	185.065732	0.0582	1.79991383
Reach 2	roadway, sub	Feb-26	Feb-29	Roller IR SD115D (84")	RL	Diesel	174	1	50%	58%	59%	8	168.2826099	0.0529	12.60480275
Reach 2	walk behind a	Feb-26	Feb-29	Wacker RT820 (32")	WAC	Diesel	18	1	25%	58%	43%	8	185.065732	0.0582	0.522555628
Reach 2	Misc. support	Feb-26	Feb-29	Baker Tank 20,000 G	ACCOUNTED I	0	0	1	100%	58%	0%	8	0	0.0000	0
Reach 2	Misc. support	Feb-26	Feb-29	10 Wheel Dump Truck	ACCOUNTED I	0	200-360	4	75%	58%	0%	8	0	0.0000	0
Reach 2	Misc. support	Feb-26	Feb-29	Flat Bed - 30,000 LB	ACCOUNTED I	0	0	2	50%	58%	0%	8	0	0.0000	0
Reach 2	deliveries lanc	Feb-26	Feb-29	Boom Truck 16000 LB Lift	ACCOUNTED I	0	405-510	1	10%	58%	0%	8	0	0.0000	0
Reach 2	all duration for equipment moves/	Feb-26	Feb-29	Tractor w/High Flat 20T	ACCOUNTED I	0	330-560	1	20%	58%	0%	8	0	0.0000	0
Reach 2	all duration fo	Feb-26	Feb-29	Low Bed w/Tractor 50T	ACCOUNTED I	0	330-560	1	20%	58%	0%	8	0	0.0000	0
Reach 2	0			Tractor w/Attenuator	ACCOUNTED I	0	300	0	0%	58%	0%	8	0	0.0000	0
Reach 2	utility work, e	Feb-26	Feb-29	Vacuum Truck 9CY	ACCOUNTED I	0	400-500	1	25%	58%	0%	8	0	0.0000	0
Reach 2	Misc. support	Feb-26	Feb-29	Pick up 4x4	ACCOUNTED I	0	325	2	100%	58%	0%	8	0	0.0000	0
Reach 2	0			Pick up w/Arrow Board	ORT	Gas	325	0	0%	58%	59%	8	0	0.0000	0
Reach 2	Misc. support	Feb-26	Feb-29	Mechanics Truck 1T	ACCOUNTED I	0	335	1	100%	58%	0%	8	0	0.0000	0
Reach 2	Misc. support	Feb-26	Feb-29	Mobil Sweeper 4CY	ACCOUNTED I	0	215	1	100%	58%	0%	8	0	0.0000	0
Reach 2	Misc. support	Feb-26	Feb-29	Welders Truck	ACCOUNTED I	0	335	1	50%	58%	0%	8	0	0.0000	0
Reach 2	Misc. support	Feb-26	Feb-29	Van	ACCOUNTED I	0	275-310	1	100%	58%	0%	8	0	0.0000	0
Reach 2	Misc. support	Feb-26	Feb-29	Foreman Pick up	ACCOUNTED I	0	325	5	100%	58%	0%	8	0	0.0000	0
Reach 2	Misc. support	Feb-26	Feb-29	Welders 300 AMP Big 40	WEL	Diesel	27	2	50%	58%	21%	8	218.1778009	0.0686	1.805174416
3															

West Battery Park Resiliency

GHG Emission Calculations
Equipment Fuel Consumption

Sample Calculation:
Equipment Emissions: BSFC Factor (gal/hp-hr) * Size (hp) * Quantity * Daily Usage Factor * hr/day

Reach	Task	Start Date	End Date	Equipment	Lookup Code	Engine type	Size (hp)	Qty	Daily use	Average Use	Load	# of Work Hours	BSFC Factor (g/hp-hr)	BSFC Factor (gal/hp-hr)	Short-Term BSFC Factor (gal/day)
West Battery Park Resiliency															
Reach 3	test pits / excavation around utils /	Mar-28	Sep-29	Air Compressor - 185 CFM	AC50	Diesel	49	1	20%	58%	43%	8	185.065503	0.0582	1.138008627
Reach 3	mini piles	Mar-28	Sep-29	Air Compressor - 1600 CFM	AC600	Diesel	540	1	75%	58%	43%	8	166.4682184	0.0524	42.30389555
Reach 3	wall finishes	Dec-28	Jul-30	Sandblasting Machine		Air	150	1	50%	58%	0%	8	0	0.0000	0
Reach 3	park drainage	Dec-28	Jul-30	Bulldozer D3K2 17k XL Series III	BD	Diesel	104	1	50%	58%	59%	8	168.2825855	0.0529	7.533904
Reach 3	landscape	Dec-28	Jul-30	CAT 304	EX40	Diesel	40.2	1	75%	58%	59%	8	186.8799268	0.0588	4.850958221
Reach 3	landscape / sı	Dec-28	Jul-30	CAT 311	EX75	Diesel	70	1	5%	58%	59%	8	186.8796964	0.0588	0.563128784
Reach 3	landscape / sı	Dec-28	Jul-30	CAT 315	EX175	Diesel	139	1	10%	58%	59%	8	168.2826192	0.0529	2.013870896
Reach 3	load/unload	Mar-28	Jul-30	CAT 318	EX175	Diesel	169	1	50%	58%	59%	8	168.2826192	0.0529	12.24259645
Reach 3	trench - total	Mar-28	Jul-30	CAT 320	EX175	Diesel	169	1	75%	58%	59%	8	168.2826192	0.0529	18.36389468
Reach 3	0			CAT 330	EX300	Diesel	235	0	0%	58%	59%	8	0	0.0000	0
Reach 3	deep trench -	Mar-28	Sep-29	CAT 349	EX600	Diesel	432	1	40%	58%	59%	8	168.2825983	0.0529	25.03574443
Reach 3	rubber tire ba	Mar-28	Jul-30	Loader - 1.5 CY 450E-WHEEL	L	Diesel	124	1	75%	58%	21%	8	196.4054586	0.0618	5.597335614
Reach 3	landscape	Dec-28	Jul-30	CAT 272C (279D, Skidsteer)	SS75	Diesel	72.9	1	75%	58%	21%	8	218.1777096	0.0686	3.655476662
Reach 3	concrete/land	Mar-28	Sep-29	Concrete Buggie - 23 CFT	D	Diesel	18	1	75%	58%	21%	8	218.1776483	0.0686	0.902586577
Reach 3	seepage / min	Mar-28	Sep-29	Concrete Pump Trailer Mounted - 50	CP	Diesel	400	1	50%	58%	59%	8	168.2826896	0.0529	28.97657177
Reach 3	hardscape	Dec-28	Jul-30	Concrete Mixer - 16 CF	CM	Gas	13	1	50%	58%	59%	8	333.3900408	0.1190	2.117829913
Reach 3	drilled elemer	Mar-28	Sep-29	Concrete Pump Boom - 92' Putzmeist	CP	Diesel	395	1	20%	58%	59%	8	168.2826896	0.0529	11.44574585
Reach 3	0			Concrete Pump Boom - 118' Putzmei	CP	Diesel	485	0	0%	58%	59%	8	0	0.0000	0
Reach 3	0			Concrete Pump Boom - 136' Putzmei	CP	Diesel	485	0	0%	58%	59%	8	0	0.0000	0
Reach 3	rebar / landsc	Mar-28	Sep-29	Crane 18 Ton - Tadano 150XL	C175	Diesel	172	1	50%	58%	43%	8	166.4683449	0.0524	8.983056253
Reach 3	drainage stru	Mar-28	Jul-30	Crane 35 Ton - Tadano 350XL	C300	Diesel	235	1	75%	58%	43%	8	166.4683294	0.0524	18.4100409
Reach 3	0			Crane 100 Ton - Grove TM9100	C600	Diesel	400	0	0%	58%	43%	8	0	0.0000	0
Reach 3	0			Crawler Crane 100T - Liebherr HS855	C750	Diesel	603	0	0%	58%	43%	8	0	0.0000	0
Reach 3	0			Crawler Crane 300T - LR1300	C750	Diesel	603	0	0%	58%	43%	8	0	0.0000	0
Reach 3	Misc. tools	Mar-28	Jul-30	Concrete Saw (65 HP) - 15" Cut Targe	CS	Diesel	47	1	5%	58%	59%	8	186.8798995	0.0588	0.378101166
Reach 3	mini piles / se	Mar-28	Sep-29	Bauer BG28/Comacchio MC15P	DR	Diesel	420	1	75%	58%	43%	8	166.4682333	0.0524	32.90303282
Reach 3	0			Bauer BG40	DR	Diesel	580	0	0%	58%	43%	8	0	0.0000	0
Reach 3	all demo, curt	Mar-28	Sep-29	CAT320 Hoe Ram w/ 4500FLB Hamm	EX175	Diesel	169	1	20%	58%	59%	8	168.2826192	0.0529	4.897038581
Reach 3	0			CAT 345 Hoe Ram w/ V56	EX600	Diesel	345	0	0%	58%	59%	8	0	0.0000	0
Reach 3	pavement der	Mar-28	Sep-29	Jack Hammer/Pavement breaker	POWERED BY	0	0	1	10%	58%	0%	8	0	0.0000	0
Reach 3	minor demo, l	Dec-28	Jul-30	Bobcat 272C Hoe Ram	SS100	Diesel	94	1	50%	58%	21%	8	218.1776756	0.0686	3.142338845
Reach 3	goes with 125	Mar-28	Sep-29	Diamond wire sawcut		Electric	0	1	50%	58%	0%	8	0	0.0000	0
Reach 3	landscape	Dec-28	Jul-30	Forklift 4000	FK75	Propane	62	1	50%	58%	30%	8	184.1582619	0.0988	4.262685832
Reach 3	landscape	Dec-28	Jul-30	Forklift 8000	FK100	Propane	97	1	50%	58%	30%	8	184.1583276	0.0988	6.669043117
Reach 3	Misc. support	Mar-28	Jul-30	Generator 60 KW	GE175	Diesel	102	1	100%	58%	43%	8	166.4683041	0.0524	10.65431992
Reach 3	Misc. support	Mar-28	Jul-30	Generator 125 KW	GE300	Diesel	215	1	100%	58%	43%	8	166.4682766	0.0524	22.45763142
Reach 3	Misc. support	Mar-28	Jul-30	Loader - WHEEL 950H 4CY Bucket	L	Diesel	202	1	30%	58%	21%	8	196.4054586	0.0618	3.64729611
Reach 3	walls	Dec-28	Jul-30	Genie S-40 (4x4) w/ Oscillator	AL	Diesel	48	1	30%	58%	21%	8	218.1776058	0.0686	0.962758827
Reach 3	walls	Dec-28	Jul-30	Genie S-60 (4x4)	AL	Diesel	48	2	50%	0%	21%	8	218.1776058	0.0686	0
Reach 3	0			Car Float - 362x42x11	TOWED BY TU	0	0	0	0%	58%	0%	8	0	0.0000	0
Reach 3	0			Tug Inland 40'	ACCOUNTED I	Diesel	800	0	0%	58%		8	0	0.0000	0
Reach 3	Misc. support	Mar-28	Jul-30	Pressure Washer 5000 PSI	PW	Gas	24	1	50%	58%	85%	8	333.3903496	0.1190	5.632825325
Reach 3	utility, drainag	Mar-28	Sep-29	Arrow Board		Battery/Sola	50/110	2	50%	58%	#N/A	8	0	0.0000	0
Reach 3	0			Attenuator - Vehicle Mounted		Battery/Sola	115/230	0	0%	58%	#N/A	8	0	0.0000	0
Reach 3	steel sheets, a	Mar-28	Sep-29	Vibratory Hammer 100T	GE600	Diesel	350	1	50%	58%	43%	8	166.4681822	0.0524	18.27945707
Reach 3	steel sheeting	Mar-28	Sep-29	CAT 345 w/ ICE 216 w/ Power Pack	GE175	Diesel / Dies	345	1	50%	58%	43%	8	166.4683041	0.0524	18.01833516
Reach 3	Misc. support	Mar-28	Jul-30	Pump - 3" Submersible		Electric	8.5	4	100%	58%	0%	8	0	0.0000	0
Reach 3	Misc. support	Mar-28	Jul-30	Pump - 4" Trash 18,000 GPH	GP	Gas	22	1	100%	58%	69%	8	333.390029	0.1190	8.382961393
Reach 3	Misc. support	Mar-28	Jul-30	Pump - 6" Trash 33,000 GPH	DP	Diesel	24	1	100%	58%	43%	8	185.0654036	0.0582	2.786958404
Reach 3	mini roller, utilities, back fill, all	Mar-28	Jul-30	CAT CB-224D (47")	CO25	Diesel	31	1	50%	58%	43%	8	185.0654199	0.0582	1.799910795
Reach 3	roadway, sub	Mar-28	Jul-30	Roller IR SD115D (84")	RL	Diesel	174	1	50%	58%	59%	8	168.282686	0.0529	12.60480845
Reach 3	walk behind a	Mar-28	Jul-30	Wacker RT820 (32")	WAC	Diesel	18	1	25%	58%	43%	8	185.0654199	0.0582	0.522554747
Reach 3	Misc. support	Mar-28	Jul-30	Baker Tank 20,000 G	ACCOUNTED I	0	0	1	100%	58%	0%	8	0	0.0000	0
Reach 3	Misc. support	Mar-28	Jul-30	10 Wheel Dump Truck	ACCOUNTED I	0	200-360	4	75%	58%	0%	8	0	0.0000	0
Reach 3	Misc. support	Mar-28	Jul-30	Flat Bed - 30,000 LB	ACCOUNTED I	0	0	2	50%	58%	0%	8	0	0.0000	0
Reach 3	deliveries lan	Mar-28	Jul-30	Boom Truck 16000 LB Lift	ACCOUNTED I	0	405-510	1	10%	58%	0%	8	0	0.0000	0
Reach 3	all duration for equipment moves /	Mar-28	Jul-30	Tractor w/High Flat 20T	ACCOUNTED I	0	330-560	1	20%	58%	0%	8	0	0.0000	0
Reach 3	all duration fo	Mar-28	Jul-30	Low Bed w/Tractor 50T	ACCOUNTED I	0	330-560	1	20%	58%	0%	8	0	0.0000	0
Reach 3	0			Tractor w/Attenuator	ACCOUNTED I	0	300	0	0%	58%	0%	8	0	0.0000	0
Reach 3	utility work, e	Mar-28	Jul-30	Vacuum Truck 9CY	ACCOUNTED I	0	400-500	1	25%	58%	0%	8	0	0.0000	0
Reach 3	Misc. support	Mar-28	Jul-30	Pick up 4x4	ACCOUNTED I	0	325	2	100%	58%	0%	8	0	0.0000	0
Reach 3	Misc. support	Mar-28	Jul-30	Pick up w/Arrow Board	OBT	Gas	325	1	50%	58%	59%	8	168.2827138	0.0529	23.54346795
Reach 3	Misc. support	Mar-28	Jul-30	Mechanics Truck 1T	ACCOUNTED I	0	335	1	100%	58%	0%	8	0	0.0000	0
Reach 3	Misc. support	Mar-28	Jul-30	Mobil Sweeper 4CY	ACCOUNTED I	0	215	1	100%	58%	0%	8	0	0.0000	0
Reach 3	Misc. support	Mar-28	Jul-30	Welders Truck	ACCOUNTED I	0	335	1	50%	58%	0%	8	0	0.0000	0
Reach 3	Misc. support	Mar-28	Jul-30	Van	ACCOUNTED I	0	275-310	1	100%	58%	0%	8	0	0.0000	0
Reach 3	Misc. support	Mar-28	Jul-30	Foreman Pick up	ACCOUNTED I	0	325	5	100%	58%	0%	8	0	0.0000	0
Reach 3	Misc. support	Mar-28	Jul-30	Welders 300 AMP Big 40	WEL	Diesel	27	2	50%	58%	21%	8	218.1776795	0.0686	1.805173411
4															
Reach 4	test pits / excavation around utils /	Nov-27	Jul-29	Air Compressor - 185 CFM	AC50	Diesel	49	1	20%	58%	43%	8	185.0655383	0.0582	1.138008844
Reach 4	mini piles	Nov-27	Jul-29	Air Compressor - 1600 CFM	AC600	Diesel	540	1	75%	58%	43%	8	166.4682957	0.0524	42.3039152
Reach 4	wall finishes	Sep-28	Jun-30	Sandblasting Machine		Air	150	1	50%	58%	0%	8	0	0.0000	0
Reach 4	park drainage	Sep-28	Jun-30	Bulldozer D3K2 17k XL Series III	BD	Diesel	104	1	50%	58%	59%	8	168.2825855	0.0529	7.533904
Reach 4	landscape	Sep-28	Jun-30	CAT 304	EX40	Diesel	40.2	1	75%	58%	59%	8	186.8799268	0.0588	4.850958221
Reach 4	landscape / sı	Sep-28	Jun-30	CAT 311	EX75	Diesel	70	1	5%	58%	59%	8	186.8796964	0.0588	0.563128784
Reach 4	landscape / sı	Sep-28	Jun-30	CAT 315	EX175	Diesel	139	1	10%	58%	59%	8	168.2826192	0.0529	2.013870896
Reach 4	load/unload	Nov-27	Jun-30	CAT 318	EX175	Diesel	169	1	50%	58%	59%	8	168.2826317	0.0529	12.24259736
Reach 4	trench - total	Nov-27	Jun-30	CAT 320	EX175	Diesel	169	1	75%	58%	59%	8	168.2826317	0.0529	18.36389605
Reach 4	0	Jan-00	Jan-00	CAT 330	EX300	Diesel	235	0	0%	58%	59%	8	#VALUE!	#VALUE!	#VALUE!
Reach 4	deep trench -	Nov-27	Jul-29	CAT 349	EX600	Diesel	432	1	40%	58%	59%	8	168.2825859	0.0529	25.0357426
Reach 4	rubber tire ba	Nov-27	Jun-30	Loader - 1.5 CY 450E-WHEEL	L	Diesel	124	1	75%	58%	21%	8	196.4052551	0.0618	5.597329815
Reach 4	landscape	Sep-28	Jun-30	CAT 272C (279D, Skidsteer)	SS75	Diesel	72.9	1	75%	58%	21%	8	218.1777096	0.0686	3.655476662
Reach 4	concrete/land	Nov-27	Jul-29	Concrete Buggie - 23 CFT	D	Diesel	18	1	75%	58%	21%	8	218.177541	0.0686	0.902586133
Reach 4	seepage / min	Nov-27	Jul-29	Concrete Pump Trailer Mounted - 50	CP	Diesel	400	1	50%	58%	59%	8	168.2826496	0.0529	28.9765649
Reach 4	hardscape	Sep-28	Jun-30	Concrete Mixer - 16 CF	CM	Gas	13	1	50%	58%	59%	8	333.3900408	0.1190	2.117829913
Reach 4	drilled elemer	Nov-27	Jul-29	Concrete Pump Boom - 92' Putzmeist	CP	Diesel	395	1	20%	58%	59%	8	168.2826496	0.0529	11.44574313
Reach 4	platform repla	Nov-27	Jul-29	Concrete Pump Boom - 118' Putzmei	CP	Diesel	485	1	20%	58%	59%	10	168.2826496	0.0529	17.56704247
Reach 4	0	Jan-00	Jan-00	Concrete Pump Boom - 136' Putzmei	CP	Diesel	485	0	0%	58%	59%	8	#VALUE!	#VALUE!	#VALUE!
Reach 4	rebar / landsc	Nov-27	Jul-29	Crane 18 Ton - Tadano 150XL	C175	Diesel	172	1	50%	58%	43%	10	166.4682912	0.0524	11.2288167
Reach 4	drainage stru	Nov-27	Jun-30	Crane 35 Ton - Tadano 350XL	C300	Diesel	235	1	75%	58%	43%	8	166.4682764	0.0524	18.41003504
Reach 4	drilled shaft cages / [illegible]	Nov-27	Jul-29	Crane 100 Ton - Grove TM9100	C600	Diesel	400	1	75%	58%	43%	10	166.4683096	0.0524	39.17029511
Reach 4	drilled shaft cages / demo	Nov-27	Jul-29	Crawler Crane 100T - Liebherr HS855	C750	Diesel	603	1	50%	58%	43%	10	166.4682291	0.0524	39.36612756
Reach 4	drilled shaft cages / demo	Nov-27	Jul-29	Crawler Crane 300T - LR1300	C750	Diesel	603	1	50%	58%	43%	10	166.4682291	0.0524	39.36612756
Reach 4	Misc. tools	Nov-27	Jun-30	Concrete Saw (65 HP) - 15" Cut Targe	CS	Diesel	47	1	5%	58%	59%	8	186.8798415	0.0588	0.378101049
Reach 4	mini piles / se	Nov-27	Jul-29	Bauer BG28/Comacchio MC15P	DR	Diesel	420	1	75%	58%	43%	8	166.4682303	0.0524	32.90303223
Reach 4	drilled shafts	Nov-27	Jul-29	Bauer BG40	DR	Diesel	580	2	75%	58%	43%	8	166.4682303	0.0524	90.8750414
Reach 4	all demo, curt	Nov-27	Jul-29	CAT320 Hoe Ram w/ 4500FLB Hamm	EX175	Diesel	169	1	20%	58%	59%	8	168.2826317	0.0529	4.897038946
Reach 4	platform dem	Feb-26	Jul-29	CAT 345 Hoe Ram w/ V56	EX600	Diesel	345	1	33%	58%	59%	10	168.2825502	0.0529	20.61862477
Reach 4	pavement der	Nov-27	Jul-29	Jack Hammer/Pavement breaker	POWERED BY	0	0	1	10%	58%	0%	8	0	0.0000	0
Reach 4	minor demo, l	Sep-28	Jun-30	Bobcat 272C Hoe Ram	SS100	Diesel	94	1	50%	58%	21%	8	218.1776756	0.0686	3.142338845
Reach 4	goes with 125	Nov-27	Jul-29	Diamond wire sawcut		Electric	0	1	50%	58%	0%	10	0	0.0000	0
Reach 4	landscape	Sep-28	Jun-30	Forklift 4000	FK75	Propane	62	1	50%	58%	30%	8	184.1582619	0.0988	4.262685832
Reach 4	landscape	Sep-28	Jun-30	Forklift 8000	FK100	Propane	97	1	50%	58%	30%	8	184.1583276	0.0988	6.669043117
Reach 4	Misc. support	Nov-27	Jun-30	Generator 60 KW	GE175	Diesel	102	1	100%	58%	43%	8	166.4682327	0.0524	10.65431535
Reach 4	Misc. support	Nov-27	Jun-30	Generator 125 KW	GE300	Diesel	215	1	100%	58%	43%	8	166.4683488	0.0524	22.45764116
Reach 4	Misc. support	Nov-27	Jun-30	Loader - WHEEL 950H 4CY Bucket	L	Diesel	202	1	30%	58%	21%	8	196.4052551	0.0618	3.647292331
Reach 4	walls	Sep-28	Jun-30	Genie S-40 (4x4) w/ Oscillator	AL	Diesel	48	1	30%	20%	21%	8	218.1776058	0.0686	0.331985803
Reach 4	walls	Sep-28	Jun-30	Genie S-60 (4x4)	AL	Diesel	48	2	50%	58%	21%	8	218.1776058	0.0686	3.209196091
Reach 4	platform repla	Nov-27	Jul-29	Car Float - 362x42x11	TOWED BY TU	0	0	2	50%	58%	0%	10	0	0.0000	0
Reach 4	platform dem	Nov-27	Jul-29	Tug Inland 40'	ACCOUNTED I	Diesel	800	1	5%	58%	80%	10	0	0.0000	0
Reach 4	Misc. support	Nov-27	Jun-30	Pressure Washer 5000 PSI	PW	Gas	24	1	50%	58%	85%	8	333.3907793	0.1190	5.632832586
Reach 4	utility, drainag	Nov-27	Jul-29	Arrow Board		Battery/Sola	50/110	2	50%	58%	#N/A	8	0	0.0000	0
Reach 4	0	Jan-00	Jan-00	Attenuator - Vehicle Mounted		Battery/Sola	115/230	0	0%	58%	#N/A	8	0	0.0000	0
Reach 4	steel sheets, a	Nov-27	Jul-29	Vibratory Hammer 100T	GE600	Diesel	350	1	50%	58%	43%	8	166.4682658	0.0524	18.27946625
Reach 4	0	Jan-00	Jan-00	CAT 345 w/ ICE 216 w/ Power Pack	GE175	Diesel / Dies	345	0	0%	58%	43%	8	#VALUE!	#VALUE!	#VALUE!
Reach 4	Misc. support	Nov-27	Jun-30	Pump - 3" Submersible		Electric	8.5	4	100%	58%	0%	8	0	0.0000	0
Reach 4	Misc. support	Nov-27	Jun-30	Pump - 4" Trash 18,000 GPH	GP	Gas	22	1	100%	58%	69%	8	333.3900685	0.1190	8.382962388
Reach 4	Misc. support	Nov-27	Jun-30	Pump - 6" Trash 33,000 GPH	DP	Diesel	24	1	100%	58%	43%	8	185.0654491	0.0582	2.786959089
Reach 4	mini roller, utilities, back fill, all	Nov-27	Jun-30	CAT CB-224D (47")	CO25	Diesel	31	1	50%	58%	43%	8	185.0655143	0.0582	1.799911713
Reach 4	roadway, sub	Nov-27	Jun-30	Roller IR SD115D (84")	RL	Diesel	174	1	50%	58%	59%	8	168.2826708	0.0529	12.60480732
Reach 4	walk behind a	Nov-27	Jun-30	Wacker RT820 (32")	WAC	Diesel	18	1	25%	58%	43%	8	185.0655143	0.0582	0.522555013
Reach 4	Misc. support	Nov-27	Jun-30	Baker Tank 20,000 G	ACCOUNTED I	0	0	1	100%	58%	0%	8	0	0.0000	0
Reach 4	Misc. support	Nov-27	Jun-30	10 Wheel Dump Truck	ACCOUNTED I	0	200-360	4	75%	58%	0%	8	0	0.0000	0
Reach 4	Misc. support	Nov-27	Jun-30	Flat Bed - 30,000 LB	ACCOUNTED I	0	0	2	50%	58%	0%	8	0	0.0000	0
Reach 4	deliveries lan	Nov-27	Jun-30	Boom Truck 16000 LB Lift	ACCOUNTED I	0	405-510	1	10%	58%	0%	8	0	0.0000	0
Reach 4	all duration for equipment moves /	Nov-27	Jun-30	Tractor w/High Flat 20T	ACCOUNTED I	0	330-560	1	20%	58%	0%	8	0	0.0000	0
Reach 4	all duration fo	Nov-27	Jun-30	Low Bed w/Tractor 50T	ACCOUNTED I	0	330-560	1	20%	58%	0%	8	0	0.0000	0
Reach 4	0	Jan-00	Jan-00	Tractor w/Attenuator	ACCOUNTED I	0	300	0	0%	58%	0%	8	0	0.0000	0
Reach 4	utility work, e	Nov-27	Jun-30	Vacuum Truck 9CY	ACCOUNTED I	0	400-500	1	25%	58%	0%	8	0	0.0000	0
Reach 4	Misc. support	Nov-27	Jun-30	Pick up 4x4	ACCOUNTED I	0	325	2	100%	58%	0%	8	0	0.0000	0
Reach 4	Misc. support	Nov-27	Jun-30	Pick up w/Arrow Board	OBT	Gas	325	1	100%	58%	59%	8	168.2825802	0.0529	47.08689854
Reach 4	Misc. support	Nov-27	Jun-30	Mechanics Truck 1T	ACCOUNTED I	0	335	1	100%	58%	0%	8	0	0.0000	0
Reach 4	Misc. support	Nov-27	Jun-30	Mobil Sweeper 4CY	ACCOUNTED I	0	215	1	100%	58%	0%	8	0	0.0000	0
Reach 4	Misc. support	Nov-27	Jun-30	Welders Truck	ACCOUNTED I	0	335	1	50%	58%	0%	8	0	0.0000	0
Reach 4	Misc. support	Nov-27	Jun-30	Van	ACCOUNTED I	0	275-310	1	100%	58%	0%	8	0	0.0000	0
Reach 4	Misc. support	Nov-27	Jun-30	Foreman Pick up	ACCOUNTED I	0	325	5	100%	58%	0%	8	0	0.0000	0
Reach 4	Misc. support	Nov-27	Jun-30	Welders 300 AMP Big 40	WEL	Diesel	27	2	50%	58%	21%	8	218.1776463	0.0686	1.805173136

West Battery Park Resiliency

GHG Emission Calculations
Equipment Fuel Consumption

Sample Calculation:
Equipment Emissions: BSFC Factor (gal/hp-hr) * Size (hp) * Quantity * Daily Usage Factor * hr/day

Reach	Task	Start Date	End Date	Equipment	Lookup Code	Engine type	Size (hp)	Qty	Daily use	Average Use	Load	# of Work Hours	BSFC Factor (g/hp-hr)	BSFC Factor (gal/hp-hr)	Short-Term BSFC Factor (gal/day)
West Battery Park Resiliency															
5															
Reach 5	test pits / excavation for 2nd utility	Feb-26	Feb-29	Air Compressor - 185 CFM	AC50	Diesel	49	1	20%	58%	43%	8	185.0656409	0.0582	1.138009474
Reach 5	mini piles	Feb-26	Feb-29	Air Compressor - 1600 CFM	AC600	Diesel	540	1	75%	58%	43%	8	166.468302	0.0524	42.30391681
Reach 5	wall finishes	Aug-27	Sep-30	Sandblasting Machine		Air	150	1	50%	58%	0%	8	0	0.0000	0
Reach 5	park drainage	Aug-27	Sep-30	Bulldozer D3K2 17k XL Series III	BD	Diesel	104	1	50%	58%	59%	8	168.2825459	0.0529	7.533902228
Reach 5	landscape	Aug-27	Sep-30	CAT 304	EX40	Diesel	40.2	1	75%	58%	59%	8	186.8798187	0.0588	4.850955416
Reach 5	landscape / sn	Aug-27	Sep-30	CAT 311	EX75	Diesel	70	1	5%	58%	59%	8	186.8800258	0.0588	0.563129777
Reach 5	landscape / sn	Aug-27	Sep-30	CAT 315	EX175	Diesel	139	1	10%	58%	59%	8	168.2826317	0.0529	2.013871046
Reach 5	load/unload	Feb-26	Sep-30	CAT 318	EX175	Diesel	169	1	50%	58%	59%	8	168.28261	0.0529	12.24259579
Reach 5	trench - total	Feb-26	Sep-30	CAT 320	EX175	Diesel	169	1	75%	58%	59%	8	168.28261	0.0529	18.36389368
Reach 5	0	Jan-00	Jan-00	CAT 330	EX300	Diesel	235	0	0%	58%	59%	8	#VALUE!	#VALUE!	#VALUE!
Reach 5	deep trench -	Feb-26	Sep-30	CAT 349	EX600	Diesel	432	1	40%	58%	59%	8	168.2825502	0.0529	25.03573727
Reach 5	rubber tire ba	Feb-26	Sep-30	Loader - 1.5 CY 450E-WHEEL	L	Diesel	124	1	75%	58%	21%	8	196.4052674	0.0618	5.597330165
Reach 5	landscape	Aug-27	Sep-30	CAT 272C (272D Skidsteer)	SS75	Diesel	72.9	1	75%	58%	21%	8	218.177689	0.0686	3.655476317
Reach 5	concrete/land	Feb-26	Feb-29	Concrete Buggie - 23 CFT	D	Diesel	18	1	75%	58%	21%	8	218.1776486	0.0686	0.902586578
Reach 5	seepage / min	Feb-26	Feb-29	Concrete Pump Trailer Mounted - 50	CP	Diesel	400	1	50%	58%	59%	8	168.2825729	0.0529	28.97655169
Reach 5	hardscape	Aug-27	Sep-30	Concrete Mixer - 16 CF	CM	Gas	13	1	50%	58%	59%	8	333.3909305	0.1190	2.117835565
Reach 5	drilled elemen	Feb-26	Feb-29	Concrete Pump Boom - 92' Putzmeist	CP	Diesel	395	1	20%	58%	59%	8	168.2825729	0.0529	11.44573792
Reach 5	platform repl	Feb-26	Feb-29	Concrete Pump Boom - 118' Putzmei	CP	Diesel	485	1	20%	58%	59%	10	168.2825729	0.0529	17.56703446
Reach 5	0	Jan-00	Jan-00	Concrete Pump Boom - 136' Putzmei	CP	Diesel	485	0	0%	58%	59%	8	#VALUE!	#VALUE!	#VALUE!
Reach 5	rebar / landsc	Feb-26	Feb-29	Crane 18 Ton - Tadano 150XL	C175	Diesel	172	1	50%	58%	43%	10	166.4682844	0.0524	11.22881624
Reach 5	drainage stru	Feb-26	Sep-30	Crane 35 Ton - Tadano 350XL	C300	Diesel	235	1	75%	58%	43%	8	166.4682241	0.0524	18.41002926
Reach 5	drilled shaft cages / demo	Feb-26	Feb-29	Crane 100 Ton - Grove TM9100	C600	Diesel	400	1	75%	58%	43%	10	166.4682941	0.0524	39.17029149
Reach 5	drilled shaft cages / demo	Feb-26	Feb-29	Crawler Crane 100T - Liebherr HS855	C750	Diesel	603	1	50%	58%	43%	10	166.4682771	0.0524	39.36613891
Reach 5	drilled shaft cages / demo	Feb-26	Feb-29	Crawler Crane 300T - LR1300	C750	Diesel	603	1	50%	58%	43%	10	166.4682771	0.0524	39.36613891
Reach 5	Misc. tools	Feb-26	Sep-30	Concrete Saw (65 HP) - 15" Cut Targe	CS	Diesel	47	1	5%	58%	59%	8	186.879875	0.0588	0.378101116
Reach 5	mini piles / se	Feb-26	Feb-29	Bauer BG28/Comacchio MC15P	DR	Diesel	420	1	75%	58%	43%	8	166.4682782	0.0524	32.9030417
Reach 5	drilled shafts	Feb-26	Feb-29	Bauer BG40	DR	Diesel	580	2	75%	58%	43%	8	166.4682782	0.0524	90.87506754
Reach 5	all demo. curb	Feb-26	Feb-29	CAT320 Hoe Ram w/ 4500FLB Hamm	EX175	Diesel	169	1	20%	58%	59%	8	168.28261	0.0529	4.897038315
Reach 5	platform dem	Feb-26	Feb-29	CAT 345 Hoe Ram w/ VS6	EX600	Diesel	345	1	33%	58%	59%	10	168.2825502	0.0529	20.61862477
Reach 5	pavement der	Feb-26	Feb-29	Jack Hammer/Pavement breaker	POWERED BY	0	0	1	10%	58%	0%	8	0	0.0000	0
Reach 5	minor demo. l	Aug-27	Sep-30	Bobcat 272C Hoe Ram	SS100	Diesel	94	1	50%	58%	21%	8	218.1776324	0.0686	3.142338223
Reach 5	goes with 125	Feb-26	Feb-29	Diamond wire sawcut		Electric	0	1	50%	58%	0%	10	0	0.0000	0
Reach 5	landscape	Aug-27	Sep-30	Forklift 4000	FK75	Propane	62	1	50%	58%	30%	8	184.1585023	0.0988	4.262691397
Reach 5	landscape	Aug-27	Sep-30	Forklift 8000	FK100	Propane	97	1	50%	58%	30%	8	184.1583006	0.0988	6.669042141
Reach 5	Misc. support	Feb-26	Sep-30	Generator 60 KW	GE175	Diesel	102	1	100%	58%	43%	8	166.4682643	0.0524	10.65431738
Reach 5	Misc. support	Feb-26	Sep-30	Generator 125 KW	GE300	Diesel	215	1	100%	58%	43%	8	166.4683141	0.0524	22.45763647
Reach 5	Misc. support	Feb-26	Sep-30	Loader - WHEEL 950H 4CY Bucket	L	Diesel	202	1	30%	20%	21%	8	196.4052674	0.0618	1.257687089
Reach 5	walls	Aug-27	Sep-30	Genie S-40 (4x4) w/ Oscillator	AL	Diesel	48	1	30%	58%	21%	8	218.177914	0.0686	0.962760188
Reach 5	walls	Aug-27	Sep-30	Genie S-60 (4x4)	AL	Diesel	48	2	50%	58%	21%	8	218.177914	0.0686	3.209200625
Reach 5	platform repl	Feb-26	Feb-29	Car Float - 362x42x11	TOWED BY TU	0	0	2	50%	58%	0%	10	0	0.0000	0
Reach 5	platform dem	Feb-26	Feb-29	Tug Inland 40'	ACCOUNTED I	Diesel	800	1	5%	58%	80%	10	0	0.0000	0
Reach 5	Misc. support	Feb-26	Sep-30	Pressure Washer 5000 PSI	PW	Gas	24	1	50%	58%	85%	8	333.3922597	0.1190	5.632857597
Reach 5	utility, draina	Feb-26	Feb-29	Arrow Board		Battery/Sola	50/110	2	50%	58%	#N/A	8	0	0.0000	0
Reach 5	0	Jan-00	Jan-00	Attenuator - Vehicle Mounted		Battery/Sola	115/230	0	0%	58%	#N/A	8	0	0.0000	0
Reach 5	steel sheets, s	Feb-26	Feb-29	Vibratory Hammer 100T	GE600	Diesel	350	1	50%	58%	43%	8	166.4681293	0.0524	18.27945126
Reach 5	0	Jan-00	Jan-00	CAT 345 w/ ICE 216 w/ Power Pack	GE175	Diesel / Dies	345	0	0%	58%	43%	8	#VALUE!	#VALUE!	#VALUE!
Reach 5	Misc. support	Feb-26	Sep-30	Pump - 3" Submersible		Electric	8.5	4	100%	58%	0%	8	0	0.0000	0
Reach 5	Misc. support	Feb-26	Sep-30	Pump - 4" Trash 18,000 GPH	GP	Gas	22	1	100%	58%	69%	8	333.3898343	0.1190	8.382956498
Reach 5	Misc. support	Feb-26	Sep-30	Pump - 6" Trash 33,000 GPH	DP	Diesel	24	1	100%	58%	43%	8	185.0653986	0.0582	2.786958326
Reach 5	mini roller, utilities, backfill, all	Feb-26	Sep-30	CAT CB-224D (47")	CO25	Diesel	31	1	50%	58%	43%	8	185.065733	0.0582	1.79991383
Reach 5	roadway, sub	Feb-26	Sep-30	Roller IR SD115D (84")	RI	Diesel	174	1	50%	58%	59%	8	168.2826099	0.0529	12.60480275
Reach 5	walk behind a	Feb-26	Sep-30	Wacker BT820 (32")	WAC	Diesel	18	1	25%	58%	43%	8	185.065733	0.0582	0.522555628
Reach 5	Misc. support	Feb-26	Sep-30	Baker Tank 20,000 G	ACCOUNTED I	0	0	1	100%	58%	0%	8	0	0.0000	0
Reach 5	Misc. support	Feb-26	Sep-30	10 Wheel Dump Truck	ACCOUNTED I	0	200-360	4	75%	58%	0%	8	0	0.0000	0
Reach 5	Misc. support	Feb-26	Sep-30	Flat Bed - 30,000 LB	ACCOUNTED I	0	0	2	50%	58%	0%	8	0	0.0000	0
Reach 5	deliveries land	Feb-26	Sep-30	Boom Truck 16000 LB Lift	ACCOUNTED I	0	405-510	1	10%	58%	0%	8	0	0.0000	0
Reach 5	all duration for equipment moves	Feb-26	Sep-30	Tractor w/High Flat 20T	ACCOUNTED I	0	330-560	1	20%	58%	0%	8	0	0.0000	0
Reach 5	all duration fo	Feb-26	Sep-30	Low Bed w/Tractor 50T	ACCOUNTED I	0	330-560	1	20%	58%	0%	8	0	0.0000	0
Reach 5	0	Jan-00	Jan-00	Tractor w/Attenuator	ACCOUNTED I	0	300	0	0%	58%	0%	8	0	0.0000	0
Reach 5	utility work, e	Feb-26	Sep-30	Vacuum Truck 9CY	ACCOUNTED I	0	400-500	1	25%	58%	0%	8	0	0.0000	0
Reach 5	Misc. support	Feb-26	Sep-30	Pick up 4x4	ACCOUNTED I	0	325	2	100%	58%	0%	8	0	0.0000	0
Reach 5	Misc. support	Feb-26	Sep-30	Pick up w/Arrow Board	ORT	Gas	325	1	50%	58%	59%	8	168.2827325	0.0529	23.54342057
Reach 5	Misc. support	Feb-26	Sep-30	Mechanics Truck 1T	ACCOUNTED I	0	335	1	100%	58%	0%	8	0	0.0000	0
Reach 5	Misc. support	Feb-26	Sep-30	Mobil Sweeper 4CY	ACCOUNTED I	0	215	1	100%	58%	0%	8	0	0.0000	0
Reach 5	Misc. support	Feb-26	Sep-30	Welders Truck	ACCOUNTED I	0	335	1	50%	58%	0%	8	0	0.0000	0
Reach 5	Misc. support	Feb-26	Sep-30	Van	ACCOUNTED I	0	275-310	1	100%	58%	0%	8	0	0.0000	0
Reach 5	Misc. support	Feb-26	Sep-30	Foreman Pick up	ACCOUNTED I	0	325	5	100%	58%	0%	8	0	0.0000	0
Reach 5	Misc. support	Feb-26	Sep-30	Welders 300 AMP Big 40	WEL	Diesel	27	2	50%	58%	21%	8	218.1778009	0.0686	1.805174416
6															
Reach 6	test pits / excavation for 2nd utility	Jan-27	May-29	Air Compressor - 185 CFM	AC50	Diesel	49	1	20%	58%	43%	8	185.0655383	0.0582	1.138008844
Reach 6	mini piles	Jan-27	May-29	Air Compressor - 1600 CFM	AC600	Diesel	540	1	75%	58%	43%	8	166.4682957	0.0524	42.3039152
Reach 6	wall finishes	Mar-28	Jul-30	Sandblasting Machine		Air	150	1	50%	58%	0%	8	0	0.0000	0
Reach 6	park drainage	Mar-28	Jul-30	Bulldozer D3K2 17k XL Series III	BD	Diesel	104	1	50%	58%	59%	8	168.2825855	0.0529	7.533904
Reach 6	landscape	Mar-28	Jul-30	CAT 304	EX40	Diesel	40.2	1	75%	58%	59%	8	186.8799268	0.0588	4.85095821
Reach 6	landscape / sn	Mar-28	Jul-30	CAT 311	EX75	Diesel	70	1	5%	58%	59%	8	186.8796964	0.0588	0.563128784
Reach 6	landscape / sn	Mar-28	Jul-30	CAT 315	EX175	Diesel	139	1	10%	58%	59%	8	168.2826192	0.0529	2.013870896
Reach 6	load/unload	Jan-27	Jul-30	CAT 318	EX175	Diesel	169	1	50%	58%	59%	8	168.2826317	0.0529	12.24259736
Reach 6	trench - total	Jan-27	Jul-30	CAT 320	EX175	Diesel	169	1	75%	58%	59%	8	168.2826317	0.0529	18.36389605
Reach 6	0	Jan-00	Jan-00	CAT 330	EX300	Diesel	235	0	0%	58%	59%	8	#VALUE!	#VALUE!	#VALUE!
Reach 6	deep trench -	Jan-27	May-29	CAT 349	EX600	Diesel	432	1	40%	58%	59%	8	168.2825859	0.0529	25.0357426
Reach 6	rubber tire ba	Jan-27	Jul-30	Loader - 1.5 CY 450E-WHEEL	L	Diesel	124	1	75%	58%	21%	8	196.4052551	0.0618	5.597329815
Reach 6	landscape	Mar-28	Jul-30	CAT 272C (272D Skidsteer)	SS75	Diesel	72.9	1	75%	58%	21%	8	218.1777096	0.0686	3.655476662
Reach 6	concrete/land	Jan-27	May-29	Concrete Buggie - 23 CFT	D	Diesel	18	1	75%	58%	21%	8	218.177541	0.0686	0.902586133
Reach 6	seepage / min	Jan-27	May-29	Concrete Pump Trailer Mounted - 50	CP	Diesel	400	1	50%	58%	59%	8	168.2826496	0.0529	28.9765649
Reach 6	hardscape	Mar-28	Jul-30	Concrete Mixer - 16 CF	CM	Gas	13	1	50%	58%	59%	8	333.3900408	0.1190	2.117829913
Reach 6	drilled elemen	Jan-27	May-29	Concrete Pump Boom - 92' Putzmeist	CP	Diesel	395	1	20%	58%	59%	8	168.2826496	0.0529	11.44574313
Reach 6	platform repl	Jan-27	May-29	Concrete Pump Boom - 118' Putzmei	CP	Diesel	485	1	20%	58%	59%	10	168.2826496	0.0529	17.56704247
Reach 6	0	Jan-00	Jan-00	Concrete Pump Boom - 136' Putzmei	CP	Diesel	485	0	0%	58%	59%	8	#VALUE!	#VALUE!	#VALUE!
Reach 6	rebar / landsc	Jan-27	May-29	Crane 18 Ton - Tadano 150XL	C175	Diesel	172	1	50%	58%	43%	10	166.4682912	0.0524	11.2288167
Reach 6	drainage stru	Jan-27	Jul-30	Crane 35 Ton - Tadano 350XL	C300	Diesel	235	1	75%	58%	43%	8	166.4682764	0.0524	18.41003504
Reach 6	drilled shaft cages / demo	Jan-27	May-29	Crane 100 Ton - Grove TM9100	C600	Diesel	400	1	75%	58%	43%	10	166.4683096	0.0524	39.17029511
Reach 6	drilled shaft cages / demo	Jan-27	May-29	Crawler Crane 100T - Liebherr HS855	C750	Diesel	603	1	50%	58%	43%	10	166.4682291	0.0524	39.36612756
Reach 6	drilled shaft cages / demo	Jan-27	May-29	Crawler Crane 300T - LR1300	C750	Diesel	603	1	50%	58%	43%	10	166.4682291	0.0524	39.36612756
Reach 6	Misc. tools	Jan-27	Jul-30	Concrete Saw (65 HP) - 15" Cut Targe	CS	Diesel	47	1	5%	58%	59%	8	186.8798415	0.0588	0.378101049
Reach 6	mini piles / se	Jan-27	May-29	Bauer BG28/Comacchio MC15P	DR	Diesel	420	1	75%	58%	43%	8	166.4682303	0.0524	32.90303223
Reach 6	drilled shafts	Jan-27	May-29	Bauer BG40	DR	Diesel	580	2	75%	58%	43%	8	166.4682303	0.0524	90.8750414
Reach 6	all demo. curb	Jan-27	May-29	CAT320 Hoe Ram w/ 4500FLB Hamm	EX175	Diesel	169	1	20%	58%	59%	8	168.2826317	0.0529	4.897038946
Reach 6	platform dem	Feb-26	May-29	CAT 345 Hoe Ram w/ VS6	EX600	Diesel	345	1	33%	58%	59%	10	168.2825502	0.0529	20.61862477
Reach 6	pavement der	Jan-27	May-29	Jack Hammer/Pavement breaker	POWERED BY	0	0	1	10%	58%	0%	8	0	0.0000	0
Reach 6	minor demo. l	Mar-28	Jul-30	Bobcat 272C Hoe Ram	SS100	Diesel	94	1	50%	58%	21%	8	218.1776756	0.0686	3.142338845
Reach 6	goes with 125	Jan-27	May-29	Diamond wire sawcut		Electric	0	1	50%	58%	0%	10	0	0.0000	0
Reach 6	landscape	Mar-28	Jul-30	Forklift 4000	FK75	Propane	62	1	50%	58%	30%	8	184.1582619	0.0988	4.262685832
Reach 6	landscape	Mar-28	Jul-30	Forklift 8000	FK100	Propane	97	1	50%	58%	30%	8	184.1583726	0.0988	6.669043117
Reach 6	Misc. support	Jan-27	Jul-30	Generator 60 KW	GE175	Diesel	102	1	100%	58%	43%	8	166.4682327	0.0524	10.65431535
Reach 6	Misc. support	Jan-27	Jul-30	Generator 125 KW	GE300	Diesel	215	1	100%	20%	43%	8	166.4683488	0.0524	7.744014194
Reach 6	Misc. support	Jan-27	Jul-30	Loader - WHEEL 950H 4CY Bucket	L	Diesel	202	1	30%	58%	21%	8	196.4052551	0.0618	3.647292331
Reach 6	walls	Mar-28	Jul-30	Genie S-40 (4x4) w/ Oscillator	AL	Diesel	48	1	30%	58%	21%	8	218.1776058	0.0686	0.962758827
Reach 6	walls	Mar-28	Jul-30	Genie S-60 (4x4)	AL	Diesel	48	2	50%	58%	21%	8	218.1776058	0.0686	3.209196091
Reach 6	platform repl	Jan-27	May-29	Car Float - 362x42x11	TOWED BY TU	0	0	2	50%	58%	0%	10	0	0.0000	0
Reach 6	platform dem	Jan-27	May-29	Tug Inland 40'	ACCOUNTED I	Diesel	800	1	5%	58%	80%	10	0	0.0000	0
Reach 6	Misc. support	Jan-27	Jul-30	Pressure Washer 5000 PSI	PW	Gas	24	1	50%	58%	85%	8	333.3907293	0.1190	5.632832586
Reach 6	utility, draina	Jan-27	May-29	Arrow Board		Battery/Sola	50/110	2	50%	58%	#N/A	8	0	0.0000	0
Reach 6	0	Jan-00	Jan-00	Attenuator - Vehicle Mounted		Battery/Sola	115/230	0	0%	58%	#N/A	8	0	0.0000	0
Reach 6	steel sheets, s	Jan-27	May-29	Vibratory Hammer 100T	GE600	Diesel	350	1	50%	58%	43%	8	166.4682658	0.0524	18.27946625
Reach 6	0	Jan-00	Jan-00	CAT 345 w/ ICE 216 w/ Power Pack	GE175	Diesel / Dies	345	0	0%	58%	43%	8	#VALUE!	#VALUE!	#VALUE!
Reach 6	Misc. support	Jan-27	Jul-30	Pump - 3" Submersible		Electric	8.5	4	100%	58%	0%	8	0	0.0000	0
Reach 6	Misc. support	Jan-27	Jul-30	Pump - 4" Trash 18,000 GPH	GP	Gas	22	1	100%	58%	69%	8	333.3900685	0.1190	8.382962388
Reach 6	Misc. support	Jan-27	Jul-30	Pump - 6" Trash 33,000 GPH	DP	Diesel	24	1	100%	58%	43%	8	185.0654491	0.0582	2.786959089
Reach 6	mini roller, utilities, backfill, all	Jan-27	Jul-30	CAT CB-224D (47")	CO25	Diesel	31	1	50%	58%	43%	8	185.0655143	0.0582	1.799911713
Reach 6	roadway, sub	Jan-27	Jul-30	Roller IR SD115D (84")	RI	Diesel	174	1	50%	58%	59%	8	168.2826708	0.0529	12.60480732
Reach 6	walk behind a	Jan-27	Jul-30	Wacker BT820 (32")	WAC	Diesel	18	1	25%	58%	43%	8	185.0655143	0.0582	0.522555013
Reach 6	Misc. support	Jan-27	Jul-30	Baker Tank 20,000 G	ACCOUNTED I	0	0	1	100%	58%	0%	8	0	0.0000	0
Reach 6	Misc. support	Jan-27	Jul-30	10 Wheel Dump Truck	ACCOUNTED I	0	200-360	4	75%	58%	0%	8	0	0.0000	0
Reach 6	Misc. support	Jan-27	Jul-30	Flat Bed - 30,000 LB	ACCOUNTED I	0	0	2	50%	58%	0%	8	0	0.0000	0
Reach 6	deliveries land	Jan-27	Jul-30	Boom Truck 16000 LB Lift	ACCOUNTED I	0	405-510	1	10%	58%	0%	8	0	0.0000	0
Reach 6	all duration for equipment moves	Jan-27	Jul-30	Tractor w/High Flat 20T	ACCOUNTED I	0	330-560	1	20%	58%	0%	8	0	0.0000	0
Reach 6	all duration fo	Jan-27	Jul-30	Low Bed w/Tractor 50T	ACCOUNTED I	0	330-560	1	20%	58%	0%	8	0	0.0000	0
Reach 6	0	Jan-00	Jan-00	Tractor w/Attenuator	ACCOUNTED I	0	300	0	0%	58%	0%	8	0	0.0000	0
Reach 6	utility work, e	Jan-27	Jul-30	Vacuum Truck 9CY	ACCOUNTED I	0	400-500	1	25%	58%	0%	8	0	0.0000	0
Reach 6	Misc. support	Jan-27	Jul-30	Pick up 4x4	ACCOUNTED I	0	325	2	100%	58%	0%	8	0	0.0000	0
Reach 6	Misc. support	Jan-27	Jul-30	Pick up w/Arrow Board	ORT	Gas	325	1	50%	58%	59%	8	168.2825802	0.0529	23.54344927
Reach 6	Misc. support	Jan-27	Jul-30	Mechanics Truck 1T	ACCOUNTED I	0	335	1	100%	58%	0%	8	0	0.0000	0
Reach 6	Misc. support	Jan-27	Jul-30	Mobil Sweeper 4CY	ACCOUNTED I	0	215	1	100%	58%	0%	8	0	0.0000	0
Reach 6	Misc. support	Jan-27	Jul-30	Welders Truck	ACCOUNTED I	0	335	1	50%	58%	0%	8	0	0.0000	0
Reach 6	Misc. support	Jan-27	Jul-30	Van	ACCOUNTED I	0	275-310	1	100%	58%	0%	8	0	0.0000	0
Reach 6	Misc. support	Jan-27	Jul-30	Foreman Pick up	ACCOUNTED I	0	325	5	100%	58%	0%	8	0	0.0000	0
Reach 6	Misc. support	Jan-27	Jul-30	Welders 300 AMP Big 40	WEL	Diesel	27	2	50%	58%	21%	8	218.1776463	0.0686	1.805173336
7															

West Battery Park Resiliency

GHG Emission Calculations

Equipment Fuel Consumption

Sample Calculation:

Equipment Emissions: BSFC Factor (gal/hp-hr) * Size (hp) * Quantity * Daily Usage Factor * hr/day

Reach	Task	Start Date	End Date	Equipment	Lookup Code	Engine type	Size (hp)	Qty	Daily use	Average Use	Load	# of Work Hours	BSFC Factor (g/hp-hr)	BSFC Factor (gal/hp-hr)	Short-Term BSFC Factor (gal/day)
West Battery Park Resiliency															
Reach 7	test pits / excavation and utils	Feb-26	Jun-27	Air Compressor - 185 CFM	AC50	Diesel	49	1	20%	58%	43%	8	185.0656409	0.0582	1.138009474
Reach 7	mini piles	Feb-26	Jun-27	Air Compressor - 1600 CFM	AC600	Diesel	540	1	75%	58%	43%	8	166.468302	0.0524	42.30391681
Reach 7	wall finishes	Oct-26	Mar-28	Sandblasting Machine		Air	150	1	50%	58%	0%	8	0	0.0000	0
Reach 7	park drainage	Oct-26	Mar-28	Bulldozer D3K2 17k XL Series III	BD	Diesel	104	1	50%	58%	59%	8	168.2825937	0.0529	7.533904368
Reach 7	landscape	Oct-26	Mar-28	CAT 304	EX40	Diesel	40.2	1	75%	58%	59%	8	186.8798332	0.0588	4.850955792
Reach 7	landscape / s	Oct-26	Mar-28	CAT 311	EX75	Diesel	70	1	5%	58%	59%	8	186.8801349	0.0588	0.563130105
Reach 7	landscape / s	Oct-26	Mar-28	CAT 315	EX175	Diesel	139	1	10%	58%	59%	8	168.28261	0.0529	2.013870786
Reach 7	load/unload	Feb-26	Mar-28	CAT 318	EX175	Diesel	169	1	50%	58%	59%	8	168.28261	0.0529	12.24259579
Reach 7	trench - total	Feb-26	Mar-28	CAT 320	EX175	Diesel	169	1	75%	58%	59%	8	168.28261	0.0529	18.36389368
Reach 7	0	Jan-00	Jan-00	CAT 330	EX300	Diesel	235	0	0%	58%	59%	8	#VALUE!	#VALUE!	#VALUE!
Reach 7	deep trench -	Feb-26	Jun-27	CAT 349	EX600	Diesel	432	1	40%	58%	59%	8	168.2825502	0.0529	25.03573727
Reach 7	rubber tire ba	Feb-26	Mar-28	Loader - 1.5 CY 450E-WHEEL	L	Diesel	124	1	75%	58%	21%	8	196.4052674	0.0618	5.597330165
Reach 7	landscape	Oct-26	Mar-28	CAT 272C (279D, Skidsteer)	SS75	Diesel	72.9	1	75%	58%	21%	8	218.177608	0.0686	3.65547496
Reach 7	concrete/land	Feb-26	Jun-27	Concrete Buggie - 23 CFT	D	Diesel	18	1	75%	58%	21%	8	218.1776486	0.0686	0.902586578
Reach 7	seepage / min	Feb-26	Jun-27	Concrete Pump Trailer Mounted - 50	CP	Diesel	400	1	50%	58%	59%	8	168.2825729	0.0529	28.97655169
Reach 7	hardscape	Oct-26	Mar-28	Concrete Mixer - 16 CF	CM	Gas	13	1	50%	58%	59%	8	333.3920278	0.1190	2.117842535
Reach 7	drilled elemer	Feb-26	Jun-27	Concrete Pump Boom - 92' Putzmeist	CP	Diesel	395	1	20%	58%	59%	8	168.2825729	0.0529	11.44573792
Reach 7	platform repla	Feb-26	Jun-27	Concrete Pump Boom - 118' Putzmei	CP	Diesel	485	1	20%	58%	59%	8	168.2825729	0.0529	14.05362757
Reach 7	0	Jan-00	Jan-00	Concrete Pump Boom - 136' Putzmei	CP	Diesel	485	0	0%	58%	59%	8	#VALUE!	#VALUE!	#VALUE!
Reach 7	rebar / landsc	Feb-26	Jun-27	Crane 18 Ton - Tadano 150XL	C175	Diesel	172	1	50%	58%	43%	8	166.4682844	0.0524	8.983052992
Reach 7	drainage struc	Feb-26	Mar-28	Crane 35 Ton - Tadano 350XL	C300	Diesel	235	1	75%	58%	43%	8	166.4682241	0.0524	18.41002926
Reach 7	drilled shaft cages / demo platforms	Feb-26	Jun-27	Crane 100 Ton - Grove TM9100	C600	Diesel	400	1	75%	58%	43%	8	166.4682941	0.0524	31.33623319
Reach 7	drilled shaft cages / demo platforms	Feb-26	Jun-27	Crawler Crane 100T - Liebherr HS855	C750	Diesel	603	1	50%	58%	43%	8	166.4682771	0.0524	31.49291113
Reach 7	drilled shaft cages / demo platforms	Feb-26	Jun-27	Crawler Crane 300T - LR1300	C750	Diesel	603	1	50%	58%	43%	8	166.4682771	0.0524	31.49291113
Reach 7	Misc. tools	Feb-26	Mar-28	Concrete Saw (65 HP) - 15" Cut Targe	CS	Diesel	47	1	5%	58%	59%	8	186.879875	0.0588	0.378101116
Reach 7	mini piles / sec	Feb-26	Jun-27	Bauer BG28/Comacchio MC15P	DR	Diesel	420	1	75%	58%	43%	8	166.4682782	0.0524	32.9030417
Reach 7	drilled shafts	Feb-26	Jun-27	Bauer BG40	DR	Diesel	580	2	75%	58%	43%	8	166.4682782	0.0524	90.87506754
Reach 7	all demo. curt	Feb-26	Jun-27	CAT320 Hoe Ram w/ 4500FLB Hamm	EX175	Diesel	169	1	20%	58%	59%	8	168.28261	0.0529	4.897038315
Reach 7	platform dem	Feb-26	Jun-27	CAT 345 Hoe Ram w/ V56	EX600	Diesel	345	1	33%	58%	59%	8	168.2825502	0.0529	16.49489982
Reach 7	pavement der	Feb-26	Jun-27	Jack Hammer/Pavement breaker	POWERED BY	0	0	1	10%	58%	0%	8	0	0.0000	0
Reach 7	minor demo. l	Oct-26	Mar-28	Bobcat 272C Hoe Ram	SS100	Diesel	94	1	50%	58%	21%	8	218.1777726	0.0686	3.142340243
Reach 7	goes with 125	Feb-26	Jun-27	Diamond wire sawcut		Electric	0	1	50%	58%	0%	8	0	0.0000	0
Reach 7	landscape	Oct-26	Mar-28	Forklift 4000	FK75	Propane	62	1	50%	58%	30%	8	184.1582999	0.0988	4.262686712
Reach 7	landscape	Oct-26	Mar-28	Forklift 8000	FK100	Propane	97	1	50%	58%	30%	8	184.1582096	0.0988	6.669038843
Reach 7	Misc. support	Feb-26	Mar-28	Generator 60 KW	GE175	Diesel	102	1	100%	20%	43%	8	166.4682643	0.0524	3.673902543
Reach 7	Misc. support	Feb-26	Mar-28	Generator 125 KW	GE300	Diesel	215	1	100%	58%	43%	8	166.4683141	0.0524	22.45763647
Reach 7	Misc. support	Feb-26	Mar-28	Loader - WHEEL 950H 4CY Bucket	L	Diesel	202	1	30%	58%	21%	8	196.4052674	0.0618	3.647292559
Reach 7	walks	Oct-26	Mar-28	Genie S-40 (4x4) w/ Oscillator	AL	Diesel	48	1	30%	58%	21%	8	218.1776847	0.0686	0.962759176
Reach 7	walks	Oct-26	Mar-28	Genie S-60 (4x4)	AL	Diesel	48	2	50%	58%	21%	8	218.1776847	0.0686	3.209197253
Reach 7	platform repla	Feb-26	Jun-27	Car Float - 362x42x11	TOWED BY TU	0	0	2	50%	58%	0%	8	0	0.0000	0
Reach 7	platform dem	Feb-26	Jun-27	Tug Inland 40'	ACCOUNTED I	Diesel	800	1	5%	58%	80%	8	0	0.0000	0
Reach 7	Misc. support	Feb-26	Mar-28	Pressure Washer 5000 PSI	PW	Gas	24	1	50%	58%	85%	8	333.3922597	0.1190	5.632857597
Reach 7	utility, drainag	Feb-26	Jun-27	Arrow Board		Battery/Sola	50/110	2	50%	58%	#N/A	8	0	0.0000	0
Reach 7	0	Jan-00	Jan-00	Attenuator - Vehicle Mounted		Battery/Sola	115/230	0	0%	58%	#N/A	8	0	0.0000	0
Reach 7	steel sheets, a	Feb-26	Jun-27	Vibratory Hammer 100T	GE600	Diesel	350	1	50%	58%	43%	8	166.4681293	0.0524	18.27945126
Reach 7	0	Jan-00	Jan-00	CAT 345 w/ ICE 216 w/ Power Pack	GE175	Diesel / Dies	345	0	0%	58%	43%	8	#VALUE!	#VALUE!	#VALUE!
Reach 7	Misc. support	Feb-26	Mar-28	Pump - 3" Submersible		Electric	8.5	4	100%	58%	0%	8	0	0.0000	0
Reach 7	Misc. support	Feb-26	Mar-28	Pump - 4" Trash 18,000 GPH	GP	Gas	22	1	100%	58%	69%	8	333.3898343	0.1190	8.382956498
Reach 7	Misc. support	Feb-26	Mar-28	Pump - 6" Trash 33,000 GPH	DP	Diesel	24	1	100%	58%	43%	8	185.0653986	0.0582	2.786958328
Reach 7	mini roller, utilities, backfill, all	Feb-26	Mar-28	CAT CB-224D (47")	CO25	Diesel	31	1	50%	58%	43%	8	185.065732	0.0582	1.79991383
Reach 7	roadway, subt	Feb-26	Mar-28	Roller IR SD115D (84")	RL	Diesel	174	1	50%	58%	59%	8	168.2826099	0.0529	12.60480275
Reach 7	walk behind a	Feb-26	Mar-28	Wacker RT820 (32")	WAC	Diesel	18	1	25%	58%	43%	8	185.065732	0.0582	0.522555628
Reach 7	Misc. support	Feb-26	Mar-28	Baker Tank 20,000 G	ACCOUNTED F	0	0	1	100%	58%	0%	8	0	0.0000	0
Reach 7	Misc. support	Feb-26	Mar-28	10 Wheel Dump Truck	ACCOUNTED F	0	200-360	4	75%	58%	0%	8	0	0.0000	0
Reach 7	Misc. support	Feb-26	Mar-28	Flat Bed - 30,000 LB	ACCOUNTED F	0	0	2	50%	58%	0%	8	0	0.0000	0
Reach 7	deliveries lane	Feb-26	Mar-28	Boom Truck 16000 LB Lift	ACCOUNTED F	0	405-510	1	10%	58%	0%	8	0	0.0000	0
Reach 7	all duration for equipment moves	Feb-26	Mar-28	Tractor w/High Flat 20T	ACCOUNTED F	0	330-560	1	20%	58%	0%	8	0	0.0000	0
Reach 7	all duration fo	Feb-26	Mar-28	Low Bed w/Tractor 50T	ACCOUNTED F	0	330-560	1	20%	58%	0%	8	0	0.0000	0
Reach 7	0	Jan-00	Jan-00	Tractor w/Attenuator	ACCOUNTED F	0	300	0	0%	58%	0%	8	0	0.0000	0
Reach 7	utility work, e	Feb-26	Mar-28	Vacuum Truck 9CY	ACCOUNTED F	0	400-500	1	25%	58%	0%	8	0	0.0000	0
Reach 7	Misc. support	Feb-26	Mar-28	Pick up 4x4	ACCOUNTED F	0	325	2	100%	58%	0%	8	0	0.0000	0
Reach 7	Misc. support	Feb-26	Mar-28	Pick up w/Arrow Board	OBT	Gas	325	1	50%	58%	59%	8	168.2827325	0.0529	23.54347057
Reach 7	Misc. support	Feb-26	Mar-28	Mechanics Truck 1T	ACCOUNTED F	0	335	1	100%	58%	0%	8	0	0.0000	0
Reach 7	Misc. support	Feb-26	Mar-28	Mobil Sweeper 4CY	ACCOUNTED F	0	215	1	100%	58%	0%	8	0	0.0000	0
Reach 7	Misc. support	Feb-26	Mar-28	Welders Truck	ACCOUNTED F	0	335	1	50%	58%	0%	8	0	0.0000	0
Reach 7	Misc. support	Feb-26	Mar-28	Van	ACCOUNTED F	0	275-310	1	100%	58%	0%	8	0	0.0000	0
Reach 7	Misc. support	Feb-26	Mar-28	Foreman Pick up	ACCOUNTED F	0	325	5	100%	58%	0%	8	0	0.0000	0
Reach 7	Misc. support	Feb-26	Mar-28	Welders 300 AMP Big 40	WEL	Diesel	27	2	50%	58%	21%	8	218.1778009	0.0686	1.805174416
Pump Station															

2024

Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24

2025

Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25

2026

Equipment	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26
Air Compressor - 185 CFM		1.138009	1.138009	1.138009	1.138009	1.138009	1.138009	1.138009	1.138009	1.138009	1.138009	1.138009
Air Compressor - 1600 CFM		42.30392	42.30392	42.30392	42.30392	42.30392	42.30392	42.30392	42.30392	42.30392	42.30392	42.30392
Sandblasting Machine												
Bulldozer D3K2 17k XL Series III										7.533904	7.533904	7.533904
CAT 304										4.850956	4.850956	4.850956
CAT 311										0.56313	0.56313	0.56313
CAT 315										2.013871	2.013871	2.013871
CAT 318		12.2426	12.2426	12.2426	12.2426	12.2426	12.2426	12.2426	12.2426	12.2426	12.2426	12.2426
CAT 320		18.36389	18.36389	18.36389	18.36389	18.36389	18.36389	18.36389	18.36389	18.36389	18.36389	18.36389
CAT 330												
CAT 349		25.03574	25.03574	25.03574	25.03574	25.03574	25.03574	25.03574	25.03574	25.03574	25.03574	25.03574
Loader - 1.5 CY 450E-WHEEL		5.59733	5.59733	5.59733	5.59733	5.59733	5.59733	5.59733	5.59733	5.59733	5.59733	5.59733
CAT 272C (279D, Skidsteer)										3.655475	3.655475	3.655475
Concrete Buggie - 23 CFT		0.902587	0.902587	0.902587	0.902587	0.902587	0.902587	0.902587	0.902587	0.902587	0.902587	0.902587
Concrete Pump Trailer Mounted - 50		28.97655	28.97655	28.97655	28.97655	28.97655	28.97655	28.97655	28.97655	28.97655	28.97655	28.97655
Concrete Mixer - 16 CF										2.117843	2.117843	2.117843
Concrete Pump Boom - 92' Putzmeist		11.44574	11.44574	11.44574	11.44574	11.44574	11.44574	11.44574	11.44574	11.44574	11.44574	11.44574
Concrete Pump Boom - 118' Putzmei		14.05363	14.05363	14.05363	14.05363	14.05363	14.05363	14.05363	14.05363	14.05363	14.05363	14.05363
Concrete Pump Boom - 136' Putzmei												
Crane 18 Ton - Tadano 150XL		8.983053	8.983053	8.983053	8.983053	8.983053	8.983053	8.983053	8.983053	8.983053	8.983053	8.983053
Crane 35 Ton - Tadano 350XL		18.41003	18.41003	18.41003	18.41003	18.41003	18.41003	18.41003	18.41003	18.41003	18.41003	18.41003
Crane 100 Ton - Grove TM9100		31.33623	31.33623	31.33623	31.33623	31.33623	31.33623	31.33623	31.33623	31.33623	31.33623	31.33623
Crawler Crane 100T - Liebherr HS855		31.49291	31.49291	31.49291	31.49291	31.49291	31.49291	31.49291	31.49291	31.49291	31.49291	31.49291
Crawler Crane 300T - LR1300		31.49291	31.49291	31.49291	31.49291	31.49291	31.49291	31.49291	31.49291	31.49291	31.49291	31.49291
Concrete Saw (65 HP) - 15" Cut Targe		0.378101	0.378101	0.378101	0.378101	0.378101	0.378101	0.378101	0.378101	0.378101	0.378101	0.378101
Bauer BG28/Comacchio MC15P		32.90304	32.90304	32.90304	32.90304	32.90304	32.90304	32.90304	32.90304	32.90304	32.90304	32.90304
Bauer BG40		90.87507	90.87507	90.87507	90.87507	90.87507	90.87507	90.87507	90.87507	90.87507	90.87507	90.87507
CAT320 Hoe Ram w/ 4500FLB Hamm		4.897038	4.897038	4.897038	4.897038	4.897038	4.897038	4.897038	4.897038	4.897038	4.897038	4.897038
CAT 345 Hoe Ram w/ V56		16.4949	16.4949	16.4949	16.4949	16.4949	16.4949	16.4949	16.4949	16.4949	16.4949	16.4949
Jack Hammer/Pavement breaker												
Bobcat 272C Hoe Ram										3.14234	3.14234	3.14234
Diamond wire sawcut												
Forklift 4000										4.262687	4.262687	4.262687
Forklift 8000										6.669039	6.669039	6.669039
Generator 60 KW		3.673903	3.673903	3.673903	3.673903	3.673903	3.673903	3.673903	3.673903	3.673903	3.673903	3.673903
Generator 125 KW		22.45764	22.45764	22.45764	22.45764	22.45764	22.45764	22.45764	22.45764	22.45764	22.45764	22.45764
Loader - WHEEL 950H 4CY Bucket		3.647293	3.647293	3.647293	3.647293	3.647293	3.647293	3.647293	3.647293	3.647293	3.647293	3.647293
Genie S-40 (4x4) w/ Oscillator										0.962759	0.962759	0.962759
Genie S-60 (4x4)										3.209197	3.209197	3.209197
Car Float - 362x42x11												
Tug Inland 40'												
Pressure Washer 5000 PSI		5.632858	5.632858	5.632858	5.632858	5.632858	5.632858	5.632858	5.632858	5.632858	5.632858	5.632858
Arrow Board												
Attenuator - Vehicle Mounted												
Vibratory Hammer 100T		18.27945	18.27945	18.27945	18.27945	18.27945	18.27945	18.27945	18.27945	18.27945	18.27945	18.27945
CAT 345 w/ ICE 216 w/ Power Pack												
Pump - 3" Submersible												
Pump - 4" Trash 18,000 GPH		8.382956	8.382956	8.382956	8.382956	8.382956	8.382956	8.382956	8.382956	8.382956	8.382956	8.382956
Pump - 6" Trash 33,000 GPH		2.786958	2.786958	2.786958	2.786958	2.786958	2.786958	2.786958	2.786958	2.786958	2.786958	2.786958
CAT CB-224D (47")		1.799914	1.799914	1.799914	1.799914	1.799914	1.799914	1.799914	1.799914	1.799914	1.799914	1.799914
Roller IR SD115D (84")		12.6048	12.6048	12.6048	12.6048	12.6048	12.6048	12.6048	12.6048	12.6048	12.6048	12.6048
Wacker RT820 (32")		0.522556	0.522556	0.522556	0.522556	0.522556	0.522556	0.522556	0.522556	0.522556	0.522556	0.522556
Baker Tank 20,000 G												
10 Wheel Dump Truck												
Flat Bed - 30,000 LB												
Boom Truck 16000 LB Lift												
Tractor w/High Flat 20T												
Low Bed w/Tractor 50T												
Tractor w/Attenuator												
Vacuum Truck 9CY												
Pick up 4x4												
Pick up w/Arrow Board		23.54347	23.54347	23.54347	23.54347	23.54347	23.54347	23.54347	23.54347	23.54347	23.54347	23.54347
Mechanics Truck 1T												
Mobil Sweeper 4CY												
Welders Truck												
Van												
Foreman Pick up												
Welders 300 AMP Big 40		1.805174	1.805174	1.805174	1.805174	1.805174	1.805174	1.805174	1.805174	1.805174	1.805174	1.805174

2027

Equipment	Jan-27	Feb-27	Mar-27	Apr-27	May-27	Jun-27	Jul-27	Aug-27	Sep-27	Oct-27	Nov-27	Dec-27
Air Compressor - 185 CFM	1.138009	1.138009	1.138009	1.138009	1.138009	1.138009						
Air Compressor - 1600 CFM	42.30392	42.30392	42.30392	42.30392	42.30392	42.30392						
Sandblasting Machine												
Bulldozer D3K2 17k XL Series III	7.533904	7.533904	7.533904	7.533904	7.533904	7.533904	7.533904	7.533904	7.533904	7.533904	7.533904	7.533904
CAT 304	4.850956	4.850956	4.850956	4.850956	4.850956	4.850956	4.850956	4.850956	4.850956	4.850956	4.850956	4.850956
CAT 311	0.56313	0.56313	0.56313	0.56313	0.56313	0.56313	0.56313	0.56313	0.56313	0.56313	0.56313	0.56313
CAT 315	2.013871	2.013871	2.013871	2.013871	2.013871	2.013871	2.013871	2.013871	2.013871	2.013871	2.013871	2.013871
CAT 318	12.2426	12.2426	12.2426	12.2426	12.2426	12.2426	12.2426	12.2426	12.2426	12.2426	12.2426	12.2426
CAT 320	18.36389	18.36389	18.36389	18.36389	18.36389	18.36389	18.36389	18.36389	18.36389	18.36389	18.36389	18.36389
CAT 330												
CAT 349	25.03574	25.03574	25.03574	25.03574	25.03574	25.03574						
Loader - 1.5 CY 450E-WHEEL	5.59733	5.59733	5.59733	5.59733	5.59733	5.59733	5.59733	5.59733	5.59733	5.59733	5.59733	5.59733
CAT 272C (279D, Skidsteer)	3.655475	3.655475	3.655475	3.655475	3.655475	3.655475	3.655475	3.655475	3.655475	3.655475	3.655475	3.655475
Concrete Buggie - 23 CFT	0.902587	0.902587	0.902587	0.902587	0.902587	0.902587						
Concrete Pump Trailer Mounted - 50	28.97655	28.97655	28.97655	28.97655	28.97655	28.97655						
Concrete Mixer - 16 CF	2.117843	2.117843	2.117843	2.117843	2.117843	2.117843	2.117843	2.117843	2.117843	2.117843	2.117843	2.117843
Concrete Pump Boom - 92' Putzmeist	11.44574	11.44574	11.44574	11.44574	11.44574	11.44574						
Concrete Pump Boom - 118' Putzmei	14.05363	14.05363	14.05363	14.05363	14.05363	14.05363						
Concrete Pump Boom - 136' Putzmei												
Crane 18 Ton - Tadano 150XL	8.983053	8.983053	8.983053	8.983053	8.983053	8.983053						
Crane 35 Ton - Tadano 350XL	18.41003	18.41003	18.41003	18.41003	18.41003	18.41003	18.41003	18.41003	18.41003	18.41003	18.41003	18.41003
Crane 100 Ton - Grove TM9100	31.33623	31.33623	31.33623	31.33623	31.33623	31.33623						
Crawler Crane 100T - Liebherr HS855	31.49291	31.49291	31.49291	31.49291	31.49291	31.49291						
Crawler Crane 300T - LR1300	31.49291	31.49291	31.49291	31.49291	31.49291	31.49291						
Concrete Saw (65 HP) - 15" Cut Targe	0.378101	0.378101	0.378101	0.378101	0.378101	0.378101	0.378101	0.378101	0.378101	0.378101	0.378101	0.378101
Bauer BG28/Comacchio MC15P	32.90304	32.90304	32.90304	32.90304	32.90304	32.90304						
Bauer BG40	90.87507	90.87507	90.87507	90.87507	90.87507	90.87507						
CAT320 Hoe Ram w/ 4500FLB Hamm	4.897038	4.897038	4.897038	4.897038	4.897038	4.897038						
CAT 345 Hoe Ram w/ V56	16.4949	16.4949	16.4949	16.4949	16.4949	16.4949						
Jack Hammer/Pavement breaker												
Bobcat 272C Hoe Ram	3.14234	3.14234	3.14234	3.14234	3.14234	3.14234	3.14234	3.14234	3.14234	3.14234	3.14234	3.14234
Diamond wire sawcut												
Forklift 4000	4.262687	4.262687	4.262687	4.262687	4.262687	4.262687	4.262687	4.262687	4.262687	4.262687	4.262687	4.262687
Forklift 8000	6.669039	6.669039	6.669039	6.669039	6.669039	6.669039	6.669039	6.669039	6.669039	6.669039	6.669039	6.669039
Generator 60 KW	3.673903	3.673903	3.673903	3.673903	3.673903	3.673903	3.673903	3.673903	3.673903	3.673903	3.673903	3.673903
Generator 125 KW	22.45764	22.45764	22.45764	22.45764	22.45764	22.45764	22.45764	22.45764	22.45764	22.45764	22.45764	22.45764
Loader - WHEEL 950H 4CY Bucket	3.647293	3.647293	3.647293	3.647293	3.647293	3.647293	3.647293	3.647293	3.647293	3.647293	3.647293	3.647293
Genie S-40 (4x4) w/ Oscillator	0.962759	0.962759	0.962759	0.962759	0.962759	0.962759	0.962759	0.962759	0.962759	0.962759	0.962759	0.962759
Genie S-60 (4x4)	3.209197	3.209197	3.209197	3.209197	3.209197	3.209197	3.209197	3.209197	3.209197	3.209197	3.209197	3.209197
Car Float - 362x42x11												
Tug Inland 40'												
Pressure Washer 5000 PSI	5.632858	5.632858	5.632858	5.632858	5.632858	5.632858	5.632858	5.632858	5.632858	5.632858	5.632858	5.632858
Arrow Board												
Attenuator - Vehicle Mounted												
Vibratory Hammer 100T	18.27945	18.27945	18.27945	18.27945	18.27945	18.27945						
CAT 345 w/ ICE 216 w/ Power Pack												
Pump - 3" Submersible												
Pump - 4" Trash 18,000 GPH	8.382956	8.382956	8.382956	8.382956	8.382956	8.382956	8.382956	8.382956	8.382956	8.382956	8.382956	8.382956
Pump - 6" Trash 33,000 GPH	2.786958	2.786958	2.786958	2.786958	2.786958	2.786958	2.786958	2.786958	2.786958	2.786958	2.786958	2.786958
CAT CB-224D (47")	1.799914	1.799914	1.799914	1.799914	1.799914	1.799914	1.799914	1.799914	1.799914	1.799914	1.799914	1.799914
Roller IR SD115D (84")	12.6048	12.6048	12.6048	12.6048	12.6048	12.6048	12.6048	12.6048	12.6048	12.6048	12.6048	12.6048
Wacker RT820 (32")	0.522556	0.522556	0.522556	0.522556	0.522556	0.522556	0.522556	0.522556	0.522556	0.522556	0.522556	0.522556
Baker Tank 20,000 G												
10 Wheel Dump Truck												
Flat Bed - 30,000 LB												
Boom Truck 16000 LB Lift												
Tractor w/High Flat 20T												
Low Bed w/Tractor 50T												
Tractor w/Attenuator												
Vacuum Truck 9CY												
Pick up 4x4												
Pick up w/Arrow Board	23.54347	23.54347	23.54347	23.54347	23.54347	23.54347	23.54347	23.54347	23.54347	23.54347	23.54347	23.54347
Mechanics Truck 1T												
Mobil Sweeper 4CY												
Welders Truck												
Van												
Foreman Pick up												
Welders 300 AMP Big 40	1.805174	1.805174	1.805174	1.805174	1.805174	1.805174	1.805174	1.805174	1.805174	1.805174	1.805174	1.805174

2028

Equipment	Jan-28	Feb-28	Mar-28	Apr-28	May-28	Jun-28	Jul-28	Aug-28	Sep-28	Oct-28	Nov-28	Dec-28
Air Compressor - 185 CFM												
Air Compressor - 1600 CFM												
Sandblasting Machine												
Bulldozer D3K2 17k XL Series III	7.533904	7.533904	7.533904									
CAT 304	4.850956	4.850956	4.850956									
CAT 311	0.56313	0.56313	0.56313									
CAT 315	2.013871	2.013871	2.013871									
CAT 318	12.2426	12.2426	12.2426									
CAT 320	18.36389	18.36389	18.36389									
CAT 330												
CAT 349												
Loader - 1.5 CY 450E-WHEEL	5.59733	5.59733	5.59733									
CAT 272C (279D, Skidsteer)	3.655475	3.655475	3.655475									
Concrete Buggie - 23 CFT												
Concrete Pump Trailer Mounted - 50												
Concrete Mixer - 16 CF	2.117843	2.117843	2.117843									
Concrete Pump Boom - 92' Putzmeist												
Concrete Pump Boom - 118' Putzmei												
Concrete Pump Boom - 136' Putzmei												
Crane 18 Ton - Tadano 150XL												
Crane 35 Ton - Tadano 350XL	18.41003	18.41003	18.41003									
Crane 100 Ton - Grove TM9100												
Crawler Crane 100T - Liebherr HS855												
Crawler Crane 300T - LR1300												
Concrete Saw (65 HP) - 15" Cut Targe	0.378101	0.378101	0.378101									
Bauer BG28/Comacchio MC15P												
Bauer BG40												
CAT320 Hoe Ram w/ 4500FLB Hamm												
CAT 345 Hoe Ram w/ V56												
Jack Hammer/Pavement breaker												
Bobcat 272C Hoe Ram	3.14234	3.14234	3.14234									
Diamond wire sawcut												
Forklift 4000	4.262687	4.262687	4.262687									
Forklift 8000	6.669039	6.669039	6.669039									
Generator 60 KW	3.673903	3.673903	3.673903									
Generator 125 KW	22.45764	22.45764	22.45764									
Loader - WHEEL 950H 4CY Bucket	3.647293	3.647293	3.647293									
Genie S-40 (4x4) w/ Oscillator	0.962759	0.962759	0.962759									
Genie S-60 (4x4)	3.209197	3.209197	3.209197									
Car Float - 362x42x11												
Tug Inland 40'												
Pressure Washer 5000 PSI	5.632858	5.632858	5.632858									
Arrow Board												
Attenuator - Vehicle Mounted												
Vibratory Hammer 100T												
CAT 345 w/ ICE 216 w/ Power Pack												
Pump - 3" Submersible												
Pump - 4" Trash 18,000 GPH	8.382956	8.382956	8.382956									
Pump - 6" Trash 33,000 GPH	2.786958	2.786958	2.786958									
CAT CB-224D (47")	1.799914	1.799914	1.799914									
Roller IR SD115D (84")	12.6048	12.6048	12.6048									
Wacker RT820 (32")	0.522556	0.522556	0.522556									
Baker Tank 20,000 G												
10 Wheel Dump Truck												
Flat Bed - 30,000 LB												
Boom Truck 16000 LB Lift												
Tractor w/High Flat 20T												
Low Bed w/Tractor 50T												
Tractor w/Attenuator												
Vacuum Truck 9CY												
Pick up 4x4												
Pick up w/Arrow Board	23.54347	23.54347	23.54347									
Mechanics Truck 1T												
Mobil Sweeper 4CY												
Welders Truck												
Van												
Foreman Pick up												
Welders 300 AMP Big 40	1.805174	1.805174	1.805174									

2029

Jan-29	Feb-29	Mar-29	Apr-29	May-29	Jun-29	Jul-29	Aug-29	Sep-29	Oct-29	Nov-29	Dec-29

2030

Jan-30	Feb-30	Mar-30	Apr-30	May-30	Jun-30	Jul-30	Aug-30	Sep-30	Oct-30	Nov-30	Dec-30

West Battery Park Resiliency
GHG Emission Calculations
Equipment Fuel Consumption

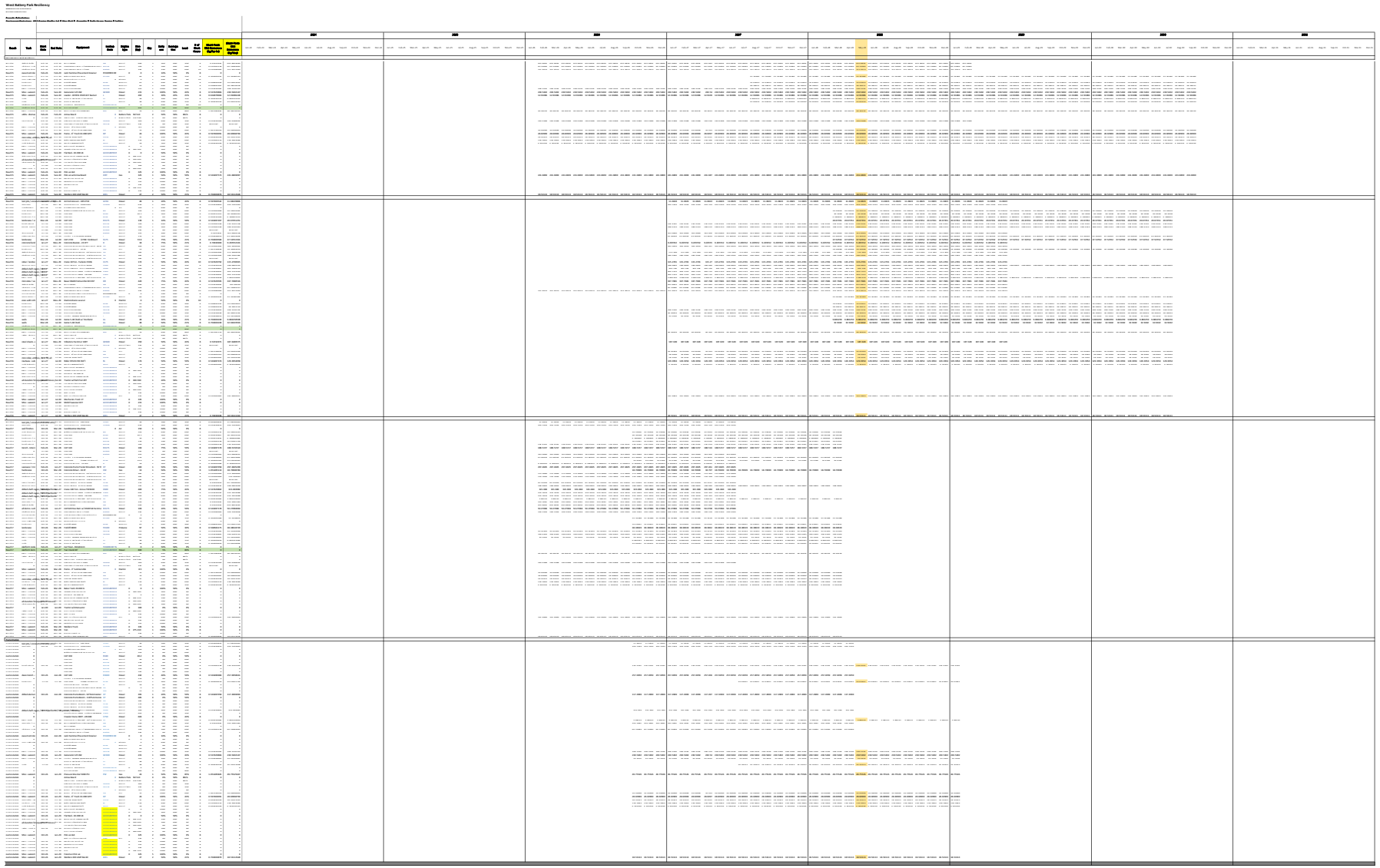
Sample Calculation:
Equipment Emissions: BSFC Factor (gal/hp-hr) * Size (hp) * Quantity * Daily Usage Factor * hr/day

Reach	Task	Start Date	End Date	Equipment	Lookup Code	Engine type	Size (hp)	Qty	Daily use	Average Use	Load	# of Work Hours	BSFC Factor (g/hp-hr)	BSFC Factor (gal/hp-hr)	Short-Term BSFC Factor (gal/day)
West Battery Park Resiliency															
pump station	test pits / excavation and utils	Oct-26	Apr-28	Air Compressor - 185 CFM	AC50	Diesel	49	1	20%	58%	43%	8	185.0656409	0.0582	1.138009474
pump station	mini piles	Oct-26	Apr-28	Air Compressor - 1600 CFM	AC600	Diesel	540	1	75%	58%	43%	8	166.468302	0.0524	42.30391681
pump station	0			Sandblasting Machine		Air	150	0	0%	58%	0%	8	0	0.0000	0
pump station	0			Bulldozer D3K2 17k XL Series III	BD	Diesel	104	0	0%	58%	59%	8	0	0.0000	0
pump station	0			CAT 304	EX40	Diesel	40.2	0	0%	58%	59%	8	0	0.0000	0
pump station	0			CAT 311	EX75	Diesel	70	0	0%	58%	59%	8	0	0.0000	0
pump station	0			CAT 315	EX175	Diesel	139	0	0%	58%	59%	8	0	0.0000	0
pump station	load/unload	Oct-26	Jan-29	CAT 318	EX175	Diesel	169	1	50%	58%	59%	8	168.28261	0.0529	12.24259579
pump station	0			CAT 320	EX175	Diesel	169	0	0%	58%	59%	8	0	0.0000	0
pump station	0			CAT 330	EX300	Diesel	235	0	0%	58%	59%	8	0	0.0000	0
pump station	deep trench -	Oct-26	Apr-28	CAT 349	EX600	Diesel	432	1	40%	58%	59%	8	168.2825502	0.0529	25.03573727
pump station	0			Loader - 1.5 CY 450E-WHEEL	L	Diesel	124	0	0%	58%	21%	8	0	0.0000	0
pump station	landscape	Jul-27	Jan-29	CAT 272C (279D, Skidsteer)	SS75	Diesel	72.9	1	75%	58%	21%	8	218.177689	0.0686	3.655476317
pump station	0			Concrete Buggie - 23 CFT	D	Diesel	18	0	0%	58%	21%	8	0	0.0000	0
pump station	0			Concrete Pump Trailer Mounted -50'	CP	0	0	0	0%	58%	0%	8	0	0.0000	0
pump station	0			Concrete Mixer - 16 CF	CM	Gas	13	0	0%	58%	59%	8	0	0.0000	0
pump station	drilled elemer	Oct-26	Apr-28	Concrete Pump Boom - 92'Putzmeist	CP	Diesel	395	1	20%	58%	59%	8	168.2825729	0.0529	11.44573792
pump station	0			Concrete Pump Boom - 118'Putzmeis	CP	Diesel	485	0	0%	58%	59%	8	0	0.0000	0
pump station	0			Concrete Pump Boom - 136'Putzmeis	CP	Diesel	485	0	0%	58%	59%	8	0	0.0000	0
pump station	0			Crane 18 Ton - Tadano 150XL	C175	Diesel	172	0	0%	58%	43%	8	0	0.0000	0
pump station	0			Crane 35 Ton - Tadano 350XL	C300	Diesel	235	0	0%	58%	43%	8	0	0.0000	0
pump station	drilled shaft cages / steel platform / set precast	Oct-26	Apr-28	Crane 100 Ton - Grove TM9100	C600	Diesel	400	1	75%	58%	43%	8	166.4682941	0.0524	31.33623319
pump station	0			Crawler Crane 100T - Liebherr HS855	C750	Diesel	603	0	0%	58%	43%	8	0	0.0000	0
pump station	0			Crawler Crane 300T - LR1300	C750	Diesel	603	0	0%	58%	43%	8	0	0.0000	0
pump station	Misc. tools	Oct-26	Jan-29	Concrete Saw (65 HP) - 15" CutTarget	CS	Diesel	47	1	5%	58%	59%	8	186.879875	0.0588	0.378101116
pump station	mini piles / se	Oct-26	Apr-28	Bauer BG28/Comacchio MC15P	DR	Diesel	420	1	75%	58%	43%	8	166.4682782	0.0524	32.9030417
pump station	0			Bauer BG40	DR	Diesel	580	0	0%	58%	43%	8	0	0.0000	0
pump station	all demo, curt	Oct-26	Apr-28	CAT320 Hoe Ram w/ 4500FLBHamme	EX175	Diesel	169	1	20%	58%	59%	8	168.28261	0.0529	4.897038315
pump station	0			CAT 345 Hoe Ram w/ V56	EX600	Diesel	345	0	0%	58%	59%	8	0	0.0000	0
pump station	pavement der	Oct-26	Apr-28	Jack Hammer/Pavement breaker	POWERED BY	0	0	1	10%	58%	0%	8	0	0.0000	0
pump station	0			Bobcat 272C Hoe Ram	SS100	0	0	0	0%	58%	0%	8	0	0.0000	0
pump station	goes with 125	Oct-26	Apr-28	Diamond wire sawcut		Electric	0	1	50%	58%	0%	8	0	0.0000	0
pump station	0			Forklift 4000	FK75	Propane	62	0	0%	58%	30%	8	0	0.0000	0
pump station	0			Forklift 8000	FK100	Propane	97	0	0%	58%	30%	8	0	0.0000	0
pump station	Misc. support	Oct-26	Jan-29	Generator 60 KW	GE175	Diesel	102	1	100%	58%	43%	8	166.4682643	0.0524	10.65431738
pump station	Misc. support	Oct-26	Jan-29	Generator 125 KW	GE300	Diesel	215	1	100%	58%	43%	8	166.4683141	0.0524	22.45763647
pump station	Misc. support	Oct-26	Jan-29	Loader - WHEEL 950H 4CY Bucket	L	Diesel	202	1	30%	58%	21%	8	196.4052674	0.0618	3.647292559
pump station	0			Genie S-40 (4x4) w/ Oscillator	AL	Diesel	48	0	0%	58%	21%	8	0	0.0000	0
pump station	walls	Jul-27	Jan-29	Genie S-60 (4x4)	AL	Diesel	48	1	50%	58%	21%	8	218.177914	0.0686	1.604600313
pump station	0			Car Float - 362x42x11	TOWED BY TL	0	0	0	0%	58%	0%	8	0	0.0000	0
pump station	0			Tug Inland 40'	ACCOUNTED I	Diesel	800	0	0%	58%	#N/A	8	0	0.0000	0
pump station	Misc. support	Oct-26	Jan-29	Pressure Washer 5000 PSI	PW	Gas	24	1	50%	58%	85%	8	333.3922597	0.1190	5.632857597
pump station	0			Arrow Board		Battery/Sola	50/110	0	0%	58%	#N/A	8	0	0.0000	0
pump station	0			Attenuator - Vehicle Mounted		Battery/Sola	115/230	0	0%	58%	#N/A	8	0	0.0000	0
pump station	0			Vibratory Hammer 100T	GE600	Diesel	350	0	0%	58%	43%	8	0	0.0000	0
pump station	0			CAT 345 w/ ICE 216 w/ Power Pack	GE175	Diesel / Dies	345	0	0%	58%	43%	8	0	0.0000	0
pump station	Misc. support	Oct-26	Jan-29	Pump - 3" Submersible		Electric	8.5	4	100%	58%	0%	8	0	0.0000	0
pump station	Misc. support	Oct-26	Jan-29	Pump - 4" Trash 18,000 GPH	GP	Gas	22	1	100%	58%	69%	8	333.3898343	0.1190	8.382956498
pump station	Misc. support	Oct-26	Jan-29	Pump - 6" Trash 33,000 GPH	DP	Diesel	24	1	100%	58%	43%	8	185.0653986	0.0582	2.786958328
pump station	mini roller, uti	Oct-26	Jan-29	CAT CB-224D (47")	CO25	Diesel	31	1	50%	58%	43%	8	185.065732	0.0582	1.79991383
pump station	roadway, sub	Oct-26	Jan-29	Roller IR SD115D (84")	RL	Diesel	174	1	50%	58%	59%	8	168.2826099	0.0529	12.60480275
pump station	walk behind a	Oct-26	Jan-29	Wacker RT820 (32")	WAC	Diesel	18	1	25%	58%	43%	8	185.065732	0.0582	0.522555628
pump station	Misc. support	Oct-26	Jan-29	Baker Tank 20,000 G	ACCOUNTED I	0	0	1	100%	58%	0%	8	0	0.0000	0
pump station	Misc. support	Oct-26	Jan-29	10 Wheel Dump Truck	ACCOUNTED I	0	200-360	4	75%	58%	0%	8	0	0.0000	0
pump station	Misc. support	Oct-26	Jan-29	Flat Bed - 30,000 LB	ACCOUNTED I	0	0	2	50%	58%	0%	8	0	0.0000	0
pump station	deliveries lanc	Oct-26	Jan-29	Boom Truck 16000 LB Lift	ACCOUNTED I	0	405-510	1	10%	58%	0%	8	0	0.0000	0
pump station	all duration for equipment moves /	Oct-26	Jan-29	Tractor w/High Flat 20T	ACCOUNTED I	0	330-560	1	20%	58%	0%	8	0	0.0000	0
pump station	0			Low Bed w/Tractor 50T	ACCOUNTED I	0	330-560	0	0%	58%	0%	8	0	0.0000	0
pump station	utility, work ir	Oct-26	Jan-29	Tractor w/Attenuator	ACCOUNTED I	0	300	1	20%	58%	0%	8	0	0.0000	0
pump station	0			Vacuum Truck 9CY	ACCOUNTED I	0	400-500	0	0%	58%	0%	8	0	0.0000	0
pump station	Misc. support	Oct-26	Jan-29	Pick up 4x4	ACCOUNTED I	0	325	2	100%	58%	0%	8	0	0.0000	0
pump station	0			Pick up w/Arrow Board	ORT	Gas	325	0	0%	58%	59%	8	0	0.0000	0
pump station	Misc. support	Oct-26	Jan-29	Mechanics Truck 1T	ACCOUNTED I	0	335	1	100%	58%	0%	8	0	0.0000	0
pump station	Misc. support	Oct-26	Jan-29	Mobil Sweeper 4CY	ACCOUNTED I	0	215	1	100%	58%	0%	8	0	0.0000	0
pump station	Misc. support	Oct-26	Jan-29	Welders Truck	ACCOUNTED I	0	335	1	50%	58%	0%	8	0	0.0000	0
pump station	Misc. support	Oct-26	Jan-29	Van	ACCOUNTED I	0	275-310	1	100%	58%	0%	8	0	0.0000	0
pump station	Misc. support	Oct-26	Jan-29	Foreman Pick up	ACCOUNTED I	0	325	5	100%	58%	0%	8	0	0.0000	0
pump station	Misc. support	Oct-26	Jan-29	Welders 300 AMP Big 40	WEL	Diesel	27	2	50%	58%	21%	8	218.1778009	0.0686	1.805174416

	Year								
	0	1	2	3	4	5	6	7	
	2024	2025	2026	2027	2028	2029	2030	2031	Total
Diesel	0	0	551,646	772,246	744,079	378,538	100,965	0	2,547,474
Gas	0	0	35,786	44,334	44,160	14,952	0	0	139,232
Propane	0	0	214	2,985	4,648	5,213	2,470	0	15,529

West Battery Park Resiliency

Reach	Task	Start Date	End Date	Equipment	Lookup Code	Engine type	Size (hp)	Qty	Daily use	Average Use	Load	# of Work Hours	Short-Term CO2 Emissions (kg/hp-hr)	Short-Term CO2 Emissions (kg/day)	2024	2025	2026	2027	2028	2029	2030	2031
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]



West Battery Park Resiliency

GHG Emission Calculations

Tugboat Emissions

Tug Boat Assumptions:
Fuel Rate of 213 g/kW-hr based on C1 engines
Auxiliary engine assumed 107 HP
Two tug trips per day with a one way travel distance of 15 miles, plus 4 trips per week for material delivery/disposal
Sustained speed of 10 knots

On-Site Maneuvering

	HP	kW	g/kW-hr	gal/kW-hr	Gallons
Main Engine	800	596.6	213	0.066986483	194,293
Auxiliary Engine	107	79.8	213	0.066986483	129,933
					324,226

	CO2 g/kW-hr	CH4 g/kW-hr	N2O g/kW-hr
Main Engine	679.47	0.0054	0.033
Auxiliary Engine	679.47	0.0064	0.033

											GWP-100				
											1	21	310		
						Fuel Consumption		Daily Emissions (g/day)			Total Emissions (kg)				Total Emissions (MT CO2e)
Location	Start Date	End Date	Qty	Days	# of Work Hours	Daily (gal/day)	Total (gal)	CO2	CH4	N2O	CO2	CH4	N2O	CO2e	
Reach 1	Feb-26	Oct-28	0.0					0.0	0.0	0.0	0.0	0.0	0.0	0	0
Reach 2	Feb-26	Feb-28	1.0	541	10.0	133.4	72,154	1352837.4	11.5	65.7	731885.1	6.2	35.5	743,035	743
Reach 3			0.0					0.0	0.0	0.0	0.0	0.0	0.0	0	0
Reach 4	Nov-27	Jul-29	1.0	457	10.0	133.4	60,951	1352837.4	11.5	65.7	618246.7	5.3	30.0	627,666	628
Reach 5	Feb-26	Feb-29	1.0	803	10.0	133.4	107,097	1352837.4	11.5	65.7	1086328.5	9.3	52.8	1,102,879	1,103
Reach 6	Jan-27	May-29	1.0	630	10.0	133.4	84,024	1352837.4	11.5	65.7	852287.6	7.3	41.4	865,272	865
Reach 7	Feb-26	Jun-27	0.0					0.0	0.0	0.0	0.0	0.0	0.0	0	0
						Total	324,226						Total	3,338,852	3,339

Transit

				On-Site Tugboats		Delivery Tugboat Trips			
Location	Start Date	End Date	Qty	Construction Days	Tug Round Trips	Weeks	Tug Round Trips	Total Trips	VMT
Reach 1	Feb-26	Oct-28	0.0					0	0
Reach 2	Feb-26	Feb-28	1.0	541	541	108	433	974	29207
Reach 3			0.0					0	0
Reach 4	Nov-27	Jul-29	1.0	457	457	91	365	822	24647
Reach 5	Feb-26	Feb-29	1.0	803	803	160	642	1445	43341
Reach 6	Jan-27	May-29	1.0	630	630	126	503	1133	34003
Reach 7	Feb-26	Jun-27	0.0					0	0
							Total		131,199

				GWP-100				
				1	21	310		
				Total Emissions (kg)				Total Emissions (MT CO2e)
Knots	MPH	Hours	Gallons	CO2	CH4	N2O	CO2e	
10.0	11.5	11,401	423,555	4296279.2	34.9	208.7	4,361,696	4,362

West Battery Park Resiliency

GHG Emission Calculations

Embedded Emissions

MATERIALS

Steel

42.3	TG CO2e emitted from iron and steel production proccess. US GHG Inventory, 2009 (EPA 2011)
65,460,000	tons of crude steel produced in 2009 (EPA, ibid)
0.65	tons direct (IP) CO2 per ton steel produced (2009)
0.6	tons CO2 per ton from energy used for production (Horvath, PaLATE model data, via TRB draft model)
1.25	**total tons CO2e per ton of steel**

Concrete

Portland cement lifecycle emissions (includes fuel, process, and transport):

927	kg CO2/mt cement
0.0395	kg CH4/mt cement
928	**kg CO2e/mt cement**
0.928	*mt CO2e/mt cement*
1.682	*mt CO2e/CY cement*

SOURCE: Life Cycle Inventory of Portland Cement Manufacture, PCA, 2006

NYS Buy Clean Concrete Lifecycle emissions

541	**kg CO2e/CY cement**
298.44	**kg CO2e/mt cement**
0.298	*mt CO2e/mt cement*

SOURCE: Life Cycle Inventory of Portland Cement Manufacture, PCA, 2006

Assumes concrete density: *1.8* *metric tons/CY* *2371* *kg/cum*

Assumes cement content: *10%*

Quantity Assumptions

		Total	ton CO2e	Emissions kg CO2e	MT CO2e
Total Steel	**ton**	**1,700**	**2,118**	---	**2,334**
	mton	1,874			
Total Concrete	**CY**	35,000			
Assumes concrete density:	**kg/cu. m**	2371			
	metric tons/CY	1.81			
Assumes cement content:		10%			
Total Cement	**ton**	6,345			
Total Cement	**mton**	**6,994**	---	**6,490,147**	**6,490**
					8,824.60

Total Concrete	**CY**	35,000			
Total Cement	**CY**	3,500	---	**1,893,500**	**1,894**

West Battery Park Resiliency

GHG Emission Calculations

Emission Factors

BSFC Emission Factors (g/hp-hr)

ID	Equipment	Engine	SCC Code	HPmin	HPmax	HP	Equipment	Equipment	Load	2025	2026	2027	2028	2029	2030
	Air Compressor	Diesel	2270006015	41	50	49	Air Compressor	AC50	43%	185.0655	185.0656	185.0656	185.0655	185.0655	185.0656
	Air Compressor	Diesel	2270006015	301	600	500	Air Compressor	AC600	43%	166.4683	166.4683	166.4683	166.4683	166.4682	166.4683
	Bulldozer	Diesel	2270002069	101	175	104	Bulldozer	BD	59%	168.2826	168.2826	168.2826	168.2825	168.2826	168.2827
	Excavator	Diesel	2270002036	26	40	40.2	Excavator	EX40	59%	186.8799	186.8799	186.8798	186.8798	186.8799	186.8798
	Excavator	Diesel	2270002036	51	75	70	Excavator	EX75	59%	186.8800	186.8798	186.8801	186.88	186.8797	186.8798
	Excavator	Diesel	2270002036	101	175	139	Excavator	EX175	59%	168.2825801	168.2827	168.2826	168.2826	168.2826	168.2827
	Excavator	Diesel	2270002036	176	300	235	Excavator	EX300	59%	168.2826	168.2826	168.2827	168.2827	168.2826	168.2826
	Excavator	Diesel	2270002036	301	600	432	Excavator	EX600	59%	168.2827	168.2827	168.2826	168.2826	168.2826	168.2827
	Loader	Diesel	2270002072	101	175	124	Loader	L	21%	196.4053	196.4054	196.4053	196.4053	196.4055	196.4051
	Skidsteer	Diesel	2270002072	51	75	72.9	Skidsteer	SS75	21%	218.1777	218.1777	218.1776	218.1777	218.1777	218.1778
	Dumpers	Diesel	2270002078	17	25	18	Dumpers	D	21%	218.1777	218.1777	218.1776	218.1775	218.1776	218.1778
	Concrete Pump Trailer Mounted	Diesel	2270002081	301	600	400	Concrete Pump Trailer Mounted	CP	59%	168.2826475	168.2826	168.2826	168.2826	168.2827	168.2826
	Concrete Mixer	Gas	2265002042	12	16	13	Concrete Mixer	CM	59%	333.3964	333.3934	333.392	333.3909	333.39	333.3901
	Concrete Pump Boom	Diesel	2270002081	301	600	395	Concrete Pump Boom	CP	59%	168.2826	168.2826	168.2826	168.2826	168.2827	168.2826
	Crane	Diesel	2270002045	101	175	172	Crane	C175	43%	166.4683	166.4681	166.4683	166.4683	166.4683	166.4682
	Crane	Diesel	2270002045	176	300	235	Crane	C300	43%	166.4682	166.4682	166.4682	166.4683	166.4683	166.4682
	Crane	Diesel	2270002045	301	600	400	Crane	C600	43%	166.4682	166.4682	166.4683	166.4683	166.4683	166.4682
	Crawler Crane	Diesel	2270002045	601	750	603	Crawler Crane	C750	43%	166.4682	166.4682	166.4683	166.4682	166.4684	166.4683
	Concrete Saw	Diesel	2270002039	41	50	47	Concrete Saw	CS	59%	186.8797	186.88	186.8799	186.8798	186.8799	186.8799
	Drill rig	Diesel	2270002033	301	600	420	Drill rig	DR	43%	166.4683	166.4682	166.4683	166.4682	166.4682	166.4682
	excavator with breaker	Diesel	2270002036	101	175	169	excavator with breaker	EX175	59%	168.2825801	168.2827	168.2826	168.2826	168.2826	168.2827
	excavator with breaker	Diesel	2270002036	301	600	345	excavator with breaker	EX600	59%	168.2827	168.2827	168.2826	168.2826	168.2826	168.2827
	Skidsteer loader	Diesel	2270002072	76	100	94	Skidsteer loader	SS100	21%	218.1777	218.1778	218.1778	218.1776	218.1777	218.1777
	Forklift	Propane	2267003020	51	75	62	Forklift	FK75	30%	184.1583	184.1584	184.1583	184.1585	184.1583	184.1584
	Forklift	Propane	2267003020	76	100	97	Forklift	FK100	30%	184.1584	184.1583	184.1582	184.1583	184.1583	184.1583
	Generator	Diesel	2270006005	101	175	102	Generator	GE175	43%	166.4683	166.4684	166.4683	166.4682	166.4683	166.4683
	Generator	Diesel	2270006005	176	300	215	Generator	GE300	43%	166.468272	166.4683	166.4683	166.4683	166.4683	166.4683
	Loader	Diesel	2270002072	101	175	202	Loader	L	21%	196.4053	196.4054	196.4053	196.4053	196.4055	196.4051
	Aerial lift	Diesel	2270003010	41	50	48	Aerial lift	AL	21%	218.1777	218.1776	218.1777	218.1779	218.1776	218.1777
	Pressure washer	Diesel	2265006030	17	25	24	Pressure washer	PW	85%	333.4008	333.3949	333.3923	333.3908	333.3903	333.3901
	Vibratory Hammer with 350 HP power u	Diesel	2270006005	301	600	350	Vibratory Hammer with 350 HP po	GE600	43%	166.4683	166.4682	166.4681	166.4683	166.4682	166.4682
	CAT 345 w/ ICE 216 w/ Power Pack - Ger	Diesel	2270006005	101	175	142	CAT 345 w/ ICE 216 w/ Power Pack	GE175	43%	166.4683	166.4684	166.4683	166.4682	166.4683	166.4683
	Pump	Diesel	2265006010	17	25	22	Pump	GP	69%	333.3905404	333.3907	333.3898	333.3901	333.39	333.39
	Pump	Diesel	2270006010	17	25	24	Pump	DP	43%	185.0658	185.0656	185.0654	185.0654	185.0654	185.0656
	Compactor	Diesel	2270002009	17	25	31	Compactor	CO25	43%	185.0655	185.0656	185.0657	185.0655	185.0654	185.0654
	Roller	Diesel	2270002015	101	175	174	Roller	RL	59%	168.2825	168.2828	168.2826	168.2827	168.2827	168.2825
	Wacker	Diesel	2270002009	17	25	18	Wacker	WAC	43%	185.0655	185.0656	185.0657	185.0655	185.0654	185.0654
	Off-road Trucks	Diesel	2270002051	176	300	300	Off-road Trucks	ORT	59%	168.2825	168.2826	168.2827	168.2826	168.2827	168.2826
	Welder	Diesel	2270006025	26	40	27	Welder	WEL	21%	218.1777641	218.1778	218.1778	218.1776	218.1777	218.1776
								TRUCK		0	0	0	0	0	0

Fuel Properties

Densities	kg/L	g/gal	lb/gal
Diesel	0.84	3,179.75	7.01
Gasoline	0.74	2,801.21	6.18
Propane	0.51	1,864.27	4.11
LPG	0.54	2,044.12	4.51

BSFC Emission Factors (gal/hp-hr)

ID	Equipment	Engine	SCC Code	HPmin	HPmax	HP	Equipment	Equipment	Load	2025	2026	2027	2028	2029	2030
	Air Compressor	Diesel	2270006015	41	50	49	Air Compressor	AC50	43%	0.0582	0.058201	0.058201	0.058201	0.058201	0.058201
	Air Compressor	Diesel	2270006015	301	600	500	Air Compressor	AC600	43%	0.0524	0.052353	0.052353	0.052353	0.052353	0.052353
	Bulldozer	Diesel	2270002069	101	175	104	Bulldozer	BD	59%	0.0529	0.052923	0.052923	0.052923	0.052923	0.052923
	Excavator	Diesel	2270002036	26	40	40.2	Excavator	EX40	59%	0.0588	0.058772	0.058772	0.058772	0.058772	0.058772
	Excavator	Diesel	2270002036	51	75	70	Excavator	EX75	59%	0.0588	0.058772	0.058772	0.058772	0.058772	0.058772
	Excavator	Diesel	2270002036	101	175	139	Excavator	EX175	59%	0.0529	0.052923	0.052923	0.052923	0.052923	0.052923
	Excavator	Diesel	2270002036	176	300	235	Excavator	EX300	59%	0.0529	0.052923	0.052923	0.052923	0.052923	0.052923
	Excavator	Diesel	2270002036	301	600	432	Excavator	EX600	59%	0.0529	0.052923	0.052923	0.052923	0.052923	0.052923
	Loader	Diesel	2270002072	101	175	124	Loader	L	21%	0.0618	0.061768	0.061768	0.061768	0.061768	0.061768
	Skidsteer	Diesel	2270002072	51	75	72.9	Skidsteer	SS75	21%	0.0686	0.068615	0.068615	0.068615	0.068615	0.068615
	Dumpers	Diesel	2270002078	17	25	18	Dumpers	D	21%	0.0686	0.068615	0.068615	0.068615	0.068615	0.068615
	Concrete Pump Trailer Mounted	Diesel	2270002081	301	600	400	Concrete Pump Trailer Mounted	CP	59%	0.0529	0.052923	0.052923	0.052923	0.052923	0.052923
	Concrete Mixer	Gas	2265002042	12	16	13	Concrete Mixer	CM	59%	0.1190	0.119018	0.119017	0.119017	0.119017	0.119017
	Concrete Pump Boom	Diesel	2270002081	301	600	395	Concrete Pump Boom	CP	59%	0.0529	0.052923	0.052923	0.052923	0.052923	0.052923
	Crane	Diesel	2270002045	101	175	172	Crane	C175	43%	0.0524	0.052353	0.052353	0.052353	0.052353	0.052353
	Crane	Diesel	2270002045	176	300	235	Crane	C300	43%	0.0524	0.052353	0.052353	0.052353	0.052353	0.052353
	Crane	Diesel	2270002045	301	600	400	Crane	C600	43%	0.0524	0.052353	0.052353	0.052353	0.052353	0.052353
	Crawler Crane	Diesel	2270002045	601	750	603	Crawler Crane	C750	43%	0.0524	0.052353	0.052353	0.052353	0.052353	0.052353
	Concrete Saw	Diesel	2270002039	41	50	47	Concrete Saw	CS	59%	0.0588	0.058772	0.058772	0.058772	0.058772	0.058772
	Drill rig	Diesel	2270002033	301	600	420	Drill rig	DR	43%	0.0524	0.052353	0.052353	0.052353	0.052353	0.052353
	excavator with breaker	Diesel	2270002036	101	175	169	excavator with breaker	EX175	59%	0.0529	0.052923	0.052923	0.052923	0.052923	0.052923
	excavator with breaker	Diesel	2270002036	301	600	345	excavator with breaker	EX600	59%	0.0529	0.052923	0.052923	0.052923	0.052923	0.052923
	Skidsteer loader	Diesel	2270002072	76	100	94	Skidsteer loader	SS100	21%	0.0686	0.068615	0.068615	0.068615	0.068615	0.068615
	Forklift	Propane	2267003020	51	75	62	Forklift	FK75	30%	0.0988	0.098783	0.098783	0.098783	0.098783	0.098783
	Forklift	Propane	2267003020	76	100	97	Forklift	FK100	30%	0.0988	0.098783	0.098783	0.098783	0.098783	0.098783
	Generator	Diesel	2270006005	101	175	102	Generator	GE175	43%	0.0524	0.052353	0.052353	0.052353	0.052353	0.052353
	Generator	Diesel	2270006005	176	300	215	Generator	GE300	43%	0.0524	0.052353	0.052353	0.052353	0.052353	0.052353
	Loader	Diesel	2270002072	101	175	202	Loader	L	21%	0.0618	0.061768	0.061768	0.061768	0.061768	0.061768
	Aerial lift	Diesel	2270003010	41	50	48	Aerial lift	AL	21%	0.0686	0.068615	0.068615	0.068615	0.068615	0.068615
	Pressure washer	Gas	2265006030	17	25	24	Pressure washer	PW	85%	0.1190	0.119018	0.119017	0.119017	0.119017	0.119017
	Vibratory Hammer with 350 HP power u	Diesel	2270006005	301	600	350	Vibratory Hammer with 350 HP po	GE600	43%	0.0524	0.052353	0.052353	0.052353	0.052353	0.052353
	CAT 345 w/ ICE 216 w/ Power Pack - Ger	Diesel	2270006005	101	175	142	CAT 345 w/ ICE 216 w/ Power Pack	GE175	43%	0.0524	0.052353	0.052353	0.052353	0.052353	0.052353
	Pump	Gas	2265006010	17	25	22	Pump	GP	69%	0.1190	0.119017	0.119017	0.119017	0.119017	0.119017
	Pump	Diesel	2270006010	17	25	24	Pump	DP	43%	0.0582	0.058201	0.058201	0.058201	0.058201	0.058201
	Compactor	Diesel	2270002009	17	25	31	Compactor	CO25	43%	0.0582	0.058201	0.058201	0.058201	0.058201	0.058201
	Roller	Diesel	2270002015	101	175	174	Roller	RL	59%	0.0529	0.052923	0.052923	0.052923	0.052923	0.052923
	Wacker	Diesel	2270002009	17	25	18	Wacker	WAC	43%	0.0582	0.058201	0.058201	0.058201	0.058201	0.058201
	Off-road Trucks	Diesel	2270002051	176	300	300	Off-road Trucks	ORT	59%	0.0529	0.052923	0.052923	0.052923	0.052923	0.052923
	Welder	Diesel	2270006025	26	40	27	Welder	WEL	21%	0.0686	0.068615	0.068615	0.068615	0.068615	0.068615
								TRUCK		0.0000	0	0	0	0	0

West Battery Park Resiliency

GHG Emission Calculations

Emission Factors

CO2 Emissions (kg/hp-hr)

ID	Equipment	Engine	SCC Code	HPmin	HPmax	HP	Equipment	Equipment	Load	2025	2026	2027	2028	2029	2030
	Air Compressor	Diesel	2270006015	41	50	49	Air Compressor	AC50	43%	0.5975	0.59747	0.59747	0.59747	0.597469	0.59747
	Air Compressor	Diesel	2270006015	301	600	500	Air Compressor	AC600	43%	0.5374	0.53743	0.53743	0.53743	0.53743	0.53743
	Bulldozer	Diesel	2270002069	101	175	104	Bulldozer	BD	59%	0.5433	0.543287	0.543287	0.543287	0.543287	0.543288
	Excavator	Diesel	2270002036	26	40	40.2	Excavator	EX40	59%	0.6033	0.603327	0.603327	0.603327	0.603327	0.603327
	Excavator	Diesel	2270002036	51	75	70	Excavator	EX75	59%	0.6033	0.603327	0.603328	0.603327	0.603326	0.603327
	Excavator	Diesel	2270002036	101	175	139	Excavator	EX175	59%	0.5433	0.543287	0.543287	0.543287	0.543287	0.543287
	Excavator	Diesel	2270002036	176	300	235	Excavator	EX300	59%	0.5433	0.543287	0.543287	0.543288	0.543287	0.543287
	Excavator	Diesel	2270002036	301	600	432	Excavator	EX600	59%	0.5433	0.543287	0.543287	0.543287	0.543287	0.543287
	Loader	Diesel	2270002072	101	175	124	Loader	L	21%	0.6341	0.634079	0.634079	0.634079	0.63408	0.634079
	Skidsteer	Diesel	2270002072	51	75	72.9	Skidsteer	SS75	21%	0.7044	0.704369	0.704369	0.70437	0.70437	0.70437
	Dumpers	Diesel	2270002078	17	25	18	Dumpers	D	21%	0.7044	0.70437	0.704369	0.704369	0.704369	0.70437
	Concrete Pump Trailer Mounted	Diesel	2270002081	301	600	400	Concrete Pump Trailer Mounted	CP	59%	0.5433	0.543287	0.543287	0.543287	0.543287	0.543287
	Concrete Mixer	Gas	2265002042	12	16	13	Concrete Mixer	CM	59%	1.0513	1.051289	1.051285	1.051282	1.051279	1.051279
	Concrete Pump Boom	Diesel	2270002081	301	600	395	Concrete Pump Boom	CP	59%	0.5433	0.543287	0.543287	0.543287	0.543287	0.543287
	Crane	Diesel	2270002045	101	175	172	Crane	C175	43%	0.5374	0.537429	0.53743	0.53743	0.53743	0.53743
	Crane	Diesel	2270002045	176	300	235	Crane	C300	43%	0.5374	0.537429	0.53743	0.53743	0.53743	0.537429
	Crane	Diesel	2270002045	301	600	400	Crane	C600	43%	0.5374	0.53743	0.53743	0.53743	0.53743	0.537429
	Crawler Crane	Diesel	2270002045	601	750	603	Crawler Crane	C750	43%	0.5374	0.537429	0.53743	0.53743	0.53743	0.53743
	Concrete Saw	Diesel	2270002039	41	50	47	Concrete Saw	CS	59%	0.6033	0.603327	0.603327	0.603327	0.603327	0.603327
	Drill rig	Diesel	2270002033	301	600	420	Drill rig	DR	43%	0.5374	0.537429	0.53743	0.53743	0.53743	0.53743
	excavator with breaker	Diesel	2270002036	101	175	169	excavator with breaker	EX175	59%	0.5433	0.543287	0.543287	0.543287	0.543287	0.543287
	excavator with breaker	Diesel	2270002036	301	600	345	excavator with breaker	EX600	59%	0.5433	0.543287	0.543287	0.543287	0.543287	0.543287
	Skidsteer loader	Diesel	2270002072	76	100	94	Skidsteer loader	SS100	21%	0.7044	0.70437	0.70437	0.704369	0.704369	0.704369
	Forklift	Propane	2267003020	51	75	62	Forklift	FK75	30%	0.5686	0.568584	0.568583	0.568584	0.568583	0.568584
	Forklift	Propane	2267003020	76	100	97	Forklift	FK100	30%	0.5686	0.568584	0.568583	0.568583	0.568584	0.568583
	Generator	Diesel	2270006005	101	175	102	Generator	GE175	43%	0.5374	0.53743	0.53743	0.53743	0.53743	0.53743
	Generator	Diesel	2270006005	176	300	215	Generator	GE300	43%	0.5374	0.53743	0.53743	0.53743	0.53743	0.53743
	Loader	Diesel	2270002072	101	175	202	Loader	L	21%	0.6341	0.634079	0.634079	0.634079	0.63408	0.634079
	Aerial lift	Diesel	2270003010	41	50	48	Aerial lift	AL	21%	0.7044	0.704369	0.70437	0.70437	0.704369	0.70437
	Pressure washer	Gas	2265006030	17	25	24	Pressure washer	PW	85%	1.0513	1.051294	1.051286	1.051281	1.05128	1.051279
	Vibratory Hammer with 350 HP power u	Diesel	2270006005	301	600	350	Vibratory Hammer with 350 HP po	GE600	43%	0.5374	0.53743	0.537429	0.53743	0.537429	0.537429
	CAT 345 w/ ICE 216 w/ Power Pack - Ger	Diesel	2270006005	101	175	142	CAT 345 w/ ICE 216 w/ Power Pack	GE175	43%	0.5374	0.53743	0.53743	0.53743	0.53743	0.53743
	Pump	Gas	2265006010	17	25	22	Pump	GP	69%	1.0513	1.051281	1.051278	1.051279	1.051279	1.051279
	Pump	Diesel	2270006010	17	25	24	Pump	DP	43%	0.5975	0.59747	0.597469	0.597469	0.597469	0.59747
	Compactor	Diesel	2270002009	17	25	31	Compactor	CO25	43%	0.5975	0.59747	0.59747	0.597469	0.597469	0.597469
	Roller	Diesel	2270002015	101	175	174	Roller	RL	59%	0.5433	0.543288	0.543287	0.543287	0.543287	0.543287
	Wacker	Diesel	2270002009	17	25	18	Wacker	WAC	43%	0.5975	0.59747	0.59747	0.597469	0.597469	0.597469
	Off-road Trucks	Diesel	2270002051	176	300	300	Off-road Trucks	ORT	59%	0.5433	0.543287	0.543288	0.543287	0.543288	0.543287
	Welder	Diesel	2270006025	26	40	27	Welder	WEL	21%	0.7044	0.70437	0.70437	0.704369	0.704369	0.704369
								TRUCK		0	0	0	0	0	0

MOVES TRUCKS FACTORS

miles traveled (mi) 0.1

Total Energy Consumption

	2025	2026	2027	2028	2029	2030	
TTI	0.1031	0.1008	0.1037	0.1055	0.1021	0.1031	MMBtu/hr
CTI	0.1031	0.1008	0.1037	0.1055	0.1021	0.1031	MMBtu/hr
TTC5	0.0042	0.0041	0.0041	0.0041	0.0040	0.0040	MMBtu/mi
CTC5	0.0042	0.0041	0.0041	0.0041	0.0040	0.0040	MMBtu/mi
TTC25	0.0230	0.0226	0.0225	0.0223	0.0217	0.0214	MMBtu/mi
CTC25	0.0230	0.0226	0.0225	0.0223	0.0217	0.0214	MMBtu/mi
AC25	0.0042	0.0041	0.0040	0.0039	0.0037	0.0037	MMBtu/mi

CO2 Equivalent

	2025	2026	2027	2028	2029	2030	
TTI	8456.1739	8403.1182	8706.3941	9059.5224	8721.6629	9006.2177	g/hr
CTI	8456.1739	8403.1182	8706.3941	9059.5224	8721.6629	9006.2177	g/hr
TTC5	340.2894	335.7805	340.0394	347.4137	335.0017	340.0056	g/veh
CTC5	340.2894	335.7805	340.0394	347.4137	335.0017	340.0056	g/veh
TTC25	1863.7383	1837.5972	1827.7942	1830.3386	1775.8628	1762.8919	g/mi
CTC25	1863.7383	1837.5972	1827.7942	1830.3386	1775.8628	1762.8919	g/mi
AC25	320.5985	312.5390	302.6225	291.3085	280.0438	269.6393	g/mi

Diesel

1	10.21	CO2	10.27	kg CO2e/gal
84	0.00041	CH4	22.631684	lb CO2e/gal
264	0.00008	N2O		

https://www.epa.gov/system/files/documents/2024-02/ghg-emission-factors-hub-2024.pdf

https://dec.ny.gov/sites/default/files/2023-12/summaryreportnysghgemissionsreport2023.pdf

0.1374 MMBtu/gal

https://www.eia.gov/energyexplained/units-and-calculators/british-thermal-units.php

Gasoline

1	8.78	CO2	8.83	kg CO2e/gal
84	0.00038	CH4	19.473519	lb CO2e/gal
264	0.00008	N2O		

https://www.epa.gov/system/files/documents/2024-02/ghg-emission-factors-hub-2024.pdf

https://dec.ny.gov/sites/default/files/2023-12/summaryreportnysghgemissionsreport2023.pdf

0.1202 MMBtu/gal

https://www.eia.gov/energyexplained/units-and-calculators/british-thermal-units.php

Propane

1	5.72	CO2	5.76	kg CO2e/gal
84	0.00027	CH4	12.689542	lb CO2e/gal
264	0.00005	N2O		

https://www.epa.gov/system/files/documents/2024-02/ghg-emission-factors-hub-2024.pdf

https://dec.ny.gov/sites/default/files/2023-12/summaryreportnysghgemissionsreport2023.pdf

NYSDEC Upstream Emission Factor

Table A1. 2020 Emission Rates for Upstream Out-of-State Sources (g/mmbtu)

	Diesel Fuel	
CH4	120.000	g/MMBtu
N2O	0.260	g/MMBtu
CO2	14,104	g/MMBtu
CO2e	24,214	g/MMBtu

0.138 mmBtu per gallon

	Diesel Fuel	
CH4	16.560	g/gal
N2O	0.036	g/gal
CO2	1,946	g/gal
CO2e	3,342	g/gal

NYSDEC, *Appendix A of the 2022 Statewide GHG Emission Report. January 2023*