

**PETITION FOR ZONING AMENDMENT TO MODIFY PLANNED
DEVELOPMENT DISTRICT #53 AND COASTAL SITE PLAN
REVIEW TO ALLOW FOR RESIDENTIAL USE UP TO
500 APARTMENTS LOCATED AT 501-585 LONG WHARF DRIVE**

September 1, 2021



Lynn Fusco
Fusco Harbor Associates LLC and
Fusco Maritime Associates LLC
555 Long Wharf Drive
Suite 14
New Haven, CT 06511
Phone: (203) 777-7451

John Milone, PE
jmilone@slrconsulting.com
Jason Williams PLA
Milone & MacBroom, Inc.
99 Realty Drive
Cheshire, CT 06410
Phone: (203) 271-1773

Brian P. O'Connor, AIA
boconnor@cube3.com
CUBE3
160 State Street
Floor 6
Boston, MA 02109
Phone: (978) 989-9900

Matthew Ranelli
mraneli@goodwin.com
Shipman & Goodwin LLP
265 Church Street
Suite 1207
New Haven, CT 06510-7013
Phone: (203) 836-2805

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SUBMITTED UNDER SEPARATE COVER

Three full-size Plan Sets, and one 8 1/2 x 11 set, dated August 2021, prepared by CUBE3 and SLR

Traffic Study, dated August 2021, prepared by SLR

Coastal Resources Assessment, dated August 2021, prepared by SLR

Application fee of \$1,500 payable to Treasurer, City of New Haven

SHIPMAN

Matthew Ranelli
Phone: (860) 251-5748
Fax: (860) 251-5318
mranelli@goodwin.com

September 1, 2021

Hon. Tyisha Walker-Myers
and Alders
Board of Alders
City of New Haven
165 Church Street
New Haven, CT 06510

Re: Transmittal Letter: Petition for Zoning Amendment to Modify Planned Development District #53 and Coastal Site Plan Review to Allow for Residential Use Up to 500 Apartments Located at 501-585 Long Wharf Drive (Including MBLU Nos. 205 0529 00102, 205 0529 00202, 205 0529 00102, 080 0530 00101, and 205 0529 00300)

Dear President Walker-Myers and Alders:

On behalf of Fusco Harbor Associates LLC and Fusco Maritime Associates LLC (collectively "Fusco"), we are pleased to submit the attached petition and materials for a zoning amendment to modify Planned Development District ("PDD") #53 (the "Petition or Application") and corresponding Coastal Site Plan Review ("CSPR"). The Petition requests modification of the existing PDD #53 to expressly allow residential use up to 500 apartments in the Long Wharf area between the Maritime Center and the recently added Canal Dock Boathouse.

This portion of the Long Wharf area is one of the most visible locations in the City and often the first impression visitors have of New Haven. It has been the subject of significant planning for growth, improving public access to the shoreline, and establishing a residential presence to make the area more inviting including most recently a two-year study culminating in the development of the Long Wharf Responsible Growth Plan in 2018 (which was formally adopted by the Board of Alders as part of the New Haven Vision 2025 comprehensive plan (hereafter the "Vision Plan"). The Vision Plan characterizes the Long Wharf area as underutilized and recommends "denser development of new residential and commercial uses." (Vision Plan p. 11). It calls for the development of five new walkable, mixed-use neighborhoods including a residential "harbor district" located in the area of PDD #53. The Vision Plan was the

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result of extensive City, State, and community input and took into account City goals for economic development, shoreline access, and coastal resiliency. Fusco's proposed plan is the key first step in acting on the City's Vision Plan for the Long Wharf area.

Fusco's proposed plan, is consistent with and adopts many of the goals of the Vision Plan. Importantly, the proposed modification of PDD #53 will provide a critical mass of residences on-site and create a destination for New Haven residents and others to visit the shoreline. The mixed-use amenities will create a synergy and direct connection with the boathouse, Long Wharf Park, and the Hill South and Downtown neighborhoods. People will have more options; they can meet for a walk or bike ride, visit with friends and family, shop in the market, enjoy a meal or potentially some live entertainment, or just sit and enjoy the harbor.

Fusco takes great pride in New Haven and the Long Wharf area. It built and maintains the Maritime Center (Fusco's headquarters) and has developed a number of New Haven's other landmark sites. The Maritime Center stands out as an attractive, well-maintained presence in an area otherwise dominated by industrial uses and surface parking. Fusco is excited for the opportunity to grow Long Wharf with the same caliber of development and desirable amenities as detailed in this proposal. Historically, Long Wharf was a key area for the City and city life and it can be again. For this project, Fusco has assembled an expert team of architects, landscape architects, and engineers to re-imagine what our shoreline can look like and how to invite our neighbors to this area.

With these materials, we are delivering a check for the application fee of \$1,500 for a zoning text or map change on the basis that this is a change to PDD #53. If any additional fee is required or we have miscalculated the fee please let me know and we will provide a check for the additional amount.

We look forward to the opportunity to present Fusco's proposed plan to revitalize this portion of New Haven's shoreline to the Board of Alders and working with City staff at its earliest opportunity.

Sincerely,

Matthew Ranelli

GMR:ekf
Attachments

September 1, 2021

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- c: Fusco Harbor Associates LLC and Fusco Maritime Associates LLC (w/ att.)
- The Hon. Rosa DeLauro, United States Representative (w/ att.)
- The Hon. Carmen Rodriguez, Alder, Ward 6, City of New Haven (w/ att.)
- The Hon. Justin Elicker, Mayor, City of New Haven (w/ att.)
- Albert Lucas, Director, Legislative Services, City of New Haven (w/ att.)
- Michael Piscitelli, Economic Development Administrator, City of New Haven (w/ att.)
- Aïcha Woods, Executive Director, City of New Haven (w/ att.)
- Giovanni Zinn, City Engineer, City of New Haven (w/ att.)
- James Turcio, Building Official, City of New Haven (w/ att.)
- Milone & MacBroom, Inc. (w/ att.)
- CUBE3 (w/ att.)

SHIPMAN

Matthew Ranelli
Phone: (860) 251-5748
Fax: (860) 251-5318
mranelli@goodwin.com

September 1, 2021

Hon. Tyisha Walker-Myers
and Alders
Board of Alders
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165 Church Street
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Re: Petition for Zoning Amendment to Modify Planned Development District #53 and Coastal Site Plan Review to Allow for Residential Use Up to 500 Apartments Located at 501-585 Long Wharf Drive (Including MBLU Nos. 205 0529 00102, 205 0529 00202, 205 0529 00102, 080 0530 00101, and 205 0529 00300)

Dear President Walker-Myers and Alders:

On behalf of Fusco Harbor Associates LLC and Fusco Maritime Associates LLC (collectively "Fusco"), we are pleased to submit this petition for zoning amendment to modify Planned Development District ("PDD") #53 to allow residential use for up to 500 apartments located at 501-585 Long Wharf Drive (including Nos. 205 0529 00102, 205 0529 00202, 205 0529 00102, 080 0530 00101, and 205 0529 00300) in accordance with Article VII, Section 65 of the New Haven Zoning Ordinances.

The Long Wharf Site And Zoning

The proposed development site is located on south side of Long Wharf Drive on a 4.3+ acre site between the Maritime Center and the Canal Dock Boathouse and bounded on the south by New Haven Harbor and Long Island Sound. It consists of three parcels known as 501 Long Wharf Drive (MBLU Nos. 205 0529 00102, 205 0529 00202, and 205 0529 00102) with related parking to be included at the existing Maritime Center and connected parking garage located at 585 Long Wharf Drive (collectively, MBLU Nos. 080 0530 00101 and 205 0529 00300). 501 Long Wharf Drive is currently used mainly as a restaurant and parking lot with a small portion of the Maritime Center Harbor Walk. Tab 3 (aerial photo).

The site is zoned PDD #53 (a/k/a, the Long Wharf Planned Development District) which allows for a variety of uses including restaurant, office use, commercial / retail, and other service, research, professional, and marine related uses. PDD #53 was approved by the Board of Aldermen in May 1984. At the time PDD #53 was established, the Board of Alders and City Plan recognized that the area included in PDD #53 and the surrounding properties had been essentially separated from Downtown, Wooster Square, and Hill South by I-95. In the early 1980's, the City developed the Long Wharf Renewal and Redevelopment Plan in the hope of spurring development that would bring residents and businesses back to the area. At that time, Fusco Corporation was selected after an RFP as the preferred developer and proposed the Maritime Center using the PDD process. The existing Maritime Center was built by Fusco and now houses Fusco's headquarters and many other New Haven businesses. The original PDD proposal envisioned that residential and retail uses would eventually be added to the PDD and that the PDD may even be expanded to include additional properties.

The Proposed Use And Zoning Modification To PDD #53

The proposed modification does not expand the boundaries of PDD #53 but does propose two new buildings and expands the types of uses allowed to expressly include residential uses and related amenities such as a food market, outdoor dining, and accessory entertainment / performance areas within PDD #53. The modification will include the proposed buildings, improvements, and uses shown on the general development plan submitted with this Petition.

Fusco's proposed general plan calls for two mixed-use buildings of 13 and 15 stories, respectively, and containing up to 500 apartments (ranging from studio apartments up to three bedroom apartments). The buildings will contain reception areas for residents and commercial uses open to the public on the first floor totaling approximately 20,000 square feet including a market with indoor and outdoor food service. The buildings will contain one floor of parking, loading areas, and valet parking options for parking spaces in the nearby 1,800-space Maritime Center Garage. That garage was built with extra capacity in mind for future improvements in PDD #53. Other uses proposed in this plan, including commercial, retail, and related entertainment are already allowed in PDD #53 but noted here for completeness.

At the detailed site plan stage, our architects and design professionals will design the buildings to a LEED or similar code by following a checklist created by one of our LEED Accredited Professionals focusing on envelope efficiency, energy efficiency, healthy environments, and conscientious sites. Even if Fusco elects not to pursue certification by LEED or other private code, by designing and building to this standard, we can ensure a sustainable building.

The proposed modification satisfies the criteria for a PDD (and modification of a PDD) contained in Section 65(a) of the Zoning Ordinances. The general plan is in accordance with the comprehensive plan as well as City guidance documents and plans for redevelopment of the area

including the Vison Plan as addressed below. The proposed residential use is an important element of the City's plans for redevelopment of the Long Wharf area. The proposed plan also includes high quality Type I building construction with high quality materials and landscaping to complement the surrounding neighborhood such as the well-maintained Maritime Center to the northeast and the newly built Canal Dock Boathouse to the southwest. The proposed site plan orientation is intended to improve and enhance public access to the site and in particular New Haven's waterfront while also providing residents with over 250 square feet of open space per unit. Further, Fusco has also provided (1) a traffic study demonstrating that the existing roads have adequate site lines and capacity to accommodate the proposed development; and (2) a stormwater management report demonstrating that the proposed development will not result in any increase in the peak rate or total volume of runoff. Tabs 10 and 11. In fact, the proposed plan slightly reduces the total amount of impervious surface on the site and provides greater stormwater controls to manage the peak rate of runoff than existing conditions.

In short, the proposed plan not only satisfies the criteria for PDDs and achieves important planning and public access goals but also greatly improves the site over existing conditions.

Relation To The Vison Plan, Existing Uses, And Neighborhood

Based on our discussions with the Hill South Community Management team members and provisions of the Vison Plan, Fusco has planned for the site to be an important connecting point and destination for those walking, biking, or otherwise visiting from the surrounding neighborhoods.

On July 30, 2021, Fusco met with the Hill South Community Management Team members and Alder Carmen Rodriguez to present its draft plan and receive comments and input. One recurring theme of comments during the meeting was the desire of neighborhood residents to connect to the shoreline and in particular to develop an enjoyable walking and biking alternative to traverse along the Long Wharf area. The proposed plan achieves that goal. It creates a true destination in Long Wharf that will provide carefully designed indoor and outdoor spaces, plazas, and walkways along the water. By creating a destination point that further links the nearby neighborhoods, Long Wharf Park, and the Boathouse, the proposed development will enhance the appeal of those destinations for individuals and families who want a range of activities when visiting Long Wharf. Visitors and residents will now be able to enjoy the proposed market with food service and indoor and outdoor dining, several overlook points, and an extended harbor walk with thoughtfully laid out landscape spaces and park-like areas to meet and gather. The new buildings and outdoor amenities will be handicap accessible. The addition of the residential community will create a built in increase in foot traffic which will also make the area more inviting.

As noted in our transmittal letter, this portion of the Long Wharf area is one of the most visible locations in the City and often the first impression visitors have of New Haven. For

decades the City has attempted to develop plans to improve and revitalize the area, improve public access to the shoreline, and establish a residential presence. Most recently, the City, State, and community leaders undertook a two-year study culminating in the Long Wharf Responsible Growth Plan in 2018 (which was then formally adopted by the Board of Alders in 2019 as part of the New Haven Vision 2025 comprehensive plan ("Vision Plan")). The Vision Plan characterizes the existing area as underutilized and recommends "denser development of new residential and commercial uses." (Vision Plan p. 11). Its five new walkable, mixed-use neighborhoods include a residential "harbor district" located in the area of PDD #53.

The proposed plan is truly the first step and instrumental in bringing the Vision Plan into reality.

Coastal Area Management Site Plan Review

Simultaneously filed with this Petition, Fusco is also filing a coastal site plan review application consistent with the City of New Haven coastal program regulations and the State Coastal Management Act. Tabs 7 and 8. As part of that application, Fusco is also providing a coastal resources report prepared by its environmental consultants. The report contains a detailed review of coastal resources near the project area. It demonstrates that the proposed project activities will be conducted entirely landward of the Coastal Jurisdiction Line and is consistent with applicable coastal use and policies. The report analyzes the proposed stormwater management elements and other design elements intended to avoid impact to the surrounding resources and concluded that the proposed project will not adversely impact the nearby coastal resources.

The report recognizes that the project site is located in a FEMA 100-year flood zone based on the City adopted FEMA Map (Map 09009C0441J). The majority of the site (and most of the Long Wharf area addressed in the Vision Plan) and where the construction activities are located is designated Zone AE with a base flood elevation of 13 feet. The existence of the flood zone is included in the Vision Plan discussion for the area and its recommendations for dense development of the area.

Fusco currently owns and operates the Maritime Center on the neighboring site and is uniquely aware of the flood risks as a result. The planning team has consulted the City and the State of Connecticut Department of Energy and Environmental Protection and developed a design that complies with all regulations for development in Zone AE and does not propose any buildings in the small portion of the site designated VE. Fusco has also exceeded the minimum requirement by, among other things, increasing the amount of free board required between the base flood elevation and lowest residential portion of the buildings. Importantly, Fusco is also proposing Type I buildings built of higher quality materials required to withstand the dynamic loads in storm events and meet or exceed the building standards in a flood zone. In addition, as an additional precaution, Fusco has also prepared a Communication and Storm Preparedness

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Plan (Tab 12) to provide clear and specific trigger and response for potential storm events. Finally, Fusco currently confers with the City on a regular basis and has built design flexibility into its proposed general plan to anticipate and work with the City on its future flood control improvement plans for the Long Wharf area.

Conclusion

Historically, Long Wharf was a key area for City life and Fusco's plan will help it achieve that status again. Fusco has a long-standing commitment to New Haven and takes great pride in the City and the Long Wharf area in particular. Its headquarters are located in the Maritime Center which is a familiar landmark to New Haveners residents. Fusco has demonstrated with the Maritime Center and other properties that it is a good neighbor with expertise in operating and maintaining its buildings and landscapes. Fusco is excited for the opportunity to extend the same caliber of development and desirable amenities with the proposed project.

We look forward to the opportunity to present Fusco's proposed plan to revitalize this portion of New Haven's shoreline to the Board of Alders and its committees and working with City staff.

Sincerely,

Matthew Ranelli

GMR:ekf

Attachments

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- The Hon. Rosa DeLauro, United States Representative (w/ att.)
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- Milone & MacBroom, Inc. (w/ att.)
- CUBE3 (w/ att.)



PDD MODIFICATION SUBMISSION

LONG WHARF RESIDENTIAL

LONG WHARF DRIVE
NEW HAVEN, CONNECTICUT

AUGUST 2021



LOCATION MAP:

PREPARED BY:



PREPARED FOR:

FUSCO MARITIME ASSOCIATES, LLC
566 LONG WHARF DRIVE
NEW HAVEN, CT 06511



LEGEND

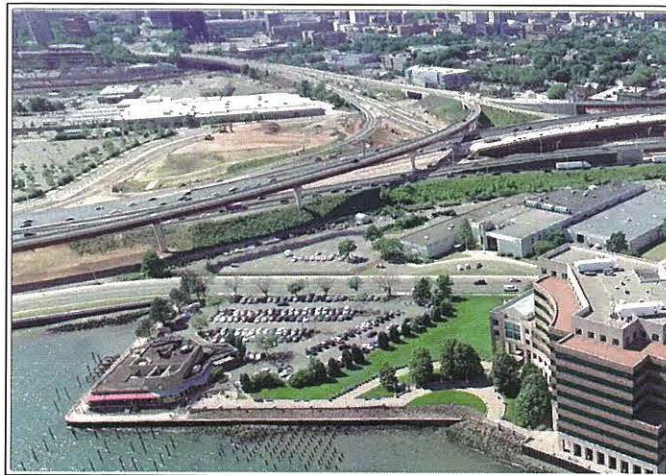
EXISTING	PROPOSED

GENERAL NOTES

- PROPERTY AND TOPOGRAPHIC SURVEY ENTITLED "PROPERTY/TOPOGRAPHIC SURVEY - PREPARED FOR FUSCO CORPORATION, LONG WHARF DRIVE & HAMILTON STREET, NEW HAVEN, CT," PREPARED BY MILNE & MACBROOM, INC. DATED: MAY 19, 2020.
- NORTH ARROW, BEARINGS AND COORDINATES ARE BASED UPON THE CONNECTICUT COORDINATE SYSTEM (NAD 1983). ELEVATIONS, CONTOURS AND BENCH MARK ARE BASED UPON NGVD 1988.
- INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE, AND INVERSE SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. CALL "CALL BEFORE YOU DIG", 1-800-932-4455. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROLS SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
- SUR ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF MAPS AND DATA WHICH HAVE BEEN SUPPLIED BY OTHERS.
- THIS PROJECT IS NOT WITHIN COASTAL ZONE MANAGEMENT AREAS AND/OR FLOOD ZONES.
- THERE ARE NO KNOWN PALAND WETLANDS AND/OR WATERCOURSE AREAS ON THIS OR ADJACENT PROPERTIES.
- ALL UTILITY SERVICES ARE TO BE UNDERGROUND. THE EXACT LOCATION, DEPTH OF CONSTRUCTION, AND SIZE OF ELECTRIC, TELEPHONE, AND CABLE TELEVISION ARE TO BE DETERMINED BY THE RESPECTIVE UTILITY COMPANIES.
- ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- SEDIMENT AND EROSION CONTROL MEASURES AS DEPICTED ON THESE PLANS AND DESCRIBED WITHIN THE SEDIMENT AND EROSION CONTROL NARRATIVE SHALL BE IMPLEMENTED AND MAINTAINED UNTIL PERMANENT COVER AND STABILIZATION IS ESTABLISHED. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL CONFORM TO THE "GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, CONNECTICUT - 2002" AND IN ALL CASES BEST MANAGEMENT PRACTICES SHALL PREVAIL.
- ALL DESTABILIZED LAWN AREAS SHALL RECEIVE A MINIMUM OF 6" TOPSOIL. PLANTING BEDS SHALL RECEIVE 12" AS SHOWN ON THE PLANS.
- ALL PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATE FINISHED GRADE.
- ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO THE CITY OF NEW HAVEN REQUIREMENTS AND TO THE APPLICABLE SECTIONS OF THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, AND INCIDENTAL CONSTRUCTION, FROM 8187 AND ADDENDUMS.
- THE PLANS REQUIRE A CONTRACTOR'S WORKING KNOWLEDGE OF LOCAL, MUNICIPAL, WATER AUTHORITY, AND STATE CODES FOR UTILITY SYSTEMS. ANY CONFLICTS BETWEEN MATERIALS AND LOCATIONS SHOWN, AND LOCAL REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE EXECUTION OF WORK. THE ENGINEER WILL NOT BE HELD LIABLE FOR COSTS INCURRED TO IMPLEMENT OR CORRECT WORK WHICH DOES NOT CONFORM TO LOCAL CODE.
- ALL FUEL, OIL, PAINT OR OTHER HAZARDOUS MATERIALS USED DURING CONSTRUCTION SHOULD BE STORED IN A SECONDARY CONTAINER AND REMOVED TO A LOCKED INDOOR AREA WITH AN IMPERVIOUS FLOOR DURING NON-WORK HOURS.
- COMPLIANCE WITH THE PERMIT CONDITIONS IS THE RESPONSIBILITY OF BOTH THE CONTRACTOR AND THE PERMITTEE.
- MEAN HIGH WATER LINE (MHW) = ELEV. + 2.8' AND CONSTA JURISDICTION LINE (CJL) = ELEV. - 4.8'



PROPOSED CONDITIONS



EXISTING CONDITIONS

ZONING DATA TABLE

ZONE	PDD 53 (Planned Development District)	
	REQUIRED/PERMITTED	PROVIDED
PROJECT LOCATION	Parcel H-1, Parcel LWDA-3A & Parcel LWDA-4	
DWELLING UNITS	No Requirements	410
DENSITY	No Requirements	410 (484,245 GSF) 95 UNITS/ACRE
MAX HEIGHT	No Requirements	BUILDING #1 = 158'-0" BUILDING #2 = 169'-0"
MIN. LOT AREA	No Requirements	187,330 SF/ 4.3 AC (3 PARCELS)
MIN. LOT WIDTH	No Requirements	515.40 (H-1 & LWDA-4)
FRONT YARD SETBACK	No Requirements	10'-0"
REAR YARD SETBACK	No Requirements	10'-0"
SIDE YARD SETBACK	No Requirements	10'-0"
MAX COVERAGE (BUILDING)	No Requirements	21.87% (3-PARCELS)
F.A.R. (MAX)	No Requirements	2.58
USABLE OPEN SPACE	250 SF/ Dwelling Unit	456.9 SF per unit (187,330 SF/ 4.3 AC)

LIST OF DRAWINGS

NO.	NAME	TITLE
--	--	TITLE SHEET
02	--	SITE PLAN RENDERING
03-07	--	CONCEPTUAL RENDERING
08-09	1-(1-2)	PROPERTY SURVEY
10	EX	EXISTING CONDITIONS AND REMOVAL PLAN
11	LA	SITE PLAN - LAYOUT
12	LS	SITE PLAN - LANDSCAPING
13	LT	SITE PLAN - LIGHTING
14	GR	SITE PLAN - GRADING
15	UT	SITE PLAN - UTILITIES
16	SE-1	SEDIMENT AND EROSION CONTROL PLAN
17	SE-2	SEDIMENT AND EROSION CONTROL SPECIFICATION AND DETAILS
18	RH	REFLECTIVE HEAT IMPACT STUDY
19	PH-1	PHASE - 1 CONSTRUCTION SEQUENCE
20-25	SD-(1-5)	SITE DETAILS
26	A-000	COVER SHEET
27	A-100	OVERALL PLAN - LOWER LEVEL
28	A-100.1	BUILDING 1 - LOWER LEVEL
29	A-100.2	BUILDING 2 - LOWER LEVEL
30	A-101	OVERALL PLAN - TYPICAL GROUND LEVEL
31	A-101.1	BUILDING 1 - GROUND LEVEL
32	A-101.2	BUILDING 2 - GROUND LEVEL
33	A-102	OVERALL PLAN - SECOND LEVEL
34	A-102.1	BUILDING 1 - SECOND LEVEL
35	A-102.2	BUILDING 2 - SECOND LEVEL
36	A-103	OVERALL PLAN - TYPICAL LEVEL
37	A-103.1	BUILDING 1 - TYPICAL LEVEL
38	A-103.2	BUILDING 2 - TYPICAL LEVEL
39	A-104	OVERALL PLAN - THIRTEENTH LEVEL
40	A-104.1	BUILDING 1 - THIRTEENTH LEVEL
41	A-105	OVERALL PLAN - FIFTEENTH LEVEL
42	A-105.2	BUILDING 2 - FIFTEENTH LEVEL
43	A-106	OVERALL PLAN - ROOF PLAN
44	A-106.1	BUILDING 1 - ROOF PLAN
45	A-106.2	BUILDING 2 - ROOF PLAN
46	A-200	BUILDING 1 - OVERALL ELEVATIONS
47	A-201	BUILDING 1 - OVERALL ELEVATIONS
48	A-202	BUILDING 2 - OVERALL ELEVATIONS
49	A-203	BUILDING 2 - OVERALL ELEVATIONS
50	A-300	BUILDING 2 - OVERALL BUILDING SECTIONS
51	A-301	BUILDING 2 - OVERALL BUILDING SECTIONS



- 1 OPEN PEDESTRIAN PLAZA WITH OUTDOOR SCULPTURES AND SEATING
- 2 INTIMATE OUTDOOR SEATING PLAZA BETWEEN TWO RAIN GARDENS
- 3 ELEVATED BOARDWALK FEATURE WITH EDUCATIONAL SIGNAGE
- 4 OPEN LAWN SPACE FOR SMALL EVENT
- 5 LARGE STORMWATER INFILTRATION BASIN BECOMES AN ENVIRONMENTAL SITE FEATURE AND NATURAL DESIGN ELEMENT
- 6 RAIN GARDEN
- 7 UPPER MARKET PLAZA
- 8 A MIXTURE OF SUSTAINABLE WOOD DECKING AND PERMEABLE PAVER PLAZA SPACES PROVIDE LARGE OPEN AREAS FOR EVENTS AND PUBLIC GATHERING
- 9 OPEN LAWN SPACE
- 10 MID-LEVEL SCULPTURE EVENT PLAZA SPACE (PERMEABLE PAVERS)

- 11 SMALL PERMEABLE SEATING PLAZA
- 12 CONCRETE AMPHITHEATER AND LARGE GRANITE SEATING BLOCKS
- 13 PERVIOUS CONCRETE HARBOR WALK PROVIDES PUBLIC ACCESS ALONG THE WATER EDGE
- 14 OUTDOOR GATHERING AND DINING MARKET PLAZA SPACES
- 15 MONUMENTAL STAIRS WITH LARGE GRANITE SEATING BLOCKS
- 16 ADA ACCESSIBLE PERVIOUS CONCRETE WALKWAY PROVIDES ACCESS TO OVERLOOK FEATURE, BOARDWALK AND MARKET ENTRANCE
- 17 PERVIOUS ASPHALT ACCESS DRIVE
- 18 PERMEABLE PAVER ARRIVAL PLAZA AND DROP-OFF/PICK-UP AREA

LONG WHARF RESIDENTIAL SITE PLAN RENDERING

SLR





Long Wharf Redevelopment
New Haven, CT
26 July 2021



CONCEPTUAL RENDERING

CUBE 3 Studio LLC | 370 Merrimack Street, Suite 337 | Lawrence, MA 01843 | 978 689-8900 | cube3.com





Long Wharf Redevelopment
New Haven, CT
26 July 2021



CONCEPTUAL RENDERING

CUBE 3 Studio LLC | 370 Merrimack Street, Suite 337 | Lawrence, MA 01843 | 978 680 8900 | cube3.com





Long Wharf Redevelopment
New Haven, CT
26 July 2021



CONCEPTUAL RENDERING

CUBE 3 Studio LLC | 370 Merrimack Street, Suite 337 | Lawrence, MA 01843 | 978.689.8900 | cube3.com





Long Wharf Redevelopment
New Haven, CT
26 July 2021



CONCEPTUAL RENDERING

CUBE 3 Studio LLC | 370 Merrimack Street, Suite 337 | Lawrence, MA 01843 | 978 989 8900 | cube3.com





Long Wharf Redevelopment
New Haven, CT
26 July 2021



CONCEPTUAL RENDERING

CUBE 3 Studio LLC | 370 Merrimack Street, Suite 337 | Lawrence, MA 01843 | 978.989.9900 | cube3.com



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CITY OF NEW HAVEN, CONNECTICUT

CITY PLAN DEPARTMENT | 165 CHURCH STREET, 5TH FLOOR, NEW HAVEN, CT 06510-2010
PHONE 203.946.6379 FAX 203.946.7815

Application for Development Permit

DATA

CHECK BOX ~~WHERE~~ APPROPRIATE. PRINT OR TYPE INFORMATION IN SPACE PROVIDED.

1. Project Address(es)

501, 555, 585 Long Wharf Drive

A/K/A:

Tax Map-Block-Parcel(s)

205 0529 00102, 205 0529 00202, 205
0529 00102, 205 0529 00300 and 080
0530 00101

Nearest Cross Street:
Hamilton Street

<input type="checkbox"/> Check Here if Fee Exempt.	THIS BOX IS FOR CITY USE ONLY		
<input type="checkbox"/> As-of Right	File #	Fee Paid	Date [yy-mm-dd]
<input type="checkbox"/> Zoning Relief	# _____	\$ _____	____/____/____
<input type="checkbox"/> Development Permit	# _____	\$ _____	____/____/____
This includes <input type="checkbox"/> Site Plan Review. <input type="checkbox"/> CSPR ... <input type="checkbox"/> SESC... <input type="checkbox"/> IW			
<input type="checkbox"/> Flood Development Permit	# _____	\$ _____	____/____/____
<input type="checkbox"/> Performance Bond	# _____	\$ _____	____/____/____
<input type="checkbox"/> Building Permit	# _____	\$ _____	____/____/____

2. Property Owner Information & Consent

Name Fusco Harbor Associates LLC; Fusco Maritime Associates LLC Daytime Phone: 203-777-7451

Firm c/o Fusco Corporation

Business Home Answering Service

Street Address: 501, 555 and 585 Long Wharf Drive

Fax: _____ Cell: _____

City New Haven State CT ZIP 06511

E-Mail: _____

As OWNER OF THE PROPERTY I hereby authorize this development permit application, and:

1. I consent to necessary and proper inspections of the above property by agents of the City at a reasonable time after an application is made, and
2. I certify that I am familiar with all of the information provided in this application, and
3. I am aware that any permit obtained through deception, inaccurate or misleading information is subject to revocation and penalties, and
4. I certify that this project conforms to zoning or has applied for or been granted zoning relief.

Dated: August 27, 2021


Signature of PROPERTY OWNER

3. Applicant Information & Certification

Check here if SAME AS OWNER (Fill in only if not same as Owner.)

Name Fusco Harbor Associates LLC and Fusco Maritime Associates LLC Daytime Phone: 203-777-7451

Firm c/o Fusco Corporation

Business Home Answering Service

Street Address 555 Long Wharf Drive

Fax: _____ Cell: _____

City New Haven State CT ZIP 06511

E-Mail: _____

As APPLICANT I am familiar with all of the information provided in this application and aware that any permit obtained through deception, inaccurate or misleading information is subject to revocation and penalties.

Dated: August 27, 2021


Signature of APPLICANT

4. Authorized Agent Information

Check here if SAME AS OWNER (Fill in only if not same as Owner.)

Name Matthew Ranelli, Esq.

Daytime Phone: (203) 836-2805

Firm Shipman & Goodwin LLP

Business Home Answering Service

Street Address 265 Church Street, Suite 1207

Fax: (203) 836-2802 Cell:

City New Haven State CT ZIP 06510

E-Mail: mranelli@goodwin.com

Check One: The AUTHORIZED AGENT for the attached Development Application is:

Lessee Attorney Architect Engineer Real Estate Agent Contractor Other-Specify _____

As AUTHORIZED AGENT I am familiar with all of the information provided in this application and aware that any permit obtained through deception, inaccurate or misleading information is subject to revocation and penalties.

Dated: August 27, 2021


Signature of AUTHORIZED AGENT

CITY OF NEW HAVEN, CONNECTICUT

CITY PLAN DEPARTMENT | 165 CHURCH STREET, 5TH FLOOR, NEW HAVEN, CT 06510-2010
 PHONE 203.946.6379 FAX 203.946.7815

Application for Development Permit

WORKSHEET

1. Calculate **LOT AREA** as defined by the New Haven Zoning Ordinance excluding the following categories:
- Wetlands and Watercourses as defined in Sections 22a-38 15&16) C.G.S. and appearing on New Haven County USDA Soil Conservation Service Soil Survey.
 - State-designated Tidal Wetlands defined and mapped under Sections 22a-29(a)(2) and 22a-30 C.G.S.
 - Any parcel area below the Mean High Water Mark.

LOT AREA CALCULATION WORKSHEET			
ZONING LOT AREA = TAX PARCEL AREA MINUS STEP 1 TOTAL			
STEP 1 Add Items A. through C. below:		STEP 2: Subtract STEP 1 TOTAL from Tax Parcel	
Area:			
A. Tidal Wetlands -----	0 SF	TAX PARCEL AREA:	187,330* SF
B. Area below Mean High Water Mark -----	31,419 SF		
C. Inland Wetlands & Watercourses -----	0 SF	MINUS STEP 1 TOTAL:	0 SF
	= STEP 1 TOTAL 31,419 SF	ZONING LOT AREA:	155,911* SF
Three parcels with proposed development activity. Does not include parcel with existing parking garage.			

2. ZONING TABLE *(Fill in below or include on submission drawing cover sheet.)*

RESIDENTIAL PROJECTS: ~~ZONING TABLE IS ATTACHED TO SUBMISSION DRAWING COVER SHEET~~

ZONING DISTRICT:	Not Applicable = <input checked="" type="checkbox"/>	Standard [Permitted or Required]	Proposed [or Allowed by BZA]
1. ZONING LOT AREA <i>[Calculate Above]</i>		Sq. Ft.	Sq. Ft.
2. NUMBER OF DWELLING UNITS	<input type="checkbox"/>	Units	Units
3. LOT AREA PER DWELLING UNIT	<input type="checkbox"/>	Sq. Ft./DU	Sq. Ft./DU
4. IMPERVIOUS SURFACE	<input type="checkbox"/>	Sq. Ft. %	Sq. Ft. %
5. FRONT YARD	<input type="checkbox"/>	Feet	Feet
6. SIDE YARDS	<input type="checkbox"/>	Feet and Feet	Feet and Feet
7. REAR YARD	<input type="checkbox"/>	Feet	Feet
8. BUILDING HEIGHT		Feet	Feet
9. PARKING	<input type="checkbox"/>	#Spaces	#Spaces

COMMERCIAL OR INDUSTRIAL PROJECTS: ~~ZONING TABLE IS ATTACHED TO SUBMISSION DRAWING COVER SHEET~~

ZONING DISTRICT:	Not Applicable = <input checked="" type="checkbox"/>	Standard [Permitted or Required]	Proposed [or Allowed by BZA]
1. ZONING LOT AREA <i>[Calculate Above]</i>		Sq. Ft.	Sq. Ft.
2. TOTAL FLOOR AREA (ALL FLOORS):	<input type="checkbox"/>	Sq. Ft.	Sq. Ft.
3. FLOOR AREA RATIO (FAR = B/A)	<input type="checkbox"/>	FAR	FAR
4. IMPERVIOUS SURFACE	<input type="checkbox"/>	Sq. Ft. %	Sq. Ft. %
5. PARKING	<input type="checkbox"/>	Spaces	Spaces
6. LOADING	<input type="checkbox"/>	Spaces	Spaces

3. MATERIAL (SOIL, ROCK OR FILL) TO BE MOVED, REMOVED OR ADDED

CALCULATE MATERIAL TO BE MOVED, REMOVED OR ADDED (Calculate below - Enter sizes in feet).

	Length	x	Width	x	Depth	= Cubic Feet	÷ 27	= Cubic Yards
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	MATERIAL TO BE MOVED:	_____	x	_____	x	_____	÷ 27	= TBD at site plan
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	MATERIAL TO BE ADDED:	_____	x	_____	x	_____	÷ 27	= TBD at site plan
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	MATERIAL TO BE REMOVED:	_____	x	_____	x	_____	÷ 27	= TBD at site plan

TOTAL MATERIAL TO BE MOVED, REMOVED OR ADDED = TBD at site plan

REGRADEING OF SITE: ~~TBD at detailed site plan approval stage.~~

- No Yes Are more than 800 cubic yards soil, rock or fill to be **MOVED, REMOVED OR ADDED?**
 No Yes Is more than 30% of the lot area proposed to be **REGRADED** by more than 2 feet? (do following calculation).

REGRADED AREA IN SQUARE FEET _____ ÷ TOTAL LOT AREA _____ IN SQUARE FEET = _____ PERCENT
 [Area to be re-graded by more than 2 feet divided by Total Lot Area equals Percentage of Lot to be re-graded]

CITY OF NEW HAVEN, CONNECTICUT

CITY PLAN DEPARTMENT | 165 CHURCH STREET, 5TH FLOOR, NEW HAVEN, CT 06510-2010
PHONE 203.946.6379 FAX 203.946.7815

Application for Development Permit: Site Plan Review

SITE

A NARRATIVE IS REQUIRED _ Please see application for PDD modification/detailed site plans to follow approval of PDD NARRATIVE: A description of the proposed project in sufficient detail to determine that it complies with the New Haven Zoning Ordinance and State of Connecticut Soil Erosion and Sediment Control Standards. (Attach NARRATIVE or include it on the submitted SITE PLAN).

1. State the purpose and intended use of the project.

See Attached Narrative. This is a petition for a PDD modification. Final site plan approval will be requested when detailed site plans are submitted pursuant to Section 65(e) after approval of the PDD #53 modification.

2. Describe the structure(s) and construction activities.

See Attached Narrative.

3. State the construction Start and End Dates/Provide a Construction Staging Plan/If phased provide Time Estimates for Each Phase.

See Construction Phasing Plan submitted with application. Construction time to be determined when detailed site plans are submitted pursuant to Section 65(e) after approval of the PDD #53 modification.

4. List any Federal or State Permits required and their status. Furnish copy of permits issued or applications filed.

CHECK HERE IF NONE No additional permits are needed for PDD modification approval

5. Provide Board of Zoning Appeals Decision Letter(s) if zoning relief has been secured. Plan must be in compliance with the New Haven Zoning Ordinance to receive Site Plan approval.

SITE PLAN SUBMISSION REFER TO "SITE PLAN GUIDELINES" AT CITYOFNEWHAVEN.COM

SURVEY

1. A-2 Survey of property boundary, right-of-way, street, building and/or setback lines, easement lines.
2. A-2 Survey *not* required. Staff has determined this project is: Exempt Unregulated Minor Application.
3. Show Coastal Management District Boundary, Flood Zones, wetlands, watercourses, (soil types if pertinent).

SITE PLAN DATA Please use the checklist below and SESC REGULATIONS as a guide to provide required data.

4. **SITE PLAN** [1" = 20' or larger is preferred] with north arrow, scale, date prepared, and name of preparer.
5. General Location Map at a scale of 1 inch = 600 feet, with North Arrow.
6. Buildings and improvements on abutting parcels within 50 feet of the property lines
7. Names of abutting Property Owners.
8. Driveways, aprons, sidewalks, curbs, walkways, parking layout, loading facilities, and utilities.
9. Provide applicable standard City details.
10. Existing and proposed topographical contours where slope is **LESS THAN 15%**, show at **2 FOOT** intervals.
11. Existing and proposed topographical contours where slope is **15% OR MORE**, show at **5 FOOT** intervals.
12. Proposed site alterations including cleared, excavated, filled or graded areas.
13. Existing trees with diameters of 8 inches or greater, and changes proposed, including protection measures.
14. Edge of wooded areas.
15. Proposed landscaping keyed to a plant list. Include size and planting detail.
16. Sanitary sewage disposal, water supply lines, other utilities on or serving the site.
17. Proposed building plans and elevations.
18. New property lines & improvements: signs, fences, walls, dumpsters, outdoor storage area, lighting.

ENGINEERING DATA. Please provide the following data using the checklist as a guide.

19. Storm Drainage details including roof leaders.
20. Existing and proposed grades and construction materials.
21. Support Data and Drainage Calculations to show adequacy of pipe sizes, flow, slope, invert and top of grate connections
[Not required because: Exempt Unregulated Minor Application].

CITY OF NEW HAVEN, CONNECTICUT

CITY PLAN DEPARTMENT | 165 CHURCH STREET, 5TH FLOOR, NEW HAVEN, CT 06510-2010
PHONE 203.946.6379 FAX 203.946.7815

Application for Development Permit: Coastal Site Plan Review

CSPR

Use a check to note items completed. Print or type information in space provided, or attach.

1. General Information.

If this project is within the Coastal Management District, please furnish material required in the SITE section of the application forms and the following additional information:

- A. General Project Area Map locating Coastal Resources on or adjacent to the site, as defined in §22a-93(7), C.G.S.
B. List the type and extent of vegetation, animal habitats and plant types at or adjacent to the site.

C. Yes No Does this project affect the view to or from this site of coastal resources?

D. Yes No Is this Parcel in a Flood Zone? If yes, fill in the Flood Zone AE, VE and Community-Panel Number 090084-000/09009C0441J

(IF YES, A FLOOD DEVELOPMENT PERMIT WILL BE REQUIRED AS PART OF THE BUILDING PERMIT APPLICATION).

E. Yes No Is this a previously developed urban site REMOTE from the waterfront?

2. Coastal Resources Impact. Review lists below, check each item which is on or adjacent to the site.

- | Yes | No | COASTAL RESOURCES | Yes | No | OTHER FEATURES |
|--|-------------------------------------|------------------------------------|--|-------------------------------------|---------------------------------|
| A. <input type="checkbox"/> | <input checked="" type="checkbox"/> | Coastal Bluffs or Escarpments | 1. <input checked="" type="checkbox"/> | <input type="checkbox"/> | Navigable Waters |
| B. <input type="checkbox"/> | <input checked="" type="checkbox"/> | Rocky Shorefronts | 2. <input type="checkbox"/> | <input checked="" type="checkbox"/> | Historical Structure or Feature |
| C. <input type="checkbox"/> | <input checked="" type="checkbox"/> | Beaches and Dunes | 3. <input type="checkbox"/> | <input checked="" type="checkbox"/> | Scenic Feature |
| D. <input type="checkbox"/> | <input checked="" type="checkbox"/> | Intertidal Flats | 4. <input type="checkbox"/> | <input checked="" type="checkbox"/> | Archeological Feature |
| E. <input type="checkbox"/> | <input checked="" type="checkbox"/> | Tidal Wetlands | 5. <input type="checkbox"/> | <input checked="" type="checkbox"/> | Recreational Feature |
| F. <input type="checkbox"/> | <input checked="" type="checkbox"/> | Freshwater Wetlands & Watercourses | 6. <input type="checkbox"/> | <input type="checkbox"/> | Other (Please Describe below): |
| G. <input type="checkbox"/> | <input checked="" type="checkbox"/> | Estuarine Embayments | | | |
| H. <input checked="" type="checkbox"/> | <input type="checkbox"/> | Coastal Flood Hazard Area | | | |
| I. <input checked="" type="checkbox"/> | <input type="checkbox"/> | Nearshore Waters | | | |
| J. <input checked="" type="checkbox"/> | <input type="checkbox"/> | Offshore Waters | | | |
| K. <input type="checkbox"/> | <input checked="" type="checkbox"/> | Shorelands | | | |
| L. <input type="checkbox"/> | <input checked="" type="checkbox"/> | Shellfish Concentration Areas | | | |
| M. <input checked="" type="checkbox"/> | <input type="checkbox"/> | Developed Shorefront | | | |
| N. <input type="checkbox"/> | <input checked="" type="checkbox"/> | Island | | | |

For CSPR Goals and Policies, See Connecticut General Statutes §22a-92, C.G.S.

For EACH BOX CHECKED YES above, ATTACH THE FOLLOWING INFORMATION:

- Describe the character and condition of EACH coastal resource or other feature checked above.
- Identify and describe potential adverse or beneficial impacts of the project on the condition, character and value of EACH resource checked above.
- Describe any measures to mitigate adverse impacts described.
- Identify any conflicts between the proposed activity and any goal or policy in the §22a-92, C.G.S. (CCMA).
- After installation of reasonable measures:
 - a. Describe any remaining adverse impacts.
 - b. Explain why the impacts were not mitigated.
 - c. State why the Commission should find the impacts acceptable.
 - d. Explain how the proposed project is consistent with coastal goals and policies in §22a-92, C.G.S. (CCMA).

CITY OF NEW HAVEN, CONNECTICUT

CITY PLAN DEPARTMENT | 165 CHURCH STREET, 5TH FLOOR, NEW HAVEN, CT 06510-2010
PHONE 203.946.6379 FAX 203.946.7815

COASTAL SITE PLAN REVIEW: WATERFRONT SUPPLEMENT

CSPR

STOP HERE: COMPLETE THIS SECTION ONLY IF THIS IS A WATERFRONT SITE

Check YES or NO for each question listed. Print or type information in space provided, or attach.

READ THE STATEMENT BELOW AND THEN ANSWER THE FOLLOWING QUESTIONS.

WATER DEPENDENT USES are defined in Chapter 444, §22a-93 of the Connecticut General Statutes as:

Those uses and facilities which require direct access to, or location in, marine or tidal waters and which therefore cannot be located inland, including, but not limited to: marinas, recreational and commercial fishing and boating facilities, finfish and shellfish processing plants, waterfront dock and port facilities, shipyards and boatbuilding facilities, water-based recreational uses, navigation aids, basins and channels, industrial uses dependent upon waterborne transportation or requiring large volumes of cooling or process water which cannot reasonably be located or operated at an inland site and uses which provide general public access to marine or tidal waters.

Yes No

1. Are the proposed use or uses water dependent as defined above?
2. Is the site located on a navigable water body?
3. Will the project preclude development of water dependent uses as defined above on or adjacent to this site in the future?
IF YES, DESCRIBE.

See attached Coastal Resource Assessment Letter Report

4. Have efforts been made to preserve opportunities for future water dependent development?
IF YES, DESCRIBE.

See attached Coastal Resource Assessment Letter Report

5. Is public access provided to the adjacent waterbody or watercourse?
IF NO, DESCRIBE WHY NOT.

6. Does this project include a shoreline flood and erosion control structure (i.e. breakwater, bulkhead, groin, jetty, revetment, riprap, seawall, placement of barriers to the flow of flood waters or movement of sediment along the shoreline)?

IF YES, DESCRIBE.

7. Does this project include work below the Coastal Jurisdiction Line (i.e. location of topographical elevation of the highest predictable tide from 1983 to 2001)? New Haven CJL elevation is 4.6' (referenced to NAVD88).

IF YES, DESCRIBE.

LONG WHARF RESIDENTIAL

Coastal Resources Assessment Letter

Prepared for:

Fusco Maritime Associates, LLC

Client Ref: 141.14783.00003

August 2021



SLR[®]

CONTENTS

1. Coastal Resources Assessment Letter 1

ATTACHMENTS

- Attachment A Supporting Figures
- Attachment B Photographic Log



August 18, 2021

Fusco Maritime Associates, LLC
555 Long Wharf Drive
New Haven, CT 06511

**Re: Long Wharf Residential Redevelopment
Long Wharf Drive
New Haven, Connecticut
SLR #141.14738.00003**

Dear Ms. Fusco:

SLR International Corporation (SLR) is providing the following coastal resources assessment report of the proposed residential redevelopment of Long Wharf in New Haven, Connecticut. This report provides a description of existing coastal resources on and adjacent to the site on New Haven Harbor, the proposed residential improvements, and an evaluation of these activities within the context of the Connecticut Coastal Management Act (CMA).

The proposed project entails the redevelopment of portions of Long Wharf Drive properties to facilitate the construction of two multistory buildings for residential and commercial use. The improvements are proposed on the south side of Long Wharf Drive in an area currently occupied by a previous restaurant, parking, and lawn area and will take place entirely within previously developed upland areas. The project area has direct frontage on New Haven Harbor and straddles two 100-year flood zones. The dynamics of the site have been thoughtfully considered during the design phase to account for periodic inundation due to storm events.

The proposed site improvements are consistent with applicable resource and use policies of the CMA. The project is designed to accentuate the coastal area of the City of New Haven by providing public access as an integral component of the site layout. Short-term impacts will be addressed through sedimentation and erosion controls, while long-term impacts will be addressed through proper installation and maintenance of sedimentation and erosion controls and long-term maintenance of the proposed stormwater management system.

General Site Description

The project site is comprised of three parcels owned by Fusco Maritime Associates, LLC: 501 Long Wharf Drive, 555 Long Wharf Drive, and an unnumbered parcel¹ on Long Wharf Drive (Attachment A, Figure 1). The parcels are bordered by Long Wharf Drive to the north; The Ceccarelli Hursh Group – Ameriprise Financial to the east; the New Haven Canal Dock Boathouse to the west; and New Haven Harbor to the south. Along the southern and western portions of the property the project site is bounded by a seawall with approximately 700 linear feet of frontage along the New Haven Harbor.

The proposed project is located in an area historically modified and developed. The surrounding area is intensely developed with commercial and industrial properties along the waterfront. According to the United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS) web soil survey mapping, two soil map units are within the project site (Attachment A, Figure 2). The primary soil type within the project area is Udorthent, or human transported fill material (HTM).

Currently one commercial building is present in the southwest portion of the project site. The building, associated parking lot, and other impervious surface comprise approximately 2.96 acres (69%) of the 4.3-acre project site. Approximately 1.46 acres are comprised of maintained lawn and the remaining portion of the lot is occupied by New Haven Harbor. No work is proposed within the harbor. All activities will be located in previously developed upland areas. A stone seawall extends from the western portion of the site to the southeastern boundary at 5.0' North American Vertical Datum of 1988 (NAVD 88)². Beneath the seawall is a developed shorefront intertidal comprised of a mix of stone masonry and riprap (Attachment B). Extending beyond the seawall and riprap are timber pilings located along the southern and eastern shorefront. American oysters (*Crassostrea virginica*) have colonized much of the lower shorefront anthropogenic rock features.

There are three active stormwater outfalls located within the project site. A 42" corrugated metal pipe is located in the northwest portion of 501 Long Wharf Drive at -2.0'. Two reinforced concrete storm pipes (64" at 0.8' and 60" at -4.8') are located at the southern portion of the unnamed parcel. The catchment areas to these stormwater outlets will be defined through correspondence with the City of New Haven.

According to the Federal Emergency Management Act (FEMA) flood mapping, the project site is located entirely within special flood hazard areas (FEMA map 09009C0441J, effective on 07/08/2013). The majority of the upland portion of the project site is within a Zone AE (elevation 13'), the eastern portion of the seawall is within a Zone VE (elevation 16 feet), and the western portion of the seawall is within a Zone VE (elevation 13 feet). The coastal jurisdiction line, at elevation 4.6' NAVD, is located on the face of the seawall.

¹ MBLU: 205 0529 00201 Long Wharf Drive

² All references to elevation refer to NAVD 88 datum.

Proposed Project

The project proposes to remove the existing building and parking lot and construct two buildings of mixed commercial and residential use that will support a market, plazas, and outdoor lawn areas, as well as maintain a public walkway along the seawall (Attachment A, Figure 3). The proposed infrastructure will be serviced by municipal sewer and water. The buildings will be located 25' + from the coastal jurisdiction line and will be positioned in the southwest portion of 501 Long Wharf Drive and the northwest portion of 555 Long Wharf Drive. The lower levels of the high rise buildings will be used as open, floodable garages and commercial areas, while the upper levels will be residential. The buildings will be constructed to resist hydrostatic and hydrodynamic wave loads as well as debris loads. The buildings will be constructed to velocity zone flood zone standards and are designed to National Flood Insurance Program (NFIP) and Connecticut Building Code standards with appropriate freeboard between first flood elevations and flood zones. A flood contingency plan will be prepared to address egress from the site in forecasted storms.

Public access and visual connection to New Haven Harbor was a key element in site design. Between the two buildings will include public seating, vegetative planting, and stormwater infiltration areas. The public walkway along the New Haven Harbor will be 10' wide at an elevation of + 5.7' and will connect the project site to Long Wharf Drive and adjacent properties to the east. A pervious concrete walkway (Elevation +14.0) is proposed to cross over the existing walkway at elevation 5.0' in order to provide access to an overlook platform of the New Haven boathouse and harbor as well as provide access to the boardwalk and market entrance. The proposed buildings will be constructed at an elevation of + 15.0' and the proposed plaza and market area will be constructed at an elevation of + 14.5'. The amount of impervious surface within the project site will be similar but slightly less than existing conditions with approximately 1.949 acres (45.3%) of impervious surface within the 4.3-acre project site.

The work is confined to developed areas and will be used for both commercial and residential purposes. The project proposes to cut approximately 3,157 cubic yards of material and fill 6,806 cubic yards of material. The purpose of the fill is cosmetic in order to raise the buildings to help facilitate pedestrian circulation around the project area. No structural fill is proposed. The overall net fill is approximately 3,649 cubic yards.

The project was designed to maintain protected interests identified within the CMA. Given that direct activities are proposed within existing developed areas and indirect activities are managed in the long term by stormwater design and a flood contingency plan, the proposed project may be constructed in manner so as not to adversely affect coastal resources. Sedimentation and erosion controls will be consistent with Connecticut Department of Energy & Environmental Protection 2002 Sediment and Erosion Control Guidelines and will serve to minimize temporary impacts during construction.

Stormwater management in the central portion of the site will be managed by stormwater infiltration areas. Onsite drainage will use green and hard infrastructure designed with backflow prevention and for rapid post-storm site drainage. Six rain gardens and an infiltration trench are proposed adjacent to the buildings to serve as green drainage infrastructure. The three existing stormwater outfalls will remain. However, a network of storm drains will be installed throughout the site and connect to the outfalls in

order to maintain proper drainage. Four series of drainage are proposed. Surrounding the west, north, and east sides of the western proposed building will be a drainage system comprised of 12 catch basins and eight manholes draining into the 42" corrugated metal pipe located in the northwest portion of the project area. A series of 16 catch basins is proposed south of the proposed buildings and discharges into the two reinforced concrete steel pipes at the southern portion of the project area. Two catch basins are proposed northeast of the buildings that will connect to the drains beneath Long Wharf Drive. An additional set of two culverts will be installed in the northeast portion of the site on either side of the easternmost entranceway. The minimum required total volume of the proposed project site is 10,950 cubic feet (406 cubic yards). With the proposed rain gardens and depressions throughout the property the actual volume is 15,825 cubic feet (586 cubic yards), which is more than 50% water quality volume (WQV) for the project. Details of the proposed stormwater management, including cross sections and proposed plantings, are provided on site plans prepared by SLR entitled *Long Wharf Residential*, dated July 2021.

Identification of Applicable Coastal Resources and Coastal Resource Policies

The following table provides a list of CMA resources and policies. A check mark is placed adjacent to the resources and policies that are applicable to the project.

<i>Coastal Resources</i>	<i>On Site</i>	<i>Adjacent</i>	<i>Off site but within the influence of project</i>	<i>Not Applicable</i>
General Coastal Resources - Definition: CGS § 22a-93(7); Policy: CGS Section 22a-92(a)(2)	✓			
Beaches & Dunes - Definition: CGS § 22a-93(7)(C); Policies: CGS §§ 22a-92-(b)(2)(C) and 22a-92(c)(1)(K)				✓
Bluffs & Escarpments - Definition: CGS § 22a-93(7)(A); Policy: CGS Section 22a-92(b)(2)(A)				✓
Coastal Hazard Area - Definition: CGS § 22a-93(7)(H); Policies: CGS Sections 22a-92(a)(2), 22a-92(a)(5), 22a-92(b)(2)(F), 22a-92(b)(2)(J), and 22a-92(c)(2)(B)	✓			
Coastal Waters, Estuarine Embayments, Nearshore Waters, Offshore Waters - Definition: CGS § 22a-93(5), 22a-93(7)(G), and 22a-93(7)(K), and 22a-93(7)(L) respectively; Policies: CGS § 22a-92(a)(2) and 22a-92(c)(2)(A)	✓			
Developed Shorefront - Definition: CGS § 22a-93(7)(I); Policy: 22a-92(b)(2)(G)	✓			
Freshwater Wetlands and Watercourses - Definition: CGS § 22a-93(7)(F); Policy: CGS Section 22a-92(a)(2)				✓
Intertidal Flats - Definition: CGS § 22a-93(7)(D); Policies: 22a-92(b)(2)(D) and 22a-92(c)(1)(K)				✓
Islands - Definition: CGS § 22a-93(7)(J); Policy: CGS § 22a-92(b)(2)(H)				✓
Rocky Shorefront - Definition: CGS § 22a-93(7)(B); Policy: CGS § 22a-92(b)(2)(B)				✓
Shellfish Concentration Areas - Definition: CGS § 22a-93(7)(N); Policy: CGS § 22a-92(c)(1)(I)				✓
Shorelands - Definition: CGS § 22a-93(7)(M); Policy: CGS § 22a-92(b)(2)(I)				✓
Tidal Wetlands - Definition: CGS § 22a-93(7)(E); Policies: CGS §§ 22a-92(a)(2), 22a-92(b)(2)(E), and 22a-92(c)(1)(B)				✓

Coastal resources on and adjacent to the site consist of general coastal resources, coastal hazard area, coastal waters, and developed shorefront (Attachment A, Figure 4). The character of each resource was evaluated within the context of the proposed project to determine potential impacts. Through the use of

best management practices, coastal resources on and adjacent to the project site will not be adversely impacted by the proposed site improvements. The extent and nature of each resource will not be physically modified by the proposed activities.

Identification of Applicable Coastal Use and Activity Policies and Standards

The following identify all coastal policies and standards in or referenced by CGS § 22a-92 applicable to the proposed project or activity:

<i>Coastal Use Activity Policy and Standard</i>	<i>Applicable</i>
General Development - CGS § 22a-92(a)(1), 22a-92(a)(2), and 22a-92(a)(9)	✓
Water-Dependent Uses - CGS § 22a-92(a)(3) and 22a-92(b)(1)(A); definition CGS § 22a-93(16)	✓
Ports and Harbors - CGS § 22a-92(b)(1)(C)	
Coastal Structures and Filling - CGS § 22a-92(b)(1)(D)	
Dredging and Navigation - CGS § 22a-92(c)(1)(C) and 22a-92(c)(1)(D)	
Boating - CGS § 22a-92(b)(1)(G)	
Fisheries - CGS Section 22a-92(c)(1)(I)	
Coastal Recreation and Access - CGS § 22a-92(a)(6), 22a-92(c)(1)(j) and 22a-92(c)(1)(K)	
Sewer and Water Lines - CGS § 22a-92(b)(1)(B)	
Fuel, Chemicals and Hazardous Materials - CGS § 22a-92(b)(1)(C), 22a-92(b)(1)(E) and 22a-92(c)(1)(A)	
Transportation - CGS § 22a-92(b)(1)(F), 22a-92(c)(1)(F), 22a-92(c)(1)(G), and 22a-92(c)(1)(H)	
Solid Waste - CGS § 22a-92(a)(2)	
Dams, Dikes and Reservoirs - CGS § 22a-92(a)(2)	
Cultural Resources - CGS § 22a-92(b)(1)(J)	
Open Space and Agricultural Lands - CGS § 22a-92(a)(2)	

Consistency with Applicable Coastal Use Policies and Standards

The proposed project is consistent with the applicable coastal use and activity policies and standards identified in the preceding table.

- **General Development:** In accordance with this policy and standard, the project is proposed in a manner that is consistent with the capability of the land and water resources to support development, preservation, and use without significantly disrupting the natural environment or sound economic growth.

- Water-Dependent Uses: Through preserving the public harbor walkway, the project maintains the high priority and preference to uses that are dependent upon proximity to the water immediately adjacent to marine and tidal waters.

Identification of Potential Adverse Impacts on Coastal Resources

The proposed project has been designed to maintain consistency with the CMA as described in Connecticut General Statutes (CGS) Section 22a-90 through 22a-112 and thus achieve Federal coastal consistency. The primary resources on the subject property are comprised of developed shoreline and coastal hazard areas. Language in the CMA stipulates eight adverse impacts that must be avoided in the course of site development.

The following table provides a list of potential adverse impacts on coastal resources as defined in CGS § 22a-93(15). A check mark is placed adjacent to the potential impacts that are applicable to the project. Below the table is a summary of how these adverse impacts will be avoided to maintain consistency with the CMA.

<i>Potential Adverse Impacts on Coastal Resources</i>	<i>Applicable</i>	<i>Not Applicable</i>
A) <i>Degrading water quality through the significant introduction into either coastal waters or groundwater supplies of suspended solids, nutrients, toxics, heavy metals or pathogens, or through the significant alteration of temperature, pH, dissolved oxygen or salinity - CGS Section 22a-93(15)(A)</i>		✓
B) <i>Degrading existing circulation patterns of coastal water through the significant alteration of patterns of tidal exchange or flushing rates, freshwater input, or existing basin characteristics and channel contours - CGS Section 22a-93(15)(B)</i>		✓
C) <i>Degrading natural erosion patterns through the significant alteration of littoral transport of sediments in terms of deposition or source reduction - CGS Section 22a-93(15)(C)</i>		✓
D) <i>Degrading natural or existing drainage patterns through the significant alteration of groundwater flow and recharge and volume of runoff - CGS Section 22a-93(15)(D)</i>		✓
E) <i>Increasing the hazard of coastal flooding through significant alteration of shoreline configurations or bathymetry, particularly within high velocity flood zones - CGS Section 22a-93(15)(E)</i>		✓
F) <i>Degrading visual quality through significant alteration of the natural features of vistas and viewpoints - CGS Section 22a-93(15)(F)</i>		✓
G) <i>Degrading or destroying essential wildlife, finfish or shellfish habitat through significant alteration of the composition,</i>		✓

<i>Potential Adverse Impacts on Coastal Resources</i>	<i>Applicable</i>	<i>Not Applicable</i>
<i>migration patterns, distribution, breeding or other population characteristics of the natural species or significant alteration of the natural components of the habitat - CGS Section 22a-93(15)(G)</i>		
H) <i>Degrading tidal wetlands, beaches and dunes, rocky shorefronts, and bluffs and escarpments through significant alteration of their natural characteristics or functions - CGS Section 22a-93(15)(H)</i>		✓

The proposed project has been analyzed within the context of the eight primary CMA interests:

1. The proposed project manages this potential adverse impact by employing modern and innovative stormwater management and best management practices during construction.
2. The proposed project demonstrates a low potential to adversely impact circulation patterns. The project is confined to a relatively small surface area within a previously developed shoreline. No new stormwater outlets to the New Haven Harbor are proposed.
3. Significant alteration to littoral transport is not anticipated. The developed shoreline is currently occupied by riprap and stone masonry with timber pilings present along the southern portion of the project site.
4. The volume of stormwater generated by the proposed project is essentially equal to the volume generated by existing impervious materials on the property. Onsite drainage will use green and hard infrastructure designed with backflow prevention and for rapid post-storm site drainage. The proposed upland project is not anticipated to significantly alter existing drainage patterns. No new stormwater outlets are proposed and proposed runoff mimics existing, though a number of water quality measures are proposed that do not currently exist.
5. The proposed project will not increase the frequency of flooding within this portion of New Haven. Structures are planned to be elevated to base flood elevation plus 1-foot freeboard. The project will not result in an increased base flood elevation on the property or localized area. The project is designed mindful of the dynamic coastal environment and proposes sound engineering solutions to account for anticipated conditions with high intensity, low frequency events.
6. The proposed project takes place within a developed landscape and will modify existing vistas or viewpoints from certain areas landward of the project site. However, a market and plaza will be constructed facing the New Haven Harbor and the public harbor walkway provides an appreciable improvement to public access of the water.

7. The proposed project, located within a developed upland area, will not adversely affect coastal habitats.
8. No tidal wetlands, beaches or dunes, rocky shorefront, or bluffs or escarpments are located on the subject site. Coastal resources affected by the project include developed shorefront and coastal hazard area. Due to the distance of the project site to tidal wetlands, rocky shorefront, beaches and dunes, and bluffs or escarpments, there is minimal potential for the project to adversely impacts these resources.

Identification of Potential Adverse Impacts on Water-Dependent Uses

The following table provides a list of potential adverse impacts on coastal resources as defined in CGS § 22a-93(17). A check mark is placed adjacent to the potential impacts that are applicable to the project.

<i>Potential Adverse Impacts on Future Water-Dependent Development Opportunities and Activities</i>	<i>Applicable</i>	<i>Not Applicable</i>
<i>A) Locating a non-water-dependent use at a site physically suited for or planned for location of a water-dependent use - CGS Section 22a-93(17)</i>		✓
<i>B) Replacing an existing water-dependent use with a non-water-dependent use - CGS Section 22a-93(17)</i>		✓
<i>C) Siting a non-water-dependent use which would substantially reduce or inhibit existing public access to marine or tidal waters - CGS Section 22a-93(17)</i>		✓

Specific to potential water dependency:

- The existing commercial building will be removed and replaced with two buildings and a public outdoor area, and the public walkway will be expanded. The water-dependent walkway will remain.
- There are no proposed replacements of water-dependent use with non-water-dependent use. The project allows for public access with visual connectivity to New Haven Harbor. Public access is a recognized water-dependent use per the CMA.
- The public harbor walkway will remain and continue to permit visual access to New Haven Harbor.

Mitigation of Potential Adverse Impacts

No potential adverse impacts on coastal resources and/or future water-dependent development are anticipated. The project will result in an active water-dependent use in a manner consistent with the spirit and letter of the CMA.

Remaining Adverse Impacts

No potential adverse impacts on coastal resources and/or future water-dependent development are anticipated. The proposed project is consistent with zoning standards and promotes water-dependent activity through the maintenance of coastal resource conditions and functions.

Conclusions

SLR completed a coastal consistency review of the proposed improvements on the Long Wharf properties in New Haven. Proposed activities involve the creation of two multistory buildings on Long Wharf Drive within an existing developed area. The proposed project has been designed mindful of the dynamic coastal area, and the site redevelopment allows for periodic flooding. The buildings will lie above the base flood elevation with freeboard to account for anticipated sea level rise. The project incorporates green infrastructure to improve stormwater quality prior to discharge in New Haven Harbor. Public visual access to New Haven Harbor is a primary element of site design. Potential adverse impacts to coastal resources are addressed with stormwater management and flood contingency planning in the long term and sedimentation and erosion control during construction. If you should have any questions or comments regarding this review, please do not hesitate to contact us.

Sincerely,

SLR International Corporation



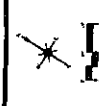
Megan B. Raymond, MS, PWS, CFM
Principal Scientist, Wetlands & Waterways Lead



Aidan Barry, MS
Environmental Scientist

Enclosures

141.14738.00003.jl2221.ltr



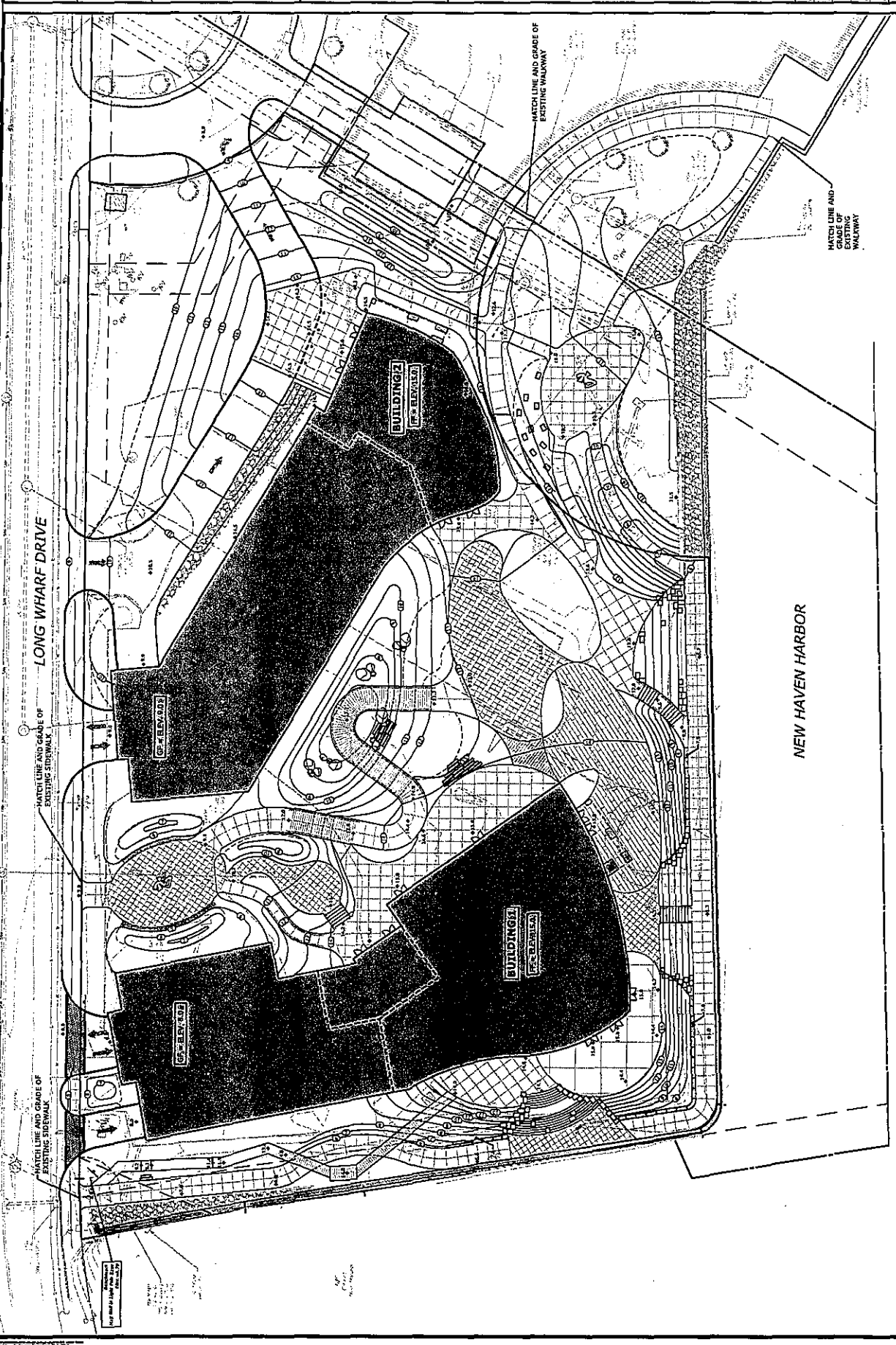
SLR
 1500 MAIN STREET, 10TH FLOOR
 NEW HAVEN, CT 06510
 PHONE: 203.261.1000
 FAX: 203.261.1001

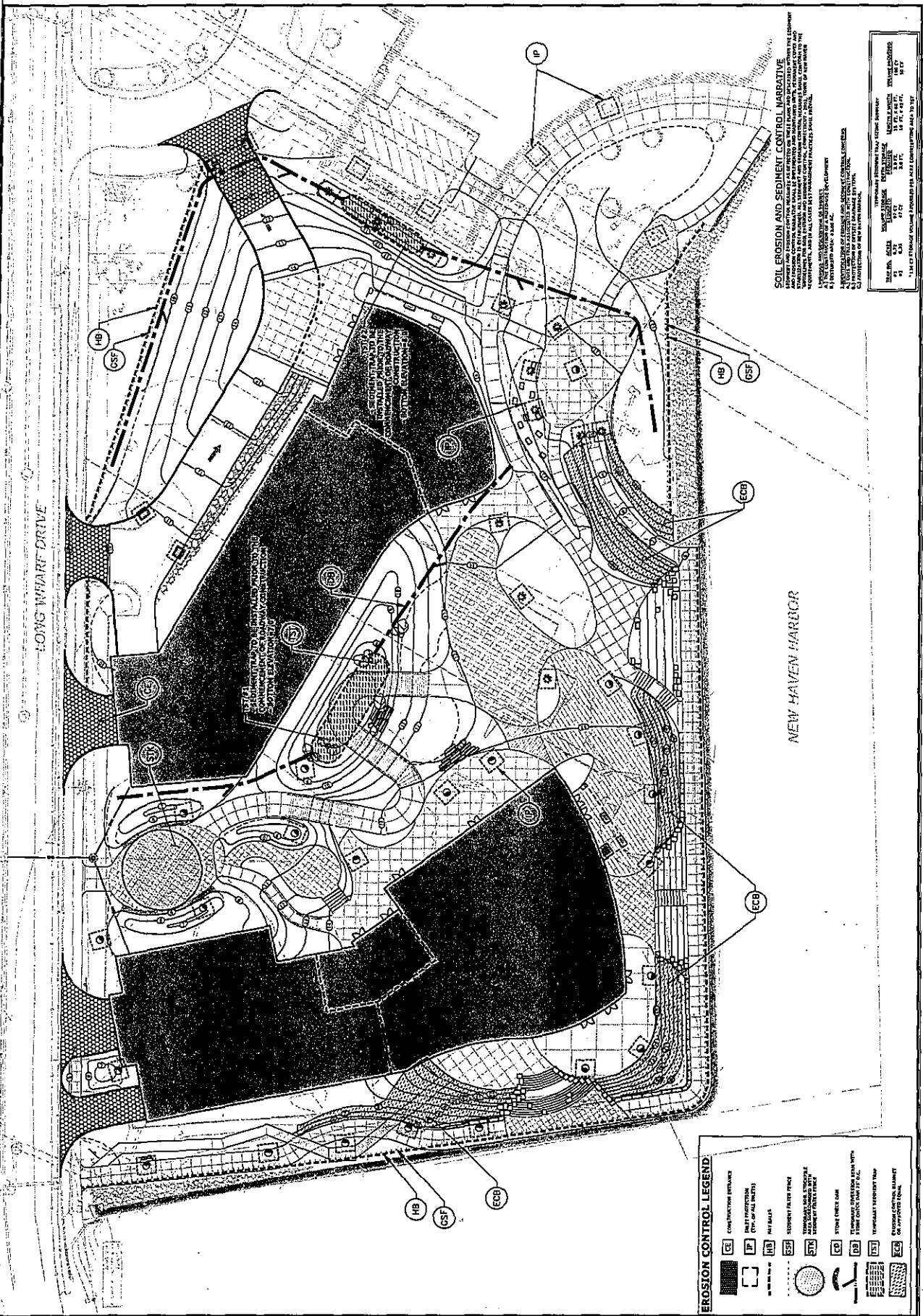
NO.	DESCRIPTION	DATE	BY

SITE PLAN - GRADING
 LONG WHARF RESIDENTIAL
 NEW HAVEN, CONNECTICUT

DATE	11/07/07
BY	LM
CHECKED	AW
SCALE	AS SHOWN
PROJECT NO.	4788-03
DRAWING NO.	14 OF 15

GR





SOIL EROSION AND SEDIMENT CONTROL NARRATIVE
 This plan shows the proposed erosion and sediment control measures for the Long Wharf Residential project. The measures are designed to prevent soil erosion and sediment transport during construction and to stabilize the site after construction is complete. The measures include concrete berms, sediment basins, silt fences, and other erosion control devices. The plan also shows the proposed grading and drainage system for the site.

NO.	DESCRIPTION	AREA (SQ. FT.)	PERCENTAGE OF TOTAL AREA
1	CONCRETE BERMS	1,200	1.2%
2	SEDIMENT BASINS	1,500	1.5%
3	SILT FENCES	1,000	1.0%
4	OTHER EROSION CONTROL MEASURES	1,300	1.3%
TOTAL		5,000	5.0%

EROSION CONTROL LEGEND

CCB	CONCRETE BERM
SF	SILT FENCE
SB	SEDIMENT BASIN
STK	STORMWATER TREATMENT KIOSK
CE	CONCRETE CURB
ST	STONE TRENCH
DT	DRY TRENCH
EC	EROSION CONTROL CURB

LONG WHARF RESIDENTIAL

Stormwater Report

Prepared for:

Fusco Maritime Associates, LLC

141.14738.00003

August 2021



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- 1. Project Overview 1
- 2. Existing Site Conditions 2
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FIGURES

Figure 1 Location Map

APPENDICES

Appendix A FEMA Flood Insurance Rate Map
 Appendix B NRCS Hydrologic Soil Group Map

1. PROJECT OVERVIEW

The materials included in this engineering report are provided in support of the proposed site redevelopment for the redevelopment of portions of Long Wharf Drive properties to facilitate the construction of two multistory buildings for residential and commercial use. The improvements are proposed on the south side of Long Wharf Drive in an area currently occupied by an abandoned restaurant, parking, and lawn area and will take place entirely within previously developed upland areas. The project area has direct frontage on New Haven Harbor and straddles two 100-year flood zones. The dynamics of the site have been thoughtfully considered during the design phase to account for periodic inundation due to storm events.

A new sanitary sewer line will tie into the existing sewer main in Long Wharf Drive. Public water will serve the project from an extension of the water main in Long Wharf Drive. All other utilities such as electric, telephone, and gas will be provided by the existing services adjacent to the project site, and all such utilities shall be located underground.

The site will continue to provide public access to the waterfront. The existing harbor walk will be extended further along the seawall and include access to the proposed food market and park areas. The existing, abandoned restaurant building will be demolished.

The project proposes to remove the existing building and parking lot and construct two buildings of mixed commercial and residential use, a market, a plaza, and an outdoor area as well as maintain a public walkway along the seawall. The buildings will be located at least 25 feet from the coastal jurisdiction line and will be positioned in the southwest portion of 501 Long Wharf Drive and the northwest portion of 555 Long Wharf Drive. The lower levels of the ten-plus story buildings will be used as commercial areas and an open parking garage; the upper levels will be residential. The buildings will be constructed to resist hydrostatic and hydrodynamic wave loads as well as debris loads. The buildings are design to National Flood Insurance Program (NFIP) standards with appropriate freeboard between first flood elevations and flood zones. A flood contingency plan will be prepared to address egress from the site in forecasted storms.

This report highlights the stormwater management approach for the project. The design goal is to treat the stormwater for water quality. The proposed development presents a decrease in impervious area from existing conditions and therefore will prevent an increase in stormwater runoff from the site from existing conditions. The proposed stormwater management system will include a vegetated bioretention area and rain gardens. The proposed system also provides the Connecticut Department of Energy & Environmental Protection (CTDEEP) Water Quality Volume (WQV) and treats the runoff associated with the first 1 inch of rainfall on the site. The subsequent sections of this report describe in more detail the methodologies and computations used to design the proposed stormwater management system.

2. EXISTING SITE CONDITIONS

The project site is comprised of three parcels owned by Fusco Corporation: 501 Long Wharf Drive; 555 Long Wharf Drive; and Parcel LWDA-3A on Long Wharf Drive (Figure 1). The parcels are bordered by Long Wharf Drive to the north; The Ceccarelli Hursh Group – Ameriprise Financial to the east; the New Haven Canal Dock Boathouse to the west; and the New Haven Harbor to the south. The project site is bounded by a seawall along the southern and western portions of the property, with approximately 700 linear feet of frontage along the New Haven Harbor.

The proposed project is located in an area historically modified and developed. The surrounding area is intensely developed with commercial and industrial properties along the waterfront. According to the United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS) web soil survey mapping, two soil map units are within the project site (Appendix B). The primary soil type within the project area is Udorthent, or human transported fill material (HTM).

Currently, one commercial building is present in the southeast portion of the project site. The building and associated parking lot comprise approximately 2.96 acres (67%) of the 4.3-acre project site. The remaining 1.46 acres are comprised of maintained lawn. A stone seawall extends from the western portion of the site to the southeastern boundary at 5.0' North American Vertical Datum of 1988 (NAVD 88)¹. Beneath the seawall is a developed shorefront comprised of a mix of stone masonry and riprap (Appendix B). Extending beyond the seawall and riprap are timber pilings located along the southern and eastern shorefront. American oysters (*Crassostrea virginica*) have colonized much of the anthropogenic rock features of the lower shorefront.

According to the Federal Emergency Management Agency (FEMA) flood mapping, the project site is located entirely within special flood hazard areas (FEMA Map 09009C0441J, effective on July 8, 2013). The majority of the upland portion of the project site is within a Zone AE (elevation 13 feet); the eastern portion of the seawall is within a Zone VE (elevation 16 feet); and the western portion of the seawall is within a Zone VE (elevation 13 feet). The coastal jurisdiction line, at elevation 4.6 feet, is located on the face of the seawall.

The site is approximately a combined 4.3 acres in size, of which approximately 3.35 acres will be disturbed for the construction activities. The site is located in the Planned Development District (PDD 53) zone as shown by the City of New Haven Geographic Information System (GIS), interactive zoning map.

The project site lies in the South Central Shoreline subregional basin identified as Basin 5800 on the CTDEEP *Atlas of Public Water Supply Sources and Drainage Basins*. This basin is located within the South Central Shoreline Regional Basin, which is part of the South Central Coast Major Basin. The site is not in an aquifer protection area.

¹ All references to elevation refer to NAVD 88 datum.

3. STORMWATER MANAGEMENT DESIGN

Stormwater runoff from the proposed site will be collected by drainage inlet structures and in roof drainage lines and conveyed to the proposed stormwater management practices before it is released off site. A stormwater treatment train is proposed consisting of catch basins with sumps, yard drains, a bioretention area, and rain gardens. Per Section 60 of the City of New Haven Zoning Ordinance, the stormwater management system has been designed to retain and infiltrate the runoff associated with the first inch of rainfall on the site. The proposed development reduces the impervious area from current conditions, thus creating a decrease in stormwater runoff from the proposed development. A hydrologic analysis was not performed for the proposed development due to this reduction in impervious area. The volume provided by the two practices combined exceeds the storage volume required to address water quality requirements.

4. WATER QUALITY MANAGEMENT

Water quality measures or Best Management Practices (BMPs) have been incorporated into the design to maintain water quality in order to provide protection of the areas downgradient of the proposed development.

Prior to discharging off site, the stormwater will pass through several stormwater quality measures. The stormwater management system will include catch basins with sumps, a bioretention basin, and rain gardens. Stormwater runoff from the proposed paved areas will be collected by a subsurface drainage system that includes area drains and yard drains in the lawn area and catch basins with 2-foot sumps in the driveway that trap coarse sediments.

The CTDEEP *2004 Stormwater Quality Manual* (Chapter 7) recommends methods for sizing stormwater treatment measures with WQV computations. The WQV addresses the initial stormwater runoff, also commonly referred to as the "first flush" runoff. The WQV provides adequate volume to store the initial 1 inch of runoff, which tends to contain the highest concentrations of potential pollutants. The total WQV required for the proposed project is 10,950 cubic feet. The combined storage volume of 15,825 cubic feet provided by the proposed stormwater management practices exceeds the total WQV required.

In accordance with Chapter 2 of *Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs*, 1987, by the Department of Environmental Programs of the Metropolitan Washington Council of Governments, an infiltration facility that exfiltrates the entire first inch of rainfall meets 80% total suspended solids (TSS) removal criteria. The bioretention area can also achieve 80% TSS removal according to the *New Jersey Stormwater Best Management Practices Manual*, 2004, developed by the New Jersey Department of Environmental Protection, Division of Watershed Management. The combination of the bioretention area and the rain gardens will ensure that the site's water quality treatment capabilities exceed what is required by city ordinance. Water quality computations will be included in the final report.

5. SEDIMENT AND EROSION CONTROL

A Sediment and Erosion (S&E) Control Plan has been developed to mitigate the short-term impacts of the development during construction. The S&E Control Plan will provide protection and prevent sediment transport to areas downgradient of the site during construction and while the site is permanently developed.

The S&E controls include a descriptive specification concerning land grading, topsoiling, temporary vegetative cover, permanent vegetative cover, vegetative cover selection and mulching, and erosion checks. Details have been provided for all erosion control measures with corresponding labels on the S&E Control Plan. The S&E controls provided are in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*.

The construction areas are to be surrounded by geotextile sediment filter fence and will be fortified with hay bales. A construction entrance has been provided at all entrance locations from Long Wharf Drive. Inlet protection at each proposed drainage inlet will be provided as well to protect against sediment entering the storm drainage system during construction. In addition, temporary topsoil stockpile areas will be provided, which will be encircled with sediment filter fencing. Erosion control blankets will be placed in areas of steep slopes. Temporary sediment traps will be constructed at the discharge points of the temporary diversion berms. The S&E controls are to be modified with the changing grades on site to ensure the protection of the surrounding areas.

6. STORMWATER MANAGEMENT PLAN REQUIREMENTS

The following is a summary of how the proposed stormwater management system has been designed to meet the requirements of Section 60(d) and (e) of the New Haven Zoning Ordinance.

(d) Contents of stormwater management plan. Where a stormwater management plan is required, such plan shall provide, at a minimum, the following information:

1. Soil characteristics of the site

Per the NRCS Web Soil Survey results included in the Appendix of this Engineering Report, the site is classified as Urban Land, which is rated as Hydrologic Soil Group "D" per NRCS.

2. Location of the closest surface water bodies and wetlands to the site, and the depth to any groundwater or aquifer areas on or adjacent to the site. In the case of tidal waters, provide the mean high water and high tide elevations.

The parcel lies adjacent to New Haven Harbor. Per the FEMA map for the site, included as Appendix A in this Engineering Report, the Special Flood Hazard Area (SFHA) Zone AE with a determined elevation of 13 feet encompasses the entire property. There are no tidal wetlands on site. The mean high water elevation in this vicinity is elevation 2.8 and the coastal jurisdiction line is at elevation 4.6. The site is not in an aquifer protection area.

3. CTDEEP ground and surface water quality classification of waterbodies on and adjacent to the site

Per the Water Quality Classifications map of New Haven, Connecticut, dated November 2016 and prepared by CTDEEP, the groundwater on the site is classified as "GB" and the surface water quality classification of the adjacent New Haven Harbor is classified as "SB."

4. Identification of any waterbodies on and adjacent to the site documented by CTDEEP as not meeting water quality standards.

CTDEEP does not identify any waterbodies on or adjacent to the site that do not meet water quality standards.

5. Location and description of all proposed stormwater control BMPs for both construction activities and postconstruction, long-term stormwater control

The locations of all proposed stormwater control BMPs for post-construction and long-term stormwater controls are indicated on the Site Plan-Utilities (Sheet UT). Pertinent details can be found on the Site Details Sheet SD-6. These controls generally consist of catch basins with sumps, area drains, yard drains, rain gardens, and a bioretention area. The post-construction BMPs will provide water quality management and peak-flow and runoff volume attenuation requirements.

The locations of the proposed S&E control measures for construction activities are indicated on the Sediment and Erosion Control Plan, Sheet SE-1. Pertinent notes and details can be found on Sheets SE-1 and SE-2. All S&E control measures have been designed in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control publication.

6. Proposed operation and maintenance manual and a schedule for maintaining any trash hoods, catch basins, or other BMP devices used to prevent runoff, facilitate sheet flow or infiltration, or treat stormwater

A Stormwater Operations and Maintenance Manual will be prepared with the final design plans.

7. Calculations of stormwater runoff rates, suspended solids removal rates, and soil infiltration rates before and after completion of the activity proposed in the application

Stormwater runoff calculations will be included in the final report. In accordance with Chapter 2 of *Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs, 1987*, by the Department of Environmental Programs of the Metropolitan Washington Council of Governments, an infiltration facility that exfiltrates the entire first inch of rainfall meets 80% TSS removal criteria. The bioretention area can also achieve 80% TSS removal according to the *New Jersey Stormwater Best Management Practices Manual, 2004*, developed by the New Jersey Department of Environmental Protection, Division of Watershed Management. The combination of the two treatment practices ensures that the site's water quality treatment capabilities exceed what is required by city ordinance.

8. A hydrologic study of predevelopment site conditions. Hydrology studies shall be conducted at a level of detail commensurate with the probable impact of the proposed activity and should extend downstream to the point where the proposed activity causes less than a 5 percent change in the peak-flow rates.

A hydrologic study was not performed as part of this Engineering Report for the preconstruction and post-construction site conditions, due to the reduction in impervious area under proposed conditions.

(e) Standards and criteria for decision. In order to approve any application for which a stormwater management plan is required, the commission shall find the stormwater management plan consistent with the following criteria:

1. Direct channeling of untreated surface water runoff into adjacent ground and surface waters shall be prohibited.

The proposed stormwater treatment train includes catch basins with sumps, yard drains, a bioretention area, and rain gardens that have been designed to provide the required water quality volume and meet the 80% TSS removal requirements prior to discharge from the site. To be conservative, the design did not account for any stormwater infiltration through the soil.

2. No net increase in the peak rate or total volume of stormwater runoff from the site, to the maximum extent possible, shall result from the proposed activity.

There will be no net increases in stormwater runoff from the proposed development for the 2-year through the 100-year return frequencies as a result of the decrease in impervious area under proposed conditions.

3. Design and planning for site development shall provide for minimal disturbance of predevelopment natural hydrologic conditions and shall reproduce such conditions after completion of the proposed activity, to the maximum extent feasible.

The existing site is currently vacant but was the prior location of a restaurant and associated parking lot. Site coverage is mostly impervious consisting of the existing building and parking lot; the remainder of the site is maintained lawn. Under proposed conditions, site coverage will reduce the amount of impervious area and will consist of two residential apartment buildings, driveway access, sidewalks and decorative pavers, rain gardens, landscaped areas, and maintained lawn. The proposed stormwater management system will prevent increases in stormwater runoff due to the decrease in impervious area and will maintain predevelopment hydrologic conditions on the site. The design will also provide water quality volume and treat the runoff associated with the first 1 inch of rainfall on the site.

4. Pollutants shall be controlled at their source to the maximum extent feasible in order to contain and minimize contamination.

The proposed stormwater management system includes two rain gardens and a bioretention area. Prior to the final discharge from the site, the rainfall collected by the drainage inlets and building roofs will be treated by the proposed stormwater treatment train that consists of catch basins with sumps, yard drains, and a vegetated bioretention area.

5. Stormwater management systems shall be designed and maintained to manage site runoff in order to reduce surface and groundwater pollution, prevent flooding, and control peak discharges and provide pollution treatment.

The stormwater management system has been designed such that runoff on the site will be captured, retained, and safely discharged off the site. Water quality treatment will meet local and state standards and will provide at least 80% TSS removal. Prior to discharging off site, the stormwater will pass through several stormwater quality measures. The stormwater management system will include catch basins with sumps and a bioretention area.

6. Stormwater management systems shall be designed to collect, retain, and treat the first inch of rain on-site, so as to trap floating material, oil, and litter.

All water quality treatment computations will be provided in the final report. The proposed stormwater management system has the capability to collect, retain, and treat the runoff associated with the first inch of rainfall on the site.

7. On-site infiltration and on-site storage of stormwater shall be employed to the maximum extent feasible.

The proposed stormwater management system has been designed to meet the requirements of Section 60.e.6 of the New Haven Zoning Ordinance.

8. Post development runoff rates and volumes shall not exceed predevelopment rates and volumes for various storm events. Stormwater runoff rates and volumes shall be controlled by infiltration and on-site detention systems designed by a professional engineer licensed in the state of Connecticut except where detaining such flow will affect upstream flow rates under various storm conditions.

Post-development runoff volumes will be controlled to prevent increases in predevelopment runoff volumes for all storm events due to the implementation of the proposed stormwater management system. By controlling runoff volume below existing levels, peak-flow rates will also be mitigated. In addition, the bioretention area will retain the runoff associated with the first inch of rainfall on the construction site area. Sizing calculations will be provided in the final report.

9. Stormwater treatment systems shall be employed where necessary to ensure that the average annual loadings of TSS following the completion of the proposed activity at the site are no greater than such loadings prior to the proposed activity. Alternatively, stormwater treatment systems shall remove 80 percent TSS from the site on an average annual basis.

The volumetric storage provided in the bioretention area and underground chambers meets both stormwater runoff mitigation and 1-inch retention. The TSS removal rates are discussed in Water Quality Management section of this Engineering Report.

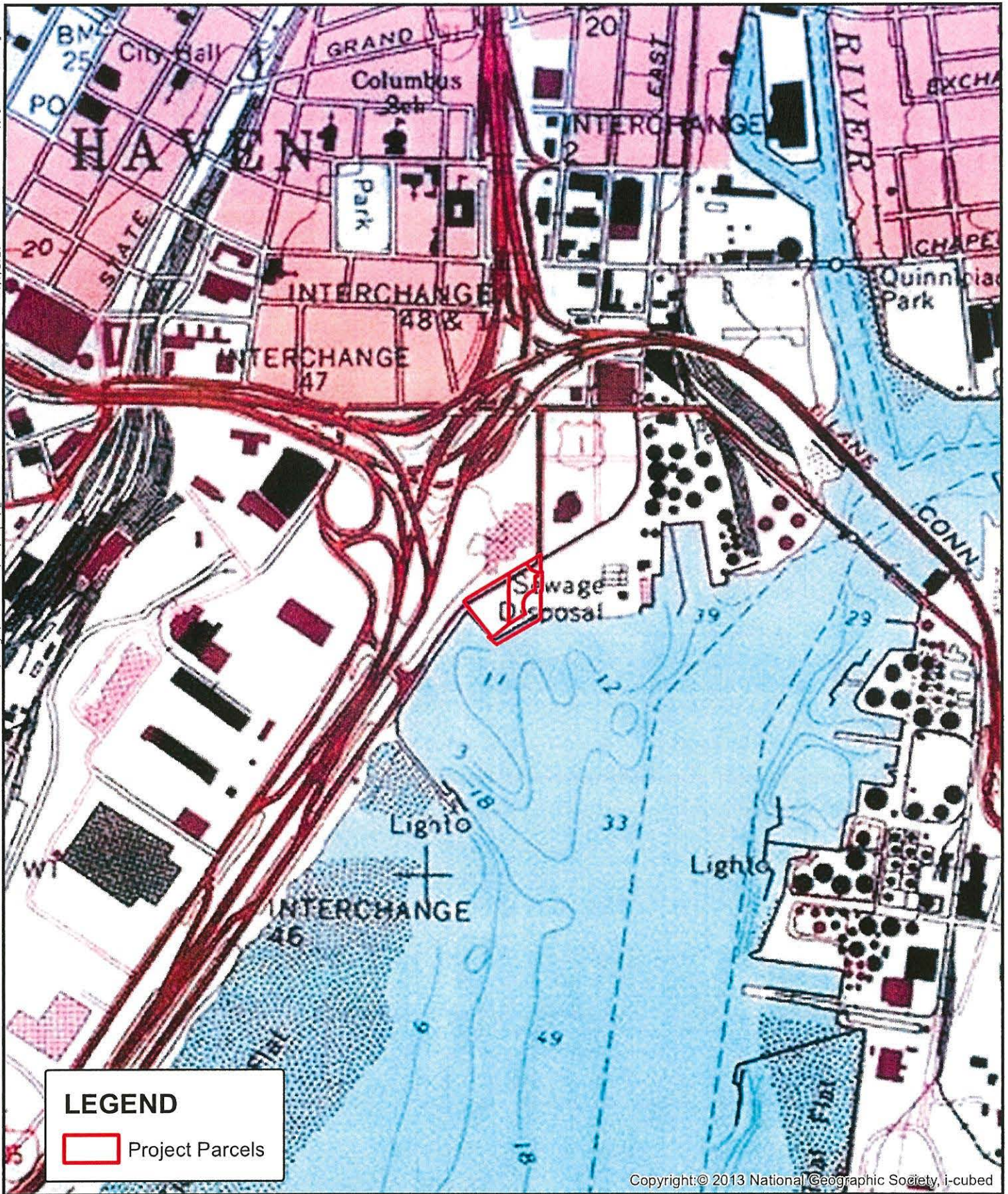
10. Use of available BMPs to minimize or mitigate the volume, rate, and impact of stormwater to ground or surface waters.

BMPs such as a bioretention basin and rain gardens were utilized as part of the proposed stormwater management system to mitigate the impacts of stormwater runoff.

7. CONCLUSIONS

The proposed development will not cause any negative stormwater impacts or adverse effects on any downgradient areas. Through the use of on-site stormwater management control measures, there will be no increase in the post-development stormwater runoff when compared to predevelopment conditions, and water quality treatment will be provided. The project meets the requirements of Section 60 of the City of New Haven Zoning Ordinance.

FIGURES



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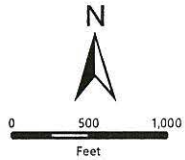
LEGEND

Project Parcels

SLR

195 CHURCH STREET
7TH FLOOR
NEW HAVEN, CT 06511
203.344.7887

USGS QUADRANGLE MAP
LONG WHARF REDEVELOPMENT
FUSCO HARBOR
LONG WHARF DRIVE
NEW HAVEN, CONNECTICUT



SCALE 1" = 1,250'

DATE 7/22/2021

141.14738.00003
PROJ. NO.

FIG. 1

APPENDIX A

FEMA FLOOD INSURANCE RATE MAP

Stormwater Report

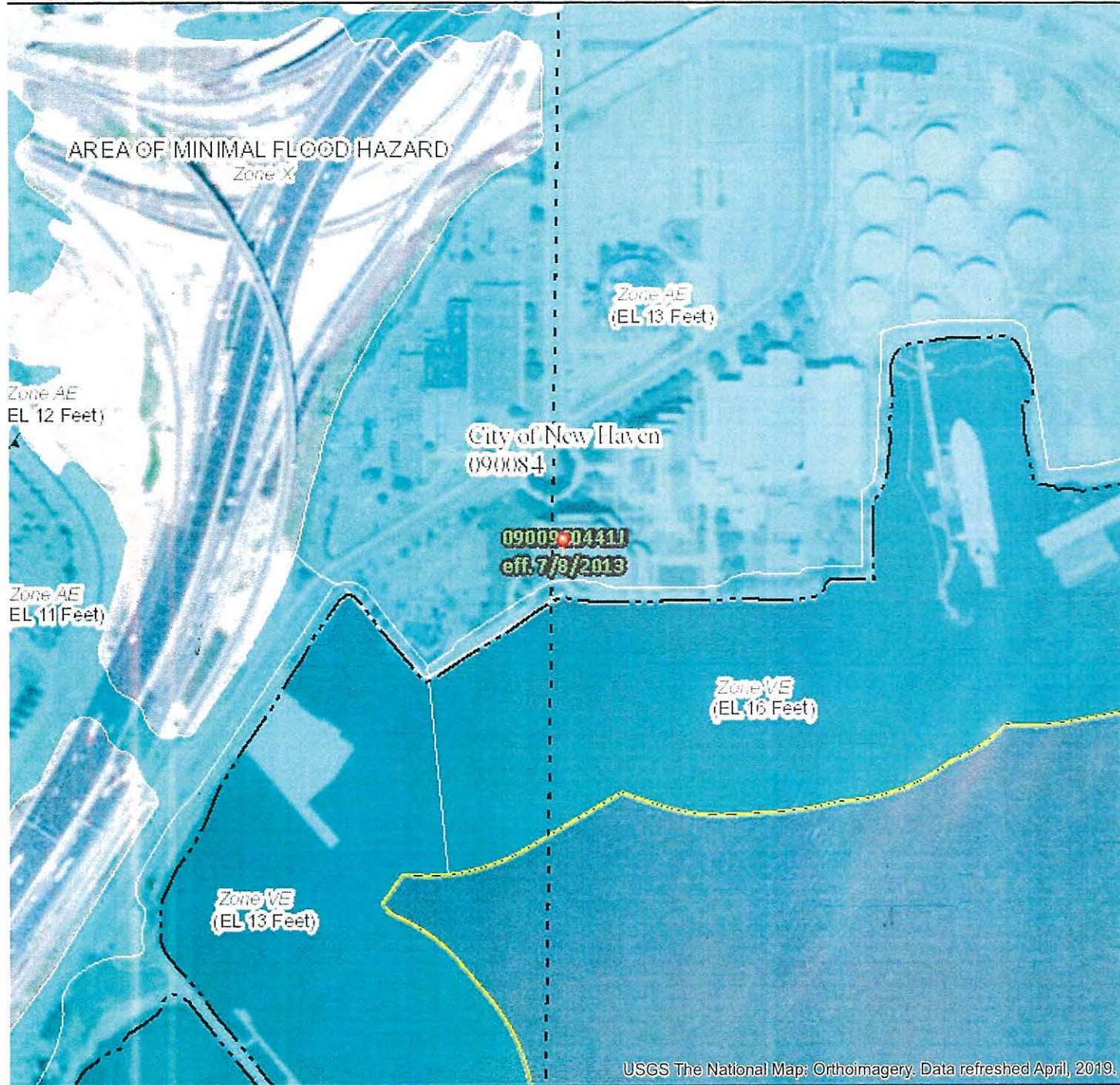
Fusco Maritime Associates, LLC

August 2021

National Flood Hazard Layer FIRMette



41°18'3.73"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Ar of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone X

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone X
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		513 Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature

MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/7/2020 at 10:58:59 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

72°54'28.80"W

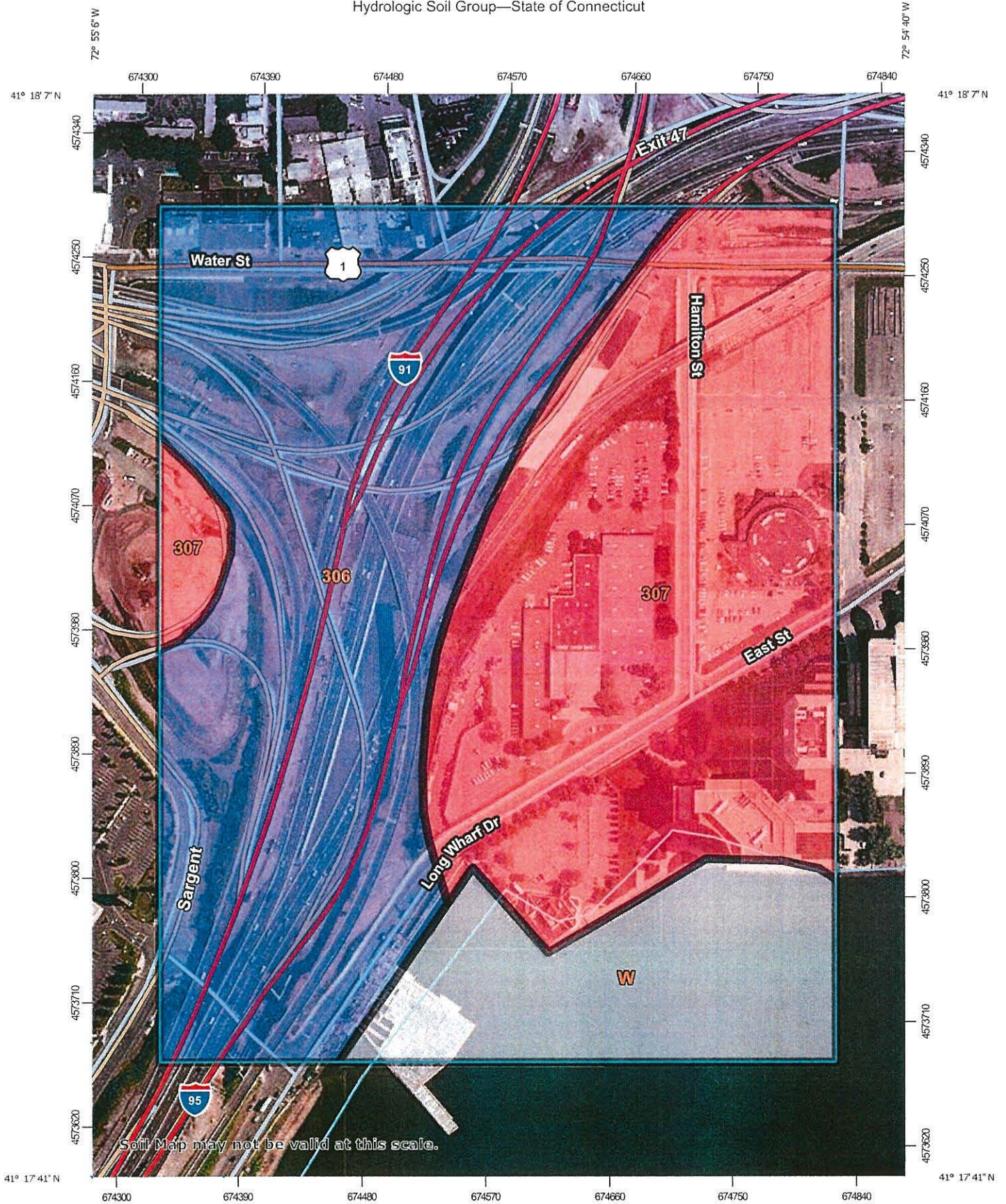
APPENDIX B

NRCS HYDROLOGIC SOIL GROUP MAP

Stormwater Report

Fusco Maritime Associates, LLC

August 2021



































Soil Map may not be valid at this scale.

Map Scale: 1:3,820 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

- Area of Interest (AOI)**
 -  Area of Interest (AOI)
- Soils**
 - Soil Rating Polygons**
 -  A
 -  A/D
 -  B
 -  B/D
 -  C
 -  C/D
 -  D
 -  Not rated or not available
 - Soil Rating Lines**
 -  A
 -  A/D
 -  B
 -  B/D
 -  C
 -  C/D
 -  D
 -  Not rated or not available
 - Soil Rating Points**
 -  A
 -  A/D
 -  B
 -  B/D
- Water Features**
 -  Streams and Canals
- Transportation**
 -  Rails
 -  Interstate Highways
 -  US Routes
 -  Major Roads
 -  Local Roads
- Background**
 -  Aerial Photography
- Other**
 -  C
 -  C/D
 -  D
 -  Not rated or not available

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
 Survey Area Data: Version 20, Jun 9, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 27, 2014—Jul 22, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
306	Udorthents-Urban land complex	B	34.7	45.7%
307	Urban land	D	31.3	41.3%
W	Water		9.8	13.0%
Totals for Area of Interest			75.8	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

LONG WHARF RESIDENTIAL

Traffic Impact Study

Prepared for:

Fusco Maritime Associates, LLC

Client Ref: 141.14783.00003

August 2021



SLR

August 18, 2021

Fusco Maritime Associates, LLC
555 Long Wharf Drive
New Haven, CT 06479

**RE: Traffic Impact Study
Long Wharf Redevelopment
Long Wharf Drive
New Haven, Connecticut
SLR #141.14738.00003**

Dear Fusco Maritime Associates,

At your request, we have undertaken this study to evaluate the traffic aspects associated with the proposed redevelopment of three parcels in the Long Wharf area in New Haven, Connecticut. The project intends to construct two high-rise residential towers on the south side of Long Wharf Drive. The project site is currently occupied by an abandoned restaurant, parking lot, and lawn area. The project proposes to remove the existing building and parking lot and construct two new buildings with a total of 410 residential units and a ground-floor food market and grocer. The work comprising the study consisted of a number of tasks including field reconnaissance, data collection, review of roadway and traffic conditions, estimation of site-development-generated traffic volumes, and assessment of future traffic operations at the site. **Figure 1** shows the site location and surrounding roadway network.

EXISTING CONDITIONS

As stated previously, the project site includes three parcels (501 Long Wharf Drive; 555 Long Wharf Drive; and Parcel LWDA-3A on Long Wharf Drive) located in the Long Wharf area in New Haven. The parcels are bordered by Long Wharf Drive to the north, the Ceccarelli Hursh Group – Ameriprise Financial to the east, the New Haven Canal Dock Boathouse to the west, and the New Haven Harbor to the south. The project will be accessible via two site driveways off Long Wharf Drive west of Hamilton Street. Land use in the Long Wharf area is largely commercial and industrial. For this evaluation the following off-site intersections were analyzed:

1. Canal Dock Road at Sargent Drive/Ikea Driveway (signalized)
2. Long Wharf Drive at Canal Dock Road (signalized)
3. Long Wharf Drive at Hamilton Street (unsignalized)
4. Water Street at East Street (signalized)
5. Water Street at Hamilton Street (unsignalized)

Long Wharf Drive/East Street runs east/west along the project site frontage with two travel lanes in each direction, additional turning lanes at key intersections, and a posted speed limit of 25 miles per hour (mph).

It is classified as an Urban Minor Arterial. There is a two-way cycle track along the south side of the roadway. Sidewalks are also present along both sides of the roadway and on-street parking is permitted along the north side of the roadway in front of the project site frontage.

Water Street (US Route 1) runs east/west north of the project site with one travel lane in each direction, additional turning lanes at key intersections, and a posted speed limit of 25 mph. It is classified as an Urban Principal Arterial. There is a separated two-way cycle track along the south side of the roadway from Brewery Street to East Street. Sidewalks are also present along both sides of the roadway.

Sargent Drive/Brewery Street runs north/south within the study area with two travel lanes in each direction, additional turning lanes at key intersections, and a posted speed limit of 30 mph. It is classified as an Urban Principal Arterial. There is a separated two-way cycle track (known as the Vision Trail) along the east side of the roadway from Water Street to Canal Dock Road. Sidewalks are also present along both sides of the roadway.

Hamilton Street runs north/south to the east of the project site with one travel lane in each direction. It is classified as an Urban Local roadway. Sidewalks are also present along both sides of the roadway.

Crash Data Summary

Data on traffic crashes near the site for the recent 3-year period of July 1, 2018, through June 30, 2021, was obtained via the Connecticut Crash Data Repository. This data is summarized in **Table 1** by location, crash severity, and collision type.

TABLE 1
Crash Data Summary

LOCATION:	CRASH SEVERITY						TYPE OF COLLISION						
	FATALITY	SERIOUS INJURY	SUSPECTED MINOR INJURY	POSSIBLE INJURY	PROPERTY DAMAGE ONLY	TOTAL	ANGLE	FIXED OBJECT	HEAD-ON	REAR-END	SIDESWIPE, SAME DIRECTION	SIDESWIPE, OPPOSITE DIRECTION	TOTAL
Sargent Dr at Canal Dock Road/Ikea driveway				3	9	12	5			4		3	12
Long Wharf Dr at Canal Dock Road			2		7	9	2		1	3		3	9
Long Wharf Dr between Canal Dock Road and Hamilton Street		2	1	1	9	13	3			4	2	4	13
Long Wharf Dr at Hamilton Street					3	3	2					1	3
Long Wharf Dr/East Street between Hamilton Street and Water Street (US Route 1)		2	1		3	6		1	2	1		2	6
Water Street (US Route 1) at East Street	1	1	3	8	24	37	11	4	4	14	2	2	37
Water Street (US Route 1) at Hamilton Street				1		1	1						1
TOTAL	1	5	7	13	55	81	24	5	7	26	4	15	81

Source: University of Connecticut Crash Data Repository from July 1, 2018, to June 30, 2021

A total of 81 crashes were reported in the study area during this period, 37 of which occurred at the intersection of Water Street (US Route 1) at East Street. Approximately 68% of the crashes resulted in property damage only. One crash resulting in a fatality was reported. This crash was a rear-end collision where a car drove into a motorized scooter at the intersection of Water Street (US Route 1) at East Street. The most common collision type was rear-end collision, followed closely by angle collision. There do not appear to be any unusual trends in the crash data for this area.

Existing Traffic Volumes

Traffic counts were conducted at the study intersections on Thursday, June 24, 2021, during the morning and afternoon peak periods. The peak hours were found to be 7:45 a.m. to 8:45 a.m. and 4:15 p.m. to 5:15 p.m. for the weekday morning and afternoon, respectively. **Figures 2 and 3** shows the existing peak-hour traffic volumes.

Due to the COVID-19 pandemic and its overall effect on reducing current travel, the traffic volumes shown in Figure 2 were adjusted to better reflect typical traffic levels in the area. The 2021 existing volumes were compared to 2018 volumes collected by the Connecticut Department of Transportation (CTDOT) via automatic traffic recorder (ATR). The 2021 volumes were increased 33% for both peak hours to align more closely with the 2018 pre-COVID ATR data. These adjusted volumes are shown on **Figures 4 and 5**.

PROPOSED DEVELOPMENT

As stated previously, the project proposes to remove the existing building and parking lot on the project site and construct two new buildings with a total of 410 residential units, grocery store space, and a food hall/market. The project will be accessible off Long Wharf Drive west of Hamilton Street via two site driveways. Each site driveway will connect to the parking garage of the respective buildings.

Residents of the buildings will enter the site via the site driveways and have their vehicles valet parked at the Maritime Parking Garage off Long Wharf Garage, west of Hamilton Street. Patrons of the grocer and food hall/market will park directly in the Maritime Parking Garage.

SITE-GENERATED TRAFFIC

The amount of new peak-hour site traffic that is estimated to be generated by the proposed redevelopment was estimated using statistical data published by the Institute of Transportation Engineers (ITE).¹ ITE Land Use Codes (LUC) #222 Multifamily Housing High-Rise, #930 Fast Casual Restaurant, and #850 Supermarket were used to estimate the site traffic volumes, which are shown in **Table 2**.

TABLE 2
Site Development Traffic Estimates

LAND USE	ITE LAND USE #	NUMBER OF VEHICLE TRIPS					
		WEEKDAY MORNING PEAK HOUR			WEEKDAY AFTERNOON PEAK HOUR		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Building 1, west - Multifamily Housing, High-Rise (198 units)	222	15	47	62	43	28	71
Building 2, east - Multifamily Housing, High-Rise (212 units)	222	16	50	66	47	30	77
Fast Casual Restaurant (9950 SF)	930	14	7	21	77	63	140
Supermarket (9950 SF)	850	23	15	38	47	45	92
TOTAL		68	119	187	214	166	380

Trip Generation, 10th Edition. Institute of Transportation Engineers, 2017

The geographic distribution of the site-generated traffic was estimated based on review of the roadway traffic patterns in the vicinity of the site and Journey-to-Work census data¹.

It is estimated that approximately 30% of the site traffic will be oriented to/from the west via Water Street, 15% to/from the north oriented toward the I-91 ramps, 10% to/from the north via East Street, 5% to/from the northeast via Chapel Street, 5% to/from the east via Water Street, 5% to the northwest and from the north via East Street oriented toward the I-95 northbound ramps, 15% to/from the west via Church Street, and 15% to/from the south via Sargent Drive and Long Wharf Drive oriented toward the I-95 southbound ramps.

Within the study area, the site traffic distribution varies slightly between the two residential buildings and the grocer and food hall/market since tenants of the residential units will drive directly to their respective buildings and patrons of the grocer and food hall/market will park directly in the Maritime Garage. Additionally, residents will have their vehicles valet parked at the Maritime Garage; the trips generated by the valet parking have been added to the site-generated traffic estimates. **Figures 6, 7, and 8** show the site traffic distribution, weekday morning traffic volumes, and weekday afternoon traffic volumes for the residential portion of Building 1 (west building). **Figures 9, 10, and 11** show the site traffic distribution, weekday morning traffic volumes, and weekday afternoon traffic volumes for the residential portion of Building 2 (east building). **Figures 12, 13, and 14** show the site traffic distribution, weekday morning traffic volumes, and weekday afternoon traffic volumes for the grocer and food hall.

¹ *Commuting Flows (Journey To Work)* – U.S. Census Bureau - <https://www.census.gov/topics/employment/commuting/guidance/flows.html>

FUTURE TRAFFIC VOLUMES

Future roadway traffic volumes were estimated both with and without the proposed redevelopment in place to determine possible traffic impacts. This proposed development is anticipated to open in year 2023.

The background traffic scenario is reflective of future conditions before the redevelopment is built and was estimated by expanding the baseline (2021 adjusted) traffic volumes to the estimated opening year of 2023 using an annual growth rate of 0.6%, per input from CTDOT. The resultant 2023 estimated traffic volumes reflect conditions just before the proposed redevelopment would open and can be seen in **Figures 15 and 16** as the background traffic volumes for the weekday morning and weekday afternoon, respectively.

The combined traffic scenario is reflective of future conditions after the proposed redevelopment is built and opened and was estimated by adding the anticipated site traffic generated by the proposed project to the future background traffic. The resultant estimated 2023 future combined traffic can be seen in **Figures 17 and 18** as the combined traffic volumes.

Intersection Capacity Analysis

The future background and combined traffic scenarios were evaluated by means of capacity analysis techniques. These analyses were used to determine the quality of operations at the study intersections, and a comparison of background versus combined traffic operations allows for a determination of possible traffic impacts from the proposed development. The quality of operations is measured and expressed as a level of service (LOS). LOS is defined as a measure of inconvenience that motorists experience. The levels are expressed with letter designations of A through F. In most communities, LOS D or better during peak hours is considered acceptable. Table 3 summarizes the results of the capacity analysis.

As can be seen, traffic conditions are expected to largely remain the same between the background and combined scenarios. The additional traffic generated by the proposed development does not trigger a downgrade in LOS for any of the individual movements or the intersections overall. It is noted that the signal plan for the intersection of Long Wharf Drive at Canal Dock Road indicates two left turn lanes for the southbound left movement from Canal Dock Road onto Long Wharf Drive, but the intersection only has one left turn lane. This signal plan should be updated to reflect this lane configuration. In the analysis of the combined scenario, the signal timings were optimized at this intersection to dedicate more time to this left turn movement. During COVID, traffic volumes were lower and the southbound left turn movement likely operated fine, but the timings should be revised to dedicate more time to this movement now that traffic volumes are increasing back to pre-COVID levels.

Additionally, the timings at the intersection of Water Street at East Street were based off of the signal plans provided by the City but adjusted based on field observations. LOS at these intersections are expected to be good; furthermore, the addition of the proposed development does not trigger any downgrade in LOS for any of the movements.

PARKING

As discussed, the residents and patrons will largely park in the adjacent parking garage. Assuming some degree of shared parking between the residential and commercial uses and the proximity of the development to Wooster Square, Downtown, and nearby transit, it is estimated that around 400 spaces should be available in the area to accommodate this development's parking demands. The 1,800 space Maritime Garage, in and of itself, is expected to have ample parking available for these uses; particularly for the residential, whose peaks in demand occur overnight and thus are extremely compatible with the peaks of the Maritime Center's office use. In addition, there will be 39 spaces under the buildings where valeted cars will be staged and a plethora of on-street parking in the area.

TABLE 3
Capacity Analysis Summary

MOVEMENTS	WEEKDAY MORNING PEAK HOUR		WEEKDAY AFTERNOON PEAK HOUR	
	BACKGROUND	COMBINED	BACKGROUND	COMBINED
<i>Signalized</i>				
Water Street at East Street				
Eastbound Left	B	B	C	C
Eastbound Through/Right	C	C	D	D
Westbound Left	B	B	D	D
Westbound Through/Right	C	C	D	D
Northbound Left/Through/Right	C	C	D	D
Southbound Left	C	C	C	C
Southbound Through/Right	C	C	C	C
OVERALL	C	C	D	D
Long Wharf Drive at Canal Dock Road				
Eastbound Left	A	A	A	B
Eastbound Through	A	A	A	B
Westbound Through	B	B	B	B
Westbound Right	A	A	A	A
Southbound Left	E	E	F	E
Southbound Right	A	A	A	A
OVERALL	B	B	C	B
Canal Dock Road at Sargent Drive/Ikea driveway				
Eastbound Left	B	B	B	B
Eastbound Through/Right	A	A	A	A
Westbound Left	B	B	B	B
Westbound Through/Right	B	B	B	B
Northbound Left	D	D	E	E
Northbound Through	C	C	C	C
Northbound Right	A	A	A	A
Southbound Left	D	D	D	D
Southbound Through/Right	D	D	E	E
OVERALL	C	C	D	D

* signal timing adjustments included under future combined conditions at the Long Wharf Drive and Canal Dock Road intersection

TABLE 3 (Continued)
 Capacity Analysis Summary

MOVEMENTS	WEEKDAY MORNING PEAK HOUR		WEEKDAY AFTERNOON PEAK HOUR	
	BACKGROUND	COMBINED	BACKGROUND	COMBINED
<i>Unsignalized</i>				
Water Street at Hamilton Street				
Westbound Left/Through	A	A	A	A
Northbound Left/Right	B	B	B	B
Long Wharf Drive at Hamilton Street				
Eastbound Left/Through	A	A	A	A
Southbound Left/Right	B	B	C	C
Long Wharf Drive at East site driveway				
Westbound Left/Through	-	A	-	A
Northbound Left/Right	-	C	-	C
Long Wharf Drive at West site driveway				
Westbound Left/Through	-	A	-	A
Northbound Left/Right	-	C	-	C

CONCLUSION

This study was conducted to assess the traffic impact of the proposed Long Wharf development in New Haven, Connecticut. To determine a profile of existing conditions, field reconnaissance and data assembly efforts were undertaken. The new traffic that will be generated by the proposed development was estimated based on industry statistical data, and intersection capacity analyses were performed comparing existing and future conditions at the study intersections. Analysis of the new traffic that is estimated to be added from this proposed development finds that it will be accommodated with little to no perceptible impact. Nonetheless, we recommend that the City adjust the signal timings at the intersection of Long Wharf Drive and Canal Dock Road in the future as necessary if overall area traffic patterns increase to pre-COVID levels.

We hope this report is useful to you and the City of New Haven. If you have any questions or need anything further, please do not hesitate to contact either of the undersigned.

Sincerely,

SLR International Corporation



David G. Sullivan, PE
 U.S. Manager of Traffic & Transportation Planning



Neil C. Olinski, MS, PTP
 Senior Transportation Planner

141.14738.00003.jl2621.ltr

LONG WHARF RESIDENTIAL

Communication and Storm Preparedness Plan

Prepared for:

Fusco Maritime Associates, LLC

Client Ref: 141.14783.00003

August 2021



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FIGURES

Figure 1: Mean Higher-High Water

Figure 2: Five-Foot Surge above MHHW

Figure 3: Six-Foot Surge above MHHW

Figure 4: Seven-Foot Surge above MHHW

PURPOSE

This Communication and Storm Preparedness Plan (CSPP) is an outline of actions to be taken before and during a flood event. The primary objective of the plan is to reduce the risks to property residents and staff of becoming trapped on the property by floodwaters, or otherwise experiencing negative health impacts, injuries, or loss of life during a flood event. Secondary objectives are to minimize the risks of damage to the building and its contents, to the personal property of residents, to adjacent properties from debris generated on this site, and to the recovery and business continuity of the business owner.

This plan should be reviewed and updated annually to make sure effective action is taken, as needed. Property management, staff, and residents should all be made aware of the plan's provisions and procedures. Preparation considers any tidal flooding (including coastal storm surge) that may cut-off egress routes.

KEY PERSONNEL AND CONTACTS

CSPP TEAM

The following individuals are designated as the CSPP Team. The team is responsible for reviewing and updating the CSPP, conducting drills, and performing or delegating actions within the CSPP. Position is listed to provide consistency in the event that the individual holding a given position changes and the CSPP is not updated before needing to be activated. The date that each name is filled-in must be listed.

POSITION	NAME	MOBILE PHONE	ALTERNATE PHONE	DATE
CSPP Coordinator		() -	() -	
Building Manager		() -	() -	
Maintenance		() -	() -	
Security		() -	() -	
Custodian		() -	() -	
Valet		() -	() -	
West Building Captain		() -	() -	
East building Captain		() -	() -	
		() -	() -	
		() -	() -	

AUTHORITY TO ACTIVATE CSPP

The following individuals have the authority to activate the CSPP. In all cases, the New Haven Emergency Management Director has authority to activate the CSPP.

POSITION	NAME	MOBILE PHONE	ALTERNATE PHONE	DATE
Property Manager		() -	() -	
Assistant Property Manager		() -	() -	
Operations Manager		() -	() -	
New Haven Emergency Operations Manager	Rick Fontana	() -	() -	

ADDITIONAL CONTACTS

The tables below list contact information for additional local authorities and vendors that are essential for implementation of the CSPP.

LOCAL AUTHORITIES	PHONE	WEBSITE
Fire Department	(203) 946-6300	newhavenct.gov/gov/depts/fire
Police Department	(203) 946-6316	newhavenct.gov/gov/depts/nhpd
Emergency Management	(203) 946-8224	newhavenct.gov/gov/depts/emergency_info

KEY VENDORS	PHONE	WEBSITE/EMAIL

SITE FLOOD HAZARD

This site is vulnerable to, and therefore at risk of, storm surge flooding from New Haven Harbor. Such flooding occurs when low pressure and sustained winds from large storm systems such as nor'easters or tropical cyclones cause ocean water to "pile up" along the shoreline. Waves are typically coincident with storm surge and can worsen flood impacts.

The land around the site is at a lower elevation than the site itself, so flooding of Long Wharf Drive will impede access and egress before the site itself experiences inundation. The following summarizes potential stages of flooding in the area; these are worst-case scenarios that assume storm surge is occurring during the highest average high tide:

- **Normal Conditions:** The highest tide on a daily basis is referred to as MHHW¹. This tide level does not impact the site.
- **4-foot Storm Surge:** If the storm surge is four feet above the MHHW, some areas near the site begin to experience minor inundation.
- **5-foot Storm Surge:** If the storm surge is five feet above the MHHW, Long Wharf Drive to the west of the site becomes flooded with shallow water. Southern egress via Long Wharf Drive and Canal Dock Road underpass becomes blocked. Some water may be on East Street, hindering northern egress by that route.
- **6-foot Storm Surge:** If the storm surge is six feet above the MHHW, Long Wharf Drive in front of the site becomes flooded with shallow water, hindering all egress from the site. Hamilton Street and East Street become flooded with shallow water, hindering all northern egress from the area. Some high-clearance vehicles may still be able to access the area from the north.
- **7-foot Storm Surge:** If the storm surge is seven feet above the MHHW, all roads in the area become flooded with shallow or deep water; access and egress from any direction is severely impacted, even for high-clearance vehicles.
- **8-foot Storm Surge:** If the storm surge is eight feet above the MHHW, the site itself experiences significant flooding.

TIDE LEVEL	TIDE HEIGHT*	IMPACT
MHHW	6.72	None
4 ft Surge	10.72	
Tropical Storm Irene	11.59	
5 ft Surge	11.72	Some Egress Flooded
Hurricane Sandy Surge	12.26	
6 ft Surge	12.72	All Egress Flooded
7 ft Surge	13.72	Widespread Road Flooding
8 ft Surge	14.72	Significant Site Flooding

* Height in Feet above Mean Lower Low Water (MLLW).
This is the standard datum for reporting tide levels.

¹ **MHHW:** Mean Higher-High Water (MHHW) is the average of the higher high-water height of each day (there are two high-tides approximately every day) over an evaluation period.

FLOOD ACTION PLAN

The Flood Action Plan describes specific triggers, identified through the weather and flood monitoring described above, and the activities to undertake when that trigger is observed. It is summarized on the table below, and described in more detail on the following pages.

PHASE	TRIGGER	OTHER ACTION
0	Normal Conditions	Monitor Long-Term Weather Conditions
1	Weather Forecast - Storm or Flood in Coming Week	Enact Flood Preparedness Procedures
2	National Weather Service: - Coastal Flood Advisory - Tropical Storm Warning Tide Predictions: - 10+ feet above MLLW	Enact Flood Evacuation Preparations
3	National Weather Service: - Coastal Flood Warning - Storm Surge Warning - Hurricane Warning Tide Predictions: - 11+ feet above MLLW	Initiate Flood Evacuation
4	City of New Haven - Evacuation Recommendation or Order State of Connecticut - Evacuation Recommendation or Order Tide Predictions: - 12+ feet above MLLW Direct Observations: - Flooding on Long Wharf Drive	Complete Flood Evacuation
5	Tide Observations: - 12+ feet above MLLW Direct Observations: - Flooding of all egress	Emergency Flood Evacuation

PHASE 0

MONITOR LONG-TERM WEATHER CONDITIONS

TRIGGER

NORMAL CONDITIONS

ACTIONS

Under normal conditions, the following steps should be taken:

If conditions that may cause flooding in the area are forecast, the next phase is activated: Flood Preparedness Procedures.

Monitoring (p. 12)

Weekly: Designated Weather & Flood Monitor monitors weather forecasts on a weekly basis for tropical cyclones, nor'easters, or other major storms.

Communication (p. 15)

Annually: Remind residents and staff to update emergency alert contact information.

Facility & Equipment (p. 13)

Annually: Check status of emergency equipment such as generators and flood defense equipment.

Staff Evacuation

Annually: Remind staff of evacuation procedures and expectations. Update CSPP roles and responsibilities.

Resident Evacuation

Annually: Remind residents of evacuation procedures and expectations.

Coordination

Annually: Coordinate with **New Haven Emergency Operations Manager** to review CSPP protocols, updated risk information, and other considerations.

PROGRESSION

If conditions that may cause flooding in the area are forecast, the next phase is activated: Flood Preparedness Procedures.

PHASE 1
FLOOD PREPAREDNESS PROCEDURES

TRIGGER
STORM OR FLOOD IS FORECAST

ACTIONS

If a tropical cyclone, nor'easter, or other potential coastal flood event is forecast within the next week, the Communication and Storm Preparedness Plan team will begin preparedness procedures. These include the following:

Monitoring (p. 12)	<u>Daily</u> : Designated Weather & Flood Monitor monitors for National Weather Service Advisories and NOAA tide predictions on a daily basis.
Communication (p. 15)	<u>Daily</u> : Use the alert procedures to inform staff and residents of the situation, including the forecast, steps being taken by management, actions for staff and residents to take, and next steps.
Facility & Equipment (p. 13)	<u>Immediately</u> : Review Facility Preparation roles and responsibilities with management team and staff (p. 12) <u>Immediately</u> : Complete Phase 1: Check Equipment Protocols
Staff Evacuation	<u>Immediately</u> : Review Communication and Storm Preparedness Plan responsibilities and protocols with management team and staff.
Resident Evacuation	<u>Immediately</u> : Review Communication and Storm Preparedness Plan procedures and expectations with residents.
Coordination	<u>Immediately</u> : Contact New Haven Emergency Operations Manager and New Haven Fire Department to inform them that initial CSPP preparations have begun.

PROGRESSION

An NWS **Coastal Flood Advisory** or **Tropical Storm Warning**, or a **predicted tide 10 feet** above MLLW or higher, triggers the next phase: Flood Evacuation Preparations.

PHASE 2

FLOOD EVACUATION PREPARATION

TRIGGER

COASTAL FLOOD ADVISORY, TROPICAL STORM WARNING, OR "10-FT TIDE" PREDICTION

ACTIONS

If the NWS has issued a **Coastal Flood Advisory** or a **Tropical Storm Warning** for the area, or if NOAA predicts tides greater than **10 feet above MLLW**, the Communication and Storm Preparedness Plan team will begin flood evacuation preparations. This includes the following:

Monitoring (p. 12)

Every 4 Hours: Designated Weather & Flood Monitor monitors for National Weather Service Advisories and NOAA tide predictions on every-four-hour basis.

Communication (p. 15)

Every 4 Hours: Use the alert procedures to inform staff and residents of the situation, including the forecast, steps being taken by management, actions for staff and residents to take, and next steps.

Facility & Equipment (p. 13)

Immediately: Complete **Phase 2: Prepare Equipment Protocols**

Staff Evacuation

Immediately: Prepare all staff for evacuation.

Resident Evacuation

Immediately: Recommend residents prepare for evacuation by identifying off-site locations to stay and preparing to pack. Suggest residents evacuate now if they are able and willing. Assist residents in need with evacuation preparation.

Coordination

Daily: Contact **New Haven Emergency Operations** Manager and **New Haven Fire Department** to inform them of CSPP preparation progress and identified needs or concerns.

PROGRESSION

An NWS **Coastal Flood Warning, Storm Surge Warning, or Hurricane Warning**, or a **predicted tide 11 feet** above MLLW or higher, triggers the next phase: Initiate Flood Evacuation.

PHASE 3

INITIATE FLOOD EVACUATION

TRIGGER

COASTAL FLOOD, STORM SURGE, OR HURRICANE WARNING, OR "11-FT TIDE" PREDICTION

ACTIONS

If the NWS has issued a **Coastal Flood Warning, Storm Surge Warning, or Hurricane Warning**, or if NOAA predicts tides greater than **11 feet above MLLW**, the Communication and Storm Preparedness Plan team will begin flood evacuation. This includes the following:

Monitoring (p. 12)	<u>Every 2 Hours</u> : Designated Weather & Flood Monitor monitors for National Weather Service Advisories, NOAA tide predictions, and actual flooding on nearby roads on an every-two-hour basis.
Communication (p. 15)	<u>Every 2 Hours</u> : Use the alert procedures to inform staff and residents of the situation, including the forecast, steps being taken by management, actions for staff and residents to take, and next steps.
Facility & Equipment (p. 13)	<u>Immediately</u> : Complete Phase 3: Nonessential Equipment Protocols
Staff Evacuation	<u>Immediately</u> : Require evacuation of all nonessential staff (staff not needed for health/safety or for subsequent CSPP procedures).
Resident Evacuation	<u>Immediately</u> : Require evacuation of residents. Assist residents in need with evacuation preparation. Refer residents to New Haven Emergency Operations or Emergency Services if necessary and appropriate.
Coordination	<u>Immediately</u> : Contact New Haven Emergency Operations Manager and New Haven Fire Department to inform them of evacuation initiation. <u>Every 4 Hours</u> : Update Emergency Operations and Fire Department of progress, and identified needs or concerns.

PROGRESSION

A **City of New Haven** or **State of Connecticut Evacuation Recommendation or Order**, a **predicted tide 12 feet** above MLLW or higher, an **observed tide of 11 ft** above MLLW or higher, or **observed flooding** on Long Wharf Drive triggers the next phase: Complete Flood Evacuation.

PHASE 4

COMPLETE FLOOD EVACUATION

TRIGGER

CITY OR STATE EVACUATION, "12-FT TIDE" PREDICTION, OBSERVED FLOODING

ACTIONS

If the City of New Haven or State of Connecticut has issued an **Evacuation Recommendation or Order**, or if NOAA predicts tides greater than **12 feet** above MLLW or observes tides greater than **11 feet** above MLLW, or if flooding is observed on Long Wharf Drive, the Communication and Storm Preparedness Plan team will complete flood evacuation. This includes the following:

Monitoring (p. 12)

Every 30 Minutes: Designated Weather & Flood Monitor monitors NOAA tide predictions and observations, actual flooding around the site, and city and state alerts, on an every-30-minutes basis.

Communication (p. 15)

Immediately: Use the alert procedures to inform staff and residents of final evacuation order. Verify that staff and residents have evacuated.

Facility & Equipment (p. 13)

Immediately: Complete **Phase 4: Essential Equipment Protocols**

Staff Evacuation

Immediately: Evacuate all remaining staff once all residents are confirmed as evacuated.

Resident Evacuation

Immediately: Responsible parties will conduct sweeps of every floor to ensure no residents or pets remain in the building.

Coordination

Immediately: Contact **New Haven Emergency Operations** Manager and **New Haven Fire Department** to inform them of evacuation Completion.
Every Hour: Update Emergency Operations and Fire Department of progress, and identified needs or concerns.

PROGRESSION

NOAA **observed tide of 12 feet** above MLLW or higher, or **observed flooding of all egress routes**, triggers the next phase: Emergency Flood Evacuation.

EMERGENCY PHASE 5

EMERGENCY FLOOD EVACUATION

TRIGGER

"12-FT TIDE" OBSERVATION, OBSERVED FLOODING OF ALL EGRESS

ACTIONS

If tides greater than 12 feet above MLLW, or flooding of all egress routes, is observed, the Communication and Storm Preparedness Plan team will perform emergency flood evacuation.

This phase is for emergencies only, and should not be necessary if earlier phases were conducted appropriately.

Monitoring (p. 12)	<u>Constant</u> : Direct observations of flood conditions.
Communication (p. 15)	<u>Immediately</u> : Verify that staff and residents have evacuated.
Facility & Equipment (p. 13)	<u>Immediately</u> : Identify any debris hazards or debris created by facility equipment.
Staff Evacuation	<u>Immediately</u> : Emergency evacuation of remaining staff.
Resident Evacuation	<u>Immediately</u> : Emergency evacuation of remaining residents or pets.
Coordination	<u>Immediately</u> : Contact New Haven Emergency Operations Manager and New Haven Fire Department to request emergency evacuation. Inform Emergency Operations and Fire Department of debris concerns or other evacuation concerns.

FLOOD MONITORING

Storm-surge flooding can occur year-round, but is typically well-forecast. Long-range weather forecasts should be monitored regularly. Any forecast storm or tide event that might cause flooding of egress routes from the site will initiate more rigorous monitoring of tide predictions and observations. Certain forecasts or observations trigger subsequent phases of the CSPP.

Factors to monitor and frequency of monitoring during each CSPP phase is summarized below:

PHASE	FACTOR TO MONITOR	FREQUENCY
0	✓ Weather	Weekly
1	✓ Weather ✓ Tide Levels	Daily
2	✓ Weather ✓ Tide Levels	Every Four Hours
3	✓ Tide Levels ✓ Evacuations	Every Two Hours
4	✓ Evacuations ✓ Flooding	Every 30 Minutes
5	✓ Flooding	Constant

The following sites should be referenced for monitoring certain factors:

FACTOR	SOURCE	SITE
Weather	Local Weather Forecast	forecast.weather.gov/MapClick.php?lat=41.308&lon=-72.9243#.YPhWaehJFPY
	Local Weather Advisories	www.weather.gov/okx/
	Atlantic Tropical Weather Outlook	www.nhc.noaa.gov/gtwo.php
	Local News	www.wtnh.com/weather/
Tide Levels	NOAA Tide Level Predictions & Observations	tidesandcurrents.noaa.gov/waterlevels.html?id=8465705
	Stevens Flood Advisory System	hudson.dl.stevens-tech.edu/sfas/
Evacuations	State of Connecticut Alerts	portal.ct.gov/DEMHS/External-Weather-Updates
	New Haven Alerts	www.newhavenct.gov/gov/depts/emergency_info/default.htm

The following table lists parties responsible for flood and weather monitoring.

Individual Monitoring Responsibilities

PERSON/POSITION	SHIFT/FREQUENCY

FACILITY PREPARATION PROTOCOLS

The following tables summarize what actions will be taken during each CSPP phase to secure and protect the facility, as well as items and equipment within the facility.

PHASE 1: CHECK EQUIPMENT PROTOCOLS

EQUIPMENT	ACTIVITY	HOURS NEEDED	ASSIGNED TO
Emergency Generators	Ensure sufficient fuel, request delivery	1	
Food, Fuel, and Supply Deliveries	Communicate with vendors about possible delays or cancelations.	1	
Waste Pickup	Communicate with vendors about possible delays or cancelations.	1	
Flood Defense Equipment	Check that equipment is operational, and that staff know deployment procedures	1	
Communication Equipment	Ensure emergency communication equipment and protocols are operational	1	
Vehicles (resident)	Request that residents inform management of which vehicles will not be needed for evacuation, and can be relocated to garage.	1	
Other Actions:			

PHASE 2: PREPARE EQUIPMENT PROTOCOLS

EQUIPMENT	ACTIVITY	HOURS NEEDED	ASSIGNED TO
Portable Outdoor Debris Hazards	Bring indoors or to higher elevations. Secure.	2	
Non-Portable Outdoor Debris Hazards	Secure in place	2	
Resident Outdoor Debris Hazards	Require residents to secure or store items on balconies		
Food, Fuel, and Supply Deliveries	Cancel or postpone delivery	2	
Waste Pickup	Expedite pickup or deliver to Transfer Station	2	
Mail Pickup	Expedite pickup or deliver to Post Office	2	
Emergency Generators	Ensure generators are functional	1	
Flood Defense Equipment	Check that equipment is ready for deployment. Check sump pumps.	1	
Vehicles (resident or site)	Relocate vehicles that will not be evacuated	1	
Electronic Records	Back up important records to the cloud or an offsite server.	4	
Other Actions:			

PHASE 3: NONESSENTIAL EQUIPMENT PROTOCOLS

EQUIPMENT	ACTIVITY	HOURS NEEDED	ASSIGNED TO
Emergency Generators	Ensure generators are functional	1	
Flood Defense Equipment	Deploy equipment at nonessential openings	2	
Lower-Level Contents	Relocate to a higher floor, offsite, or elevated location on lower-level	4	
Other Actions:			
Facility Condition Photos	Thorough photographic documentation of facility conditions before event.	4	

PHASE 4: ESSENTIAL EQUIPMENT PROTOCOLS

EQUIPMENT	ACTIVITY	HOURS NEEDED	ASSIGNED TO
Emergency Generators	Activate generators	1	
Flood Defense Equipment	Deploy equipment at all openings once evacuation is complete. Activate sump pump.	2	
Utilities	Shut down electric and fuel, control ignition sources, close emergency valves to sewer drains.	4	
Other Actions:			

OTHER EQUIPMENT ACTIONS

EQUIPMENT	ACTIVITY	PHASE	ASSIGNED TO

COMMUNICATION PROTOCOLS

METHOD	PHASE FOR USE	NOTES
Email	0-5	
Signs/Notes in Public Spaces	2,3	
Letter or Note on Unit Door	1,3	
Mobile Device Messages	1-5	Text or App Messages
In-Unit Alert System	3-5	
Building-Wide PA System	3-5	

PHASE	CONDITIONS	INFORMATION TO COMMUNICATE	FREQUENCY	COMMUNICATION METHOD
0	Normal Conditions	Remind residents and staff to update emergency alert contact information.	Annually	Email Letter to Unit
1	Storm or Flood is Forecast	<ul style="list-style-type: none"> - Weather forecast - Steps being taken by management - Review CSPP procedures & expectations - Identify vehicles to be garaged 	Daily	Email Mobile Device Letter to Unit
2	Coastal Flood Advisory, Tropical Storm Warning, Or "10-Ft Tide" Prediction	<ul style="list-style-type: none"> - Weather forecast - Steps being taken by management - Store or secure outdoor items - Prepare for evacuation 	Every 4 Hours	Email Mobile Device Public Signs
3	Coastal Flood, Storm Surge, Hurricane Warning, Or "11-Ft Tide" Prediction	<ul style="list-style-type: none"> - Weather forecast - Steps being taken by management - Evacuation Order 	Every 2 Hours	Email Mobile Device Public Signs Letter to Unit In-Unit Alert PA System
4	City Or State Evacuation, "12-Ft Tide" Prediction, Observed Flooding	<ul style="list-style-type: none"> - Final Evacuation Order - Verify staff & residents are evacuated 	Immediately	Email Mobile Device In-Unit Alert PA System
5	"12-Ft Tide" Observation, Observed Flooding Of All Egress	<ul style="list-style-type: none"> - Verify staff & residents are evacuated 	Immediately	Email Mobile Device In-Unit Alert PA System

RECOVERY PLAN

Following an evacuation, recovery will consist of assessing damages, restoring operations, and re-habitation by residents.

Equipment Damage Assessment and Restoration *(utilities, services, etc.)*

EQUIPMENT	RESTORATION ACTIVITY	RESPONSIBLE PARTY

Operations Restoration *(vendor services, deliveries, pickups, etc.)*

OPERATION	RESTORATION ACTIVITY	RESPONSIBLE PARTY

Rehabilitation *(ensuring units are safe, coordinating re-arrival of residents, etc.)*

ACTIVITY	RESPONSIBLE PARTY

POST EVENT REVIEW

A review of the implementation of the CSPP will be conducted following any activation that brings the process into Phase 1 or higher. The CSPP Coordinator will assemble the CSPP Team to review the actual actions taken against the procedures outlined in this CSPP. Steps to resolve any gaps between implementation and written procedures will be identified. Updates to the CSPP will be made as appropriate.

IMPLEMENTATION DATE	HIGHEST PHASE	CHALLENGE / OBSTACLE	STEPS TO REDRESS	RESPONSIBLE PARTY

TRAINING EXERCISES

The CSPP Coordinator will lead the CSPP Team in an annual training exercise for the CSPP.

DATE OF TRAINING	PARTICIPANTS	NOTES



No Flooding at Site

Mean Higher-High Water (MHHW)
6.72 feet above MLLW

FIG. 1	MEAN HIGHER-HIGH WATER LONG WHARF RESIDENTIAL COMMUNICATION AND STORM PREPAREDNESS PLAN Fusco Maritime Associates, LLC 501 Long Wharf Drive New Haven, CT	 45 GLASTONBURY BLVD 1ST FL GLASTONBURY, CT 06033 860.400.5690	 0 500 1,000 Feet
	DATE 7/22/2021 141.14738.00003 PROJ. NO.		



Flooding partially blocks egress.

5-foot Surge Above MHHW
11.72 feet above MLLW

<p>FIG. 2</p>	<p>DATE 7/22/2021</p>	<p>FIVE-FOOT SURGE OVER MHHW</p>	<p>45 GLASTONBURY BLVD 1ST FL GLASTONBURY, CT 06033 860.400.5680</p>
	<p>PROJ. NO. 141.14738.00003</p>	<p>LONG WHARF RESIDENTIAL COMMUNICATION AND STORM PREPAREDNESS PLAN</p> <p>Fusco Maritime Associates, LLC 501 Long Wharf Drive New Haven, CT</p>	



Flooding blocks all egress.

6-foot Surge Above MHHW
12.72 feet above MLLW

DATE 7/22/2021
 PROJ. NO. 141.14738.00003

SIX-FOOT SURGE OVER MHHW
 LONG WHARF RESIDENTIAL COMMUNICATION AND STORM
 PREPAREDNESS PLAN
 Fusco Maritime Associates, LLC
 501 Long Wharf Drive New Haven, CT

SLR
 45 GLASTONBURY BLVD
 1ST FL
 GLASTONBURY, CT 06033
 860.400.5680

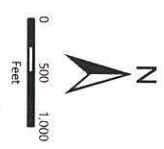


FIG. 3



Flooding is widespread.

7-foot Surge Above MHHW
13.72 feet above MLLW

FIG. 4

PROJ. NO. 141.14738.00003

DATE 7/22/2021

SEVEN-FOOT SURGE OVER MHHW

LONG WHARF RESIDENTIAL COMMUNICATION AND STORM PREPAREDNESS PLAN

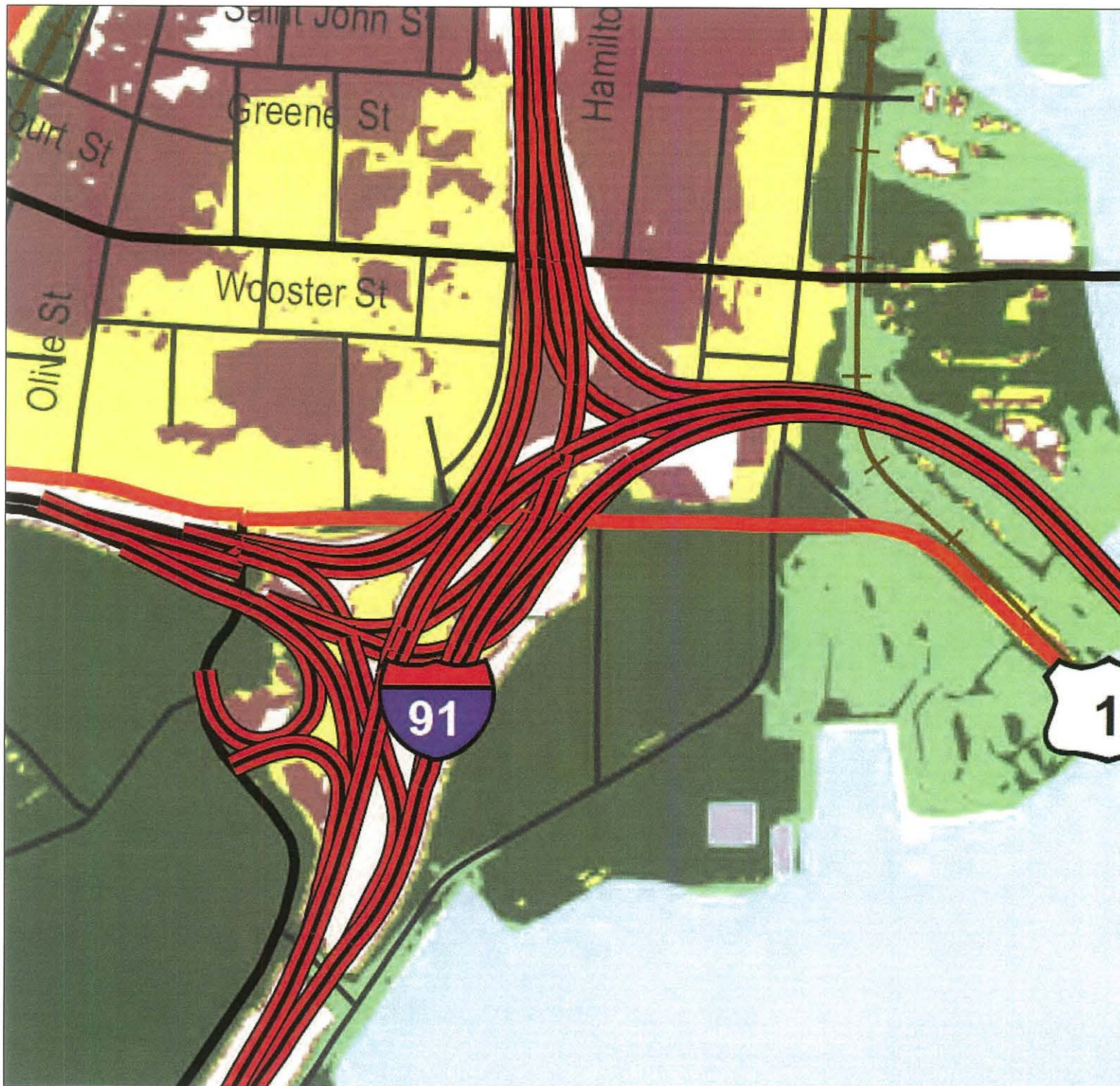
Fusco Maritime Associates, LLC
501 Long Wharf Drive New Haven, CT

SLR

45 GLASTONBURY BLVD
1ST FL
GLASTONBURY, CT 06033
860.400.5680

0 500 1,000
Feet

N



LEGEND	
Hurricane Surge Inundation	Hydrographic Features
Category 1	Water
Category 2	Intermittent Water
Category 3	Flats
Category 4	Rocks
	Inundated Area
Transportation	Marsh
Interstate Highway	Cranberry Bog
US Highways	Dam
State/Local Highways	Fish Hatchery
Local Road	Aqueduct
Railroad	Sewage Pond
Airport	Water Tank
Political	
Town Boundary	
State Boundary	
Facility Location Key	
Public Shelter	
Medical/Institutional Facility	
Mobile Home/Trailer Park	

NOTES & SOURCES

Hurricane surge elevations were determined by the National Hurricane Center using the NY3 and PV2 SLOSH model basins, and assumed peak hurricane surge arriving at mean high water.

The hurricane surge inundation areas shown on this map depict the inundation that can be expected to result from a worst case combination of hurricane landfall location, forward speed, and direction for each hurricane category.

The source of basemap transportation features such as roads and railroads is Tele Atlas 2008. The source of other basemap features is the Connecticut DEEP.

The primary ground elevation data source was LIDAR data created by Terrapoint LLC for FEMA. That data was supplemented where needed by ground surface LIDAR data created by Terrapoint LLC for the State of Connecticut. The vertical accuracy of all LIDAR data is approximately +/- 1 foot, and the horizontal accuracy is approximately +/- 3 feet.

The horizontal projection of this map is Connecticut State Plane NAD83 feet. All elevation data was referenced to the NAVD88 vertical datum.

TITLE

Connecticut Hurricane
Evacuation Study Hurricane
Surge Inundation Mapping
August 2012
New Haven

Map and Layout Adapted from Citywide New
Haven SLOSH Map available through CT DEMHS

FIG. 5

4,000 2,000 0 4,000 Feet

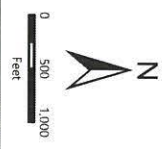
US Army Corps of Engineers
New England District

FEMA

NOAA



Esri, USDA Farm Service A



SLR
 45 GLASTONBURY BLVD
 1ST FL
 GLASTONBURY, CT 06033
 860.400.5680

FEMA NFIP MAP
 LONG WHARF RESIDENTIAL COMMUNICATION AND STORM
 PREPAREDNESS PLAN
 Fusco Maritime Associates, LLC
 501 Long Wharf Drive New Haven, CT

DATE 7/22/2021
 141.14738.00003
 PROJ. NO.

FIG. 6

SHIPMAN

Matthew Ranelli
Phone: (860) 251-5748
Fax: (860) 251-5318
mranelli@goodwin.com

September 1, 2021

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

South Central Connecticut Regional
Water Authority
90 Sargent Drive
New Haven, CT 06511

Re: Notice Required Pursuant to Section 8-3i of the General Statutes Regarding a Petition for Zoning Amendment to Modify Planned Development District #53 and Coastal Site Plan Review to Allow for Residential Use Up to 500 Apartments Located at 501-585 Long Wharf Drive (Including MBLU Nos. 205 0529 00102, 205 0529 00202, 205 0529 00102, 080 0530 00101, and 205 0529 00300)

Dear Sir or Madam:

Pursuant to § 8-3i of the General Statutes, we are writing to inform you of the filing of the above-referenced Petition for Modification of Planned Development District and Coastal Site Plan Application (the "Applications") in connection with the proposed mixed-use development to be located at the above-referenced property. Please be advised that the undersigned represents the applicants, Fusco Harbor Associates LLC and Fusco Maritime Associates LLC, concerning the above-referenced Applications. The Applications are on file at the New Haven City Plan Department, 165 Church Street, 5th Floor, New Haven, Connecticut 06510, and may be reviewed by you at your convenience.

If you have any questions or would like additional information, please do not hesitate to contact me at (203) 836-2805.

Sincerely,


Matthew Ranelli

GMR:ekf

10016510 / s5

SHIPMAN

Matthew Ranelli
Phone: (860) 251-5748
Fax: (860) 251-5318
mranelli@goodwin.com

September 1, 2021

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Lori Mathieu, Supervising Environmental Analyst
Connecticut Department of Public Health / Drinking Water Section
410 Capitol Avenue, MS #51 WAT
P. O. Box 340308
Hartford, CT 06134-0308

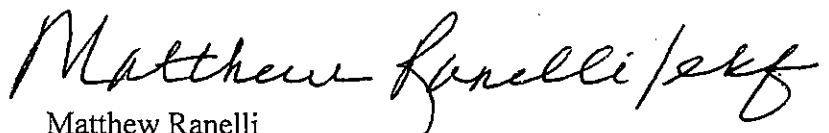
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Dear Ms. Mathieu:

Pursuant to § 8-3i of the General Statutes, we are writing to inform you of the filing of the above-referenced Petition for Modification of Planned Development District and Coastal Site Plan Application (the "Applications") in connection with the proposed mixed-use development to be located at the above-referenced property. Please be advised that the undersigned represent the applicants, Fusco Harbor Associates LLC and Fusco Maritime Associates LLC, concerning the above-referenced Applications. The Applications are on file at the New Haven City Plan Department, 165 Church Street, 5th Floor, New Haven, Connecticut 06510, and may be reviewed by you at your convenience.

If you have any questions or would like additional information, please do not hesitate to contact me at (203) 836-2805.

Sincerely,


Matthew Ranelli

GMR:ekf

10016510 / s6

Shipman & Goodwin LLP | Connecticut | New York | Washington, DC | www.shipmangoodwin.com