Re: Certificate of Need Application: Docket Number 18-32231-CON
Yale New Haven Hospital
Termination of Primary Care Services
Fifth Order for Late File

Dear Ms. Mitchell:
We are in receipt of the Fifth Order from the Office of Health Strategy on the Certificate of Need Application by Yale New Haven Hospital dated March 22, 2019 for the property at 150 Sargent Drive in New Haven.

We have repeated the questions posed by OHS below, with our response following in bold face type.

1. Provide additional details, inclusive of supportive documentation, regarding the flood history and flood risk at 150 Sargent Drive, in New Haven, Connecticut. Include the following:

As discussed in detail below, the building located at 150 Sargent Drive has not been flooded within the past ten (10) years, even during Tropical Storm Irene and Superstorm Sandy.

The Long Wharf area of New Haven is a vibrant part of the city that is the subject of significant investment and development. The area currently includes significant businesses, including IKEA, Jordan’s Furniture, Assa Abloy, and the Regional Water Authority, as well as restaurants, a hotel and other commercial ventures. It is also the home to the Long Wharf Theatre. The City of New Haven has plans to expand development in the area and to establish it as a dynamic mixed-use district with new housing, parks, and other commercial development. Information on the City’s Long Wharf Responsible Growth Plan can be found here: https://www.newhavenct.gov/gov/depts/ed/current/long_wharf.htm. A copy of the Executive Summary of the plan is attached as Exhibit 1.

In late fall of 2018, YNHH engaged Tighe & Bond, an environmental engineering firm, to provide environmental design oversight for the planned interior renovation at 150 Sargent Drive. In the process of its review, Tighe & Bond identified certain floodplain requirements and issued a report to YNHH on October 25, 2018 (copy attached as Exhibit 2). The report resulted in numerous discussions over the next few months with the City of New

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Haven and the Connecticut DEEP about the building’s categorization on flood hazard maps prepared by The National Flood Insurance Program (NFIP) operated by the Federal Emergency Management Agency (FEMA). These discussions had not yet resulted in a definitive answer about the building’s categorization by late January 2019, when YNHH filed for a permit from the City of New Haven to begin first floor renovations. At that point, YNHH was informed that a floodplain development permit would be required to obtain a building permit, which had not been anticipated by YNHH. This finding by the City stemmed from a misunderstanding about the status of the site on the FEMA flood hazard maps. The maps show an atypical situation where waves regenerate in properties behind the subject parcel due to prevailing winds. The City was unsure if this was truly an atypical situation or if it was a mapping error. As a result, the City requested clarification as to whether the building structure was located in a coastal high hazard area subject to high-velocity wave action ("Coastal AE Zone") rather than an "AE Zone" that is outside of a high hazard area. This is a key distinction as the building code places more rigorous requirements on buildings located in Coastal AE Zones. Additional discussions took place over the next several weeks, with the Connecticut DEEP finding that the site is outside of the high hazard area and the City confirming this conclusion at a meeting in February 2019. The City then issued a permit for the first phase of renovations in March 2019, which caused the initial two month delay of Phase I construction noted in Fourth Order response. YNHH and the City now have clarity around the required permits and necessary precautions to be taken to flood proof the building in connection with the planned renovations.

a. Information about whether this location has flooded within the past ten years; particularly during hurricanes Irene (2011) and Sandy (2012). Describe, in detail:

The 150 Sargent Drive location has not flooded in the past ten (10) years. Although there were two significant storms during that period – Tropical Storm Irene (2011) and Superstorm Sandy (2012) – each of which affected the Long Wharf Harbor area, the site was unaffected by flood waters and access to the site was maintained during both storm events.

There was no flooding during Tropical Storm Irene, which impacted the Connecticut coast on August 28, 2011. The storm produced damaging winds, coastal flooding and a storm surge that affected portions of the Long Wharf area in New Haven. The peak storm surge in the area during Tropical Storm Irene was recorded at Elevation 7.93 (NAVD 88) at the Sargent Drive/Long Wharf area. The first floor elevation of 150 Sargent Drive is 11.86 (NAVD88), which is above the peak storm surge elevation of Tropical Storm Irene.

There was also no flooding during Superstorm Sandy, which impacted the New Haven area on October 29 – 30, 2012. The storm brought a storm surge and coastal flooding that affected major portions of the coastal New Haven area, including the 150 Sargent Drive parking area which experienced “ponding” (i.e., pooling of water in certain areas). The peak storm surge was recorded at Elevation 9.13 (NAVD 88) at New Haven Harbor. The first floor elevation of 150 Sargent Drive is
11.86 (NAVD88), which is above the peak storm surge elevation of Superstorm Sandy.

FEMA Elevation Certificates for the existing 150 Sargent Drive building are attached as Exhibit 3.

i. any flood-related damage to 150 Sargent Drive;

There have been no flood-related damages at 150 Sargent Drive. As noted above, peak storm surges during Tropical Storm Irene and Superstorm Sandy were below the first floor elevation at 150 Sargent Drive; accordingly, there was no grade level flood damage to 150 Sargent Drive from either storm.¹

ii. the cost of remediation and repair(s) for the damage described in i above; and

No remediation or repairs were necessary, as floodwaters did not enter the building, therefore no cost was incurred.

iii. whether there were service disruptions and if so, the duration of those disruptions.

During the last ten (10) years, YNHH has never had to close the site, nor were there any service disruptions due to flooding.

During each of the significant storms (Irene and Sandy), the parking lot at 150 Sargent Drive experienced some ponding but not to an extent that the site could not be accessed. During Superstorm Sandy, some adjacent roadways were flooded; however, because the site has multiple access points (it can be accessed from Sargent Drive and also from Church Street), access was still available from the north and northwest (via Union Avenue and Church Street).

b. A copy of the 2018 report issued by Tighe and Bond regarding flood vulnerability at this location.

A copy of the October 25, 2018 report is attached as Exhibit 2.

c. Documentation regarding discussions with the State Department of Energy and Environmental Protection and the City of New Haven regarding:

iv. any recommended and/or actual changes regarding the implementation of the proposal since the filing of the CON application;

¹ During one storm, there was some water infiltration due to a poor roof seam, but that has been corrected and did not relate at all to the floodplain.
Please see attached Exhibit 4 for series of e-mails between Tighe & Bond and Diane Ifkovic of Connecticut DEEP, who is the State National Flood Insurance coordinator, regarding the type of Special Flood Hazard Area the building is in. As noted above, there was some initial misunderstanding over the flood zone status of the site. Ms. Ifkovic confirmed that the building is not in a coastal high hazard zone as determined by the NFIP Regulations in 44 CFR 60.3, and is not required to comply with the coastal high hazard zone provisions of the building code. The City acknowledged this finding at a meeting with YNHH on February 26, 2019, and issued a permit for the first floor renovations on March 7, 2019 (see Exhibit 5).

Based on the review by Tighe & Bond and the subsequent discussions with Connecticut DEEP and the City of New Haven, the scope of required flood-proofing of the site has been confirmed. YNHH has engaged an architect to implement appropriate flood-proofing, which will include installation of a fluid-applied waterproofing membrane to an elevation of 13.86 NAVD88, which is in excess of the required flood-proofing to 12 NAVD88, as well as installation of flood barrier doors, elevation of the entrance vestibule floor, and installation of insulated flood vents.

v. the required permits to implement the proposal; and

Because the site is within a 1% annual chance floodplain, the proposed improvements will require a Floodplain Development Permit from the City. Additionally, because the site is within the coastal boundary, a Coastal Site Plan Application is also required to be submitted to the City. As noted above, YNHH was not aware of these additional permitting requirements until earlier this year and its original timeline for renovations of the 150 Sargent Drive site had not included time for the additional permitting process. As noted in our response to OHS’s order dated March 18, 2019, the timeline for the overall project has been revised to an anticipated transition date in late summer 2020.

vi. the permit application schedule.

Applications are scheduled to be submitted to the City by April 18, 2019 for review at the May 15, 2019 City Plan Commission meeting.

d. The estimated impact on the patient population and the Federally Qualified Health Centers ("FQHCs") should flooding impede access to the proposed location; and

Based on the experience of the past ten (10) years (described above), YNHH and the FQHCs do not anticipate that flooding will impede access to the proposed location. It is standard practice of both YNHH and the FQHCs to notify patients and reschedule appointments in the event of weather-related closures (e.g., as a result of snowstorms). In doing
so, patient and employee safety is paramount and specific circumstances are evaluated to determine whether sites will be closed and for how long. Patients are rescheduled or redirected based on acuity. Because care to be provided at 150 Sargent Drive consists of outpatient, ambulatory services, rescheduling can be managed without any adverse impact on patients.

e. A mitigation plan to maintain access to primary care services for the patient population during a flood event.

As noted above, the building has not historically been impacted by flooding, even during significant storms such as Tropical Storm Irene and Superstorm Sandy. Any future risk will be mitigated by flood-proofing the building, re-paving the parking lot and undertaking the other renovations recommended by the architect. In the event that any roadways are flooded, there are alternate routes for access: in addition to access via Sargent Drive, the site is also accessible from the north and northwest via Union Avenue and Church Street. In addition, because the source of the flood risk in the area is coastal in nature (as opposed to riverine flash flooding events), there is typically a few days advance warning with major coastal storms, which will enable the facility staff to prepare in advance. Because coastal flooding dissipates with the tide, flooding of roads in the area is typically short-term. As noted above, if there are any weather-related emergencies that require that the site be closed, patients will be notified and rescheduled or redirected.

2. Provide a list of all transportation vendors the Applicant considered for the provision of ADA compliant transportation services for 150 Sargent Drive, and the measures taken to assess each vendor's capacity to serve the target population.

As noted at the hearing and in previous filings, YNHH has evaluated the transportation needs of the patients of the current Primary Care Centers (PCCs) and has considered ways to ensure that transportation is not a barrier to access. YNHH conducted a statistically-significant sample survey of over 2,500 current PCC patients and determined that approximately two-thirds relied on private vehicles to travel to their appointments and would benefit from the ease of access and free parking at the new site. Of the patients who do not use private vehicles, approximately 10% indicated they walk to appointments, 15% indicated that they use public transportation, and 5% indicated they used a Medical Taxi or other medical transportation.

Patients who currently use Medical Taxis or other medical transportation will be able to utilize those services to access 150 Sargent Drive. YNHH has, therefore, focused its efforts on ensuring that access will not be limited for those who use public transportation and/or who walk to their appointments. In its evaluation, it has considered the needs of the patient population, including those who require specialized transportation services. YNHH considered various options:

1. Public Transit. YNHH reviewed CT Transit, and evaluated bus routes from the New Haven neighborhoods in which the majority of patients who receive services at the YNHH PCCs live, with special focus on the neighborhoods where the largest concentration of patients not using private vehicles reside. All CT Transit buses have wheelchair lifts or ramps for access by persons with disabilities. Buses can also "kneel" to lower the first step height. According to
the CT Transit website: “Most types of mobility devices (wheelchairs, 3-wheel scooters, and walkers) can be accommodated on the buses.” Senior citizens (65+) and those with a qualifying disability can travel for a reduced fare at any time on CT Transit and all other bus systems operating under contract to the CTDOT.

2. **Ride Sharing.** After review of the bus routes identified that there are some routes that would require more than one transfer, YNHH considered ride-sharing options. One of the vendors we are planning to use for ride sharing has a specialized program called UberASSIST.

UberASSIST is a program that has been successfully implemented in other parts of the country and provides extra assistance for patients with special transportation needs, including those with disabilities, seniors, and pregnant women. Drivers are required to take an online course and drive a vehicle that can accommodate an assistive device, such as a folding wheelchair or collapsible scooter. YNHH and UberASSIST are working through the terms of their contract and anticipate that it will be finalized several months prior to the transition of services to 150 Sargent Drive. Uber has informed YNHH that UberASSIST has been implemented in fifteen cities across the United States and that it is confident that it will be able to implement the program in Greater New Haven area in time for the transition of services to 150 Sargent Drive.

3. **Specialized Transportation Providers.** As noted above, approximately 5% of the current PCC patients utilize a Medical Taxi or other medical transportation to access primary care services. It is anticipated that those patients will continue to use these services without change. For patients who do not currently utilize such services and who need services beyond scope of UberASSIST, YNHH has reviewed the following options:

- **Veyo,** the State of Connecticut’s contracted provider of transportation services for Medicaid beneficiaries.
- **The Greater New Haven Transit District (GNHTD) and the Milford Transit District (MTD),** which provide transportation services in the region for individuals with disabilities, seniors and veterans. GNHTD and MTD are regional providers in Greater New Haven of ADA-compliant transportation services under Connecticut’s complementary ADA paratransit service. Patients who meet the ADA definition of disability may apply for access to the service on a temporary, conditional or unconditional basis (e.g. those whose disability always prevents them from using public buses need only apply and be certified once for access on all future trips).
- **Coordinated Transportation Solutions (CTS),** which offers specialized transportation services throughout Connecticut. CTS contracts with three transportation providers operating in and around New Haven, all of which are ADA-compliant and include lift-equipped Handivans, and vehicles with ramps that accommodate powered wheelchairs and scooters.
- **Section 5310 grantees in the greater New Haven area.** Section 5310 is a federal grant program intended to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding transportation mobility options. The Transit Manager of the Bureau of Public Transportation, Connecticut
Department of Transportation provided information on Section 5310 grantees in the area that provide medical transportation, including:

- The Kennedy Center,
- Marrakech, Inc.,
- The Mary Wade Home, and
- East Shore Regional Adult Day Center dba Orchard House Medical Adult Day Center.

- Other non-profits in and around New Haven that offer medical transportation services for specific populations: cancer patients, ALS patients, HIV and AIDS patients, individuals receiving HUSKY D or Military Support Program services, and patients with MS, among others.

4. **Other.** For the small number of patients who do not meet eligibility requirements for Veyo, GNHTD or MTD or the other providers noted above, and who require greater assistance than is provided by the UberASSIST program, YNHH has initiated conversations with MTD and discussed the basic terms of an agreement in principle for MTD to be our safety net transportation provider for this population. MTD has confirmed that it has the capacity to meet the needs of those patients with disabilities who need transportation to 150 Sargent Drive.

The combination of ample free parking, public transportation that is ADA-compliant, the ride-sharing program including Uber ASSIST, and the services of Veyo, medical taxis and other specialized modes of transportation noted above will ensure that there are not barriers to access at 150 Sargent Drive.

Respectfully submitted,

Jeryl Topalian
Director, Strategy and Regulatory Planning
Yale New Haven Health

cc: Cynthia Sparer, Sr. VP Operations, YNHHS
    Jennifer Willcox, VP Legal Services, YNHHS
Exhibit 1
LONG WHARF RESPONSIBLE GROWTH PLAN

Executive Summary
**Planning Committee**

Michael Piscitelli  
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Acting Economic Development Administrator

Aicha S. Woods  
Assistant Director of Comprehensive Planning  
City Plan Department

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Planner  
City Plan Department

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Rory Fitzgerald  
Stephanie Brooks

**Funding Partners**

State of Connecticut  
Office of Policy and Management  
City of New Haven

**Acknowledgements**

New Haven Board of Alders  
Long Wharf Stakeholder Committee  
Hill South Management Team  
Long Wharf Business Community  
Downtown/Wooster Square Management Team
The “New Long Wharf”

The Long Wharf Responsible Growth Plan proposes a comprehensive strategy for transforming the Long Wharf Area into a series of diverse and dynamic mixed-use districts, each focused on an entirely new public realm. The Plan addresses the area’s resilience against future climate-change induced weather events and sea level rise; needed infrastructure improvements to support new development; and the anticipated costs and revenues associated with the proposed development. The Plan features several key recommendations:

- Five new walkable, mixed-use districts
- A new “Long Wharf Greenway,” a linear park that will link the four districts together
- 7.7 million square feet of new development including 4,600 units of residential development, 340,000 sf commercial office, 320,000 sf retail, and 440 hotel rooms at full build out
- A New Harbor District focused on a new water plan for New Haven Harbor and providing New Haven residents with the opportunity to enjoy a wider range of water-related activities.
- A new multi-modal circulation system, featuring new streets, bike lanes and enhancements to the pedestrian realm that will not only link-up the five districts, but connect the Long Wharf area with both the Hill Neighborhood and the Wooster Square Neighborhood, as well as enhanced connections to Long Wharf Park and Union Station.
- A strategy for stormwater management in the core of Long Wharf Area integrated with open space and recreational improvements.

The Plan is based on several key principles:

- **An emphasis on the public realm** in the form of walkable streets and parks, focusing on Places, not Projects, with landscape and public open spaces dominating the view
- **Integrating with, and enhance the existing**, building on the area’s major anchors, such as ASSA Abloy, One Maritime Center, and IKEA, relying on infill development rather than “tabula rasa” redevelopment
- **Market Driven, staged redevelopment**, with public infrastructure linked to private investments, both organized around the key places
- **Resilient and sustainable community building**, integrating public infrastructure and open space for coastal protection and storm water management
- **Promoting equitable development**, increasing access and mobility to and within the district, and maximizing social equity for all ethnic and age groups

The Responsible Growth Plan will have several important benefits for New Haven:

- **Creating a new front door for the city** from I-95, I-91 and the Harbor – by establishing a new vision for development focused around a new Long Wharf Greenway, the new Long Wharf will present a vibrant new image for the City.
- **Transit Oriented Development** – proximity to Union Station.

- **Reducing the City’s vulnerability to storm surge and stormwater flooding** – the Plan builds on the City’s ongoing work to enhance the resilience at Long Wharf Park, which includes a living shoreline, and a storm surge barrier.
- **Creating Jobs** – the construction and new commercial activity associated with the anticipated development is estimated to result in an average of 600 jobs per year, with wages and salaries totaling $41 million*. At full build-out, on a recurring annual basis, the estimated economic impact of ongoing operations is predicted to result in nearly 3,500 additional jobs in the Long Wharf area, with wages and salaries totaling nearly $182 million*.
- **Reconnecting the City to its waterfront** – the Plan creates opportunities for new maritime activity and a new place for people to engage with the Harbor.
- **Providing a major setting for new development** – the new Long Wharf will serve as an alternative to the smaller parcels and historic context of downtown, and other New Haven neighborhoods.

The final plan identifies the gap between available public funding sources and the costs associated with a series of “Enabling Projects” (i.e. priority public infrastructure projects), lays out a path to implement the use of Tax Increment Financing to finance this gap, and identifies critical challenges that must be overcome to make the plan a reality.

* in 2018 dollars
Vision Plan

### Potential New Development

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<td>440 Keys</td>
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<tr>
<td>New Parks</td>
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* Showing new development only
Five Walking Districts

At 352 acres, the Study area is vast, with little sense of scale, or identity. While the Study Area can boast of several major employers and international brands, each of these individual developments sits apart, and on its own. As a result there is little if any mutual benefit between uses. The result is a whole that is less than the sum of its parts. The Plan proposes five very different, but complimentary districts. Each district is large enough to function as a neighborhood unto itself, but is encompassed within a five walk. Each district has its own unique opportunities and constraints based on its context, accessibility and anchors that suggest different development possibilities. And finally, each will be oriented around a “place” that will serve as to organize new development and investment. While access to the different part of the study area is via Sargent Drive, the proposed Greenway will form a new multimodal circulation system linking up each district so the study areas can function as a whole.

**All districts**
- the emphasis is on walking and on the reorganization of the large area into 5 very different but, complementary districts
- integrate with and enhance existing assets
- infill new mixed use development (mostly residential)
- walkable streets and bike lanes
- landscape and public open spaces dominate the view and real estate to change the character of the neighborhood
- focus on “Places” (not projects); at least, one per district
- market driven staged private development informed by zoning and design guidelines
- public infrastructure linked, in stages, to private investments
- resiliency protection is provided at the Harbor’s edge
- many more and improved streets are created, for improved vehicular convenience and circulation
The Harbor District
Parkway District
The Innovation District
Market District
Gateway District
Equity and Sustainability – Values & Implementation Goals

The implementation of the Long Wharf Sustainable Growth Plan is an opportunity to promote sustainable and equitable solutions to increase our City’s resiliency and create longstanding benefits for New Haven residents. To this end, the New Haven Climate and Sustainability Framework, as well as other widely recognized benchmark frameworks such as the UN Sustainable Development Goals for Cities, LEED for Cities, SITES, and Living Communities Challenge, are useful tools for further consideration in setting sustainability and equitable development goals for Long Wharf.

SUSTAINABILITY

Energy

Thirty-three percent of New Haven’s greenhouse gas emissions come from electricity generation. The Long Wharf Plan is an opportunity to employ innovative solutions to meet New Haven’s energy reduction goals. Opportunities include:

- Creating an Energy Improvement District.
- Evaluating the use of micro grids to increase resiliency.
- Incentivizing solar energy production in both residential and commercial buildings.
- Setting a high benchmark for energy efficiency in new developments in Long Wharf.

Figure 1. IKEA, which features the largest solar array in the State of Connecticut offers an example of how Long Wharf is already off to a robust start in taking advantage of these opportunities.
Water

Large impervious surfaces and outdated drainage infrastructure have exacerbated flooding in the Long Wharf area. In anticipation of an increased incidence of heavy precipitation, the City recognizes the need to integrate green infrastructure into the public realm. The Long Wharf Plan is driven by a green infrastructure approach that also integrates public amenities in recreation spaces and alternative transportation routes. Additional opportunities for sustainable water practices include:

- Limiting impervious surfaces,
- Creating incentives for individual property owners to install green roofs and water-saving measures such as grey water recycling and rain water harvesting,
- Implementing a district-wide water banking system,
- Creating a closed loop water system to supply all of the area's water through captured precipitation or recycling of water.
Materials Management

Connecticut’s trash incineration rate is the highest in the country, contributing to air pollution in our communities. In its new sustainability framework, the City of New Haven embraces a zero-waste approach to materials management, aiming to view by-products of production and consumption not as waste, but as valuable resources to be conserved. Waste reduction must be approached through a multitude of methods—reducing the production of waste, as well as increasing opportunities for recycling and composting. The implementation of the Long Wharf Plan can include multiple waste reduction methods, such as:

- Exploring creative district-wide waste management solutions, including the potential of a community-level composting program.
- Providing recycling bins in community and green spaces in the Long Wharf Area.
- Exploring creative opportunities to reduce food waste, including expanding food waste reduction programs.
- Developing a program to ensure high recyclable capture rates in Long Wharf area restaurants, workplaces, and residences.
- Encouraging businesses, particularly in retail, to reduce single-use packaging.
- Aiming for the ultimate goal of achieving net-positive waste, with all waste captured and reused on site.
Transportation

A sustainable transportation network supports the mobility needs of current and future generations while doing the least damage to the environment. While many users will need or choose to access Long Wharf by car, it is important to provide accessible opportunities to travel to and within the Long Wharf area by public transportation and by walking and bicycling.

The five districts in the Long Wharf Plan are walkable in scale and connected by the Greenway and a network of Complete Streets and linear parks. Green infrastructure and public gathering spaces will ensure that these multimodal corridors feel vibrant and attractive to pedestrians and cyclists. Protected bike lanes are proposed for roads expected to carry high traffic volumes. Proximity to Union Station allows users to arrive by train, and the Plan proposes a tunnel connection to facilitate access to the Long Wharf Area from the train station. To maximize the accessibility of the Long Wharf Area through multiple modes, further attention should be given during the implementation to:

- Working with CT Transit to ensure that Long Wharf is accessible by bus from all of New Haven’s neighborhoods.
- Creating safe and pleasant routes for pedestrians and cyclists to access Long Wharf from the adjacent neighborhoods of the Hill, City Point, and Wooster Square.

Human Health

Implementation of the Long Wharf Plan will have positive effects on human health for those who work, live, and play in the area. The extensive network of parks and plantings will serve to mitigate the noise and air impacts of the adjacent highway. The Greenway and other green spaces will provide opportunities for active and passive recreation, serving to promote exercise and wellness. These parks and green infrastructure also result in a biophilic environment that will have positive impacts for mental health.

Additional thought should be given during implementation to reducing any health impacts of construction, and to ensuring that Long Wharf’s greenway and open spaces are accessible to all residents of New Haven.
EQUITABLE DEVELOPMENT

Equity is commonly defined as the guarantee of fair treatment, access, opportunity, and advancement for all people, while striving to identify and eliminate barriers that have prevented the full participation of some groups. With the scale of investment and growth opportunities included in the Long Wharf Plan, it is important that equity be a guiding principle of the implementation process, to ensure that these investments help meet the needs of all of New Haven’s residents.

Process

In the creation of any plan, it is vital that community engagement be inclusive, accessible, and authentic. The community outreach that started with the development of this plan must continue into the implementation process. Those communities which will be most impacted by changes at Long Wharf must be actively engaged, with special attention given to address any barriers to participation in the engagement process. There must be active and ongoing accountability.

Access

While implementing the Long Wharf Plan, we must make sure that all of New Haven’s residents have access to the district’s community spaces, parks, and other amenities. Public spaces should be designed in such a way that is welcoming and safe for all visitors, regardless of race, gender, class, sexual orientation, disability status, or immigration status. This can be ensured through active engagement of these communities through multiple stages of the implementation process.
Attention should also be given to ensure that the area is accessible by public transportation from all of New Haven's neighborhoods, and that there are walkable and bicycle connections to adjacent neighborhoods. Additionally, there is an opportunity for public art and cultural event programming to be included in public spaces to include diverse communities.

**Housing**

At community workshops about the Long Wharf Plan, community members expressed that affordable housing is a strong priority for the area. In implementation, it should be ensured that new residential development at Long Wharf adds a mix of housing options for low-, middle-, and high-income residents. Currently, the New Haven Zoning Ordinance does not permit residential uses in most of the Long Wharf area; in the re-zoning process for the district, creative strategies should be utilized to ensure this mix of housing options. Affordable housing can also be promoted through incentives for developers, or by setting a district-wide standard.

**Economic & Educational Opportunities**

The build-out of the Long Wharf Plan will create thousands of jobs in a variety of sectors, including construction, retail, restaurants, hotels, healthcare, technology, and professional services. During implementation, it should be ensured that these jobs are made accessible to New Haven residents, such as through contracts with New Haven Works, a local non-profit that connects qualified New Haven residents to employers for job placement. New Haven Works already has contracts with several employers in the Long Wharf Area, such as Yale-New Haven Hospital, Ikea, and Jordan's Furniture. The Long Wharf Plan also provides a rich ground for innovation and collaboration. Local educational institutions, community organizations, and entrepreneurs can take advantage of the growth of these new districts to enact creative partnerships, businesses, and programs.
Exhibit 2
150 Sargent Drive, New Haven, CT

To: Steve Carberry
From: John W. Block, P.E., L.S.
Copy: Chuck Croce, James Webb
Date: October 25, 2018

Tighe & Bond prepared this Memorandum to review compliance of the existing 150 Sargent Drive building with current City Flood Damage Prevention Ordinance regulations. We note that the City’s regulations often refer back to 44 CFR 60.3 of the Code of Federal Regulations, which governs the National Flood Insurance Program (NFIP).

This letter is based upon our review of the Community Health Care Center construction drawings from October 1970, the site survey prepared by Kratzert Jones & Associates, dated December 3, 2014, Elevation Certificate prepared by Kratzert Jones & Associates dated October 10, 2018 and our site visit on the afternoon of October 18, 2018. Photographs of building conditions during our site visit appear in Appendix A.

Project Location

The site is situated in the center of the Long Wharf District of New Haven. Chapel Street Extension bounds the site on the south west, Sargent Drive on the south east, Brewery Street on the north west, and 200 Sargent Drive on the north east.

The existing medical office building was built in 1970 and has 50,700 square feet of medical office space. The project site is located in zone IL, Light Industry.

Floodplain Context

The 150 Sargent Drive site is located within an area of special flood hazard as identified by the Federal Emergency Management Agency (FEMA) in its Flood Insurance Study (FIS) for New Haven County, Connecticut, dated July 8, 2013, and accompanying Flood Insurance Rate Maps (FIRM), dated July 8, 2013. FIRM Map number 09009C0441J shows the site within flood zone AE with the flood elevation around the building at Elevation 11 NAVD88 and a flood elevation in the rear parking lot of Elevation 12 NAVD88. See attached Firm Map Appendix A.

The DFIRM database indicates that Limit of Moderate Wave Action (LiMWA) is located at the boundary of Zone VE and AE on the waterward side of Interstate 95, but it also encloses the area of Zone AE Elevation 12 northwest of the building. After consulting with the State NFIP Coordinator and FEMA Region 1, this is an unusual situation that is caused by the regeneration of waves due to the specific topography and wind exposure of the area. The flood zone is coastally influenced, but the building itself is not within the area of moderate wave action, and therefore, the more restrictive construction provisions of ASCE-24 in the International Building Code do not apply.

The flood hazard maps prepared by the NFIP show different flood zones to delineate different floodplain characteristics. The flood zones shown on the NFIP maps, and some other designations, are described below.
A Zones: Also called "unnumbered A zones" or "approximate A zones," this designation is used for flood hazard areas where engineering studies have not been performed to develop detailed flood elevations. BFEs are not provided. Additional engineering analyses and site-specific assessments usually are required to determine the BFE.

AE Zones or A1-A30 Zones: Also called "numbered A zones," these designations are used for flood hazard areas where engineering analyses have produced detailed BFEs and boundaries for the base flood (1-percent-annual-chance flood).

V Zones (V, VE, and V1-V30): Also known as coastal high hazard areas or special flood hazard areas (SFHAs) subject to high-velocity wave action, V zones are relatively narrow areas along open coastlines that are subject to high-velocity wave action from storms or seismic sources. V zones extend from offshore to the inland limit of primary frontal dunes, or to an inland limit where the predicted breaking wave height or wave run up depth drops below 3 feet.

The NFIP's broad performance standards for new buildings proposed for flood hazard areas (and substantial improvement of existing flood prone buildings) include the following requirements:

- Buildings shall be designed and adequately anchored to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
- Building materials used below the BFE shall be resistant to flood damage.
- Buildings shall be constructed by methods and practices that minimize flood damage (primarily by elevating to or above the BFE, or by specially designed and certified floodproofing measures).
- Buildings shall be constructed with electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities that are designed and/or located to prevent water from entering or accumulating within the components.

FEMA also provides guidance on what type of damage should be expected from flood events as well as design considerations to reduce or eliminate damage. Several types of damage can occur in a flood event, including structural damage, non-structural damage and utility system damage.

New Haven Floodplain Regulations

The City of New Haven provides additional requirements for work within the floodplain under their Flood Damage Prevention Ordinance. The applicable sections of these regulations are listed below. The City’s Flood Damage Prevention Ordinance was adopted March 4, 1991, and subsequently amended effective September 8, 1998, October 4, 2010, and July 8, 2013:

5.1 General Standards

In all areas of special flood hazard the following provisions shall apply:

5.1.1 New construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
5.1.2 New construction and substantial improvements shall be constructed with materials resistant to flood damage;

5.1.3 New construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;

5.1.4 Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within components during flooding conditions;

5.1.5 New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;

5.1.6 New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the system into flood waters;

5.1.7 On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding; 5.1.8 In any portion of a watercourse which is altered or relocated the flood carrying capacity shall be maintained;

5.1.12 Above-ground storage tanks. Above-ground storage tanks (oil, propane, etc.) which are located outside or inside of the structure must either be elevated above the base flood elevation (BFE) on a concrete pad, or be securely anchored with tie-down straps to prevent flotation or lateral movement, have the top of the fill pipe extended above the BFE, and have a screw fill cap that does not allow for the infiltration of flood water.

5.3 Specific Standards

5.3.1 Special Flood Hazard Areas (A and AE). In all areas of special flood hazard A and AE where base flood elevation data has been provided, the following provisions shall apply in addition to all general standards contained in Section 5.1:

5.3.1.2 Non-Residential Construction

5.3.1.2.1 New construction or substantial improvement to any commercial, industrial, or non-residential structure located in Zone A and AE shall have the lowest floor, including basement, elevated to at least one foot above the base flood elevation; or

5.3.1.2.2 Non-residential structures located in all A zones may be floodproofed at least one foot above the base flood elevation in lieu of being elevated provided that together with all attendant utilities and sanitary facilities the areas of the structure below the required elevation are water tight with walls substantially impermeable to the passage of water, and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effects of buoyancy. A registered professional engineer or architect shall review and/or develop structural design specifications and plans for the construction and shall certify that the design and methods of construction are in accordance with acceptable standards of practice.
for meeting the provisions of this subsection. Such certification shall be provided to the Building Inspector as set forth in 4.3.1.6.

5.3.2 Fully Enclosed Areas Below Base Flood Elevation. New construction or substantial improvements of buildings that include fully-enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the automatic entry and exit of flood waters to equalize hydrostatic flood forces on exterior walls. An enclosed area below the base flood elevation that meets the design criteria specified below is not considered the lowest floor of the structure. The lowest floor must be elevated one foot above the base flood elevation.

5.3.2.1 Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:

5.3.2.1.1 Provide a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;

5.3.2.1.2 The bottom of all openings shall be no higher than one foot above the slab elevation and set at or above the exterior ground elevation so as to permit free drainage away from the structure; and

5.3.2.1.3 Openings shall be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwaters in both directions.

5.3.2.2 Electrical, plumbing, and other utility connections are prohibited below the base flood elevation; and 5.3.2.3 Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator)

Recent Flooding History

Tropical Storm Irene impacted the Connecticut coast on August 28, 2011. The storm produced damaging winds, coastal flooding and a storm surge that inundated portions of the Long Wharf area in New Haven. The peak storm surge in the study area during Hurricane Irene was recorded at Elevation 7.93 (NAVD 88) at the Sargent Drive/Long Wharf area.

Superstorm Sandy impacted the New Haven area on October 29 – 30, 2012. The storm brought a storm surge and coastal flooding that inundated major portions of the coastal New Haven area, including the 150 Sargent Drive site. During Superstorm Sandy, New Haven County was one of the most impacted and distressed counties in Connecticut where 1,165 single family homes were damaged. The City of New Haven experienced flooding from the Harbor with surge ranging up to 7 feet high and as far inland as Church Street.

The surge inundated Long Wharf from the Harbor, passed through the Canal Dock Road underpass beneath Interstate 95, and converged with floodwater in low-lying areas extending to the New Haven Rail Yard. The peak storm surge was recorded at Elevation 9.13 (NAVD 88) at New Haven Harbor.
Floodplain Performance Standards

The City Flood Damage Prevention Ordinance regulations define Substantial Improvement as any combination of repairs, reconstruction, alteration, or improvements to a structure taking place during the life of a structure, in which the cumulative cost equals or exceeds fifty percent (50%) of the market value of the structure before the "start of construction" of the improvement. We assume the improvements to the 150 Sargent Drive building will meet the definition of a Substantial Improvement.

The City Flood Damage Prevention Ordinance regulations are broad performance standards for new non-residential buildings proposed for flood hazard areas (and substantial improvement of existing non-residential floodprone buildings) include the following requirements:

- Buildings shall be designed and adequately anchored to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
- Building materials used below the BFE shall be resistant to flood damage.
- Buildings shall be constructed by methods and practices that minimize flood damage (primarily by elevating to one foot above the BFE, or by specially designed and certified floodproofing measures).
- Buildings shall be constructed with electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities that are designed and/ or located to prevent water from entering or accumulating within the components.

Compliance Assessment

We have organized our assessment into two broad categories: evaluation of exterior penetrations and openings, and utilities, as further detailed below. Our assessment is based upon reviewing the City’s floodplain management requirements.

The primary building has a main floor elevation of 11.86 NAVD88. Two stairways exit at elevation 8.8 NAVD88. There are two elevator pits at elevation 7.86 with incidental equipment and motors above elevation 11.86 NAVD88.

The Base Flood Elevation (BFE) flood elevation around the building is Elevation 11 NAVD88 and a flood elevation in the rear parking lot is Elevation 12 NAVD88. Since this building is non-residential in nature, the City’s floodplain management regulations allow the building to be floodproofed to an elevation of the base flood elevation plus one foot, which would be elevation 12 NAVD88.

Exterior Penetrations and Openings

We walked the perimeter of the existing building to look for penetrations through the building wall for utilities, and for other pathways for floodwater to enter the building, such as through doorways and windows.
Doors and Windows
The 1st floor area is at elevation 11.86 NAVD88, which is 0.86 feet above the base flood elevation of 11.0 but 0.14 feet below the required floodproofing elevation of 12.0. The two stairway exits at elevation 8.8 NAVD88 are 3.2 feet below the required floodproofing elevation of 12.0. Currently, these openings are not in compliance with the City’s floodplain management requirements. Since this building is non-residential in nature, this door may be floodproofed to an elevation of the base flood elevation plus one foot, which would be elevation 12 NAVD88. Examples of floodproofing measures include drop down panels manufactured by Presray. Please refer to Appendix B. All windows were above the base flood elevation and therefore will not be a pathway for floodwaters into the building.

Utility Penetrations
We also looked at utility penetrations from outdoor mechanical equipment or junction boxes into the building. Visual inspections seem to indicate that all penetrations observed were above the base flood elevation. Our visual observations should be verified by survey.

Exterior Utilities
The building is served by communications, electrical and gas services and facilities located on around the building. Within the boundary of the floodplain are the transformer and compactor controls. Based upon our site visit, the transformer and compactor control equipment are located below the base flood elevation, and therefore do not comply with the flood resistant provisions of the City floodplain management regulations or those of the NFIP.

Recommendations
The following tasks shall be performed to floodproof the building to achieve compliance with the City’s floodplain management regulations:

1. Install a drop-down flood door or similar water tight device for the entrance doors.
2. Discuss raising the elevation of the transformer and raising the electric control Panel for the compactor with UI and a licensed electrician.
Appendix A
Firm Map & Site Photos
1 View looking at the South side of the building.

2 View looking at the West side of the building.
View looking at East side of building from Sargent Drive.

View looking at the North side of the building.
5

View of transformer, North side of building.

6

View of compactor electric box, North side of building.
Appendix B
Floodproofing Products
Removable Flood Barrier with Pneumatic Seals

This heavy-duty but lightweight aluminum panel provides fast and reliable flood protection for virtually any size opening. The FB22 has been tested and certified by FM Approvals® and exceed FEMA and NFIP Floodproofing Certification Standards.

The panel slides into permanently installed frames and inflates in minutes to create a highly reliable and extremely durable flood barrier. The FB22 is suitable for both new construction and for retrofitting openings of existing structures. In both situations, the sill can be recessed to prevent a tripping hazard.

A reliable watertight seal is achieved on three sides of an opening with dual inflatable seals for redundant protection. For new construction, the frame for the panel can be aesthetically integrated with the doorjams.

These panels can normally be deployed by one or two people. Larger panels — up to 40 square feet — can be easily deployed with a forklift or similar device. Multiple panels can be linked with removable mullions for opening too wide for a single panel.

APPLICATIONS — THE FB22 AT WORK...
The FB22 is perfect for doorway openings, loading docks or any other openings in municipal, industrial or commercial facilities. The panels can be stored out of site when not needed, and Presray's Pneuma-Seal® technology offers effective and reliable protection.

Shown on the right are the FB22's twin air gages for redundant pneumatic seals, as well as a convenient handle for carrying the panel to the protected opening.
FB22 PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>Custom built to any dimensions up to 40 square feet</td>
</tr>
<tr>
<td>Panel</td>
<td>6061-T6 Aircraft Aluminum</td>
</tr>
<tr>
<td>Frame</td>
<td>Conversion frame is made of A36 Carbon Steel. 304/316 Stainless Steel also available.</td>
</tr>
<tr>
<td>Seals</td>
<td>Presray Pneuma-Seal® technology</td>
</tr>
<tr>
<td>Hardware</td>
<td>Welded aluminum hand grips for easy handling. Manually operated slide bolts lock panel into jamb.</td>
</tr>
<tr>
<td>Finish</td>
<td>Panel is bright aluminum. Frame is blast cleaned per SSPCSP7 and primed with one coat</td>
</tr>
</tbody>
</table>

AVAILABLE OPTIONS

- Multi-Panel Systems with removable mullions between panels for openings too wide to be accommodated by single panel
- Frame available in stainless steel
- Hand pump or portable compressors should facility air source not be available
- Floor or Wall Mounted Storage Racks, Transport Dollies to move panels into position
- A gate version (FB22G) is available in which the panel is stored in the ceiling and is lowered for deployment

CUSTOM BUILT TO MEET YOUR REQUIREMENTS

Every FB22 Flood Barrier is custom built from shop drawings to ensure that it meets the special needs of your facility.

Barriers are designed with a minimum of 2:1 factor of safety based on material yield strength. They can be mounted inside an opening (between doorjams), or mounted on the face of the building with the frame installed in front of the opening.

The FB22 is primed and finished on site, or, if desired, final coat can be applied at our manufacturing facility.

FOR MORE INFORMATION

845.373.6700 • www.presray.com • contact@presray.com
Exhibit 3
Purpose of the Elevation Certificate

The Elevation Certificate is an important administrative tool of the National Flood Insurance Program (NFIP). It is to be used to provide elevation information necessary to ensure compliance with community floodplain management ordinances, to determine the proper insurance premium rate, and to support a request for a Letter of Map Amendment (LOMA) or Letter of Map Revision based on fill (LOMR-F).

The Elevation Certificate is required in order to properly rate Post-FIRM buildings, which are buildings constructed after publication of the Flood Insurance Rate Map (FIRM), located in flood insurance Zones A1–A30, AE, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, and AR/AO. The Elevation Certificate is not required for Pre-FIRM buildings unless the building is being rated under the optional Post-FIRM flood insurance rules.

As part of the agreement for making flood insurance available in a community, the NFIP requires the community to adopt floodplain management regulations that specify minimum requirements for reducing flood losses. One such requirement is for the community to obtain the elevation of the lowest floor (including basement) of all new and substantially improved buildings, and maintain a record of such information. The Elevation Certificate provides a way for a community to document compliance with the community’s floodplain management ordinance.

Use of this certificate does not provide a waiver of the flood insurance purchase requirement. Only a LOMA or LOMR-F from the Federal Emergency Management Agency (FEMA) can amend the FIRM and remove the Federal mandate for a lending institution to require the purchase of flood insurance. However, the lending institution has the option of requiring flood insurance even if a LOMA/LOMR-F has been issued by FEMA. The Elevation Certificate may be used to support a LOMA or LOMR-F request. Lowest floor and lowest adjacent grade elevations certified by a surveyor or engineer will be required if the certificate is used to support a LOMA or LOMR-F request. A LOMA or LOMR-F request must be submitted with either a completed FEMA MT-EZ or MT-1 package, whichever is appropriate.

This certificate is used only to certify building elevations. A separate certificate is required for floodproofing. Under the NFIP, non-residential buildings can be floodproofed up to or above the Base Flood Elevation (BFE). A floodproofed building is a building that has been designed and constructed to be watertight (substantially impermeable to floodwaters) below the BFE. Floodproofing of residential buildings is not permitted under the NFIP unless FEMA has granted the community an exception for residential floodproofed basements. The community must adopt standards for design and construction of floodproofed basements before FEMA will grant a basement exception. For both floodproofed non-residential buildings and residential floodproofed basements in communities that have been granted an exception by FEMA, a floodproofing certificate is required.

ELEVATION CERTIFICATE

Important: Follow the instructions on pages 1–9.

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

SECTION A – PROPERTY INFORMATION

<table>
<thead>
<tr>
<th>A1. Building Owner’s Name</th>
<th>FOR INSURANCE COMPANY USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>YALE-NEW HAVEN HOSPITAL, INC.</td>
<td>Policy Number:</td>
</tr>
</tbody>
</table>

| A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. | Company NAIC Number: |
| 150 SARGENT DRIVE | |

| A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) |
| MBLU: 228/1304/00600; ACCT#: 228 1304 00600; VOLUME: 9679; PAGE: 254; PID: 13212 |

| A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) |
| NON-RESIDENTIAL/COMMERCIAL |

| A5. Latitude/Longitude: Lat. 41°17'33.71"N Long. 72°55'19.20" W |
| Horizontal Datum: NAD 1927 ☑ NAD 1983 |

| A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance. |

| A7. Building Diagram Number | 1A |

| A8. For a building with a crawlspace or enclosure(s): |
| a) Square footage of crawlspace or enclosure(s) N/A sq ft |
| b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade N/A |
| c) Total net area of flood openings in A8.b N/A sq in |
| d) Engineered flood openings? ☑ Yes ☑ No |

| A9. For a building with an attached garage: |
| a) Square footage of attached garage N/A sq ft |
| b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade N/A |
| c) Total net area of flood openings in A9.b N/A sq in |
| d) Engineered flood openings? ☑ Yes ☑ No |

SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

| B1. NFIP Community Name & Community Number |
| NEW HAVEN, CITY OF; 090084 |

| B2. County Name |
| NEW HAVEN |

| B3. State |
| Connecticut |

| B4. Map/Panel Number |
| 441 |

| B5. Suffix |
| J |

| B6. FIRM Index Date |
| 06-08-2013 |

| B7. FIRM Panel Effective/Revised Date |
| 06-08-2013 |

| B8. Flood Zone(s) |
| AE |

| B9. Base Flood Elevation(s) |
| (Zone AO, use Base Flood Depth) |
| 11'(building) & 12'(rear parking lot) |

| B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9: |
| ☑ FIS Profile ☑ FIRM ☑ Community Determined ☑ Other/Source: |

| B11. Indicate elevation datum used for BFE in Item B9: |
| ☑ NGVD 1929 ☑ NAVD 1988 ☑ Other/Source: |

| B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? |
| Yes ☑ No |

Designation Date: | ☑ CBRS ☑ OPA |
ELEVATION CERTIFICATE

SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: ☐ Construction Drawings* ☐ Building Under Construction* ☑ Finished Construction

*A new Elevation Certificate will be required when construction of the building is complete.


Complete Items C2.a–h below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters.

Benchmark Used: CITY BM NGVD29 CONVERT-88 Vertical Datum: NAVD 88

Indicate elevation datum used for the elevations in items a) through h) below.

☐ NGVD 1929 ☑ NAVD 1988 ☐ Other/Source:

Datum used for building elevations must be the same as that used for the BFE.

Check the measurement used.

a) Top of bottom floor (including basement, crawlspace, or enclosure floor) 7.86 feet ☑ meters

b) Top of the next higher floor 11.86 feet ☑ meters

c) Bottom of the lowest horizontal structural member (V Zones only) N/A ☐ feet ☑ meters

d) Attached garage (top of slab) N/A ☐ feet ☑ meters

e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments) 7.86 feet ☑ meters

f) Lowest adjacent (finished) grade next to building (LAG) 7.80 feet ☑ meters

g) Highest adjacent (finished) grade next to building (HAG) 11.35 feet ☑ meters

h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support 8.80 feet ☑ meters

SECTION D – SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

Were latitude and longitude in Section A provided by a licensed land surveyor? ☑ Yes ☐ No

☐ Check here if attachments.

Certifier’s Name
JAMES SAKONCHICK
License Number
CT 11302

Title
PRESIDENT

Company Name
KRATZERT JONES & ASSOCIATES, INC

Address
1755 MERIDEN-WATERBURY ROAD LAFAYETTE SQUARE UNIT 3, PO BOX 337

City
MILLDALE

State
Connecticut

ZIP Code

Signature

Date
10-10-2018

Telephone
(860) 621-3638

Ext.

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments (including type of equipment and location, per C2(e), if applicable)

Source of Latitude & Longitude: Google Earth;

Source of elevations were city redevelopment maps using NGVD 29 with conversion to NAVD 88 using website listed on FIRM map.

Elevations rough checked using Equipment used to Establish Elevation: GPS (Pro Mark-500) dual frequency receiver; Carlson Software; Real Time Kinematic (RTK) averaging with a Network Subscription (Superior) with plus or minus 0.15 ft accuracy.

THE PRIMARY BUILDING HAS A MAIN FLOOR ELEVATION OF 11.86. TWO STAIRWAYS EXIT AT ELEV. 8.8 WITH HEATER AT ELEV. 9.5. THERE ARE TWO ELEVATOR PITS AT ELEVATION 7.86 WITH INCIDENTAL EQUIPMENT. THE PRIMARY ELEVATOR EQUIPMENT AND MOTORS ARE ABOVE ELEVATION 11.86. ALL ELEVATIONS AT NAVD 88.
SECTION E – BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED)
FOR ZONE AO AND ZONE A (WITHOUT BFE)

For Zones AO and A (without BFE), complete Items E1–E5. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, B, and C. For Items E1–E4, use natural grade, if available. Check the measurement used. In Puerto Rico only, enter meters.

E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG).
   a) Top of bottom floor (including basement, crawlspace, or enclosure) is
      _________________ feet meters above or below the HAG.
      _________________ feet meters above or below the LAG.
   b) Top of bottom floor (including basement, crawlspace, or enclosure) is
      _________________ feet meters above or below the HAG.
      _________________ feet meters above or below the LAG.

E2. For Building Diagrams 6–9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 1–2 of Instructions), the next higher floor (elevation C2.b in the diagrams) of the building is

   _________________ feet meters above or below the HAG.

E3. Attached garage (top of slab) is

   _________________ feet meters above or below the HAG.

E4. Top of platform of machinery and/or equipment servicing the building is

   _________________ feet meters above or below the HAG.

E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community’s floodplain management ordinance?
  ☐ Yes  ☐ No  ☐ Unknown.  The local official must certify this information in Section G.

SECTION F – PROPERTY OWNER (OR OWNER’S REPRESENTATIVE) CERTIFICATION

The property owner or owner’s authorized representative who completes Sections A, B, and E for Zone A (without a FEMA-issued or community-issued BFE) or Zone AO must sign here. The statements in Sections A, B, and E are correct to the best of my knowledge.

Property Owner or Owner’s Authorized Representative’s Name

Address

City

State

ZIP Code

Signature

Date

Telephone

Comments

☐ Check here if attachments.
The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8–G10. In Puerto Rico only, enter meters.

G1. ☐ The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, architect, or engineer who is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)

G2. ☐ A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.

G3. ☐ The following information (Items G4–G10) is provided for community floodplain management purposes.

G4. Permit Number

G5. Date Permit Issued

G6. Date Certificate of Compliance/Occupancy Issued

G7. This permit has been issued for: ☐ New Construction ☐ Substantial Improvement

G8. Elevation of as-built lowest floor (including basement) of the building: ________________ ☐ feet ☐ meters Datum __________

G9. BFE or (in Zone AO) depth of flooding at the building site: ________________ ☐ feet ☐ meters Datum __________

G10. Community's design flood elevation: ________________ ☐ feet ☐ meters Datum __________

Local Official's Name

Title

Community Name

Telephone

Signature

Date

Comments (including type of equipment and location, per C2(e), if applicable)

☐ Check here if attachments.
If using the Elevation Certificate to obtain NFIP flood insurance, affix at least 2 building photographs below according to the instructions for Item A6. Identify all photographs with date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8. If submitting more photographs than will fit on this page, use the Continuation Page.
### Building Photographs

**Building Street Address**: 150 SARGENT DRIVE

<table>
<thead>
<tr>
<th>City</th>
<th>State</th>
<th>ZIP Code</th>
<th>Company NAIC Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEW HAVEN</td>
<td>Connecticut</td>
<td>06519</td>
<td></td>
</tr>
</tbody>
</table>

If submitting more photographs than will fit on the preceding page, affix the additional photographs below. Identify all photographs with: date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." When applicable, photographs must show the foundation with representative examples of the flood openings or vents, as indicated in Section A8.

**Photo Three Caption**: REAR VIEW FROM PARKING LOT

**Photo Four Caption**: RIGHT SIDE VIEW
Exhibit 4
Heather,
An email was just sent out a few minutes ago. Text and email chain is below for your reference. I will forward you the actual email. I understand there is some urgency on this and I thought the email would be more timely than a formal letter.

Diane

Dan et al,

After city officials contacted me regarding the location of the Coastal AE zone (Limit of Moderate Wave Action [LiMWA] area) in relation to the structure on the parcel located at 150 Sargent Drive, New Haven, I asked staff at the FEMA Region I office in Boston to review the flood insurance map for this location (FIRM panel 09009C0441J, dated July 8, 2013). The primary LiMWA line end at about the location of I-95 and hugs the shoreline down Long Wharf Drive. Anything seaward of this line would be considered to be in the Coastal AE zone. The structure at 150 Sargent Drive is well outside this primary LiMWA area.

A secondary LiMWA, circular in nature, occurs behind 150 Sargent Drive and encompasses many properties or portions or properties. It is assumed that this is a wave regeneration area, as these “circular LiMWA zones” are seen at other areas along the coast, often in salt marshes with enough space for wave regeneration. The Coastal AE zone does occur in the parking lot behind the structure at 150 Sargent Drive. However, the LiMWA line does not touch or encompass the structure itself. The structure lies outside both Coastal AE zones. The structure would be considered to be in an AE flood zone, with applicable zoning regulations and building code standards applying to any construction or re-construction for this non-residential structure.

Due to the unique mapping situation of this location, it should be noted in city permit files for future reference.

diane

Diane S. Ifkovic
State NFIP Coordinator
Environmental Analyst III
Land & Water Resources Division
Bureau of Water Protection and Land Reuse
From: Dan O'Neill [mailto:doneill@newhavenct.gov]
Sent: Thursday, February 14, 2019 12:19 PM
To: Phil Rees <ReesP@fipconstruction.com>
Cc: Robert Walsh <RWalsh@newhavenct.gov>; Jim Turcio <JTurcio@newhavenct.gov>; Ifkovic, Diane <Diane.Ifkovic@ct.gov>
Subject: RE: 150 Sargent Drive YNHH

Phil, I suggest that you get something in writing from the State the specifically states that the structure at 150 Sargent Dr. is definitely not in the Coastal A zone and thus is not subject to the limitations set forth in Sect. 6.2.1 of ASCE 24.

Dan

Daniel O'Neill
Deputy Building Inspector
City of New Haven, Connecticut
200 Orange St.
New Haven, Connecticut 06510
203-946-8048
doneill@newhavenct.gov

From: Phil Rees <ReesP@fipconstruction.com>
Sent: Thursday, February 14, 2019 10:11 AM
To: Dan O'Neill <doneill@newhavenct.gov>
Subject: 150 Sargent Drive YNHH

Good morning Dan,
Following up my voicemail regarding 150 Sargent Drive wanting to confirm you received correspondence from Diane Ifkovic of DEEP regarding FEMA and the LiMWA. I am I ok to come to your office with the permit fee and keep the process moving forward?
Regards,

Phil

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PHILIP REES  | Senior Project Manager
reesp@fipconstruction.com

FIP Construction, Inc.
1536 New Britain Avenue
Farmington, Connecticut 06032

Office: 860.470.1800  |  Fax: 860.470.1801
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www.ct.gov/deep

Conserving, improving and protecting our natural resources and environment;
Ensuring a clean, affordable, reliable, and sustainable energy supply.

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From: Eastman, Heather [mailto:Heather.Eastman@YNHH.ORG]
Sent: Thursday, February 14, 2019 2:33 PM
To: 'Phil Rees' <ReesP@fipconstruction.com>; JWBlock@tighebond.com; Ifkovic, Diane <Diane.Ifkovic@ct.gov>
Cc: JACanas@tighebond.com; Hal Chait <ChaitH@fipconstruction.com>; William Brothers <wbrothers@e4harchitecture.com>
Subject: RE: 150 Sargent Drive YNHH
Importance: High
Good Day –
I have included Diane on this email thread.

Diane –
The City inspector is requesting a formal letter from your office stating the zoning interpretation for the 150 Sargent Property, per the email thread, below.
Please let us know if you will be able to provide this documentation so that we may pursue the building permit for this project.

Your help is greatly appreciated, thank you.

All the Best,
Heather

Heather Eastman
Director of Ambulatory Facilities, Design and Construction
(203) 688-4368 Office
(203) 215-3214 Mobile
Heather.Eastman@YNHH.org

From: Phil Rees [mailto:ReesP@fipconstruction.com]
Sent: Thursday, February 14, 2019 1:48 PM
To: JWBlock@tighebond.com
Cc: JACanas@tighebond.com; Hal Chait <ChaitH@fipconstruction.com>; William Brothers <wbrothers@e4harchitecture.com>; Eastman, Heather <Heather.Eastman@YNHH.ORG>
Subject: FW: 150 Sargent Drive YNHH

EXTERNAL EMAIL: Do NOT click links or open attachments unless you trust the sender AND know the content is safe.

John/Joe
See enclosed request from the New Haven Building Dept regarding permit for 150 Sargent Radiology. Can you pursue this with Diane from DEEP.

Phil

From: Dan O’Neill <doneill@newhavenct.gov>
Sent: Thursday, February 14, 2019 12:19 PM
To: Phil Rees <ReesP@fipconstruction.com>
Cc: Robert Walsh <RWalsh@newhavenct.gov>; Jim Turcio <JTurcio@newhavenct.gov>; Ifkovic, Diane <Diane.Ifkovic@ct.gov>
Subject: RE: 150 Sargent Drive YNHH

Phil, I suggest that you get something in writing from the State the specifically states that the structure at 150 Sargent Dr. is definitely not in the Coastal A zone and thus is not subject to the limitations set forth in Sect. 6.2.1 of ASCE 24.
Hi Joe,

Sorry I am actually home today with sick child, and yesterday was a state holiday. But I did hear back from FEMA yesterday afternoon. The building is outside the LiMWA. It is a weird one. You can see the "normal" LiMWA hugging I-95. Then there is another LiMWA is the back parking lot of the building. Really odd. Sometimes we see these wave regeneration areas in tidal marshes behind a beach, but this spot is an odd one with all the development.

So again, LiMWA is behind the building in a circular area, but the building itself is out of the zone. I will also let city building officials know.
Diane S. Ifkovic  
State of Connecticut  
Department of Energy & Environmental Protection  
79 Elm Street  
Land & Water Resources Division, 3rd floor  
Hartford, CT 06106  
Phone: (860) 424-3537  
Email: diane.ifkovic@ct.gov

This message originates from the Yale New Haven Health System. The information contained in this message may be privileged and confidential. If you are the intended recipient you must maintain this message in a secure and confidential manner. If you are not the intended recipient, please notify the sender immediately and destroy this message. Thank you.
Exhibit 5
City of New Haven

PERMIT TO BUILD

This certifies that YALE-NEW HAVEN HOSPITAL INC has permission to erect, alter, or demolish a building on: 150 SARGENT DR as follows: INTERIOR RENOVATIONS TO EXISTING OFFICE SPACE 1ST FLOOR. PROVIDE HANDICAP ACCESS. INSTALL STEEL FRAME FOR EQUIPMENT UPGRADES. **MEP’S NOT INCLUDED IN COST** RADIOLOGY AND BLOOD DRAW. SPECIAL INSPECTION FRO STRUCTURAL UPGRADE. CSBC 2018. R. WALSH INSPECTOR: K. AUER 203-946-8041 CERTIFICATE OF APPROVAL

provided that the person accepting this permit shall in every respect conform to the terms of the application therefore on file in this office, and to the provisions of regulations or ordinances relating to the Location, Inspection, Alteration and Construction of Buildings in the City of New Haven.

NOTE: The recipient of this permit accepts this permit on the condition that, as owner or as agent of the owner, he/she agrees to comply with all Building & Zoning Regulations of the City of New Haven & the State Statutes of the State of Connecticut regarding the use, occupancy & type of building or structure to be constructed, added to, demolished, or altered. The recipient also agrees that this building is to be located the proper distance from all street lines, all property yard lines & required distances from all other zones & is located in a zone in which the building & its use is allowed or has been approved.

Current Use Group: B: Office, prof. or service-type transactions Proposed Use Group: B: Office, prof. or service-type transactions Construction Type: IIA: Non-combustible building elements Occupant Load: 0

Contractor Name: FIP CONSTRUCTION INC Phone: (860) 470-1820 Owner Name: YALE-NEW HAVEN HOSPITAL INC Phone: 20 YORK ST NEW HAVEN CT 06510

Address: 1536 New Britain Avenue FARMINGTON CT 06032

All permits approved are subject to inspections performed by a representative of this office. Requests for inspections must be made at least 48 hours in advance, call (203) 946-8045.

3/7/2019

All Other Work and MEPS Require Separate Permits