NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) Report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS Report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study Report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study Report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study Report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Connecticut State Plane Zone (FIPS zone 0600). The **horizontal datum** was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713- 3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on FIRM panels produced for this coastal study revision was derived from United State Geological Survey 2008 High Resolution Orthophotography produced from 1 foot pixel cells from photography dated April 2008. The projection used in the preparation of this map was Connecticut State Plane Feet, FIPS Zone 0600. The horizontal datum used was North American Datum of 1983 (NAD 83).

The AE Zone category has been divided by a **Limit of Moderate Wave Action (LiMWA)**.The LiMWA represents the approximate landward limit of the 1.5 foot breaking wave.The effects of wave hazards between the VE Zone and the LiMWA (or between the shoreline and the LiMWA for areaswhere VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.

The **profile baselines** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the **profile baseline**, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

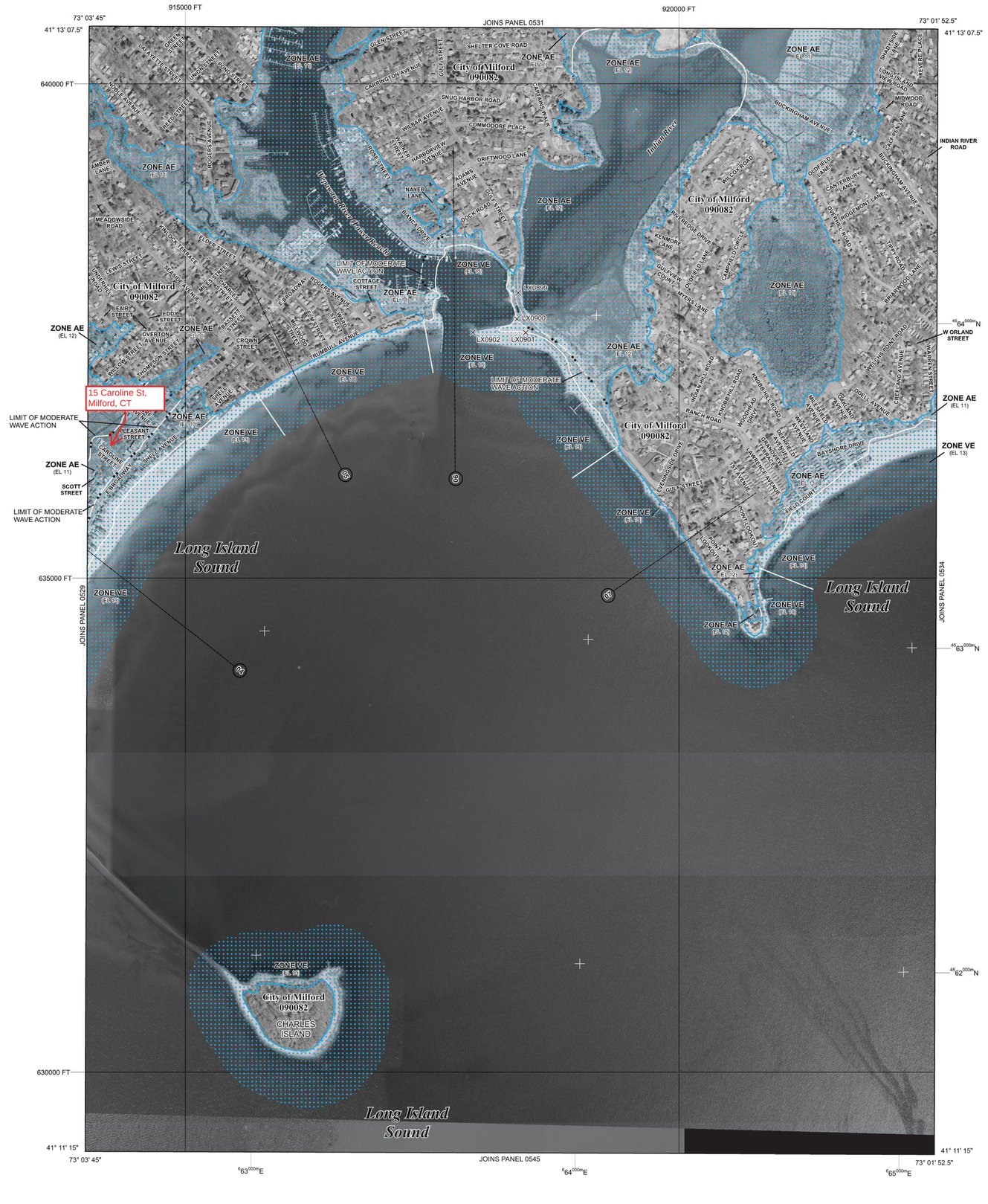
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map,** how to order products, or the National Flood Insurance Program in general, please call the **FEMA Map Information eXchange (FMIX)** at **1-877-FEMA-MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.

Only coastal structures that are certified to provide protection from the 1 percent annual chance flood are shown on this panel. However, all structures taken into consideration for the purpose of coastal flood hazard analysis and mapping are present in the FIRM database in S_Gen_Struct.



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- Limit of Moderate Wave Action
- Limit of Moderate Wave Action coincident with Zone Break
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

- A — A: Cross section line
- 23 — 23: Transect line
- Culvert
- Bridge
- 45° 02' 08", 93° 02' 12" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- 3100000 FT — 5000-foot grid: Connecticut State Plane Feet Zone (FIPS Zone 0600), Lambert Conformal Conic projection
- 4689 000m N — 1000-meter Universal Transverse Mercator grid values, zone 18N
- DX5510 × — Bench mark (see explanation in Notes to Users section of this FIRM panel)

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
December 17, 2010

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
July 8, 2013 - to change Base Flood Elevations and Special Flood Hazard Areas, to change zone designations, to update the effects of wave action, to update corporate limits, to add roads and road names, to incorporate previously issued Letters of Map Revision and to modify Coastal Barrier Resources System units.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET
150 0 150 300 METERS

NFIP

PANEL 0533J

FIRM

FLOOD INSURANCE RATE MAP

NEW HAVEN COUNTY, CONNECTICUT (ALL JURISDICTIONS)

PANEL 533 OF 635
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MILFORD, CITY OF	090082	0533	J

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
09009C0533J
MAP REVISED
JULY 8, 2013

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

U.S. Fish and Wildlife Service

National Wetlands Inventory

#2061- 15 Caroline St, Milford, CT

Mar 6, 2015

Wetlands

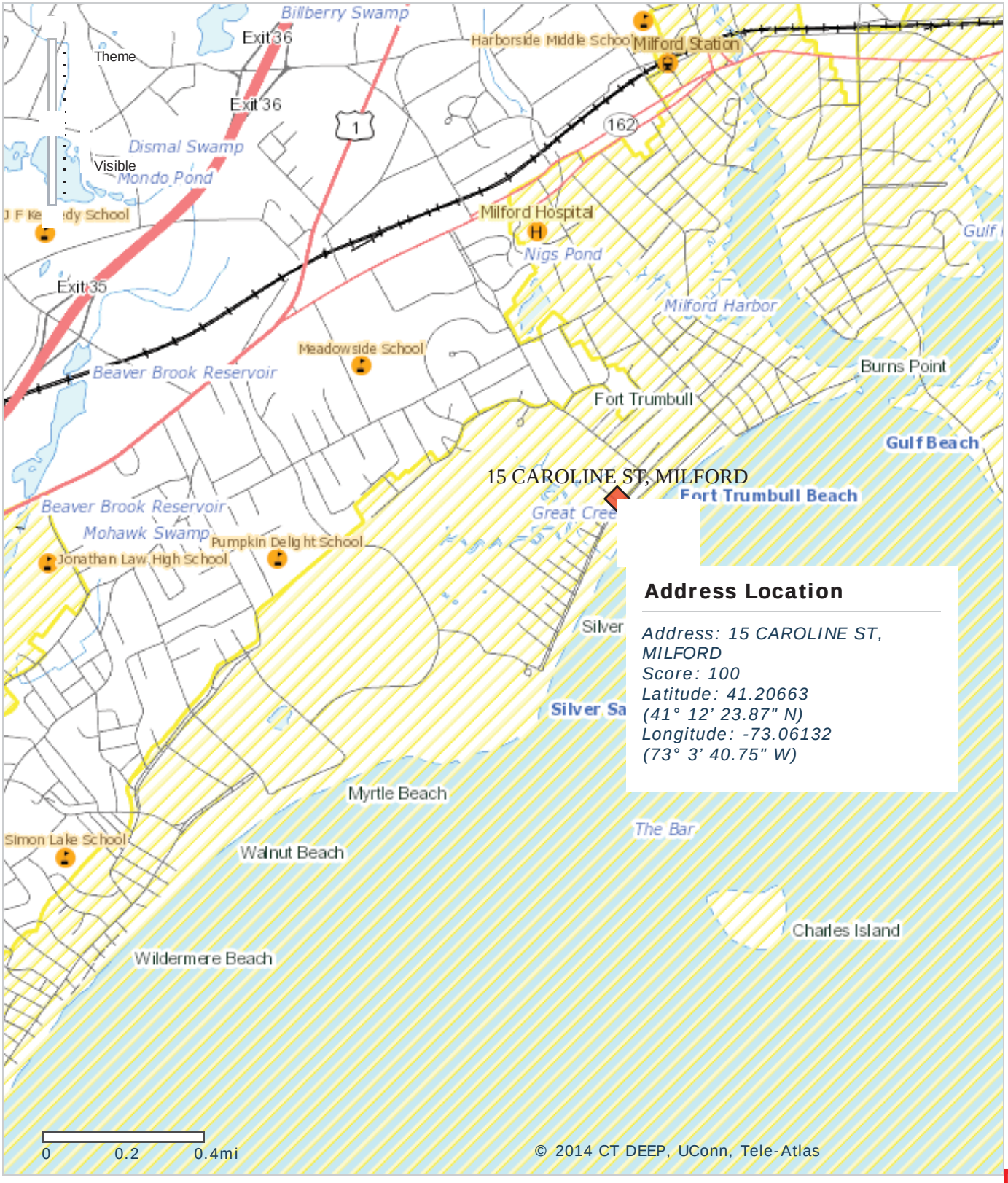
- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

User Remarks:

Connecticut Environm
Simple Map Viewer

Map Theme:
Coastal Boundary

Choose a Photo Base



Address Location

Address: 15 CAROLINE ST, MILFORD
Score: 100
Latitude: 41.20663 (41° 12' 23.87" N)
Longitude: -73.06132 (73° 3' 40.75" W)

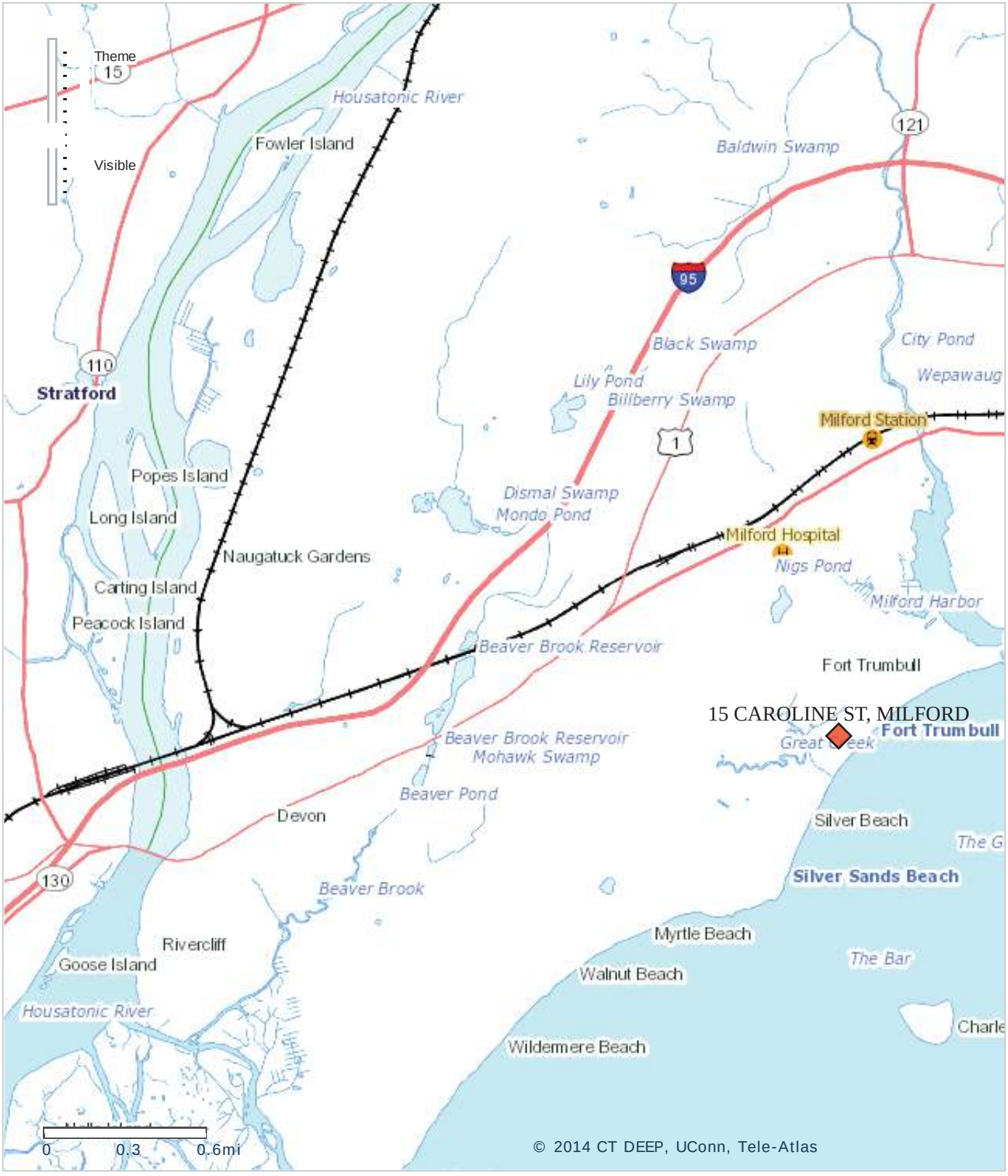
Map Scale: 1:24,000 **Latitude:** 41.20057 **Longitude:** -73.02505

4

Connecticut Environm
Simple Map Viewer

Choose a Photo Base

Map Theme:
Aquifer Protection Areas



Map Scale: 1:35,000 **Latitude:** 41.24445 **Longitude:** -73.09925

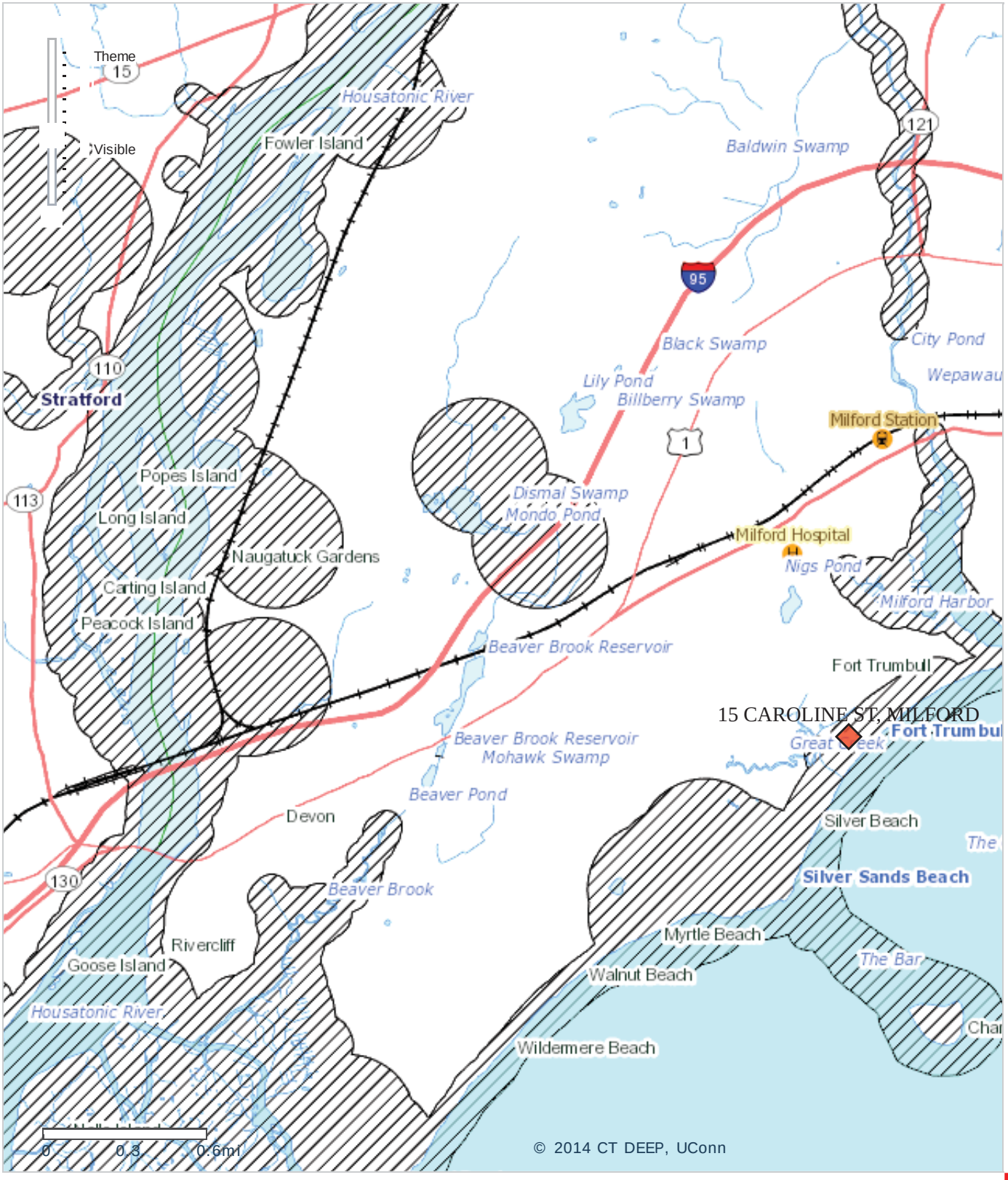
5

Connecticut Environm
Simple Map Viewer

Home | About | Contact | CLEAR | CT DEP | FAQs

Map Theme:
Natural Diversity Data Base Area, December 2014

Choose a Photo Base



Map Scale: 1:35,000 **Latitude:** 41.22588 **Longitude:** -73.02857

6

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 3301
PHONE: (603)223-2541 FAX: (603)223-0104
URL: www.fws.gov/newengland

Consultation Code: 05E1NE00-2015-SLI-0367 April 02, 2015
Event Code: 05E1NE00-2015-E-00587
Project Name: 15 Caroline S

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: 15 Caroline S

Official Species List

Provided by:

New England Ecological Services Field Office
70 COMMERCIAL STREET, SUITE 300
CONCORD, NH 3301
(603) 223-2541
http://www.fws.gov/newengland

Consultation Code: 05E1NE00-2015-SLI-0367
Event Code: 05E1NE00-2015-E-00587

Project Type: Development

Project Name: 15 Caroline S
Project Description: Existing house to be raised additional 26", within the existing footprint. No new areas developed. Access will be through already developed and pave roads. There is no suitable habitat for red knot within the project area.

Please Note: The FWS office may have modified the Project Name and/or Project Description, so it may be different from what was submitted in your previous request. If the Consultation Code matches, the FWS considers this to be the same project. Contact the office in the 'Provided by' section of your previous Official Species list if you have any questions or concerns.

Project Location Map:

Project Coordinates: MULTIPOLYGON (((-73.0617683 41.2067083, -73.0617756 41.2067075, -73.0617831 41.2067097, -73.0621366 41.206895, -73.0621426 41.2068999, -73.0621464 41.2069067, -73.0621472 41.2069144, -73.0621451 41.2069219, -73.0621402 41.206928, -73.0617111 41.2072912, -73.0617042 41.207295, -73.0616964 41.2072958, -73.0616888 41.2072936, -73.0610671 41.2069631, -73.0610611 41.2069582, -73.0610574 41.2069514, -73.0610566 41.2069438, -73.0610587 41.2069363, -73.0610634 41.2069303, -73.0610701 41.2069264, -73.0617454 41.2067, -73.0617532 41.206699, -73.0617607 41.2067011, -73.0617669 41.2067059, -73.0617683 41.2067083), (-73.0617574 41.2067383, -73.061127 41.2069496, -73.0616956 41.2072519, -73.0620917 41.2069166, -73.0617645 41.2067451, -73.0617584 41.2067402, -73.0617574 41.2067383)))

Project Counties: New Haven, CT

United States Department of Interior
Fish and Wildlife Service

Project name: 15 Caroline S

Endangered Species Act Species List

There are a total of 1 threatened or endangered species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Critical habitats listed under the **Has Critical Habitat** column may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

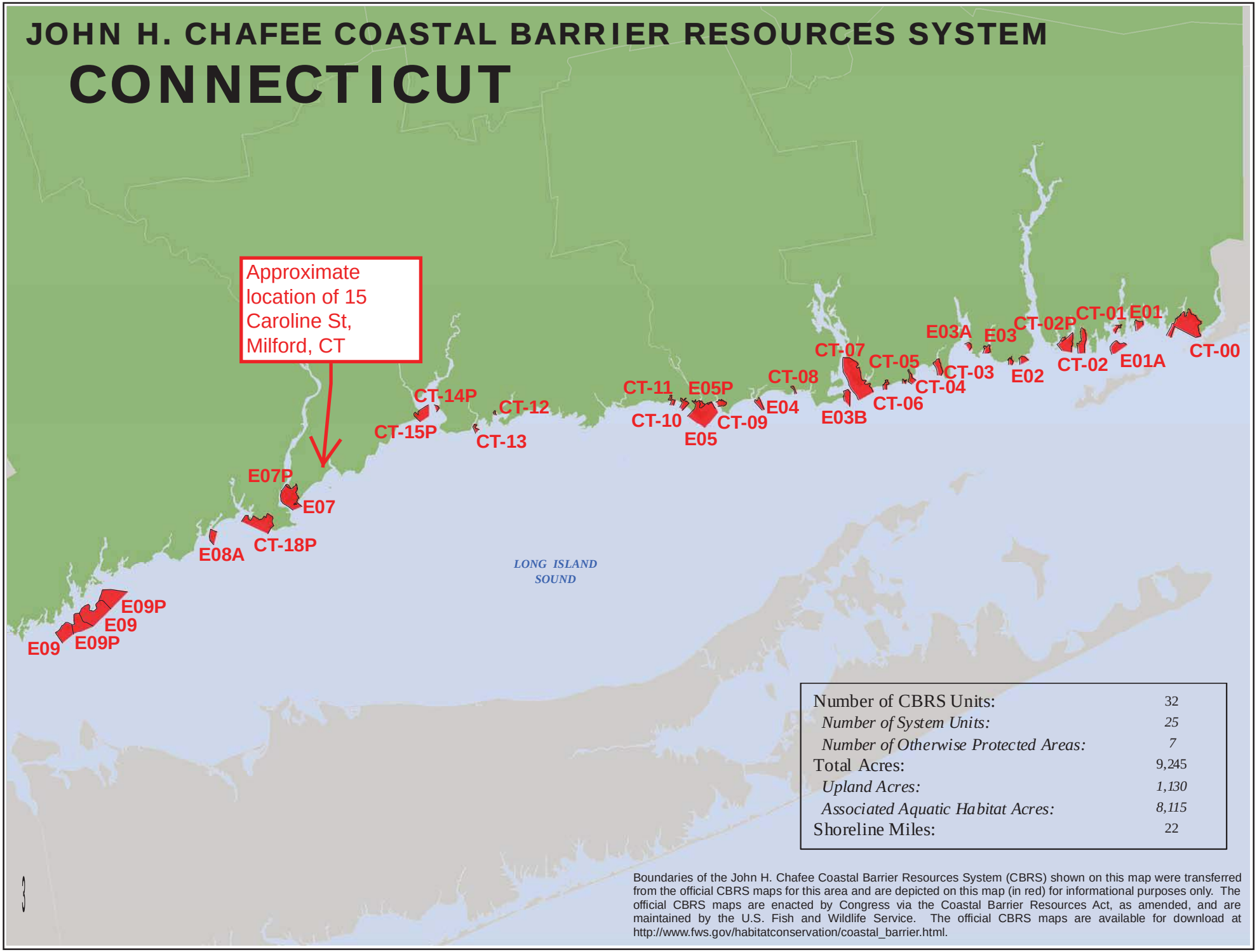
Birds	**Status**	**Has Critical Habitat**	**Condition(s)**
Red Knot *(Calidris canutus rufa)*	Threatened		

Critical habitats that lie within your project area

There are no critical habitats within your project area.

JOHN H. CHAFEE COASTAL BARRIER RESOURCES SYSTEM

CONNECTICUT



Number of CBRS Units:	32
Number of System Units:	*25*
Number of Otherwise Protected Areas:	*7*
Total Acres:	9,245
Upland Acres:	*1,130*
Associated Aquatic Habitat Acres:	*8,115*
Shoreline Miles:	22

Boundaries of the John H. Chafee Coastal Barrier Resources System (CBRS) shown on this map were transferred from the official CBRS maps for this area and are depicted on this map (in red) for informational purposes only. The official CBRS maps are enacted by Congress via the Coastal Barrier Resources Act, as amended, and are maintained by the U.S. Fish and Wildlife Service. The official CBRS maps are available for download at http://www.fws.gov/habitatconservation/coastal_barrier.html.

COASTAL BOUNDARY
MILFORD, CONNECTICUT

LEGEND

Coastal Boundary

EXPLANATION

The coastal boundary map shows the extent of lands and coastal waters as defined by Connecticut General Statute within Connecticut's coastal area. The coastal boundary is a continuous line delineated on the landward side by the interior contour elevation of the one hundred year frequency coastal flood zone, as defined and determined by the National Flood Insurance Act, or a one thousand foot linear setback measured from the mean high water mark in coastal waters, or a one thousand foot linear setback measured from the inland boundary of tidal wetlands, whichever is farthest inland; and shall be delineated on the seaward side by the seaward extent of the jurisdiction of the state.

Any regulated activity conducted within the coastal boundary by a municipal agency (i.e., plans of development, zoning regulations, municipal coastal programs and coastal site plan review (i.e., site plans submitted to zoning commission, subdivision or resubdivision plans submitted to planning commission, application for special permit or exception to the zoning or planning commissions or zoning board of appeals, variance submitted to zoning board of appeals and a referral of a municipal project)) must be conducted in a manner consistent with the requirements of the Connecticut Coastal Management Act (CMA). As the Coastal Boundary is a hybrid of the Coastal Area, all state and federal agency activities must be consistent with the requirements of the CMA. The coastal boundary is a hybrid of the original 1:24,000 version maps prepared by DEP and the revised boundary mapping undertaken by twenty-two coastal towns. This layer therefore does not replace the legal maps and may not be used for legal determinations.

The following twenty-two towns have adopted municipal coastal boundaries: Chester, Clinton, Darien, Deep River, East Haven, Essex, Fairfield, Greenwich, Groton, Guilford, Hamden, Ledyard, Madison, Milford, New Haven, New London, North Haven, Norwalk, Old Lyme, Old Saybrook, Stamford and Waterford. The coastal boundary maps for these towns may be at different scales than the original DEP draft maps and may contain minor adjustments to the boundary.

DATA SOURCES

COASTAL BOUNDARY DATA - The original boundary maps were created in 1979 on stable mylar overlay using the 1:24,000-scale US Geological Survey topographic quadrangle maps (mylar film format). The source for tidal wetland maps were the legal 1:24,000 maps (mylar format) adopted by the Commissioner of DEP and transformed to 1:24,000 mylar-scale maps by the Office of Policy and Management (OPM) using an accurate pantograph. OPM similarly converted FEMA's flood insurance maps (various scales) to a 1:24,000 mylar overlay. The inland extent of coastal waters was plotted on 1:24,000 USGS topographic maps following the procedures and sources described in The Boundary Between Saltwater and Freshwater in Connecticut, December 1978 prepared by the State of Connecticut, Department of Environmental Protection, Coastal Area Management Program.

BASE MAP DATA - Based on data originally from 1:24,000-scale USGS 7.5 minute topographic quadrangle maps published between 1969 and 1992. It includes political boundaries, railroads, airports, hydrography, geographic names and geographic places. Streets and street names are from Tele Atlas® copyrighted data. Base map information is neither current nor complete.

RELATED INFORMATION

This map is intended to be printed at its original dimensions in order to maintain the 1:24,000 scale (1 inch = 2000 feet).

MAPS AND DIGITAL DATA - Go to the CT ECO website for this map and a variety of others. Go to the DEEP website for the digital spatial data shown on this map.

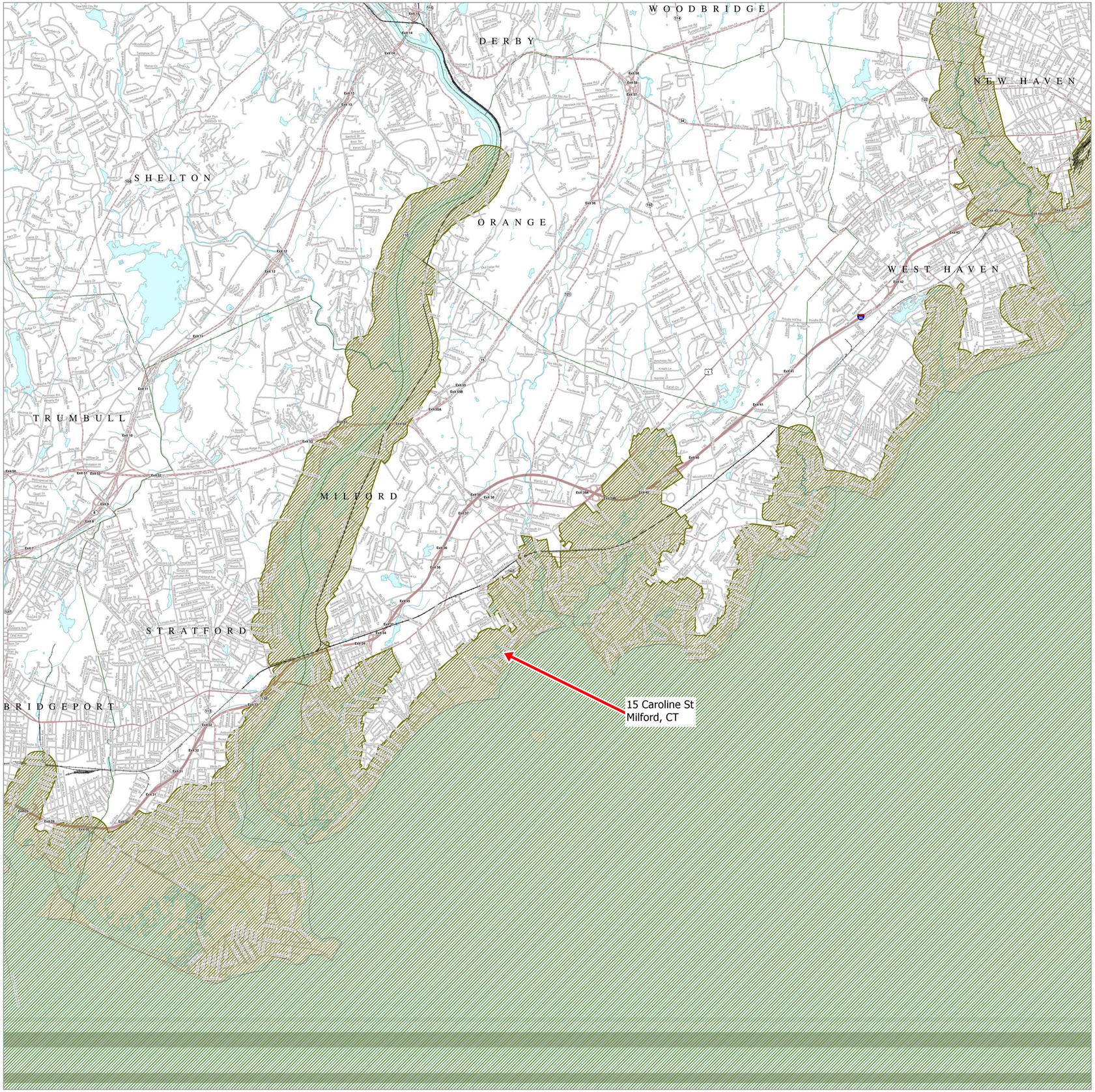
MAP LOCATION

SCALE 1:24,000 (1 inch = 2000 feet) when map is printed at original size

STATE OF CONNECTICUT
DEPARTMENT OF
ENERGY & ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127

Map created by DEEP
January 2013

Map is not colorfast
Protect from light and moisture



Natural Diversity Data Base Areas

MILFORD, CT

December 2014

State and Federal Listed Species & Significant Natural Communities

Town Boundary

NOTE: This map shows general locations of State and Federal Listed Species and Significant Natural Communities. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDB) from a number of data sources . Exact locations of species have been buffered to produce the general locations. Exact locations of species and communities occur somewhere in the shaded areas, not necessarily in the center. A new mapping format is being employed that more accurately models important riparian and aquatic areas and eliminates the need for the upstream/downstream searches required in previous versions.

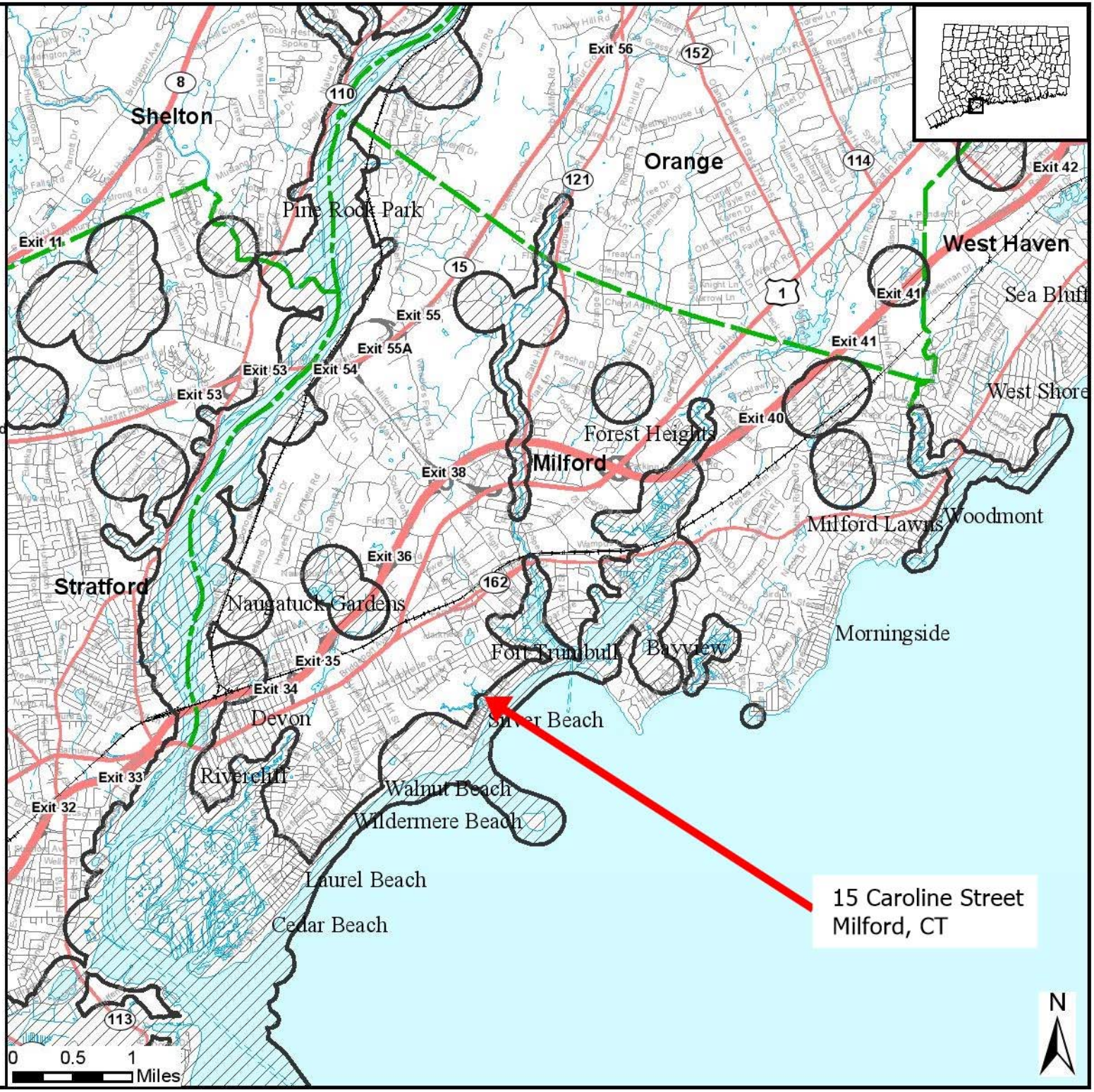
This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas. If the project is within a shaded area there may be a potential conflict with a listed species. For more information, complete a Request for Natural Diversity Data Base State Listed Species Review form (DEP-APP-007), and submit it to the NDDB along with the required maps and information. More detailed instructions are provided with the request form on our website.

www.ct.gov/deep/nddbrequest

Use the CTECO Interactive Map Viewers at www.cteco.uconn.edu to more precisely search for and locate a site and to view aerial imagery with NDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)
79 Elm St., Hartford CT 06106
Phone (860) 424-3011

Connecticut Department of Energy & Environmental Protection
Bureau of Natural Resources
Wildlife Division



FREEMAN
COMPANIES

LAND DEVELOPMENT
ENGINEERING DESIGN
CONSTRUCTION SERVICES

December 1, 2014

Amaya Architects
Attn: Rafael Amaya
284 Racebrook Rd
Orange, CT 06477

RE: Hazardous Building Materials Survey for Proposed Renovations
Location: 15 Caroline Street, Milford, Connecticut
Freeman Companies Project #: 2014-1201

Dear Mr. Amaya,

In accordance with our proposal, Freeman Companies, LLC (Freeman), conducted a comprehensive pre-renovation asbestos, lead and mold growth survey and bulk sampling of suspect materials from the residence located at 15 Caroline Street, Milford, Connecticut. The purpose of the bulk sampling and analysis survey was to sample materials for asbestos, lead-based paint and mold growth prior to any further renovations to the surveyed site structure.

The inspections were conducted November 21, 2014.

We thank you for the opportunity to provide you with our consulting services. If you have any questions regarding this report or its contents, please contact me at 860-908-4499.

Sincerely,

Freeman Companies, LLC

Brett Nicholas
Hazardous Building Materials Manager

Appendix A: ACM Laboratory Results
Appendix B: Licenses and Accreditations
Appendix C: Site Photographs (taken November 21, 2014)

1.0 INTRODUCTION

1.1 Purpose

Freeman Companies, LLC was retained by Amaya Architects to conduct a pre-renovation asbestos, lead and mold growth investigative survey of suspect materials associated with proposed renovation of the site structure located at 15 Caroline Street, Milford, CT. The asbestos survey was conducted in conformance with the Environmental Protection Agency (EPA) National Emissions Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 61.

1.2 Special Terms and Conditions

Freeman Companies LLC was contracted to perform an investigative survey of all accessible interior and exterior materials. These areas included the living spaces, attic, porches, exterior areas and roof. Inaccessible areas were generally identified as above or behind documented finish materials. Estimated quantities and approximate locations of asbestos-containing materials (ACM's) as presented were based on the visual observations at the time of the survey. Every attempt was made to locate all suspect materials. However, additional materials may be discovered above hard ceilings or behind walls on the second floor during demolition or renovation activities.

2.0 ASBESTOS INVESTIGATIVE SURVEY

2.1 General Summary

The following asbestos survey section presents the survey results, methods, and conclusions based on survey findings. Detailed information relative to ACM descriptions and locations are presented in the appendices to this report.

Appendix A Laboratory Analysis Data

Appendix A further illustrates each type of suspect asbestos-containing material identified, their location(s), and whether the materials are classified as ACM or non-ACM based upon the analytical results. All samples were submitted to EMSL Analytical, Inc. EMSL is a CT Licensed Laboratory.

2.2 Methodology

As required by the U.S. Occupational Safety & Health Administration (OSHA), the U.S. Environmental Protection Agency (EPA), and the State of Connecticut Department of Public Health (DPH), sampling was performed by an EPA Asbestos Hazard Emergency Response Act (AHERA)-accredited and DPH-certified asbestos inspector (see Appendix B). Sampling was done in a manner to prevent airborne fiber release and in accordance with the protocols specified in EPA 40 CFR Part 763. Samples were placed in appropriately labeled containers that were sealed and submitted to the laboratory for analysis. The samples were submitted for petrographic analysis using the EPA-endorsed Polarized Light Microscopy with Dispersion Staining (PLM/DS) method. The percentage of asbestos present in each sample was determined by the visual area estimation technique.

Samples were collected using a wet technique to prevent airborne fiber release. Each suspect material was sampled using a decontaminated knife to cut through its entire thickness to ensure that a complete cross section was obtained. The sample was then placed in an appropriately labeled container, which was sealed and submitted to the laboratory for analysis.

Initially, one sample of each homogeneous material was submitted to the laboratory for analysis. If this first sample result was found to contain asbestos, the remaining samples were not submitted. If this first sample result was negative, then the remaining samples were submitted for analysis. In this manner, Freeman Companies' sampling and EMSL's analysis minimized analytical costs without compromising the integrity of the survey findings.

2.4 Results of Sampling and Analysis for Asbestos

Table 1 presents a summary of the results of the sampling. Please refer to Appendix A (ACM Laboratory Results) for laboratory analysis results.

Table 1 – Asbestos Analytical Results

Sample Number	Material Description	Location(s)	Estimated Quantity	Analytical Result
112114 - 1a,b	Sheetrock	1st Floor	N/A	None Detected
112114 – 1c	Sheetrock	2nd Floor	N/A	None Detected
112114 – 2a,b	Joint Compound	1st Floor	N/A	None Detected
112114 – 2c	Joint Compound	2nd Floor	N/A	None Detected
112114 – 3a,b	Sheetrock Joint Tape	1st Floor	N/A	None Detected
112114 – 3c	Sheetrock Joint Tape	2nd Floor	N/A	None Detected
112114 – 4a,b,c	Fibrous Blown-In Insulation	1st Floor (Ceiling)	N/A	None Detected
112114 – 5a,b	Weave Pattern Fiberglass Backing	1st Floor (Ceiling)	N/A	None Detected
112114 – 5c	Weave Pattern Fiberglass Backing	Attic	N/A	None Detected
112114 – 6a,b,c	Interior Window Frame Caulk	1st Floor - Front (Southwest) Window	N/A	None Detected
112114 – 7a,b,c	Ceiling Texture	2nd Floor	N/A	None Detected
112114 – 8a,b,c	Black Felt Paper (under original siding)	Exterior	N/A	None Detected
112114 – 9a,b,c	Foil Paper (under aluminum siding)	Exterior	N/A	None Detected
112114 – 10a,b,c	Black Asphalt Shingle	Roof	N/A	None Detected
112114 – 11a,b,c	Dark Green Asphalt Shingle	Roof	N/A	None Detected
112114 – 12a,b,c	Roofing Flashing Tar	Kitchen (between ceiling rafters)	N/A	None Detected

3.0 LEAD-BASED PAINT SCREENING SURVEY

The Lead-based paint survey was conducted with an XRF direct reading instrument in accordance with the Department of Housing & Urban Development (HUD) testing guidelines. These protocols were developed for residential or day care facilities and were adopted by the Connecticut Childhood Lead Poisoning Prevention Regulations (CLPPR). The Lead-paint reports were prepared using the CLPPR threshold of 1 mg/cm^2. Although most surface paints are reported as below the threshold of 1.0 mg/cm^2, the instrument recorded some results that indicated lead was present in limited locations but below the CLPPR threshold of 1.0 mg/cm^2. Other limited locations indicated the presence of lead above 1.0 mg/cm^2.

The State of Connecticut and the U.S. Department of Housing and Urban Development (HUD) have developed technical guidelines for testing, abatement, cleanup, and disposal of lead-based paint in specific types of buildings such as public and Indian housing, and locations where children below the age of six years old reside. These guidelines define the regulated level of lead paint (Toxic Level of Lead) as paint containing greater than 1.0 milligrams lead per square centimeter (mg/cm^2) of surface as measured on-site by an X-ray fluorescent (XRF) analyzer or more than 0.50 percent lead by dry weight as measured by Atomic Absorption Spectrometry (AAS).

For the purposes of this report, all paints containing detectable amounts of lead are considered lead-based paints. This action is taken because OSHA regulates lead in construction based on airborne exposures and it cannot be ensured that lead paint with concentrations of lead less than 1.0 mg/cm^2 or 0.50% mass will not result in exposures exceeding the OSHA standard.

4.0 LEAD-BASED PAINT SURVEY RESULTS

Table 2 – Lead Paint - XRF Results

Room / Area	Floor	Component	Side	Paint Color	Substrate (Condition)	Results (mg/cm^2)
Exterior	-	Aluminum Siding	-	Red	Metal (Intact)	0.0
Exterior	**-**	**Original Siding**	**-**	**Dark Red**	**Wood (Intact)**	**2.87**
Exterior	-	Front Door (Outer)	-	Black	Wood (Intact)	0.0
Interior	-	Front Door (Inner)	-	White	Wood (Intact)	0.0
Exterior	**-**	**Front Door Frame / Jamb**	**-**	**White**	**Wood (Intact)**	**1.16**
Living Room	1st	Ceiling	-	White	Sheetrock (Intact)	0.0
Living Room	1st	Wall	South	White	Sheetrock (Intact)	0.0
Living Room	1st	Wall	East	White	Sheetrock (Intact)	0.0
Kitchen	1st	Ceiling	-	White	Sheetrock (Intact)	0.0
Kitchen	1st	Wall	North	White	Sheetrock (Intact)	0.0
Kitchen	1st	Wall	East	White	Sheetrock (Intact)	0.0
Kitchen	1st	Patio Door Frame	-	White	Wood (Intact)	0.0

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December 1, 2014

FREEMAN COMPANIES

Room / Area	Floor	Component	Side	Paint Color	Substrate (Condition)	Results (mg/cm^2)
Master Bedroom	1st	Ceiling	-	White	Sheetrock (Intact)	0.0
Master Bedroom	1st	Wall	South	White	Sheetrock (Intact)	0.0
Master Bedroom	1st	Closet Wall	West	White	Sheetrock (Intact)	0.0
Hallway	1st	Ceiling	-	White	Sheetrock (Intact)	0.0
Hallway	1st	Wall	East	Yellow	Sheetrock (Intact)	0.0
Hallway	1st	Wall	West	White	Sheetrock (Intact)	0.0
Hallway	1st	Wall	South	White	Sheetrock (Intact)	0.0
Rear Room / Stairs	1st	Ceiling	-	White	Sheetrock (Intact)	0.0
Rear Room / Stairs	1st	Wall	West	White	Sheetrock (Intact)	0.0
Rear Room / Stairs	1st	Wall	North	White	Sheetrock (Intact)	0.0
Rear Room / Stairs	1st	Stair Tread	-	Red	Wood (Intact)	0.0
Rear Room / Stairs	1st	Stair Riser	-	Yellow	Wood (Intact)	0.0
Stairwell	-	Hand Rail	-	Blue	Wood (Intact)	0.0
Stairwell	-	Wall	South	White	Sheetrock (Intact)	0.0
Stairwell	-	Stringer	-	White	Wood (Intact)	0.0
Stairwell	-	Ceiling	-	White	Sheetrock (Intact)	0.0
Hallway	2nd	Floor	-	Light Green	Wood (Intact)	0.08
Hallway	2nd	Thresholds	-	Turquoise	Wood (Intact)	0.0
Hallway	2nd	Ceiling	-	White	Sheetrock (Intact)	0.0
Hallway	2nd	Wall	North	White	Sheetrock (Intact)	0.0
Hallway	2nd	Wall	East	White	Sheetrock (Intact)	0.0
Hallway	2nd	Wall	South	White	Sheetrock (Intact)	0.0
Hallway	2nd	Wall	West	White	Sheetrock (Intact)	0.0
Hallway	2nd	Door	East	Light Green	Wood (Intact)	0.0
Hallway	2nd	Door Frame	East	Yellow	Wood (Intact)	0.0
Hallway Closet	2nd	Walls	-	Light Blue	Sheetrock (Intact)	0.0
Hallway	2nd	Door	South	Light Green	Wood (Intact)	0.0
Hallway	2nd	Door Frame	South	Yellow	Wood (Intact)	0.0
South Bedroom	2nd	Wall	North	White	Sheetrock (Intact)	0.0

HBMI Inspection Services
15 Caroline Street, Milford, CT
December 1, 2014

FREEMAN COMPANIES

Room / Area	Floor	Component	Side	Paint Color	Substrate (Condition)	Results (mg/cm^2)
South Bedroom	2nd	Wall	East	White	Sheetrock (Intact)	0.0
South Bedroom	2nd	Wall	South	White	Sheetrock (Intact)	0.0
South Bedroom	2nd	Wall	West	White	Sheetrock (Intact)	0.0
South Bedroom	2nd	Ceiling	-	White	Sheetrock (Intact)	0.0
South Bedroom	2nd	Door	North	White	Wood (Intact)	0.0
South Bedroom	2nd	Door Frame	North	White	Wood (Intact)	0.0
South Bedroom	2nd	Closet Door	North	White	Wood (Intact)	0.0
South Bedroom	2nd	Closet Door Frame	North	White	Wood (Intact)	0.0
South Bedroom	2nd	Baseboard	North	White	Wood (Intact)	0.0
South Bedroom	2nd	Baseboard	East	White	Wood (Intact)	0.0
South Bedroom	2nd	Baseboard	South	White	Wood (Intact)	0.0
South Bedroom	2nd	Baseboard	West	White	Wood (Intact)	0.0
South Bedroom	2nd	Skylight Frame	East	White	Wood (Intact)	0.0
South Bedroom	2nd	Attic Access Door	East	White	Wood (Intact)	0.0
South Bedroom	2nd	Attic Access Door Frame	East	White	Wood (Intact)	0.0
South Bedroom	2nd	Window Molding	South	White	Wood (Intact)	0.0
South Bedroom	2nd	Window Sill	South	White	Wood (Intact)	0.0
South Bedroom	2nd	Window Molding	West	White	Wood (Intact)	0.0
South Bedroom	2nd	Window Sill	West	White	Wood (Intact)	0.0
North Bedroom	2nd	Wall	North	White	Sheetrock (Intact)	0.0
North Bedroom	2nd	Wall	East	White	Sheetrock (Intact)	0.0
North Bedroom	2nd	Wall	South	White	Sheetrock (Intact)	0.0
North Bedroom	2nd	Wall	West	White	Sheetrock (Intact)	0.0
North Bedroom	2nd	Ceiling	-	White	Sheetrock (Intact)	0.0
North Bedroom	2nd	Door	South	White	Wood (Intact)	0.0
North Bedroom	2nd	Door Frame	South	Red	Wood (Intact)	0.05
North Bedroom	2nd	Door Frame	South	Blue	Wood (Intact)	0.0
North Bedroom	2nd	Closet Door	South	White	Wood (Intact)	0.0
North Bedroom	2nd	Closet Door Frame	South	Red	Wood (Intact)	0.0
North Bedroom	2nd	Closet Door Frame	South	Yellow	Wood (Intact)	0.0
North Bedroom	2nd	Skylight Frame	East	White	Wood (Intact)	0.0

Room / Area	Floor	Component	Side	Paint Color	Substrate (Condition)	Results (mg/cm^2)
North Bedroom	2nd	Dresser / Attic Door Frame	East	Yellow	Wood (Intact)	0.0
North Bedroom	2nd	Window Molding	West	Blue	Wood (Intact)	0.0
North Bedroom	2nd	Window Molding	West	Red	Wood (Intact)	0.0
North Bedroom	2nd	Window Molding	West	Brown	Wood (Intact)	0.0
North Bedroom	2nd	Floor	-	White	Wood (Intact)	0.19
North Bedroom	2nd	Baseboard	North	Green	Wood (Intact)	0.0
North Bedroom	2nd	Baseboard	North	Brown	Wood (Intact)	0.0
North Bedroom	2nd	Baseboard	West	Brown	Wood (Intact)	0.0
North Bedroom	2nd	Baseboard	South	Brown	Wood (Intact)	0.0
North Bedroom	2nd	Baseboard	East	Brown	Wood (Intact)	0.0

5.0 MOLD GROWTH

Freeman Companies LLC observed no visible water damage or mold growths either visually or by noticeable odors. As there was no detectable indications of mold, no swab samples were collected.

REPORT LIMITATIONS CRITERIA

Information contained in this report is based on site observations, sample results relevant to the scope of work for this survey. Conclusions of this report are based on the survey, study, and/or investigation. This is not to be interpreted as a complete compilation of all existing information pertaining to the site conditions.

It should be noted that site conditions observed during this investigation may change based on any number of influencing factors and/or environmental variables such as fluctuations in indoor and outdoor temperatures, humidity and seasonal changes in sunlight. These factors can influence the spread and concentration of molds as they change. This report is not intended to guarantee that the investigated site is, or is not, free from conditions, which could pose a threat or hazard to human health or safety. Should further research on the site be conducted, any additional data should be submitted to Freeman Companies for review and revisions as necessary.

This report is intended for the sole use of the Client, and may not be used or relied upon by others without the written consent of the Client. The scope of work conducted in performing this service for the Client may not be appropriate to satisfy the needs of other Parties, and the use or re-use of this document or the findings, conclusions, or recommendations is at the risk of said user.

The criteria used to evaluate the survey results includes, but is not limited to, guidelines recommended by the:

- American Conference of Governmental Industrial; Hygienists (ACGIH);
- The American Society for Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE);
- The U.S. Environmental Protection Agency (EPA);
- The American Industrial Hygiene Association (AIHA);
- The American Indoor Air Quality Council (AIAQC);
- Indoor Environmental Standards Organization (IESO);
- The Institute of Inspection Cleaning and Restoration Certification (IICRC);
- The National Air Duct Cleaners Association (NADCA);

Any comments and/or questions in regards this report should be directed to Freeman Companies LLC.

6.0 CONCLUSIONS and RECOMMENDATIONS

In accordance with the OSHA regulations (29 CFR Part 1926.1101 and 1910.1001), all potential contractors bidding on work must first be informed of the results of this survey.

All materials identified as negative for asbestos may be removed at will and disposed of as standard construction debris.

During any renovation or demolition process, safe work procedures must be implemented by properly (lead-paint) trained workers employed by contractors to address worker protection, lead exposure controls, waste stream management, and ambient air quality monitoring. Specifically, contractors will be required to comply with all applicable OSHA regulations including 29 CFR 1926.62, "Lead Exposure in Construction: Interim Final Rule" and 29 CFR 1926.59, "Hazard Communication for the Construction Industry". In addition, pre-disposal lead-waste testing requirements must be complied with.

FREEMAN COMPANIES

The below mentioned Front Door Frame is defined as a friction surface and will require a full replacement rather than abatement of the finish paint.

Lead-Painted Components	Quantity	Per unit abatement cost estimate	Total Abatement Cost
Front Door Frame / Jamb (West Frontage)	18 s.f.	$100	$100
Dark Red Shake Siding (under Aluminum Siding)	1435 s.f.	$8	$11,480
Consulting Fees			$1,000
		TOTAL	$12,580

FREEMAN COMPANIES

Appendix A

ACM Laboratory Results

EMSL Analytical, Inc.
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http://www.EMSL.com wallingfordlab@emsl.com

EMSL Order:	241404671
CustomerID:	FREE42
CustomerPO:	
ProjectID:	

Attn: **Brett Nicholas**
Freeman Companies, LLC
36 John St
Hartford, CT 06106

Phone:	(860) 908-4499
Fax:	
Received:	11/24/14 10:00 AM
Analysis Date:	11/25/2014
Collected:	11/21/2014

Project: **15 CAROLINE ST, MILFORD, CT**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos
Sample	Description	Appearance	%	Fibrous	%	Non-Fibrous	% Type
112114-1A *241404671-0001*	1st floor - sheetrock	White Fibrous Homogeneous	7%	Cellulose	30% 63%	Gypsum Non-fibrous (other)	**None Detected**
112114-1B *241404671-0002*	1st floor - sheetrock	White Non-Fibrous Homogeneous	2%	Cellulose	25% 73%	Gypsum Non-fibrous (other)	**None Detected**
112114-1C *241404671-0003*	2nd floor - sheetrock	White Fibrous Homogeneous	<1%	Cellulose	35% 65%	Gypsum Non-fibrous (other)	**None Detected**
112114-2A *241404671-0004*	1st floor - joint compound	White Non-Fibrous Homogeneous			30% 70%	Ca Carbonate Non-fibrous (other)	**None Detected**
112114-2B *241404671-0005*	1st floor - joint compound	White Non-Fibrous Homogeneous			25% 75%	Ca Carbonate Non-fibrous (other)	**None Detected**
112114-2C *241404671-0006*	2nd floor - joint compound	White Non-Fibrous Homogeneous			45% 55%	Ca Carbonate Non-fibrous (other)	**None Detected**
112114-3A *241404671-0007*	1st floor - sheetrock joint tape	White Fibrous Homogeneous	99%	Cellulose	1%	Non-fibrous (other)	**None Detected**
112114-3B *241404671-0008*	1st floor - sheetrock joint tape	White Fibrous Homogeneous	99%	Cellulose	1%	Non-fibrous (other)	**None Detected**

Analyst(s)

Erin Guzowski (14) *Lauren Brennan (10)*
Kristin Lopez (12)

Gloria V. Oriol, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from 12/01/2014 09:10:18

EMSL Analytical, Inc.
29 North Plains Highway, Unit # 4, Wallingford, CT 06492
Phone/Fax: 203-284-5948 / (203) 284-5978
http://www.EMSL.com wallingfordlab@emsl.com

EMSL Order:	241404671
CustomerID:	FREE42
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ProjectID:	

Attn: **Brett Nicholas**
Freeman Companies, LLC
36 John St
Hartford, CT 06106

Phone:	(860) 908-4499
Fax:	
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Collected:	11/21/2014

Project: **15 CAROLINE ST, MILFORD, CT**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	Description	Appearance	% Fibrous		% Non-Fibrous	% Type
112114-3C *241404671-0009*	2nd floor - sheetrock joint tape	White Fibrous Homogeneous	99%	Cellulose	1% Non-fibrous (other)	**None Detected**
112114-4A *241404671-0010*	1st floor ceiling - fibrous blown-in insulation	White Fibrous Homogeneous	97% <1% <1%	Min. Wool Cellulose Synthetic	3% Non-fibrous (other)	**None Detected**
112114-4B *241404671-0011*	1st floor ceiling - fibrous blown-in insulation	Brown Fibrous Homogeneous	<1% 97% <1%	Cellulose Min. Wool Synthetic	3% Non-fibrous (other)	**None Detected**
112114-4C *241404671-0012*	1st floor ceiling - fibrous blown-in insulation	Gray Fibrous Homogeneous	98%	Min. Wool	2% Non-fibrous (other)	**None Detected**
112114-5A *241404671-0013*	1st floor ceiling - weave pattern fiberglass backing	Brown/Black Fibrous Homogeneous	90%	Cellulose	10% Non-fibrous (other)	**None Detected**
112114-5B *241404671-0014*	1st floor ceiling - weave pattern fiberglass backing	Brown/Black Fibrous Homogeneous	90%	Cellulose	10% Non-fibrous (other)	**None Detected**
112114-5C *241404671-0015*	Attic - weave pattern fiberglass backing	Brown/Black Fibrous Homogeneous	85% 2%	Cellulose Glass	13% Non-fibrous (other)	**None Detected**
112114-6A *241404671-0016*	Front (S.W.) window - interior window frame caulk	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**

Analyst(s)

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Kristin Lopez (12)

Gloria V. Oriol, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from 12/01/2014 09:10:18

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Attn: **Brett Nicholas**
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36 John St
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Phone:	(860) 908-4499
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Project: **15 CAROLINE ST, MILFORD, CT**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos			Asbestos
Sample	Description	Appearance	% Fibrous		% Non-Fibrous	% Type
112114-6B *241404671-0017*	Front (S.W.) window - interior window frame caulk	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
112114-6C *241404671-0018*	Front (S.W.) window - interior window frame caulk	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
112114-7A *241404671-0019*	2nd floor - ceiling texture	Tan/White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
112114-7B *241404671-0020*	2nd floor - ceiling texture	Tan/White Non-Fibrous Homogeneous			100% Non-fibrous (other)	**None Detected**
112114-7C *241404671-0021*	2nd floor - ceiling texture	White Non-Fibrous Homogeneous	<1%	Cellulose	100% Non-fibrous (other)	**None Detected**
112114-8A *241404671-0022*	Exterior - black felt paper under original siding	Black Fibrous Homogeneous	30% <1%	Cellulose Min. Wool	70% Non-fibrous (other)	**None Detected**
112114-8B *241404671-0023*	Exterior - black felt paper under original siding	Black Fibrous Homogeneous	35%	Cellulose	65% Non-fibrous (other)	**None Detected**
112114-8C *241404671-0024*	Exterior - black felt paper under original siding	Black Fibrous Homogeneous	60%	Cellulose	40% Non-fibrous (other)	**None Detected**

Analyst(s)

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Kristin Lopez (12)

Gloria V. Oriol, Laboratory Manager
or other approved signatory

Initial report from 12/01/2014 09:10:18

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Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos				Asbestos
Sample	Description	Appearance	%	Fibrous	%	Non-Fibrous	% Type
112114-9A *241404671-0025*	Exterior - foil paper under aluminum siding	Tan Fibrous Homogeneous	65%	Cellulose	35%	Non-fibrous (other)	**None Detected**
112114-9B *241404671-0026*	Exterior - foil paper under aluminum siding	Tan Fibrous Homogeneous	70%	Cellulose	30%	Non-fibrous (other)	**None Detected**
112114-9C *241404671-0027*	Exterior - foil paper under aluminum siding	Brown/Silver Fibrous Homogeneous	60%	Cellulose	40%	Non-fibrous (other)	**None Detected**
112114-10A *241404671-0028*	Roof - black asphalt shingle	Black Fibrous Homogeneous	<1% 3%	Synthetic Glass	97%	Non-fibrous (other)	**None Detected**
112114-10B *241404671-0029*	Roof - black asphalt shingle	Black Fibrous Homogeneous	<1% 4%	Synthetic Glass	96%	Non-fibrous (other)	**None Detected**
112114-10C *241404671-0030*	Roof - black asphalt shingle	Black Non-Fibrous Homogeneous	12%	Glass	88%	Non-fibrous (other)	**None Detected**
112114-11A *241404671-0031*	Roof - dark green asphalt shingle	Black Fibrous Homogeneous	7%	Glass	93%	Non-fibrous (other)	**None Detected**
112114-11B *241404671-0032*	Roof - dark green asphalt shingle	Black Fibrous Homogeneous	5%	Glass	95%	Non-fibrous (other)	**None Detected**

Analyst(s)

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Gloria V. Oriol, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

Samples analyzed by EMSL Analytical, Inc. Wallingford, CT NVLAP Lab Code 200700-0,

Initial report from 12/01/2014 09:10:18

EMSL Analytical, Inc.
29 North Plains Highway, Unit # 4, Wallingford, CT 06492
Phone/Fax: 203-284-5948 / (203) 284-5978
http://www.EMSL.com wallingfordlab@emsl.com

EMSL Order:	241404671
CustomerID:	FREE42
CustomerPO:	
ProjectID:	

Attn: **Brett Nicholas**
Freeman Companies, LLC
36 John St
Hartford, CT 06106

Phone:	(860) 908-4499
Fax:	
Received:	11/24/14 10:00 AM
Analysis Date:	11/25/2014
Collected:	11/21/2014

Project: **15 CAROLINE ST, MILFORD, CT**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
112114-11C *241404671-0033*	Roof - dark green asphalt shingle	Black Non-Fibrous Homogeneous	13% Glass	87% Non-fibrous (other)	**None Detected**
112114-12A *241404671-0034*	Kitchen (between ceiling joists) - roofing flashing tar	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
112114-12B *241404671-0035*	Kitchen (between ceiling joists) - roofing flashing tar	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	**None Detected**
112114-12C *241404671-0036*	Kitchen (between ceiling joists) - roofing flashing tar	Black Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	**None Detected**

Analyst(s)

Erin Guzowski (14) *Lauren Brennan (10)*
Kristin Lopez (12)

Gloria V. Oriol, Laboratory Manager
or other approved signatory

Initial report from 12/01/2014 09:10:18

THIS IS THE LAST PAGE OF THE REPORT.

OrderID: 241404671

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*: 241404671

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Company : FREEMAN COMPANIES, LLC (FREE42)	**EMSL-Bill to:** [X] Same [ ] Different If Bill to is Different note instructions in Comments**
Street: 36 JOHN STREET	*Third Party Billing requires written authorization from third party*
City: HARTFORD **State/Province:** CT	**Zip/Postal Code:** 06106 **Country:** USA
Report To (Name): BRETT NICHOLAS	**Telephone #:** 860-908-4499
Email Address: BNICHOLAS@FREEMANCOS.COM	**Fax #:** **Purchase Order:**
Project Name/Number: 15 Caroline St, Milford, CT	**Please Provide Results:** [ ] Fax [X] Email
U.S. State Samples Taken: CT	**CT Samples:** [ ] Commercial/Taxable [X] Residential/Tax Exempt

Turnaround Time (TAT) Options* – Please Check

[ ] 3 Hour [ ] 6 Hour [ ] 24 Hour [ ] 48 Hour [ ] 72 Hour [ ] 96 Hour [X] 1 Week [ ] 2 Week

*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

PLM - Bulk (reporting limit)	TEM – Bulk
[X] PLM EPA 600/R-93/116 (<1%)	[ ] TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
[ ] PLM EPA NOB (<1%)	[ ] NY ELAP Method 198.4 (TEM)
Point Count [ ] 400 (<0.25%) [ ] 1000 (<0.1%)	[ ] Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric [ ] 400 (<0.25%) [ ] 1000 (<0.1%)	[ ] TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
[ ] NIOSH 9002 (<1%)	[ ] TEM Qualitative via Filtration Prep Technique
[ ] NY ELAP Method 198.1 (friable in NY)	[ ] TEM Qualitative via Drop Mount Prep Technique
[ ] NY ELAP Method 198.6 NOB (non-friable-NY)	**Other**
[ ] OSHA ID-191 Modified	[ ]
[ ] Standard Addition Method	

[X] Check For Positive Stop – Clearly Identify Homogenous Group **Date Sampled:** 11-21-14

Samplers Name: Brett Nicholas **Samplers Signature:**

Sample #	HA #	Sample Location	Material Description
112114-1A		1st Floor	Sheetrock
-1B		↓	↓
-1C		2nd Floor	↓
-2A		1st Floor	Joint Compound
-2B		↓	↓
-2C		2nd Floor	↓
-3A		1st Floor	Sheetrock Joint Tape
-3B		↓	↓
-3C		2nd Floor	↓

Client Sample # (s): 1A – 12C **Total # of Samples:** 36

Relinquished (Client): **Date:** 11-21-14 **Time:** Fed Ex

Received (Lab): **Date:** **Time:**

Comments/Special Instructions:
DO NOT separate layers, analyze entire sample

RECEIVED
NOV 24 2014
By EM 10:00 am

OrderID: 241404671

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(Lab Use Only)*: 24140467

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
112114-4A		1st Floor Ceiling	Fibrous Blown-in Insulation
4B		↓	↓
4C		↓	↓
5A		1st Floor Ceiling	Weave Pattern Fiberglass Backing
5B		↓	↓
5C		Attic	↓
6A		Front (S.W.) window	Interior Window Frame Caulk
6B		↓	↓
6C		↓	↓
7A		2nd Floor	Ceiling Texture
7B		↓	↓
7C		↓	↓
8A		Exterior	Black Felt Paper under original siding
8B		↓	↓
8C		↓	↓
9A		↓	Foil Paper under aluminum siding
9B		↓	↓
9C		↓	↓
10A		Roof	Black Asphalt Shingle
10B		↓	↓
10C		↓	↓
11A		↓	Dark Green Asphalt Shingle
11B		↓	↓
11C		↓	↓

***Comments/Special Instructions:**

RECEIVED
NOV 24 2014
By EJ 10:00am
fed-ex

OrderID: 241404671

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*Lab Use Only*):

241404671

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 786-5974

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
112114-12A		Kitchen (Between Ceiling Joists)	Roofing Flashing Tar
-12B		"	"
-12C		"	"

*Comments/Special Instructions:

RECEIVED
NOV 24 2014
By 10:00am

FREEMAN COMPANIES

Appendix B

Licenses and Accreditations

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT

THE INDIVIDUAL NAMED BELOW IS CERTIFIED
BY THIS DEPARTMENT AS A
ASBESTOS CONSULTANT-PROJECT DESIGNER

BRETT M NICHOLAS

CERTIFICATE NO.
000308

CURRENT THROUGH
07/31/15

VALIDATION NO.
03-928543

SIGNATURE

COMMISSIONER

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT

THE INDIVIDUAL NAMED BELOW IS CERTIFIED
BY THIS DEPARTMENT AS A
ASBESTOS CONSULTANT-INSP/MGMT PLANNER

BRETT M NICHOLAS

CERTIFICATE NO.
000313

CURRENT THROUGH
07/31/15

VALIDATION NO.
03-103346

SIGNATURE

COMMISSIONER

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT

THE INDIVIDUAL NAMED BELOW IS CERTIFIED
BY THIS DEPARTMENT AS A
ASBESTOS CONSULTANT-INSPECTOR

BRETT M. NICHOLAS

CERTIFICATE NO.
000685

CURRENT THROUGH
07/31/15

VALIDATION NO.
03-847351

SIGNATURE

COMMISSIONER

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT

THE INDIVIDUAL NAMED BELOW IS CERTIFIED
BY THIS DEPARTMENT AS A
ASBESTOS CONSULTANT-PROJECT MONITOR

BRETT M. NICHOLAS

CERTIFICATE NO.
000582

CURRENT THROUGH
07/31/15

VALIDATION NO.
03-847352

SIGNATURE

COMMISSIONER

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT

THE INDIVIDUAL NAMED BELOW IS LICENSED
BY THIS DEPARTMENT AS A

LEAD CONSULTANT CONTRACTOR

FREEMAN COMPANIES LLC

LICENSE NO.
002097

CURRENT THROUGH
07/31/15

VALIDATION NO.
03-929200

SIGNATURE

COMMISSIONER

VOID

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT

THE INDIVIDUAL NAMED BELOW IS CERTIFIED
BY THIS DEPARTMENT AS A

LEAD INSPECTOR

BRETT M NICHOLAS

CERTIFICATE NO.
002212

CURRENT THROUGH
07/31/15

VALIDATION NO.
03-847350

SIGNATURE

COMMISSIONER

VOID

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT

THE INDIVIDUAL NAMED BELOW IS CERTIFIED
BY THIS DEPARTMENT AS A

Lead Inspector Risk Assessor

BRETT M NICHOLAS

CERTIFICATION NO.
2255

CURRENT THROUGH
07/31/2015

VALIDATION NO.
DUPLICATE

SIGNATURE

COMMISSIONER

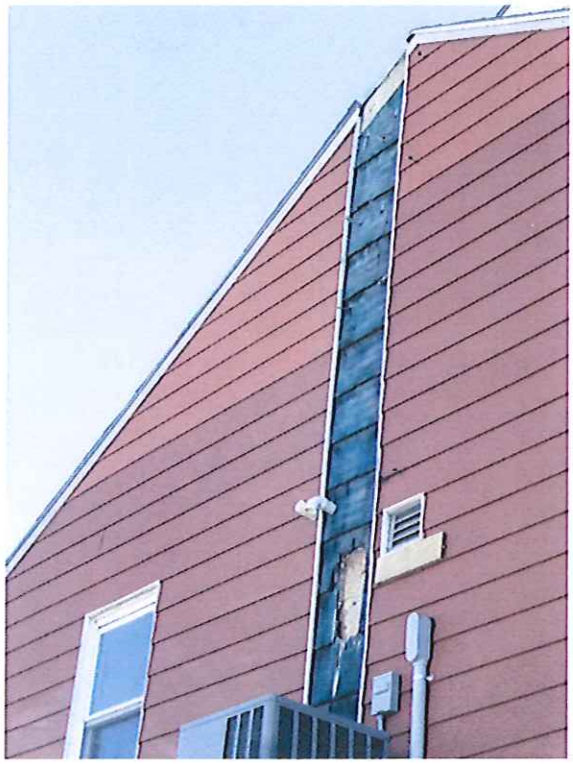
FREEMAN COMPANIES

Appendix C

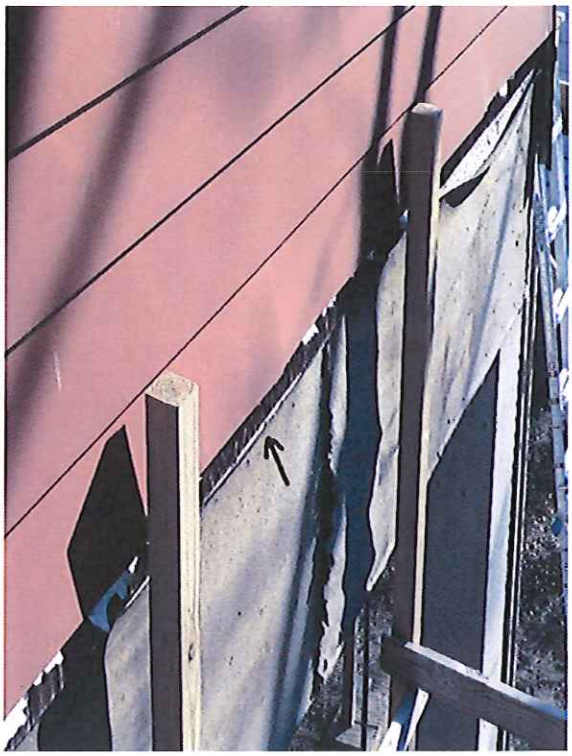
Site Photographs (taken November 21, 2014)

Front Door

Front Door Frame



Exposed Original Siding



Exposed Original Siding

Appendix B

DECD/SHPO/DOH Professional Certification Form

For all General Permit Applications submitted as part of the Flood Management Certification for Disaster Recovery Activities, the following certification must be signed and sealed by a professional engineer licensed to practice in Connecticut.

Property:

Application Number:

"I certify that in my professional judgment , the above referenced project has been designed consistent with the Flood Management Certification for Disaster Recovery Activities as approved by DEEP and that the information is true, accurate and complete to the best of my knowledge and belief.

I understand that a false statement made in the submitted information may, pursuant to Section 22a-6 of the General Statutes, be punishable as a criminal offense under Section 53a-157b of the General Statutes, and may also be punishable under Section 22a-438 of the General Statutes."

Signature of Applicant

Date: 4/6/2015

Hermia Delaire
Name of Applicant (print or type)

CDBG-DR Program Manager
Title

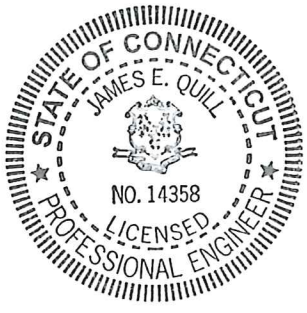
Signature of Professional Engineer

Date: March 30, 2015

James E. Quill
Name of Professional Engineer (print or type)

14358
P.E. Number

Affix P.E. Stamp Here



State of Connecticut

CITY OF MILFORD

70 West River Street Milford, CT 06460 Ph: 203 783-3234 fax: 203 783-3690

Permit No. **Z-15-97**

Zoning Permit

VALUE: **$80000.00**

FEE PAID: **$60.00**

DATE ISSUED: **3/26/2015**

PERMIT FOR: **Site Improvements**

This certifies that **GRAY ZAZU**

has permission to conduct activities at: **15 CAROLINE ST**

as follows: **Elevate existing house by 26 inches to FF of 17.4'. No changes to interior. New landing and stairs for access.**

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 zoning regulations for the City of Milford.

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 regulations of the City of Milford, and any condition set forth by the Planning & Zoning Board, Zoning Board of Appeals, or other body having autohority.

Restrictions:

Zoning Enforcement Official — Date: **3/26/2015**

This Card Must Be Displayed in a Conspicuous Place on the Premises and Not Torn Down or Removed

State of Connecticut

City of Milford

70 West River Street Milford, CT 06460 Ph: 203 783-3234 fax: 203 783-3690

Application for Building Permit

RECEIPT

Application No: **TB-15-212**

Date Recieved: **3/26/2015**

Job Location: **15 CAROLINE ST**

Permit For: **Additions/Alterations - Residential**

Contractor's Name:

Phone:

Contractor's Address:

City:

State:

Zip Code:

State Lic. No:

(Home)Owner's Name: **GRAY ZAZU**

Phone:

(Home)Owner's Address: **15 CAROLINE ST**

Work Description: **Elevate existing house by 26 inches to FF of 17.4'. No changes to interior. New landing and stairs for access.**

Total Value Of Work To Be Performed: **$80,000.00**

Structure Size:	**0.00**	**0.00**	**0.00**
	Width	Depth	Area

I hereby swear and attest that I will require proof of workers' compensation insurance for every contractor, subcontractor, or other worker before he/she engages in work on the above property in accordance with the Workers' Compensation Act (Chapter 568).

I understand that pursuant to 31-275 C.G.S., officers of a corporation and partners in a partnership may elect to be excluded from coverage by filing a waiver with the appropriate District Office; and that a sole proprietor of a business is not required to have coverage unless he files his intent to accept coverage.

I hereby certify that I am the owner of the property which is the subject of this application or the authorized agent of the property owner and have been authorized to make this application. I understand that when a permit is issued, it is a permit to proceed and grants no right to violate the Connecticut State Building Code or any other code, ordinance or statute, regardless of what might be shown or omitted on the submitted plans and specifications. All information contained within is true and accurate to the best of my knowledge and belief.

All permits approved are subject to inspections performed by a representative of this office. Requests for inspections must be made at least 24 hours in advance.

Signed:	**Amaya Architects**	**3/26/2015**	**(203) 795-5656**
	Applicant	Date	Telephone No.

Estimated Construction Costs / Permit Fees

		Payment Date	Amount Paid	Check No
Total Project Cost :	**$80,000.00**			
Total Permit Fee:	**$963.00**			
Total Permit Fee Paid:	**$0.00**			

THIS IS NOT A PERMIT