



**Routes 7/15 Interchange
Norwalk, Connecticut
State Project No. 102-358**

**Environmental Assessment,
Draft Section 4(F) Evaluation and
Environmental Impact Evaluation**

**Appendix G
Wetland Assessment**

August 2022

Prepared for:
Connecticut Department of
Transportation Federal Highway
Administration



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**Appendix G1
2017 Wetland Report**

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Prepared for:
Connecticut Department of
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**Wetland Report
Route 7 and 15
Interchange
Norwalk, CT
CTDOT Project 102-358**

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1.0 INTRODUCTION

Project Description

The purpose of this report is to document and describe state, and federal jurisdictional wetlands, i.e., “Waters of the United States”, found on site in the vicinity of the Route 7 and Route 15 interchange in Norwalk, Connecticut. The project begins approximately at the West Rocks Road overpass over Route 15 and terminates approximately 800 feet west of Perry Road. The project also extends approximately 2,000 feet north and approximately 1,000 feet south of the Route 15 overpass over Route 7, and includes existing commercial properties along Main Avenue. The entire project limits can be viewed in Appendix A: Location Map.

Field delineations were conducted by a BL Companies, Inc. (BL) wetland scientist and qualified soil scientist in accordance with Section 22a-38(15) of the Connecticut General Statutes (CGS); and federal wetlands in accordance with the U.S. Army Corps of Engineers (ACOE) *Wetlands Delineation Manual (1987)* and the *Northcentral and Northeast Region Latest Regional Supplement*. The project site is located in Fairfield County, in the City of Norwalk, Connecticut. A map depicting the delineated features can be found in Appendix B, and supporting photographic documentation of each delineated resource is located in Appendix C. Datasheets completed for each feature can be found in Appendix D.

Natural Resources

The Site lies within the Silvermine River (7302) and Norwalk River (7300) drainage basins, part of the Norwalk Regional Basin within the Southwest Coast Major Basin, and is not located within a public water supply watershed. The eastern and southern portions of the site are located within an Aquifer Protection Area according to Connecticut Department of Energy and Environmental Protection (CT DEEP) mapping.

According to the Federal Emergency Management Agency’s (FEMA) Flood Insurance Rate Map numbers 09001C0389F and 09001C0393G for Fairfield County, Connecticut, (effective dates June 18, 2010 and October 16, 2013), the project area includes several floodplain designations including, floodway, 100-year floodplain (Zone A), and 500-year floodplain (Zone X).

A review of the Connecticut Department of Energy and Environmental Protection Natural Diversity Database (DEEP NDDDB Map December 2016) indicates that there are no known or recorded species listed as threatened or endangered within the project limits. Resource mapping is included in Appendix E.

2.0 METHODOLOGY

This investigation involved a wetland/watercourse delineation conducted in accordance with the principles and practices noted in the United States Department of Agriculture (USDA) Soil Survey Manual (1993). The soil classification system of the National Cooperative Soil Survey was used in this investigation to identify the soil map units present on the project site. Field work included identification of onsite upland and wetland soils. Corresponding ACOE wetland delineation data sheets are included in Appendix D.

Vegetation, soils, and hydrology were observed and documented during the site investigation in order to meet the criteria of state and federal delineation methodologies. Soil types were identified by observing soil morphology (soil texture, color, structure, etc.). To observe the morphology of the soils, numerous test pits and/or hand borings (generally to a depth of at least two feet) are completed. If wetland and/or watercourses were determined to be present, their boundaries were identified with flags and hung from vegetation or small wood stakes. These flags are labeled "Wetland Boundary" and are generally spaced a maximum of approximately 50 feet apart. It is important to note that flagged wetland and watercourse boundaries are subject to verification by regulatory agencies.

The project Site was investigated on September 27, 28, and 29, 2016, with temperatures ranging from the low 60's to the low 70's°F under mostly sunny conditions. Follow up investigations to determine if some of the wetlands were functioning as vernal pools were also conducted on April 19th and 27th of 2017. Weather during these investigations ranged from the low 50's to low 60's with some rain showers on April 19th.

Functions and Values

Biophysical elements such as a wetland's landscape position, size, geology, hydrology, substrate, and vegetation determine the wetland functions and to what capacity they are performed. Due to the differing biophysical characteristics between onsite wetlands, the functions the wetlands provide and the capacity to perform those functions vary. To better understand these differences, the wetland functional values were assessed based on the United States Army Corps of Engineers Highway Methodology Workbook (1993) and its supplement workbook. The ACOE workbook includes thirteen (13) functions and values that have been recognized as functions wetlands can provide: ground-water recharge/discharge, flood flow alteration, fish and shellfish habitat, sediment/toxicant retention, nutrient removal/retention/ transformation, production export, sediment/shoreline stabilization, wildlife habitat, recreation, education/scientific value, uniqueness/heritage, visual quality/aesthetics, and habitat for threatened or endangered species.

3.0 REGULATORY INFORMATION

Wetlands and watercourses are regulated by state, municipal, and federal laws and regulations, each with different definitions and regulatory requirements. Accordingly, the State and municipalities may regulate wetlands and waters that fall outside of federal jurisdiction; however, where federal jurisdiction exists, concurrent State and municipal jurisdiction is almost always present.

State Jurisdiction

State of Connecticut wetland determinations are based on the presence of poorly drained, very poorly drained, alluvial, or floodplain soils and submerged land. Watercourses are defined as “rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border upon the state or any portion thereof.” Intermittent watercourse determinations are made based on the presence of a defined permanent channel and bank, and two of the following characteristics: (1) evidence of scour or deposits of recent alluvium or detritus, (2) the presence of standing or flowing water for a duration longer than a particular storm incident, and (3) the presence of hydrophytic vegetation. (See Inland Wetlands and Watercourses Act §22a-38 CGS.).

Federal Jurisdiction

Jurisdictional wetlands at the Federal level consist of “Waters of the United States”, which includes lakes, rivers and streams, as well as vegetated wetlands (See 33 CFR 328.8). The onsite waters and wetlands, regulated by the ACOE, were delineated in accordance with the Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual *Northcentral and Northeast Region (Version 2.0) (January 2012)*. This Manual requires there to be dominant hydrophytic vegetation, hydric soils, and hydrological conditions present in determining wetland areas.

4.0 PROJECT STUDY AREA

The following section describes the existing conditions of the resources located within the project limits. There are fifteen (15) identified wetlands within the project limits, descriptions of the wetlands and functions and values are provided below. Additionally, ten (10) intermittent watercourses, two (2) perennial watercourses including the Norwalk River, and a pond were identified. Several of the wetlands and watercourses ultimately flow into the Norwalk River or to the west into the Silvermine River.

Resources were delineated and labeled in the order that they were observed in the field, however for the sake of ease of presentation and also to better represent the hydraulic

connections between wetlands, the resources have been relabeled sequentially from east to west. Therefore, wetland flag labels observed in the field will not correspond to the wetland identifications utilized in this report. A list depicting the “Field ID” and the “Report ID” can be found in Appendix F.

Pond 1

Pond 1 is located north of Creeping Hemlock Drive and West of Lakewood Drive. The pond is long and linear, orientated roughly north to south; and is surrounded by forested upland. The water is estimated to be three to four feet deep, and no substrate was visible at the time of the investigation. Water was noted flowing through a stone swale on the western side of the pond. The swale is located outside of the project limits and continues to the west, north of several residential homes.

Perennial Watercourse 1 (PER 1)

Perennial watercourse 1 is located north of Route 15 and south of Creeping Hemlock Drive. The watercourse originates at a 24” reinforced concrete pipe (RCP) in a masonry endwall along the Route 15 southbound embankment. The substrate in the vicinity of the outfall includes rocks, cobble, and gravel, as well as some bricks that appear to have deteriorated from the end wall. The channel becomes narrow, approximately 2 feet wide, and very steep with rock and cobble substrate as flows progress to the west. At the base of the steep slope, the water forms a large pool and receives hydraulic input from a 15” RCP which is partially buried and a 48” RCP that conveys flows from north of Creeping Hemlock Drive. The pool is approximately 7 feet wide, with a rock, cobble, gravel, and sand substrate. Sediment deposition in this area is notable. Further west, the watercourse enters a 48” x 48” box culvert at a skew angle which conveys the flows southerly under Route 15 and outlets into Wetland 1. Vegetation is present along the channel, and includes Norway maple (*Acer platanoides*), winged euonymus (*Euonymus alatus*), multiflora rose (*Rosa multiflora*), wineberry (*Rubus phoenicolasius*), beggar tick (*Bidens frondosa*), jewelweed (*Impatiens capensis*), and aster (*Symphyotrichum* sp.). Additionally, a masonry rock wall is present along the north edge of the channel for the majority of its length.

The box culvert conveys this watercourse under Route 15 and outlets into Wetland 1 where the flow becomes diffused through the wetland, and the channel loses its definition. Wetland 1 is described in more detail separately below. At the southern portion of the wetland, the channel becomes more well defined with areas of incised banks, approximately one-foot-high and 3 feet wide. Deep pools were observed in portions of the channel, and a small oxbow was also noted along the embankment to the Stop and Shop shopping center to the south. The watercourse then flows west where the channel widens to approximately 10 feet with a silt and gravel bottom.

As it flows further west the watercourse transitions to an intermittent watercourse, the surrounding habitat remains forested. The substrate changes to mainly riprap, with evidence of sediment deposition. The intermittent channel turns slightly and flows to the south where it enters a box culvert east of Main Avenue and south of the Route 15 north entrance ramp. The surrounding area transitions to more densely developed, commercial properties. Vegetation along this portion of the channel included similar species to those seen in the upper reaches of the watercourse.

Wetland 1

Wetland 1 is located south of Route 15, west of Linden Heights, east of the Main Avenue entrance to Route 15, and north of the Stop and Shop plaza. Wetland 1 is not located within mapped FEMA floodplain or floodway. This wetland complex is classified as palustrine scrub-shrub wetland along the western and northern portion (along the highway embankment), and palustrine emergent wetland dominates within the transmission right-of-way to the east. Perennial Watercourse 1 flows south into Wetland 1 from a 48" x 48" box culvert under Route 15 and meanders through the wetland. The watercourse is diffused through the northern portion of the wetland and becomes more well defined in the southern portion.

The scrub shrub portions of the wetland are characterized by drift deposits, water-stained leaves, surface soil cracks, stunted or stressed plants, and geomorphic position. The vegetation includes sparse canopy cover of red maple (*Acer rubrum*) and dense scrub-shrub and herbaceous strata. The scrub-shrub stratum is dominated by smooth alder (*Alnus serrulata*) and glossy buckthorn (*Frangula alnus*); green ash saplings (*Fraxinus pennsylvanica*) and silky dogwood (*Cornus amomum*) are also present. Ground cover by herbaceous plants is very dense and dominated by common reed (*Phragmites australis*), sensitive fern (*Onoclea sensibilis*), arrow-leaf tearthumb (*Persicaria sagittata*), rough-leaf goldenrod (*Solidago rugosa*), glossy buckthorn (*F. alnus*), and climbing hempvine (*Mikania scandens*). Additional non-dominant herbaceous cover includes skunk cabbage (*Symplocarpus foetidus*), mile-a-minute vine (*Persicaria perfoliata*), smooth alder seedling (*A. serrulata*), and green ash seedlings (*F. pennsylvanica*). No woody vine stratum was observed.

The emergent portion of the wetland is characterized by water marks, drift deposits, water-stained leaves, surface soil cracks, stunted or stressed plants, and geomorphic position. No tree stratum is present, and multiflora rose (*R. multiflora*) and common raspberry (*Rubus idaeus*) dominate the very sparse scrub-shrub stratum. The composition of the herbaceous stratum contains the same dominant species as the scrub-shrub portions of the wetland.

Functions and values of this wetland system include: ground-water recharge/discharge, floodflow alteration, potential fish habitat, sediment/toxicant retention, nutrient

removal/retention/ transformation, production export, and wildlife habitat. The wetland appears to retain overland flows and slowly return the water back to the water table. The wetland acts as floodplain for the perennial watercourse and retains flows during storm events. The presence of a perennial watercourse with areas of deep pools allows for potential fish habitat, although no fish were observed during the investigation. The dense herbaceous and scrub-shrub stratum as well as areas of diffuse, slow-moving flows aid in the retention of sediment and toxicant as well as the removal, retention, and transformation of nutrients. Additionally, the perennial watercourse allows for the export of nutrients downstream. The wetland is situated in a forested corridor along the highway as well as between residential and commercial properties and provides habitat for several wildlife species tolerant of the nearby roadways and development.

Intermittent Watercourse 1 (INT 1)

Intermittent Watercourse 1 is located west of the Route 15 off-ramp to Route 7, and south of Route 15. The watercourse originates at a 30" RCP that conveys drainage from Route 7 and surrounding uplands, and flows into west into Wetland 2 where the channel loses definition. The substrate in the vicinity of the outfall includes large rock piles, cobble, gravel, sand, and wood chips. The channel is incised near the pipe outfall and blocked by several downed trees and litter from the nearby off-ramp. Sediment deposits are extensive throughout the channel, with large piles of sand noted in portions of the channel and nearby Wetland 2. The channel is approximately 3 feet wide throughout. Vegetation along the channel includes jewelweed (*I. capensis*), white snakeroot (*Ageratina altissima*), mugwort (*Artemisia vulgaris*), and oriental bittersweet (*Celastrus orbiculatus*).

Wetland 2

Wetland 2 is located south of Route 15, west of the Route 15 northbound exit ramp to Main Avenue, and east of the Norwalk River. A commercial property with a parking garage is present south of Wetland 2. Wetland 2 is a palustrine emergent wetland located within a mapped FEMA floodplain and floodway, and is characterized by drift deposits and geomorphic position. The wetland abuts the Norwalk River and receives hydrology from Intermittent Watercourse 1, which feeds into this wetland from the east. The sparse tree canopy is comprised of box elder (*Acer negundo*), and glossy buckthorn composes a sparse shrub stratum. Jewelweed (*I. capensis*) and poison ivy (*Toxicodendron radicans*) dominate the herbaceous stratum, along with mugwort (*Artemisia vulgaris*), rough-leaf goldenrod (*Solidago rugosa*), calico aster (*Symphotrichum lateriflorum*), and glossy buckthorn seedlings. Fox grape (*Vitis labrusca*) was also noted to dominate the woody vine stratum.

Functions and values of this wetland system include: flood flow alteration, sediment/toxicant retention, nutrient removal/retention/ transformation, sediment/shoreline stabilization, and wildlife habitat. Given its location adjacent to the river, Wetland 2

appears to retain flows during storm events. The dense herbaceous stratum provides sediment trapping. Sedimentation was noted through the intermittent watercourse (INT 1) that flows through Wetland 2. The dense herbaceous vegetation present in Wetland 2 aids in the removal, retention, and transformation of nutrients. Additionally, dense vegetation borders the river and provides shoreline stabilization. The wetland also provides a small patch of habitat for animals tolerant of the surrounding development.

Wetland 3

Wetland 3 is located south of Route 15, east of the Norwalk River, west of Main Avenue, and south of Wetland 2, and lies entirely within the mapped FEMA floodway for the Norwalk River. The wetland is divided into two sections that appear to be peninsulas formed by the periodic backwater of the Norwalk River. The southern section is situated at the base of a steeply sloped hill and extends into the river where a narrow channel caused by backwater from the river has dissected it from the northern portion of the wetland. The northern portion of the wetland is situated in a fairly level area, with water from the Norwalk River present to the east and west. The vegetation on both sections of the wetland appeared to be very similar, and therefore were categorized as the same wetland community. This palustrine scrub-shrub wetland is characterized by saturation at 12 inches, drift deposits, water-stained leaves, drainage patterns, and geomorphic position. Sparse tree canopy is composed of green ash (*F. pennsylvanica*), and a dense scrub-shrub stratum is dominated almost entirely by silky dogwood (*C. amomum*). The herbaceous stratum is dominated by jewelweed (*I. capensis*), with sensitive fern (*O. sensibilis*) and Virginia creeper (*Parthenocissus quinquefolia*) also present in the herb layer.

Functions and values of Wetland 3 include: ground-water discharge, fish habitat, sediment/toxicant retention, nutrient removal/retention/ transformation, production export, sediment/shoreline stabilization, wildlife habitat, passive recreation, and visual quality/aesthetics. Wetland 3 potentially discharges groundwater to the river during the wet season. The presence of the backwater channel from the Norwalk River provides fish habitat. Dense herbaceous and woody shrub strata aid in sediment and toxicant retention, as well as nutrient removal, retention, and transformation, and sediment/shoreline stabilization. The vegetation as well as its location adjacent to the river provide habitat for a variety of animals, especially small mammals and birds. A business is located immediately adjacent to the northern portion of Wetland 3; landscaping, benches, and walkways are present around the edge of the wetland allowing for some passive recreational uses and providing visual quality/aesthetics.

Norwalk River

The Norwalk River is located west of Main Avenue and east Route 7. The river flows from north to south towards Long Island Sound. The portion of the river within the project limits

lies beyond the tidal influence of Long Island Sound. The width of the channel varies largely from approximately 10 to 120 feet throughout the project limits, with the channel becoming narrowest approximately 1000 feet north of Glover Avenue, and becoming widest approximately 250 north of Glover Avenue. The river had been manipulated through portions of this highly developed area; retaining walls are present along the western bank north of Route 15, and a dam is present approximately 900 feet south of Route 15. Additionally, a small oxbow is present in the vicinity of Wetland 3. Historical aerials from 1934 show the presence of the dam as well as this backwater channel. Footings for a railroad bridge across the river are also present further downstream of the dam. FEMA floodway encompasses the river bank width, with floodplain (100-year and/or 500-year) present beyond either side of the river's designated floodway throughout the project limits.

The Norwalk River is designated as a Class B, B* surface water. Class B surface waters are utilized for recreational use, fish and wildlife habitat, agriculture and industrial supply and other legitimate uses including navigation. Discharges to Class B waters include discharge from public or private drinking water treatment systems, dredging and dewatering, clean water discharges, discharges from industrial and municipal wastewater treatment facilities, and other discharges subject to the provisions of section 22a-430 CGS.

Water depth appeared highly variable throughout the channel, ranging from 2 to 3 feet deep in the center of the channel, to deeper pools in the vicinity of the dam. Additionally, substrate also varied, and was not visible in many areas. Boulder, rocks, and cobble were observed through most visible portions of the river as well as silt, leaf litter, and detritus.

Functions and values of the river include flow conveyance, groundwater discharge, fish and wildlife habitat, production export, streambank stabilization, recreation, and visual quality/aesthetics. Despite manipulations, the river continues to be an important tributary to Long Island Sound. The river is capable of supporting fisheries and other animals that rely on the watercourse for habitat or food, however the dam and the adjacent developments impose limits on the mobility of some of these species. Additionally, the river provides export of products produced upstream, and dense vegetation along the river edges provide shoreline stabilization. The river is wide and deep enough to allow for recreational activities such as kayaking and fishing in various areas throughout the project limits, and provides a visual quality/aesthetic in an otherwise densely developed area.

Wetland 4

Wetland 4 is located west of the Norwalk River, south of Route 15, and east of the railroad track, and is located partially within FEMA floodway and partially within 100-year floodplain. The palustrine forested wetland is characterized by saturation at 10 inches below soil surface, algal mat or crust, and geomorphic position. The wetland acts as a

floodplain for the adjacent river and is bound to the west by railroad tracks. A 24" RCP equalizer pipe hydraulically connects Wetlands 4 and 6 under the existing tracks. Additionally, an upland berm is present through a portion of Wetland 4 and is characterized by upland vegetation including beech (*Fagus grandifolia*) and white ash (*Fraxinus Americana*). The wetland itself is dominated by red maple (*A. rubrum*) with pin oak (*Quercus palustris*) also present throughout the tree stratum. Silky dogwood (*C. amomum*) and glossy buckthorn (*F. alnus*) dominate the scrub-shrub layer; green ash (*F. pennsylvanica*) saplings are also present in this stratum but not dominant. The herbaceous stratum is dominated by arrow-leaf tearthumb (*P. sagittata*) and calico aster (*S. lateriflorum*). Non-dominant herbs include arrow arum (*Peltandra virginica*), climbing hempvine (*M. scandens*), jewelweed (*I. capensis*), and common reed (*P. australis*). Porcelain berry (*Ampelopsis brevipedunculata*) dominated the woody vine stratum.

Functions and values of Wetland 4 include: ground-water discharge, sediment/toxicant retention, nutrient removal/retention/ transformation, production export, sediment/shoreline stabilization, and wildlife habitat. Wetland 4 potentially discharges groundwater to the river during the wet season. A dense herbaceous stratum aids in sediment and toxicant retention, as well as nutrient removal, retention, and transformation, and sediment/shoreline stabilization. The vegetation as well as its location adjacent to the river provide habitat for many species of mammals, birds, and possibly reptiles and amphibians, with various cover types available.

Wetland 5

Wetland 5 is located north of Glover Street, west of Main Avenue, and east of the railroad, adjacent to the Norwalk River, and is situated with the designated FEMA floodway. The emergent wetland is located at the base of a riprap embankment and extends down to the river. Wetland 5 is characterized by saturation 10 inches below the soil surface, drift deposits, and geomorphic position. The wetland receives drainage from the surrounding uplands via a 10" clay pipe and an 8" clay pipe that discharge along the western slopes of the wetland. No tree or scrub-shrub strata are present within the wetland. The herbaceous stratum is dominated by false nettle (*Boehmeria cylindrica*), white panicle aster (*S. lanceolatum*), and multiflora rose (*R. multiflora*) seedlings. Non-dominant herbs include true forget-me-not (*Myosotis scorpioides*), purple loosestrife (*Lythrum salicaria*), swamp smartweed (*Persicaria hydropiperoides*), and climbing hempvine (*M. scandens*). No woody vine stratum was present.

Due to its small size, functions and values of this wetland are limited to nutrient uptake, some floodflow alteration, and wildlife habitat. Dense herbaceous growth in the wetland provides nutrient attenuation. Given its location adjacent to the river, the wetland likely retains flows during storm events, however this function is limited by its size. The wetland also likely provides a small patch of habitat for riverine species.

Wetland 6

Wetland 6 is located south of Route 15, west of the railroad tracks, and east of the Route 15 northbound exit to Route 7 northbound, and is bound to the south by steep rock outcrops. The USFWS NWI map classifies a portion of this wetland as Palustrine Unconsolidated Bottom Permanently Flooded Excavated (PUBHx) wetland. The wetland is situated within mapped 100-year and 500-year FEMA floodplain. The palustrine scrub-shrub wetland is situated at the base of the railroad embankment as well as the highway embankment and receives hydrology from overland flows; the overland flows appear to have formed an erosional ditch along the steep grade west of the wetland. Wetland 6 is characterized by a high water table 8 inches below the soil surface, saturation to the soil surface, inundation and saturation visible on aerial imagery, sparsely vegetated concave surface, water-stained leaves, and geomorphic position. This wetland is hydraulically connected to Wetland 4, east of the railroad tracks, via a 24" RCP equalizer pipe. Soils in this wetland are organic. In areas where vegetation is present, American hornbeam (*Carpinus caroliniana*) dominated the sparse tree stratum. Silky dogwood (*C. amomum*) almost entirely dominates the scrub-shrub stratum. Swamp milkweed (*Asclepias incarnata*) and American white waterlily (*Nymphaea odorata*) dominate the herbaceous stratum; climbing hempvine (*M. scandens*) is also present throughout the herbaceous layer but is not dominant. Fox grape (*V. labrusca*) and Japanese honeysuckle (*Lonicera japonica*) are present and dominate the woody vine stratum.

Functions and values for Wetland 6 include: ground water discharge, floodflow alteration, sediment/toxicant retention, nutrient removal/retention/ transformation, and wildlife habitat. The high water table and saturation to surface indicate potential groundwater discharge. The wetland's location at the base of embankments and organic soils indicate that the wetland receives and retains hydrology from the surrounding uplands. The presence of dense scrub-shrub and herbaceous understory aid in sediment/toxicant retention and nutrient removal, retention, and transformation. The wetland and surrounding uplands appear to function as a part of a wildlife corridor and habitat for wildlife such as mammals and birds with evidence of deer was noted during the field investigation.

Wetland 7

Wetland 7 is located west of the railroad tracks, east of Route 7, and south of the Route 15/Route 7 interchange. The palustrine scrub-shrub wetland is an isolated depression situated at the top of a rock outcrop and is characterized by inundation and saturation visible on aerial imagery, and water-stained leaves. Vegetation is lacking within the wetland; however, hydrophytes are present along the edges. A sparse tree stratum is dominated by pin oak (*Q. palustris*) along the wetland boundary. The scrub-shrub stratum is dominated by highbush blueberry (*Vaccinium corymbosum*), pin oak saplings, mountain laurel (*Kalmia latifolia*), and coastal sweet pepperbush (*Clethra alnifolia*).

Herbaceous and woody vine vegetation is completely absent from the wetland and its boundary.

The functions and values of Wetland 7 are extremely limited due to its small size and location on top of a rock outcrop. The only functions of the wetland appear to be floodflow retention and wildlife habitat. During storm events water from the surrounding upland gathers in the depression, ponds, and is slowly returned to the water table or evaporates. The wetland is located in a forested hilltop with a relatively sparse understory and is likely utilized by several small mammals and bird species as a water source. It should be noted that no ponding was observed during the September delineation nor during a November revisit. Observations of ponding are based on current and historical aerial imagery. Ponding may have been absent due to the moderate drought that was occurring during the time of the investigation.

Wetland 8

Wetland 8 is located in the Route 15 Northbound-Route 7 Northbound interchange gore area. The USFWS NWI map classifies a portion of this wetland as Palustrine Forested Broad-leaved Deciduous Seasonally Flooded/Saturated (PFO1E) wetland. The wetland is bound on all sides by roadway and receives hydrology from Intermittent Watercourse 2, which lies to the north. This palustrine forested wetland is characterized by a sparsely vegetated concave surface water-stained leaves, drainage patterns, moss trim lines, and saturation visible on aerial imagery. The tree stratum is dominated red maple (*A. rubrum*). Green ash (*F. pennsylvanica*) saplings, coastal sweet pepperbush (*C. alnifolia*), and red maple saplings dominate the shrub stratum. The herbaceous stratum is dominated by false nettle (*B. cylindrica*) and green ash seedlings. American water horehound (*Lycopus americanus*) is also present but non-dominant. No woody vine stratum was observed.

Functions and values of Wetland 8 include: ground-water recharge, flood flow alteration, sediment/toxicant retention and nutrient removal/retention/ transformation, and wildlife habitat. The wetland retains water from the surrounding uplands during storm events and slowly returns it to the water table. Dense woody vegetation aids in retaining sediment and toxicants from the surrounding roadways as well as removing, retaining, and transforming nutrients. The gore area that the wetland is situated in is forested and likely provides habitat for species tolerant of the surrounding roadway. The wetland did display evidence of shallow standing water and may provide amphibian breeding habitat. Evidence of deer in the form of scat and remains were observed within the wetland.

Intermittent Watercourse 2 (INT 2)

Intermittent Watercourse 2 is located in the Route 7 Northbound/Route 15 Northbound interchange gore area and conveys flows to Wetland 8. The channel varies in width, but on average is approximately 3 feet wide. The watercourse receives sheetflow from the

surrounding uplands and flows southwest towards the wetland. Boulders and rocks form the banks the substrate is composed of cobble, silt, and leaf litter. The surrounding forested habitat consists of red maple (*A. rubrum*) and red oak (*Q. rubra*) throughout the canopy, with red maple saplings, coastal sweet pepperbush (*C. alnifolia*), and mountain laurel (*K. latifolia*) forming the understory along the banks.

Intermittent Watercourses 3 and 4 (INT 3 and 4)

Intermittent Watercourses 3 and 4 are located east of Route 7, north of Perry Avenue, and west of Pearl Street. Intermittent Watercourse 3 begins along the Route 7 northbound embankment at the outfall of a 36" CMP which carries drainage from Route 7. At its upper reach near the road, the channel is narrow, approximately 2 feet wide with a rock, cobble, and gravel substrate. The banks appear eroded with roots exposed. The channel flows east down a steep embankment where it turns south and begins flowing towards Perry Avenue. The channel loses definition in this area and sediment is present and accumulated in a wide, flat area approximately 10 feet wide. The channel becomes more defined further south, it becomes narrower, approximately 2 feet wide, and continues to display signs of deposition of sediment. The channel eventually dissipates and converts to sheet flow into a field.

Intermittent Watercourse 4 also begins along the Route 7 northbound embankment at a 15" RCP outfall and flows east where it converges with Intermittent Watercourse 3. Intermittent Watercourse 4 is a channel approximately 1-foot-wide, with a fine gravel and sand substrate. The channel also shows signs of scour and erosion with roots exposed. Sedimentation is high throughout the channel and at the convergence with Intermittent Watercourse 3.

Both Intermittent Watercourses 3 and 4 are the result of drainage from the roadway. The high sedimentation and evidence of erosion and scour indicate that they convey high velocities while flowing. Drift deposits in the form of leaves, branches, and mainly refuse including plastic bottles and bags have accumulated significantly near Perry Avenue and may account for the loss of channel definition in some portions of Intermittent Watercourse 3. Forested uplands near these watercourses are characterized by white pine (*Pinus strobus*), northern catalpa (*Catalpa speciosa*), green ash (*F. pennsylvanica*), multiflora rose (*R. multiflora*), goldenrod (*Solidago sp.*), and oriental bittersweet (*C. orbiculatus*).

Wetland 9

This wetland is a CTDOT wetland mitigation site created in 1990 as mitigation for construction of the Route 7 expressway in the area. This site is one of several mitigation sites constructed under US ACOE permit file 198500874. The permit notes that approximately 8.1 acres of PEM and PSS would be created.

Wetland 9 is located north of the Route 7/Route 15 southbound interchange, east of Route 7 northbound, and west of Glover Avenue. The USFWS NWI map classifies a portion of this wetland as Palustrine Emergent Persistent Semi-Permanently Flooded wetland with a Riverine Unknown Perennial Unconsolidated Bottom Permanently Flooded watercourse in that runs through the wetland. Field observations indicated that Wetland 9 has two areas of inundation that also appear to support emergent vegetation, and a palustrine forested wetland along the southern edge of the wetland. The wetland is located at the base of a steep embankment to Route 7 and is characterized by a channel that flows from north to south in the northern portion of the wetland; the water becomes ponded in two areas within the central portion of the wetland. The ponded area becomes constricted at the southern portion of the wetland and forms a channel that continues to meander through the floodplain wetland. Ultimately, the flows converge with the Norwalk River outside the project limits

Hydrologic features for the wetland include inundation visible on aerial imagery, water-stained leaves, aquatic fauna, saturation visible on aerial imagery, and geomorphic position. This wetland receives flows from Wetland 10 through pipes that flow from west to east under Route 7; these pipes include four sets of 24" RCP's, and one 42" RCP. Wetland 9 also receives drainage from Route 7 northbound via two 12" RCP's. Wetland 9 is dominated by red maple (*A. rubrum*); green ash (*F. pennsylvanica*), and swamp white oak (*Quercus bicolor*) are also present but not dominant in the tree stratum. Spicebush (*Lindera benzoin*), multiflora rose (*R. multiflora*), and red maple saplings all dominate the scrub-shrub stratum. Common reed (*P. australis*) and jewelweed (*I. capensis*) are dominant in the herbaceous stratum; non-dominant herbs also include marsh fern (*Thelypteris palustris*), posion ivy (*T. radicans*), sensitive fern (*O. sensibilis*), swamp smartweed (*P. hydropiperoides*), and false nettle (*B. cyclindrica*). The woody vine stratum is dominated by oriental bittersweet (*C. orbiculatus*), fox grape (*V. labrusca*), and porcelainberry (*A. bervipedunculata*).

Wetland 9 provides the following functions and values: ground-water recharge/discharge, flood flow alteration, potential fish habitat, sediment/toxicant retention, nutrient removal/retention/ transformation, production export, sediment/shoreline stabilization, and wildlife habitat. Wetland 9 has a watercourse and ponding present, suggesting areas of groundwater discharge. The flat, and in some areas concave, nature of the wetland as well as its location at the base of a steep grade and adjacent to a perennial watercourse allows for retention of water during a storm event. The presence of a persistent pond and perennial watercourse provides potential habitat for fisheries. Dense vegetation and slow moving water through ponded areas allow for sediment and toxicant retention, as well as nutrient removal, retention, and transformation. The presence of a perennial watercourse allows for the export of nutrients downstream. Dense woody vegetation is present along the edge of ponded areas, stabilizing sources of sediment and the shoreline. Additionally,

the wetland is located in a larger forested corridor, and therefore likely supports several bird species, deer, small mammals, fish, and amphibians.

Wetland 10

This wetland is a CTDOT wetland mitigation site created in 1990 as mitigation for construction of the Route 7 expressway and also is one of several mitigation sites constructed under US ACOE permit file 198500874. The permit notes that approximately 8.1 acres of PEM and PSS would be created.

Wetland 10 is located west of Route 7, north of Route 15, and east of Perry Avenue; a transmission ROW runs through the wetland from north to south. NWI mapping classifies this area as both a Palustrine Emergent *Phragmites australis* Seasonally Flooded/Saturated (PEM5E) wetland and a Palustrine Emergent Persistent Seasonally Flooded/Saturated (PEM1E) wetland. The wetland is located at the base of a steep roadway embankment, and is bound to the west, and a small portion to the east by vertical rock outcrops, and appears to contribute flows to Wetland 9 through four sets of 24" RCP pipes and one 42" RCP under Route 7. Wetland 10 is characterized by surface water (less than 1 inch), high water table and saturation to soil surface, as well as inundation visible on aerial imagery, aquatic fauna, hydrogen sulfide odor, saturation visible on aerial imagery, and geomorphic position. The wetland lacks any notable tree and scrub-shrub strata. The herbaceous stratum is dominated by broad-leaf cattail (*Typha latifolia*), sensitive fern (*O. sensibilis*), tussock sedge (*Carex stricta*), and soft rush (*Juncus effusus*). Other non-dominant herbs include highbush blueberry (*V. corymbosum*) seedlings, swamp smartweed (*P. hydropiperoides*), and false nettle (*B. cylindrica*). No woody vine stratum was observed.

Wetland 10 provides the following functions and values: ground-water recharge/discharge, fish habitat, sediment/toxicant retention, nutrient removal/retention/transformation, sediment/shoreline stabilization, and wildlife habitat. Wetland 10 has ponding present throughout. The concave nature of the wetland as well as its location at the base of a steep grade allows for retention of water during a storm event. The presence of a persistent pond provides potential habitat for fisheries. Dense vegetation and slow moving water through ponded areas allow for sediment and toxicant retention, as well as nutrient removal, retention, and transformation, aiding in water quality. Dense woody vegetation is present along the edge of ponded areas, stabilizing sediment and the shoreline. Additionally, the wetland is located in a larger forested corridor, and therefore likely supports several bird species, deer, small mammals, and amphibians. Unidentified frog species were observed during the delineation.

Wetland 11

Wetland 11 is located west of the powerline ROW, north of Route 15, and east of Perry Avenue. USFWS NWI map classifies this feature as a Palustrine Aquatic Bed Permanently Flooded Excavated wetland (PABHx); field investigations found forested wetland surrounding the ponded area, and therefore classified the feature as a palustrine forested wetland. The wetland is characterized by inundation visible on aerial imagery, water-stained leaves, drainage patterns, and geomorphic position. The ponded area also exhibited several other hydrologic indicators including several inches of standing water and an algal mat. Wetland 11 is bisected by an impervious access road, a 12" RCP pipe connects both sides of the wetland under the access road. The wetland also connects to Wetland 12 to the south via Intermittent Watercourse 5.

The palustrine forest is dominated by red maple (*A. rubrum*) and American elm (*Ulmus americana*). The scrub-shrub stratum is dominated by multiflora rose (*R. multiflora*) and American elm saplings. Panicked hydrangea (*Hydrangea paniculata*), red maple saplings, pin oak (*Q. palustris*) saplings, and Japanese barberry (*Berberis thunbergii*) are also present in the scrub-shrub stratum but not dominant. Green ash (*F. pennsylvanica*) seedlings and greenbrier (*Smilax rotundifolia*) dominate the herbaceous stratum; poison ivy (*T. radicans*), fowl manna grass (*Glyceria striata*), and Virginia creeper (*P. quinquefolia*) are present but not dominant. Oriental bittersweet (*C. orbiculatus*) dominates the woody vine stratum. Vegetation is lacking in the vicinity of the inundated area.

Wetland 11 provides the following functions and values: ground-water recharge/discharge, fish habitat, sediment/toxicant retention, nutrient removal/retention/transformation, sediment/shoreline stabilization, and wildlife habitat. Wetland 11 has ponding present in the northern portion suggesting areas of groundwater discharge. The concave nature of the wetland allows for retention of water during a storm event. The presence of a persistent pond provides potential habitat for fisheries. Dense vegetation allows for sediment and toxicant retention, as well as nutrient removal, retention, and transformation. Dense woody vegetation is present along the edge of ponded area, stabilizing sources of sediment and the shoreline. Additionally, the wetland is located in a larger forested corridor, and therefore likely supports several bird species, deer, small mammals, reptiles, and may support breeding habitat for amphibians.

Intermittent Watercourse 5 (INT 5)

Intermittent Watercourse 5 is located north of Route 15, west of the powerline ROW and east of Perry Avenue. The watercourse hydraulically connects Wetlands 11 and 12. This intermittent watercourse is approximately 3 feet wide with a silt and leaf litter substrate. Drift deposits and water-stained leaves were also noted in the channel. The watercourse receives flows from the surrounding uplands and wetlands, and conveys flows during

storm events. The surrounding forest consists of a red maple (*A. rubrum*) dominated canopy with sugar maple (*Acer saccharum*), red oak (*Q. rubra*), and white pine (*P. strobus*) saplings understory. Herbaceous growth is present along the channel and includes green ash (*F. pennsylvanica*), Virginia creeper (*P. quinquefolia*), and greenbrier (*S. rotundifolia*).

Wetland 12

Wetland 12 is located east of Perry Avenue, north of the Route 15 southbound entrance ramp, and the western limit is partially within the powerline ROW. The wetland is situated at the base of a steep roadway embankment and extends into the powerline ROW. Intermittent Watercourse 5 connects Wetland 12 to Wetland 11 to the north. The palustrine emergent wetland is characterized by water-stained leaves and geomorphic position, and receives drainage from a 15" CMP that discharges to the northern embankment of the Route 15 southbound on-ramp. When water levels are high, water flows west out of the wetland and into a catch basin which ultimately discharges to Intermittent Watercourse 8, hydraulically connecting Wetland 12 with Wetlands 14 and likely 15. Red maple (*A. rubrum*) and black willow (*Salix nigra*) dominate the sparse tree canopy; green ash (*F. pennsylvanica*) is also present but not dominant. Button-bush (*Cephalanthus occidentalis*) and panicle hydrangea (*H. paniculata*) dominate the sparse scrub-shrub stratum; highbush blueberry (*V. corymbosum*) is present but not dominant. The herbaceous stratum is very diverse and dominated by narrow-leaf cattail (*Typha angustifolia*), harlequin blueflag (*Iris versicolor*), Virginia Marsh St. Johnswort (*Hypericum virginicum*), and false nettle (*B. cylindrica*). Rough bedstraw (*Galium asprellum*), marsh fern (*T. palustris*), arrow-leaf teatumb (*P. sagittata*), smooth beggartick (*Bidens laevis*), fowl manna grass (*G. striata*), and soft rush (*J. effusus*) were also present but not dominant. No woody vine stratum was noted.

Wetland 12 provides the following functions and values: ground-water recharge, flood flow alteration, sediment/toxicant retention, nutrient removal/retention/transformation, and wildlife habitat. The wetland's location at the base of an embankment and relatively flat topography allow for the retention of water and for groundwater to slowly be returned to the water table after storm events. Dense vegetation allows for sediment and toxicant retention, as well as nutrient removal, retention, and transformation, preventing the degradation of water quality. Additionally, the wetland is located in a larger forested corridor and adjacent to a maintained powerline ROW, and therefore likely supports several bird species, deer, small mammals, and reptiles and amphibians.

Wetland 13

Wetland 13 is located south of Route 15, west of Route 7, and east of Perry Avenue. Wetland 13 consists of a palustrine emergent and forested wetland complex in a forested setting situated at the base of the highway embankment. The emergent portion along the

eastern edge is characterized by an algal mat or crust, surface soil cracks and geomorphic position, whereas the forested portion to the south and west is characterized by sparsely vegetated concave surface, water-stained leaves, surface soil cracks, and geomorphic position. Intermittent Watercourse 9 conveys flows into the wetland, and Intermittent Watercourse 10 conveys flows out of the wetland.

The emergent portion of the wetland lacks a tree stratum, although nearby trees rooted outside of the wetland do provide some canopy cover. A very sparse shrub stratum is dominated by coastal sweet pepperbush (*C. alnifolia*) and slippery elm (*Ulmus rubra*). The herbaceous layer is dominated by tussock sedge (*C. stricta*) and rice cut grass (*Leersia oryzoides*). Non-dominant herbs include Pennsylvania smartweed (*Persicaria pensylvanica*), red fescue (*Festuca rubra*), rough-leaf goldenrod (*S. rugosa*), and greenbrier (*S. rotundifolia*). Fox grape (*V. labrusca*) dominates the sparse woody vine stratum.

The majority of the forested portion of the wetland lacks understory; trees are present mainly along the edges of the wetland or growing amongst rocks and boulders in the central portion of the wetland. Red maple (*A. rubrum*) and American elm (*U. americana*) dominate the tree canopy. Coastal sweet pepperbush, highbush blueberry (*V. corymbosum*), and green ash (*F. pennsylvanica*) saplings dominate the scrub-shrub stratum and are more highly concentrated in the southern portion. The herbaceous stratum is dominated by greenbrier, but overall is lacking. Fox grape is also present in the woody vine stratum.

Wetland 13 provides the following functions and values: ground-water recharge, floodflow alteration, and wildlife habitat. The wetland's location at the base of an embankment and concave topography allow for the retention of water and for groundwater to slowly be returned to the water table after storm events. Additionally, the wetland is located in a larger forested corridor and adjacent to a maintained powerline ROW, and therefore likely supports several bird species, deer, small mammals, and reptiles and amphibians. The wetland's sparse understory limits its functions and values.

Intermittent Watercourses 6 and 7 (INT 6 and 7)

Intermittent Watercourse 6 is located south of Route 15 and west of Route 7, east of Wetland 13, and conveys flows from east to west into the emergent portion of Wetland 13. Intermittent Watercourse 6 is approximately 4 feet wide, beginning with a riprap substrate and transitioning to a cobble, silt, and leaf litter substrate as it approaches the wetland. Fallen tree branches are present across the channel and may block some flows. Flows likely originate from the steep highway embankment to the north and east and an 18" RCP outfall that conveys drainage from catch basins located along the Route 15 Northbound off-ramp.

Intermittent Watercourse 7 is located east of Perry Avenue, south of Route 15, and west of Wetland 13, and conveys flows out of the forested portion of the wetland. Intermittent Watercourse 7 is located on the western portion of the wetland and conveys water from east to west. The channel is approximately 1-foot-wide with a silt, cobble, and leaf litter substrate; woody debris was also present in the channel. The channel loses definition as it approaches the gentle incline to Perry Avenue, and drains to a catch basin present in this vicinity.

Intermittent Watercourses 8 and 9 (INT 8 and 9)

Intermittent Watercourse 8 begins at a 30" RCP drainage outfall west of Perry Avenue, which is partially buried by sediment. During high water levels, the watercourse also receives hydrology from Wetland 12 via a catch basin located immediately west of Wetland 12. The channel varies in width but is approximately 3 feet wide on average with a silt and cobble substrate. Sedimentation was noted within the channel and the pipe outfall. The southern bank that runs parallel to the Route 15 embankment is undercut and eroded in some areas exposing roots. The banks of the watercourse are densely vegetated with herbs including poison ivy (*T. radicans*) and shrubs including silky dogwood (*C. amomum*). Intermittent Watercourse 8 meanders through the forest understory and becomes braided, eventually diverging to form a second channel, Intermittent Watercourse 9, which flows offsite to the northwest. Intermittent Watercourse 8 continues to flow west into the vicinity of Wetland 14 before flowing offsite to the northwest. Intermittent Watercourse 9 is very similar in character to Intermittent Watercourse 8, but narrows to approximately 1.5-feet wide. Drift deposits in the form of small branches and woody debris were noted in the channel. A larger wetland system that appears to be connected to Wetland 14 is present off-site to the north, therefore Intermittent Watercourses 8 and 9 appear to contribute to its hydrology.

Wetland 14

Wetland 14 is located west of Perry Road and north of Route 15 near the western project limits. The forested wetland appears to extend off-site to the north, where it likely receives hydraulic input from Intermittent Watercourses 8 and 9; it is also likely that Wetland 14 and 15 are hydraulically connected off-site to the north. Wetland 14 is characterized by water-stained leaves, drainage patterns, and geomorphic position. The tree canopy is dominated by red maple (*A. rubrum*) and American elm (*U. americana*). A dense shrub understory is dominated by spicebush (*L. benzoin*) and silky dogwood (*C. amomum*). Additional non-dominant shrubs include coastal sweet pepperbush (*C. alnifolia*) and multiflora rose (*R. multiflora*). Poison ivy (*T. radicans*) dominates the herbaceous stratum; bristly dewberry (*Rubus hispidus*) rough-leaf goldenrod (*S. rugosa*), American elm seedlings, and sensitive fern (*O. sensibilis*) were also present but not dominant herbs observed in the wetland. Fox grape (*V. labrusca*) and poison ivy dominate the woody vine stratum.

The Wetland 14 system, including the area that extends off-site to the north provides the following functions and values: ground-water discharge, floodflow alteration, sediment and toxicant retention, nutrient removal/retention/ transformation, and wildlife habitat. Groundwater seeps were observed slightly north of the project limits, indicating that the wetland system performs groundwater discharge. The concave nature of the site and its location adjacent to a steep embankment and nearby intermittent watercourse allow the wetland to retain flood flows during storm events. Dense woody vegetation allows for sediment and toxicant retention, as well as nutrient removal, retention, and transformation, preventing the degradation of water quality. Additionally, the wetland is located in a larger forested corridor and adjacent to the highway, and therefore likely supports several bird species, deer, small mammals, reptiles, and amphibians.

Intermittent Watercourse 10 (INT 10)

Intermittent Watercourse 10 originates from an 18" RCP pipe outfall at the base of the Route 15 embankment that appears to carry drainage from the highway. A small riprap splash pad is located at the base of the outfall. The channel is approximately 4 feet wide with a silt and leaf litter bottom, with heavy sedimentation. Water-stained leaves and woody debris were also noted in the channel. The watercourse is situated in a forested area, however trees in the vicinity of the channel have recently been cleared. Some vegetation, namely multiflora rose (*R. multiflora*), oriental bittersweet (*C. orbiculatus*), and greenbrier (*S. rotundifolia*), hang over portions of the channel. The watercourse flows west, eventually flowing into Wetland 15 where the channel loses definition and transitions to sheet flow.

Wetland 15

Wetland 15 is located at the western limit of the project, north of Route 15 and west of Wetland 14. The palustrine scrub-shrub wetland extends off-site to the north; it is also likely that Wetland 15 and 14 are hydraulically connected off-site to the north. Wetland 15 is characterized by high water table and saturation 8 inches below the surface, water-stained leaves, and geomorphic position. The wetland receives flows from Intermittent Watercourse 10 as well as a 15" RCP outfall along the northern embankment of the Route 15 southbound on-ramp that appears to carry drainage from the roadwat. Pussy willow (*Salix discolor*) dominates an extremely sparse tree stratum. Pussy willow also dominates the shrub stratum in addition to multiflora rose (*R. multiflora*). Wineberry (*R. phoenicolasius*) is present in the shrub stratum, but not dominant. Arrow-leaf tearthumb (*P. sagittata*), calico aster (*S. lateriflorum*), rough-leaf goldenrod (*S. rugosa*), and Japanese knotweed (*Polygonum cuspidatum*) dominate the herbaceous stratum. Marsh fern (*T. palustris*), poison ivy (*T. radicans*), sensitive fern (*O. sensibilis*), broad-leaf cattail (*T. latifolia*), curly dock (*Rumex crispus*), and prickly sedge (*Carex stipata*) are also

present in the herb stratum but non-dominant. Oriental bittersweet (*C. orbiculatus*) and fox grape (*V. labrusca*) dominate the woody vine stratum.

The Wetland 15 system, including the area that extends off-site to the north provides the following functions and values: ground-water discharge, flood flow alteration, sediment toxicant retention, nutrient removal/retention/ transformation, and wildlife habitat. Groundwater seeps were observed slightly north of the project limits, indicating that the wetland performs groundwater discharge. The concave nature of the site and its location adjacent to a steep embankment and nearby intermittent watercourse allow the wetland to retain flood flows during storm events. Dense woody and herbaceous vegetation allows for sediment and toxicant retention, as well as nutrient removal, retention, and transformation, preventing the degradation of water quality. Additionally, the wetland is located in a larger forested corridor and adjacent to the highway, and therefore likely supports several bird species, deer, small mammals, reptiles, and amphibians.

5.0 ADDITIONAL CONSIDERATIONS

Previous Delineations

Two areas previously identified as wetlands by Connecticut Department of Transportation during the 2007 delineation were investigated during this delineation but were found to not meet the definition of a wetland according to the ACOE manual. Data point information was collected at these two locations.

The first location, Sample Point 1 “SP-1”, is situated west of Route 7 and north of Route 15, between Wetland 10 and 12. The site was a small depression characterized by a sparsely vegetated concave surface with water-stained leaves, red maple (*A. rubrum*) in the tree canopy and very sparse scrub-shrub stratum. Oriental bittersweet (*C. orbiculatus*) was also dominant in the woody vine stratum. No herbaceous stratum was observed. Despite the presence of hydrologic indicators and hydrophytic vegetation, the soil was bright and fairly well-drained with no redoximorphic features, therefore it failed to meet any hydric soil indicators, and also did not qualify as state wetland.

The second location, Sample Point 2 “SP-2”, is situated at the base of a hillslope east of Route 7, south of Route 15, and north of Perry Avenue, and receives flows from INT 6 and 7. SP-2 is characterized by drift deposits and geomorphic position. The tree canopy is dominated big-tooth aspen (*Populus grandidentata*) and northern catalpa (*C. speciosa*). The scrub-shrub stratum is dominated by multiflora rose (*R. multiflora*), and the herb layer is dominated by mugwort (*A. vulgaris*) and Canada goldenrod (*Solidago canadensis*). Multiflora rose and narrow-leaf cattail (*T. angustifolia*) are also present in the herbaceous layer but not dominant. Oriental bittersweet is dominant in the woody vine stratum. The vegetation failed to meet any of the hydrophytic vegetation indicators. Despite a thin layer of mucky silt loam, the soils did not meet any of the hydric soil indicators, did not appear

to be poorly-drained, and showed no signs of redoximorphic features. Therefore, it failed to meet federal or state wetland definitions.

Stormwater Basin

An excavated stormwater basin and riprap lined swale is present within the project limits east of Wetland 1. The basin is steeply sloped along the west, north, and east sides, and gently sloped along the south where the riprap swale is located. The swale conveys water to the west towards Wetland 1 and Perennial Watercourse 1 when water levels in the basin are high. A corrugated plastic pipe located along the eastern boundary appears to convey flows into the basin. The water is approximately 8 inches deep along the edges of the basin, but appeared to exceed 12 inches in the more central portions. The basin appears to have an organic substrate consisting of muck, leaf litter, and detritus. Aquatic plants including common duckweed (*Lemna minor*) and pondweed (*Potamogeton amplifolius*) were noted in deeper portions of the basin. Vegetation surrounds the basin, but is rooted outside the water on the slopes. Observed vegetation included red maple (*A. rubrum*), green ash (*F. pennsylvanica*), multiflora rose (*R. multiflora*), glossy buckthorn (*F. alnus*), wineberry (*R. phoenicolasius*), oriental bittersweet (*C. orbiculatus*), grape (*Vitis sp.*), and poison ivy (*T. radicans*). A large amount of refuse, namely plastic bags, were present in the water and along the edges of the basin. A green frog (*Rana clamitans*) was seen jumping into the water. No egg masses, tadpoles, or spermatophores were observed in the basin.

Potential Vernal Pools

Amphibian breeding, specifically spotted salamander (*Ambystoma maculatum*) breeding, was recorded in and around Connecticut as early as the first week of March, however a cold spell delayed further breeding until the first week of April. Spotted salamander and wood frog (*Rana sylvatica*) breeding was recorded on April 3, 2017 in nearby areas (VernalPool Listserv), therefore the surveys conducted on April 19, 2017 were felt to be able to capture evidence of initial breeding movements of both species.

During the wetland delineation in September, two wetlands, Wetland 8 and 11 were noted to exhibit vernal pool characteristics, therefore both wetlands were investigated during the spring visit as potential vernal pools. Additionally, Wetlands 7, 9, 10, and 12 were also investigated during the April 19, 2017 investigation as they appeared to maintain water levels deep enough to support amphibian breeding. Dip-netting and water sampling of the pools was completed; visual and auditory surveys of the pools and surrounding uplands as well as log/rock rolling were also conducted. None of the pools or wetland areas investigated exhibited evidence of breeding amphibians. No egg masses, spermatophores, larvae, tadpoles or obligate vernal pool species were observed in any of the areas. A single frog was observed in Wetland 10 during dip-netting, but was not caught and therefore could not be identified to species; frogs were also observed in

Wetland 10 during the fall wetland delineation, however due to the lack of egg masses, spermatophores, and larvae it does not appear that the adult frogs utilize this area as breeding habitat.

6.0 SUMMARY

BL Companies identified fifteen wetlands within the project site in Norwalk, Connecticut. Five of these wetland systems (Wetland 1, 9, 10, 11, and 13) were found to exhibit two cover types; seven palustrine emergent (PEM) wetlands, six palustrine scrub-shrub (PSS) wetlands, six palustrine forested (PFO) wetlands, and one palustrine aquatic bed wetland are present within the project limits. Several of these wetland also appeared to extend off-site. Hydric soils, dominant hydrophytic vegetation, and wetland hydrology were all observed within the wetland locations satisfying the criteria of the State of Connecticut and Federal ACOE methodology for wetland delineations. In addition to the descriptions within the previous sections of this report, supporting data forms and photographs are attached that document the findings of the onsite field investigations.

Additionally, ten intermittent watercourses, one pond, and two perennial watercourses, including the Norwalk River, were documented within the project limits. Two previously delineated wetlands were investigated and deemed to not meet the federal or state wetland definitions. Data was collected at these locations and labeled SP 1 and SP 2. Furthermore, a spring investigation utilizing dip-netting, water sampling, visual and auditory sampling was conducted to determine if any suspected wetlands function as vernal pools. Investigations suggest that none of the suspected wetlands currently function as breeding habitat for vernal pool obligate species. Wetland delineation datasheets and photos of the fall and spring investigations can be found in the appendices.

7.0 PREPARER

Rachael Hyland, WPIT, Certified Associate Ecologist

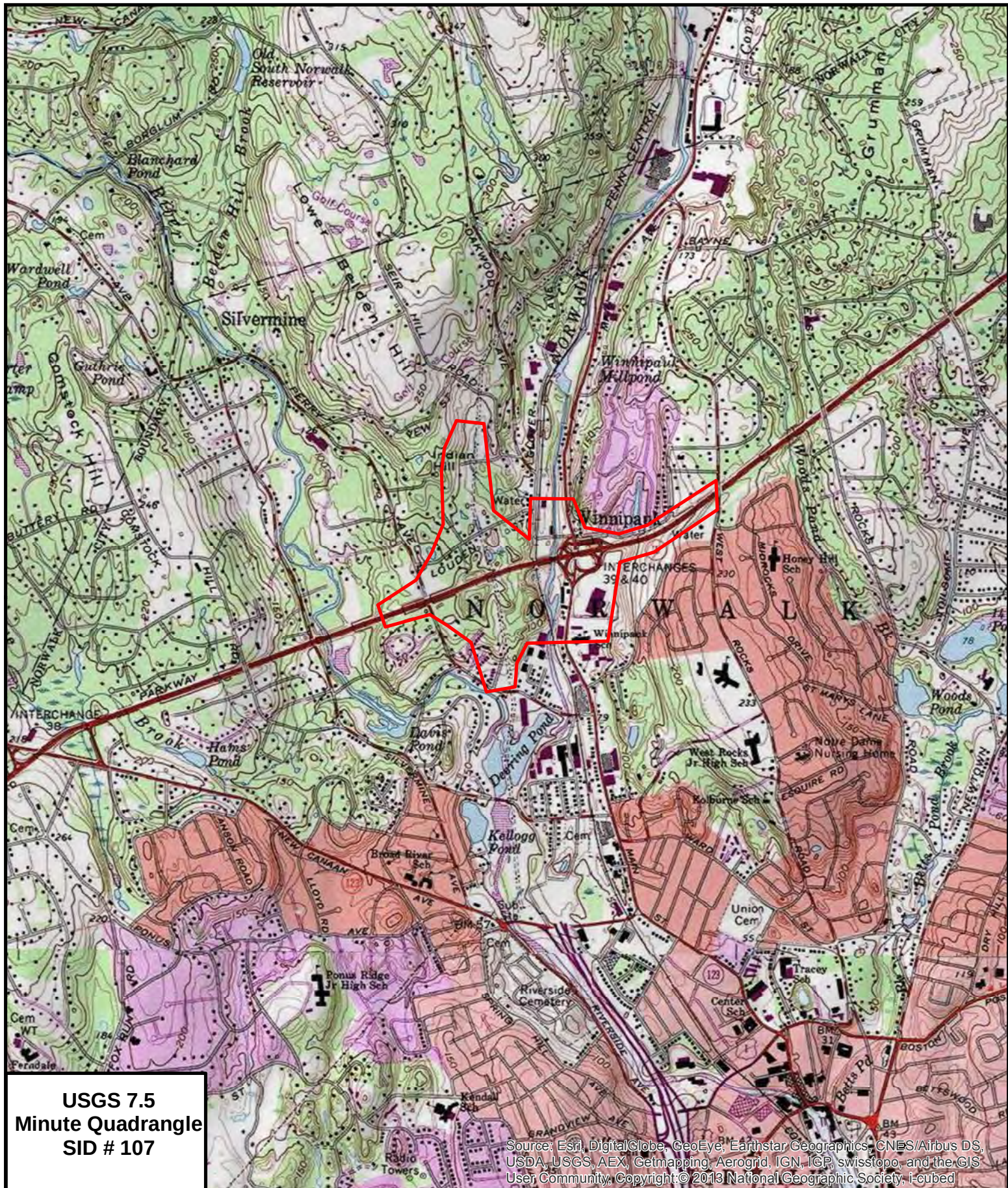
Ms. Hyland holds a Bachelor's degree in Ecology and Evolutionary Biology and has 4 years of experience in environmental sciences. Her specialty lies in ecological assessments and animal identification, specifically Connecticut species of reptiles, amphibians, and mammals including notable experience with bats. She is a Certified Associate Ecologist with the Ecologist Society of America. Ms. Hyland is also trained in wetland and upland plant identification and has assisted in federal and state delineations throughout Connecticut, Ohio, Virginia, and Alabama. Ms. Hyland is a Wetland Professional in Training with the Society of Wetland Scientists and has completed Basic Wetland Delineator Training with the Institute for Wetland Education and Environmental Research. Ms. Hyland's responsibilities include assisting with wetland delineations, permit preparation, performing environmental site assessments, vernal pool surveys, agency coordination, ecological assessments, and the preparation of client reports.

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APPENDIX A:
Location Mapping

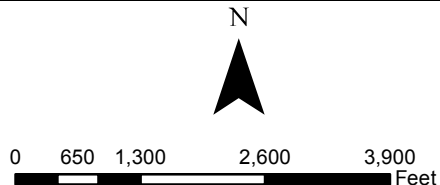


USGS 7.5
Minute Quadrangle
SID # 107

Legend



Project Location



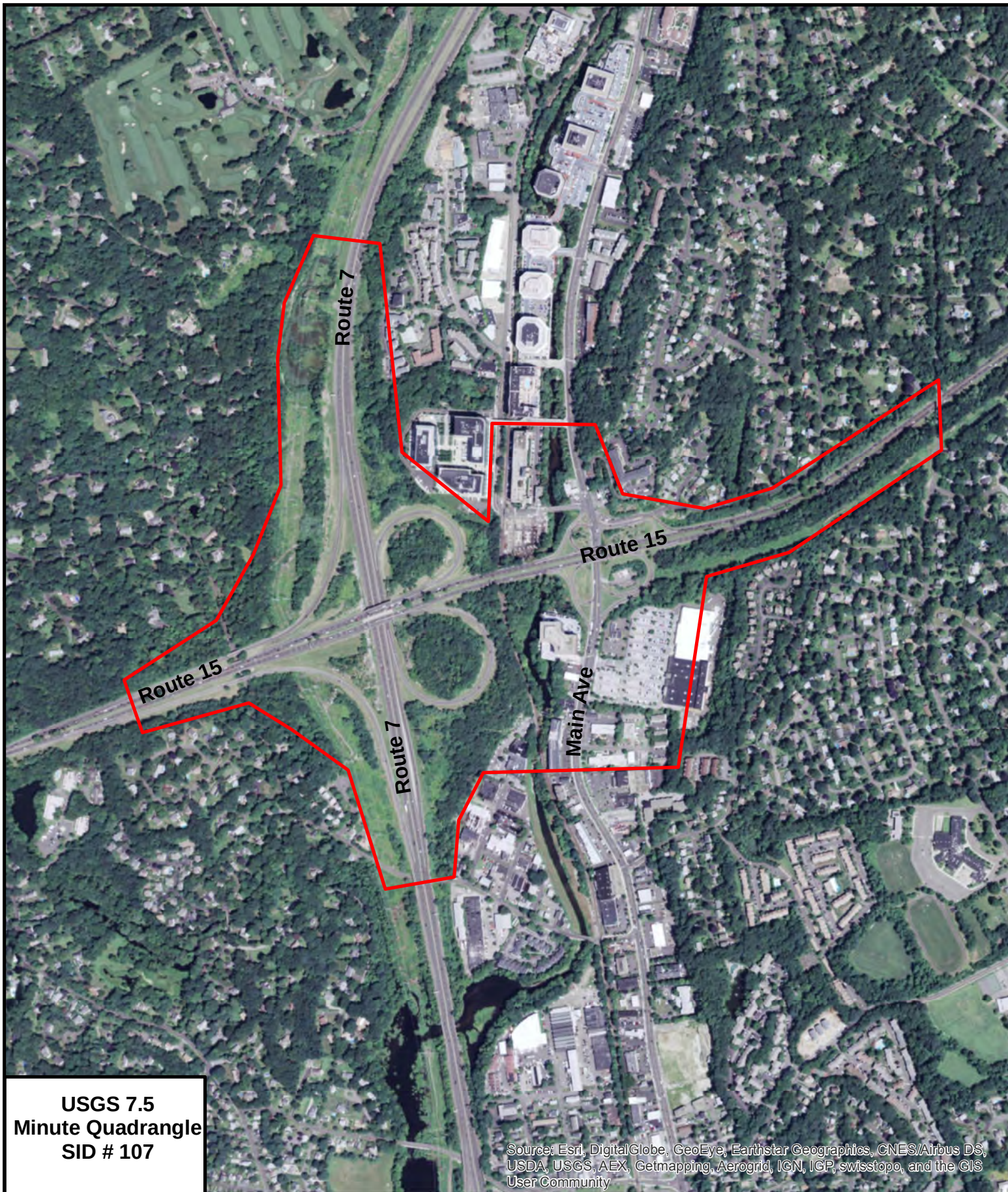
Rt 7&15 Interchange
Norwalk, CT 06851



Architecture
Engineering
Environmental
Land Surveying

Topographic Site Map

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community. Copyright © 2013 National Geographic Society, i-cubed



USGS 7.5
Minute Quadrangle
SID # 107

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS,
USDA, USGS, AEX, Getmapping, Aerogrid, IGN, ICP, swisstopo, and the GIS
User Community

Legend

 Project Location



0 290 580 1,160 1,740
Feet

Rt 7&15 Interchange
Norwalk, CT 06851



Aerial Site Map

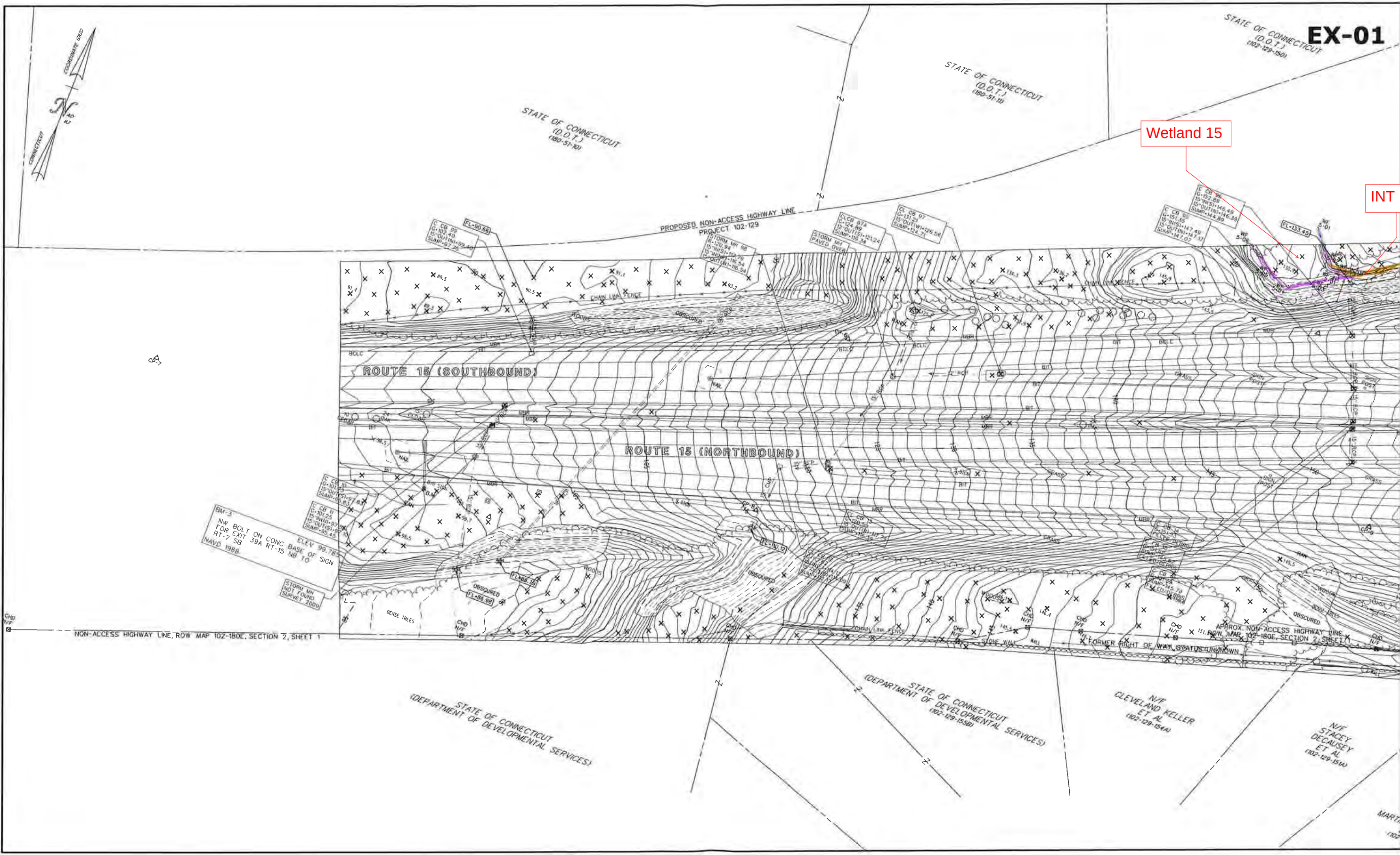
APPENDIX B:
Delineated Features Sketch



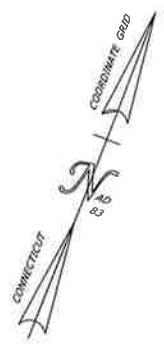
EX-01

Wetland 15

INT 10



EX-02



N/F
JANET L. WOLFF

STATE OF CONNECTICUT
(D.O.T.)
(102-129-141)

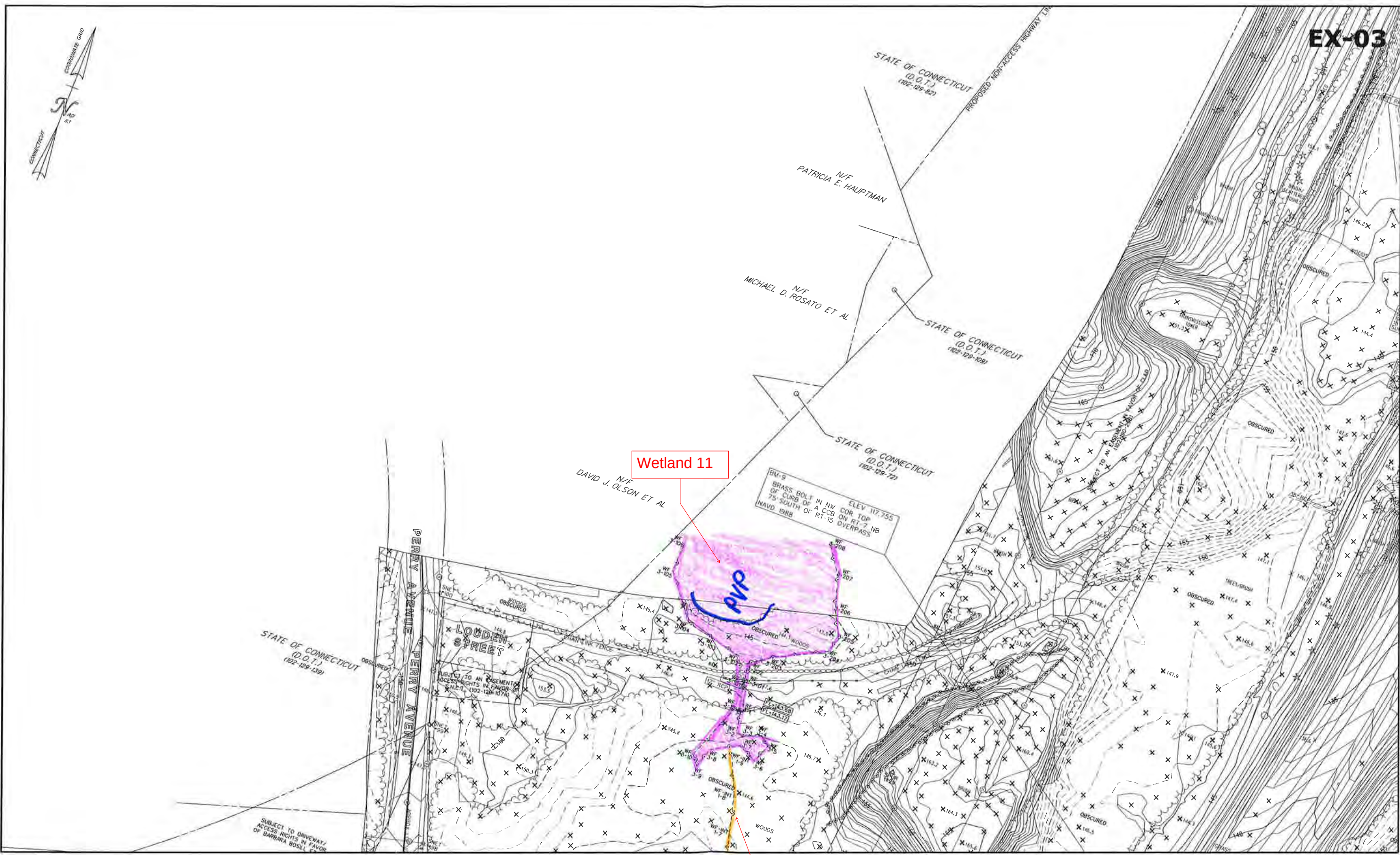
STATE OF CONNECTICUT
(D.O.T.)
(102-129-75)

STATE OF CONNECTICUT
(D.O.T.)
(102-129-84)

GAS VENT

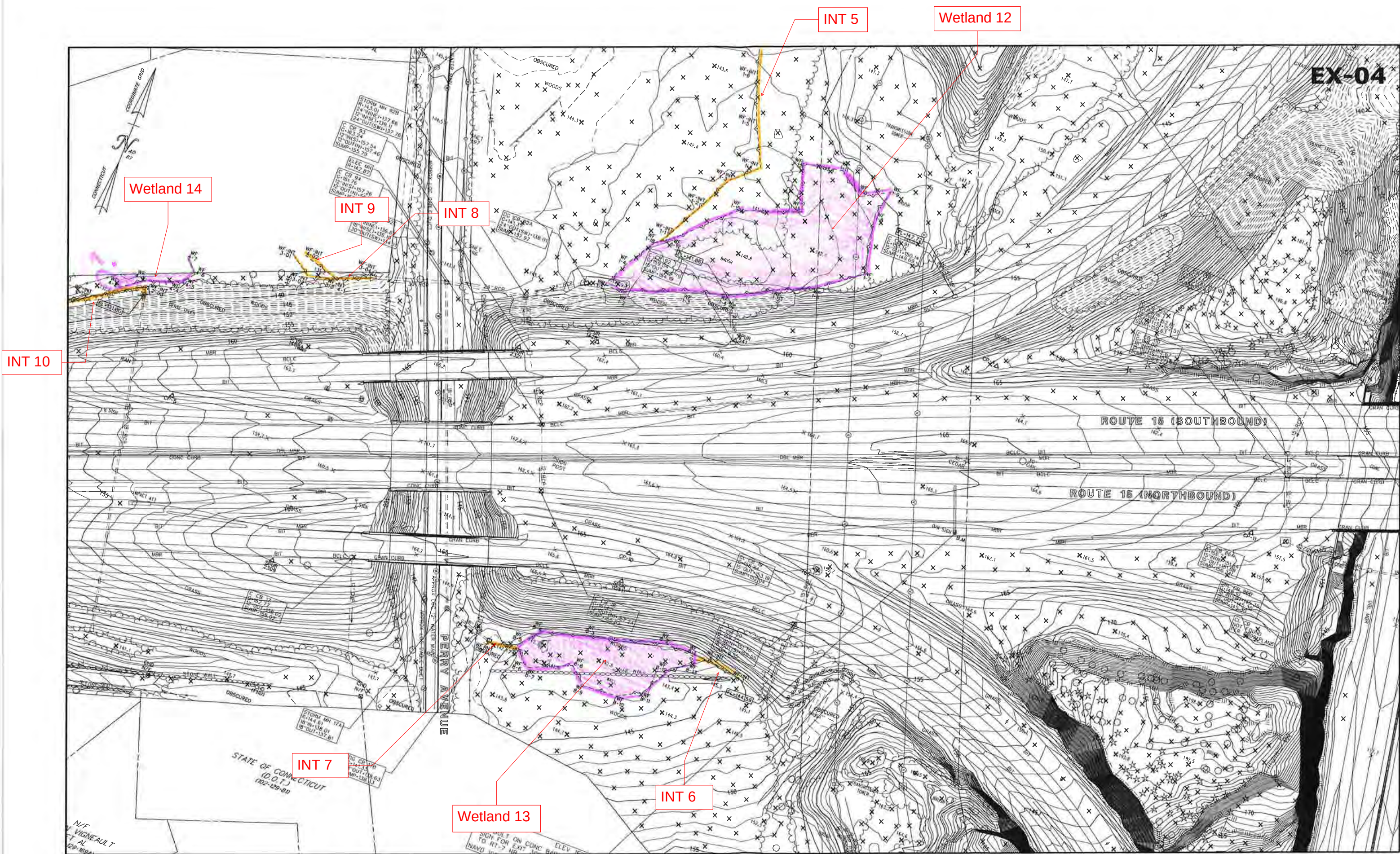
SUBJECT TO AN EASEMENT IN
FAVOR OF TENNECO INC.
(102-190-173A)

EX-03



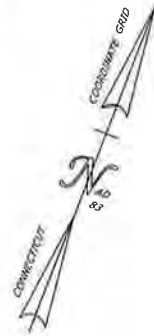
Wetland 11

INT 5



EX-05





STATE OF CONNECTICUT (D.O.T.) (102-129-111)

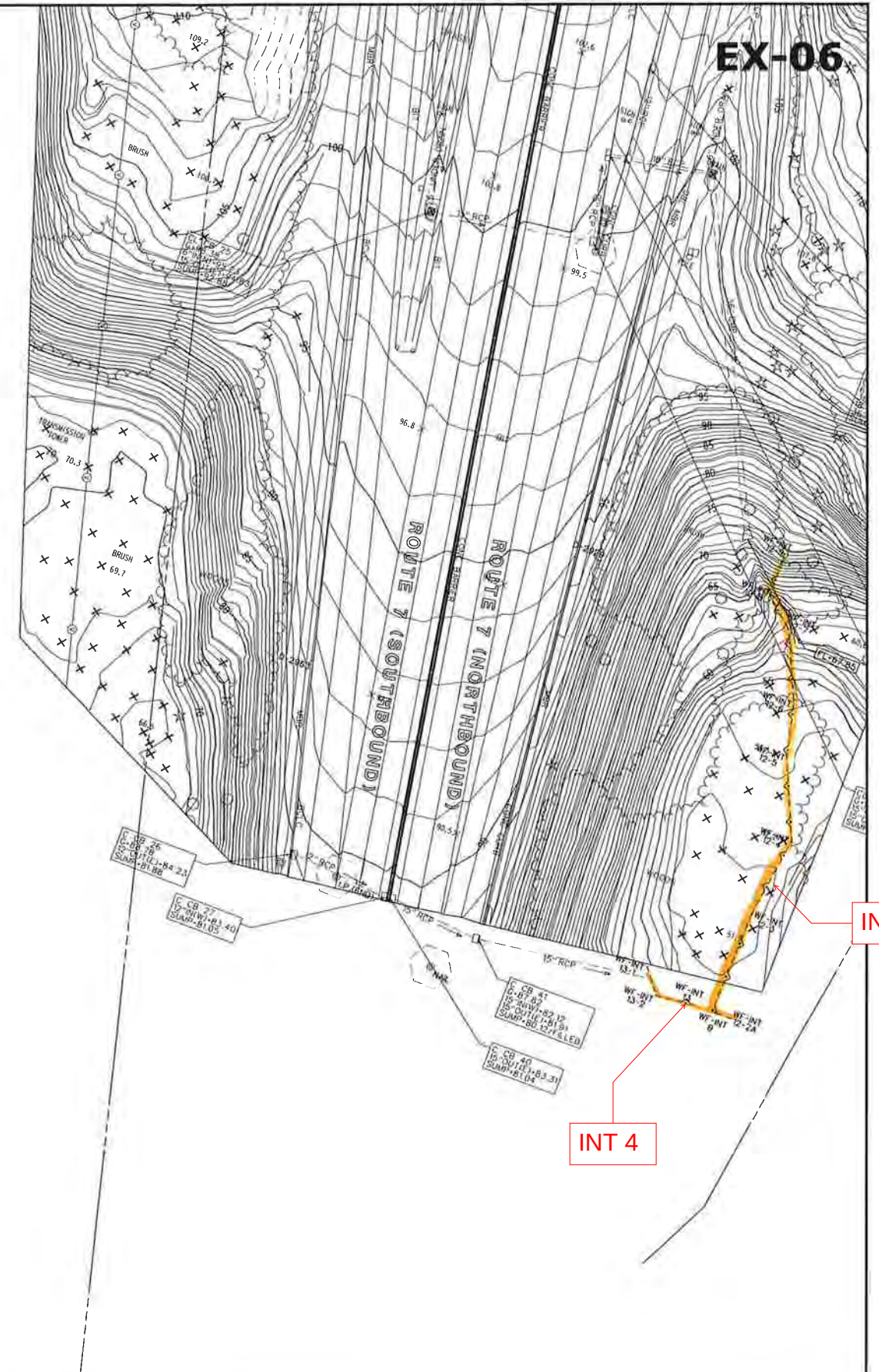
STATE OF CONNECTICUT (D.O.T.) (102-129-98)

STATE OF CONNECTICUT (D.O.T.) (102-129-91)

STATE OF CONNECTICUT (D.O.T.) (102-129-88)

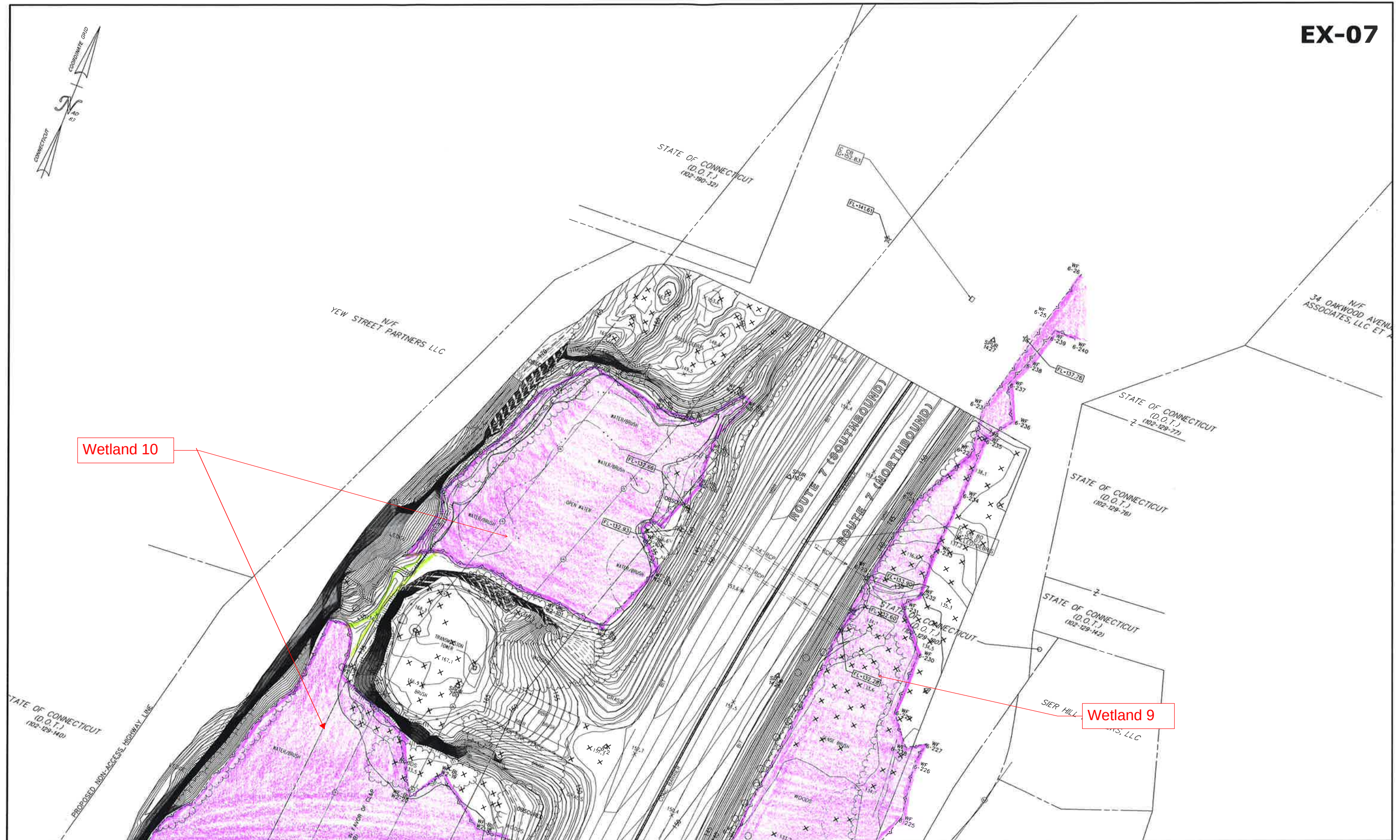
PERRY AVENUE

PROPOSED NON-ACCESS HIGHWAY LINE, PROJECT 102-129



INT 3

INT 4



This is a detailed topographic map of a wetland area, likely for engineering or environmental planning. The map features several key elements:

- Wetland 9:** A specific area of wetland is highlighted in pink and labeled "Wetland 9" with a red arrow pointing to it from the right side of the map.
- Topography:** The map shows contour lines indicating elevation, with various spot elevations marked throughout the terrain.
- Infrastructure:** A major road, "I-75", runs vertically through the center of the map. Other features include "SPUR 12/08", "GAS MAIN", and "SEWER MAIN".
- Vegetation and Land Use:** Areas are labeled with terms like "WOODS", "WATER/BRUSH", "BRUSH", and "OBSCURED". There are also labels for "WETLAND EQUALIZER" and "WETLAND".
- Boundaries and Notes:** The map includes property boundaries, easements (e.g., "EASEMENT FOR 10' WIDE DRAINAGE"), and various project notes such as "SUBJECT TO AN EASEMENT 102-129" and "TAKING LINE PROJECT 102-129".
- Grid and Scale:** A "CONDUIT GRID" is visible in the upper left corner, and a scale bar is located in the bottom right corner.

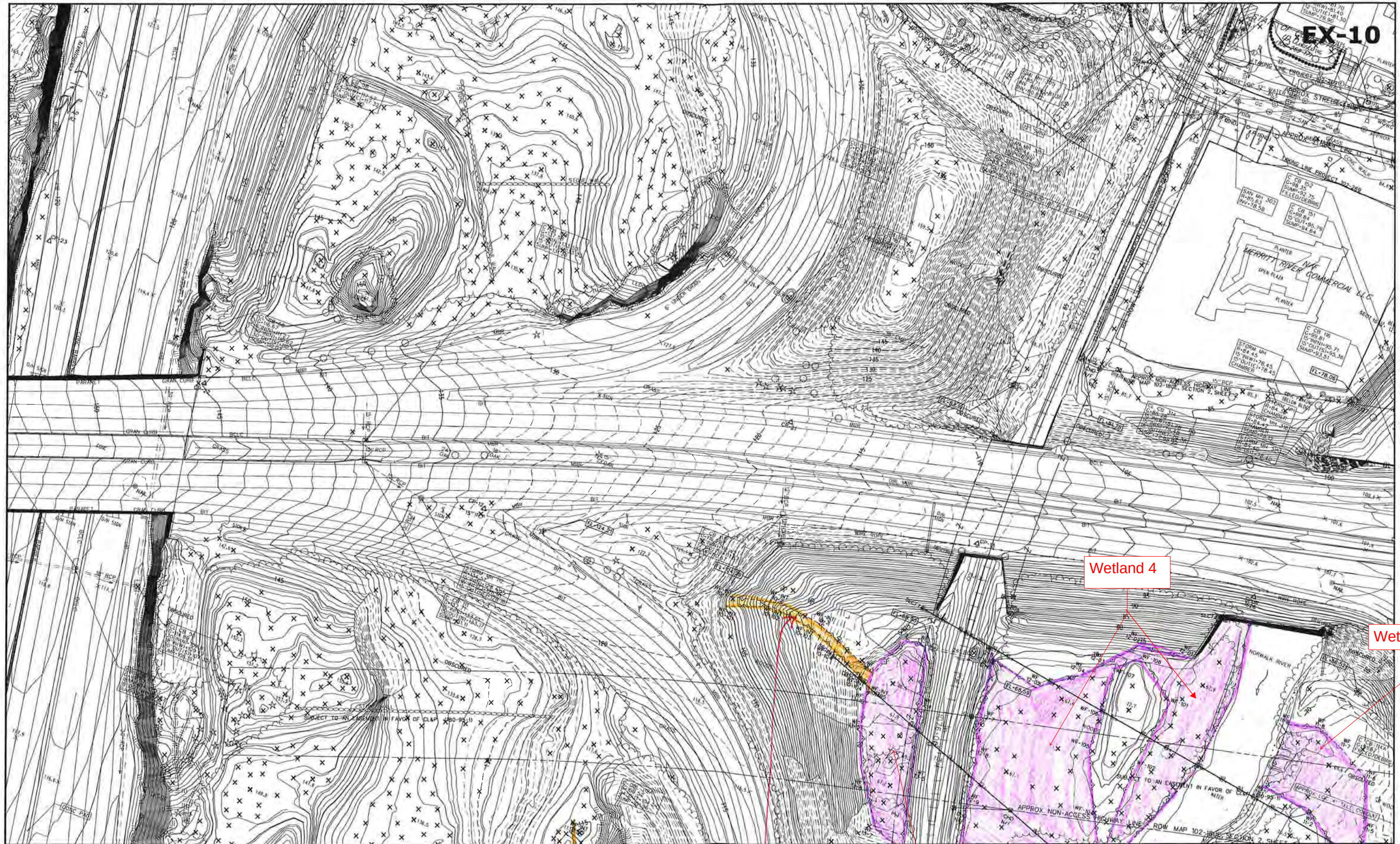
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- Vegetation and Land Use:** Areas are labeled with terms like "WOODS", "WATER/BRUSH", "BRUSH", and "OBSCURED". There are also labels for "WETLAND EQUALIZER" and "WETLAND".
- Boundaries and Notes:** The map includes property boundaries, easements (e.g., "EASEMENT FOR 10' WIDE DRAINAGE"), and various project notes such as "SUBJECT TO AN EASEMENT 102-129" and "TAKING LINE PROJECT 102-129".
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- Topography:** The map shows contour lines indicating elevation, with various spot elevations marked throughout the terrain.
- Infrastructure:** A major road, "I-75", runs vertically through the center of the map. Other features include "SPUR 12/08", "GAS MAIN", and "SEWER MAIN".
- Vegetation and Land Use:** Areas are labeled with terms like "WOODS", "WATER/BRUSH", "BRUSH", and "OBSCURED". There are also labels for "WETLAND EQUALIZER" and "WETLAND".
- Boundaries and Notes:** The map includes property boundaries, easements (e.g., "EASEMENT FOR 10' WIDE DRAINAGE"), and various project notes such as "SUBJECT TO AN EASEMENT 102-129" and "TAKING LINE PROJECT 102-129".
- Grid and Scale:** A "CONDUIT GRID" is visible in the upper left corner, and a scale bar is located in the bottom right corner.





EX-10

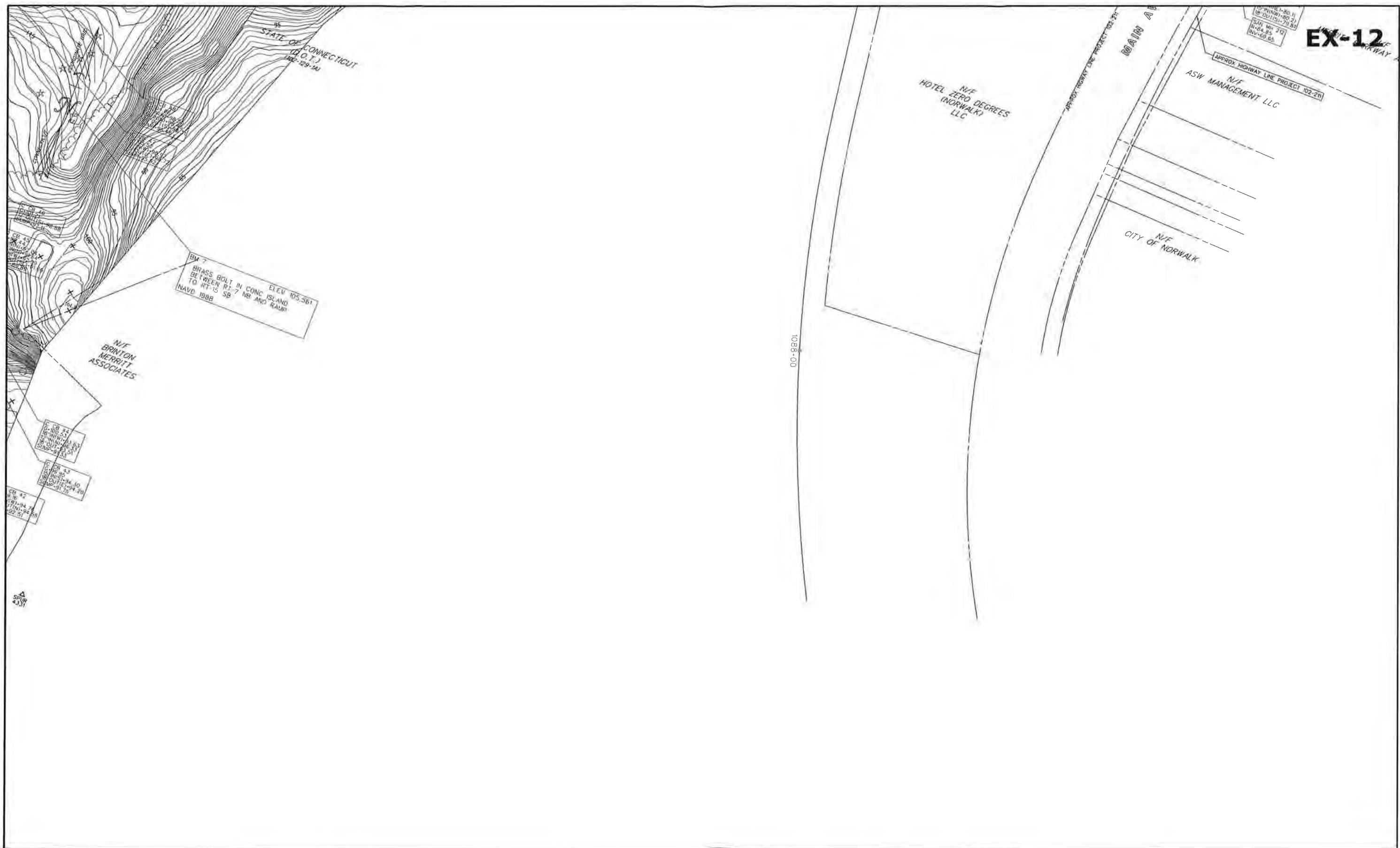
Wetland 4

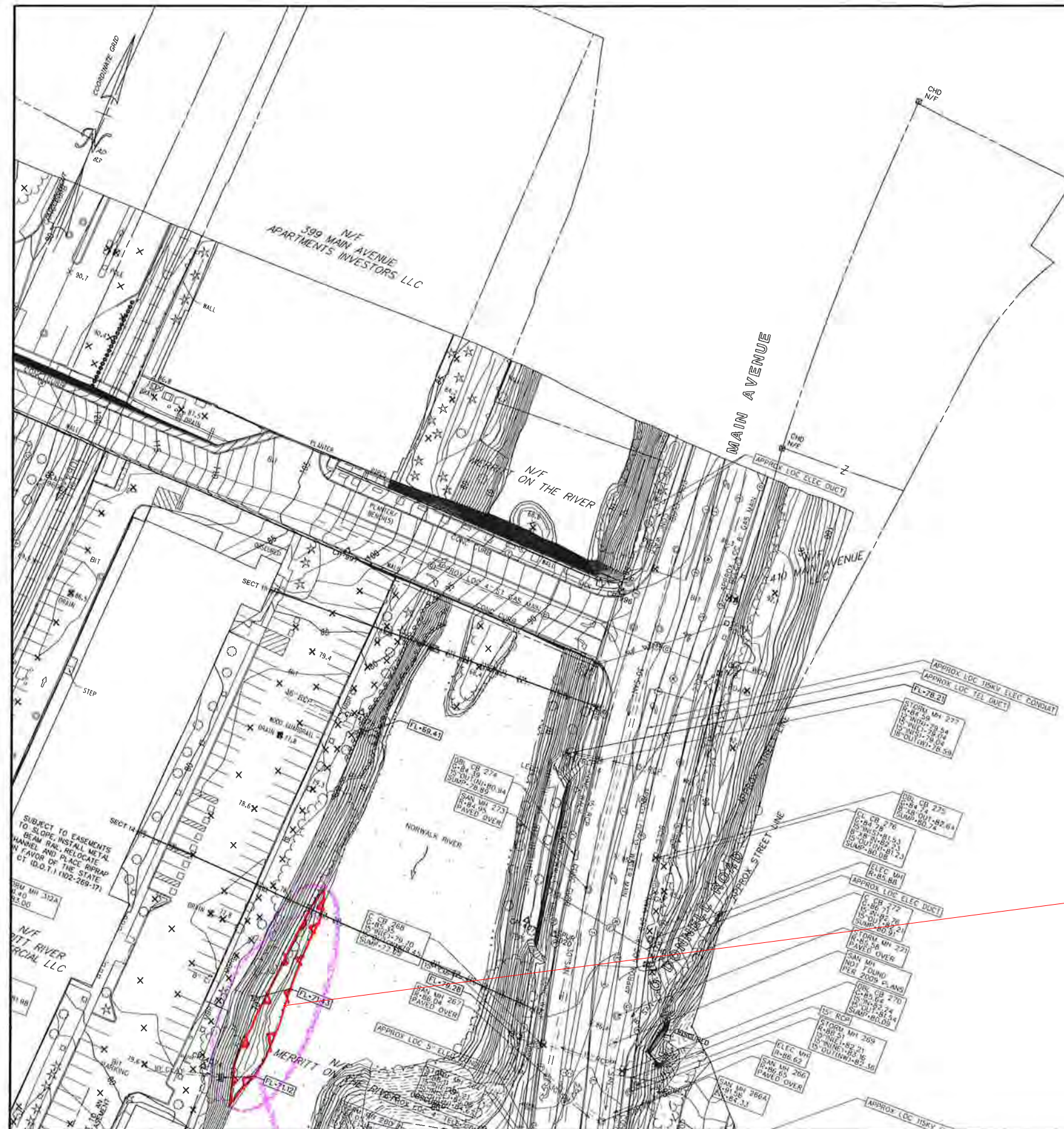
Wetland 2

Erosional feature

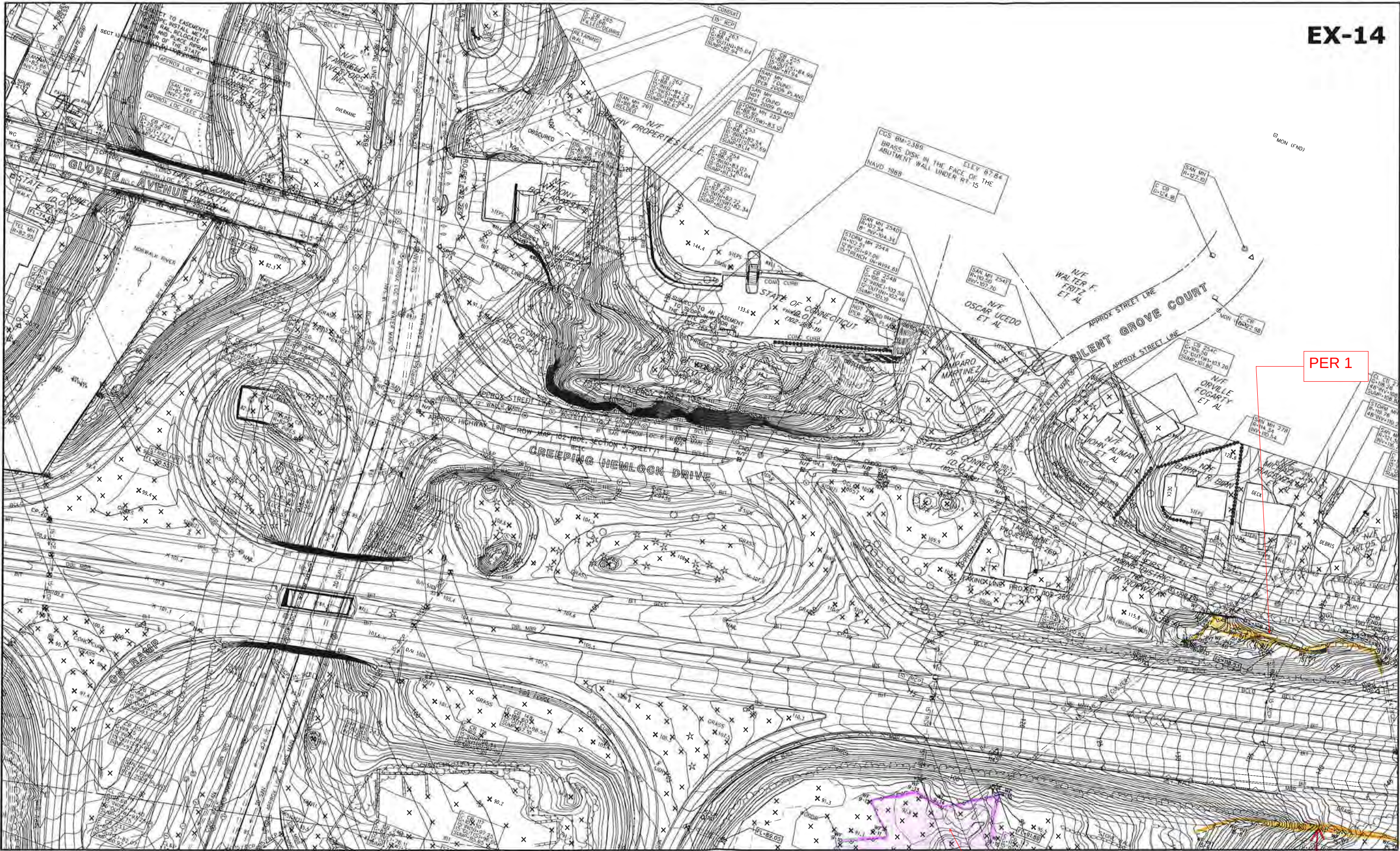
Wetland 6







Wetland 5



PER 1

Wetland 1

erosional feature



Erosional features

EX-17



BM-2
NE BOLT ON CONC BASE OF SIGN
ELEV 145.788
NAVD 1988

N/F
LINDEN ASSOCIATES, LLC

N/F
DEBORAH BRUZEK

APPROX. NON-ACCESS HIGHWAY LINE - ROW MAP 102-180E, SECTION 3, SHEET 1

THE FIRST TAXING DISTRICT
OF THE CITY OF NORWALK

APPROX STREET

APPENDIX C:
Photo Log



PHOTO 1: View of Pond 1, looking northwest.



PHOTO 2: View of upper reach of PER 1 near the pipe outfall, looking west.



PHOTO 3: View of PER 1 box culver inlet north of Route 15 southbound.



PHOTO 4: View of PER 1 south of Route 15 northbound, looking south towards parking lot.



PHOTO 5: View of PER 1, after it transitions to intermittent at culvert inlet near Main Ave, looking southeast towards the parking lot.



PHOTO 6: View of Wetland 1 complex from Route 15 northbound, looking south.



PHOTO 7: View of INT 1 through Wetland 2, looking northwest towards the Norwalk River.



PHOTO 8: View of Wetland 2 looking north towards Route 15.



PHOTO 9: View of Wetland 3 looking south, note backwater channel from the Norwalk River.



PHOTO 10: View of Wetland 4 from the east bank of the Norwalk River looking northwest.

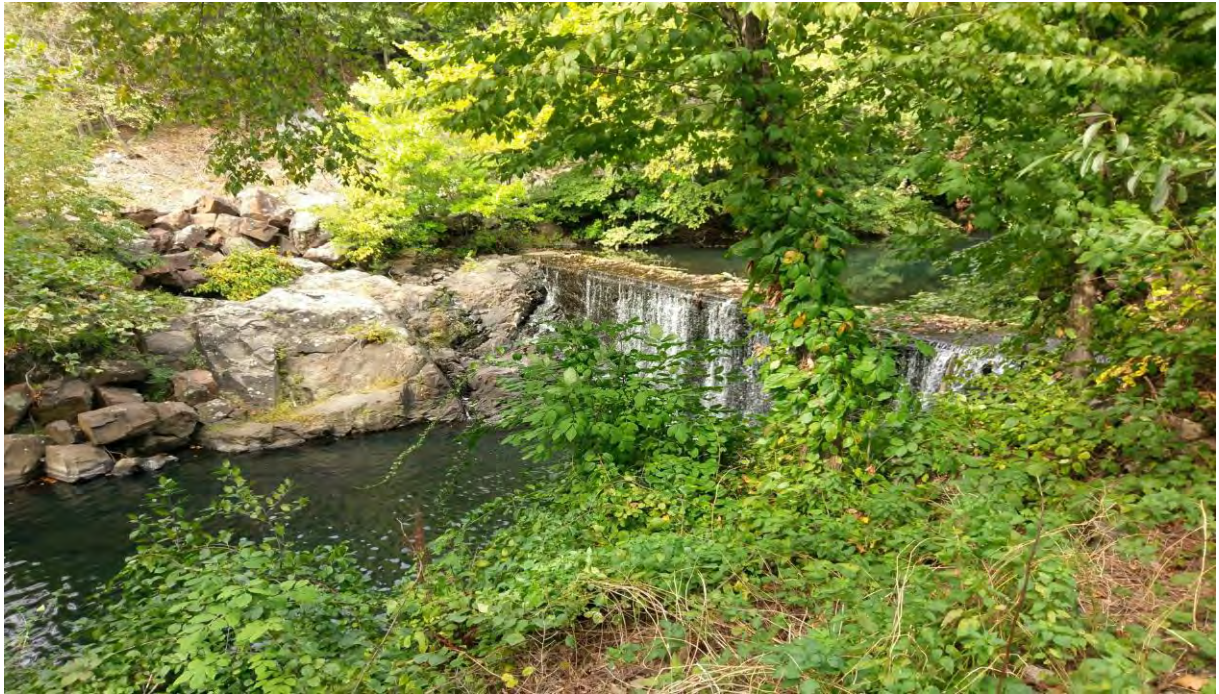


PHOTO 11: View of dam in the Norwalk River, downstream of Route 15.



PHOTO 12: View of the Norwalk River from Wetland 5, looking northeast.



PHOTO 13: View Wetland 5, looking south towards the Glover Street bridge.



PHOTO 14: View of Wetland 6 looking southeast towards the railroad tracks.



PHOTO 15: View of Wetland 7 looking north towards the Route 15/7 interchange. Note lack of vegetation within the depression



PHOTO 16: View of Wetland 8 located in the gore area, looking north. Note woody debris, and microtopography which may be indicative of a vernal pool.



PHOTO 17: View of INT 2 looking southeast towards Wetland 8. Note boulders and rocks forming the banks.



PHOTO 18: View of INT 3 at its upper reaches near Route 7 northbound. Note the substrate is cobble and rock; substrate changes to sand and gravel downstream.



PHOTO 19: View of INT 4, looking west towards Route 7 northbound. Note refuse and sedimentation in the channel.



PHOTO 20: View of Wetland 9, looking northwest towards Route 7. Note common reed growing in and around inundated area.



PHOTO 21: View of Wetland 10 looking southwest over the ponded area.



PHOTO 22: View of Wetland 11 looking north, note ponded area in the center void of vegetation surrounded by forested wetland.



PHOTO 23: View of INT 5 which connects Wetland 11 and 12, looking south towards Wetland 12.



PHOTO 24: View of Wetland 12 looking east towards the powerline ROW.



PHOTO 25: View of emergent portion of Wetland 13 looking northeast towards embankment.



PHOTO 26: View of forested portion of Wetland 13 looking east, note large boulders and lack of herbaceous growth.



PHOTO 27: Downstream view of INT 6 looking west towards Wetland 13.



PHOTO 28: View of OHWM of INT 7 looking north.



PHOTO 29: View of catch basin downstream of INT 7.



PHOTO 30: View of INT 8, looking east towards Perry Avenue, note culvert is partially buried.



PHOTO 31: View of INT 9 flowing northwest off-site; banks are densely vegetated with herbs and shrubs.



PHOTO 32: View of Wetland 14 looking south towards Route 15 embankment.



PHOTO 33: View of INT 10 pipe outfall, looking south towards Route 15 embankment.



PHOTO 34: View of Wetland 15 looking north.



PHOTO 35: View of SP-1, a previously delineated wetland that failed to meet the definition of a wetland at the federal or state level due to lack of hydric or poorly-drained soils.



PHOTO 36: View of SP-2 looking south from INT 3.



PHOTO 37: View of SP-1, a previously delineated wetland that failed to meet the definition of a wetland at the federal or state level due to lack of hydric or poorly-drained soils.



PHOTO 38: View of SP-2 looking south from INT 3.



PHOTO 39: View of stormwater basin located east of Wetland 1. Note lack of vegetation in the basin, large amount of plastic in the water, and plastic corrugated pipe.



PHOTO 40: View of riprap lined swale looking southwest from stormwater basin. Note excessive refuse.

APPENDIX D:
ACOE Datasheets

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/29/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 1 PEM
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14232 Long: -73.42369 Datum: N/A
 Soil Map Unit Name: Canton and Charlton (62C) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) No (if no, explain in Remarks.)
 Are Vegetation Yes, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 1</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. The wetland is located between highway, a developed commercial lot, and a transmission line. Soils and vegetation appear to be disturbed due to the development of the surrounding properties. PEM portion of larger wetland system	

HYDROLOGY

Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☒ Water Marks (B1) ☐ Sediment Deposits (B2) ☒ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☒ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☒ Surface Soil Cracks (B6) ☒ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>18</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>18</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 1 PEM

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum	(Plot size: <u>15 ft.</u>)			
1.	<u>Rosa multiflora</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>
2.	<u>Rubus idaeus</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>
3.				
4.				
5.				
6.				
7.				
		<u>10</u>	= Total Cover	

Herb Stratum	(Plot size: <u>5 ft.</u>)			
1.	<u>Phragmites australis</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>
2.	<u>Impatiens capensis</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>
3.	<u>Persicaria sagittata</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>
4.	<u>Mikania scandens</u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>
5.	<u>Solidago rugosa</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
6.	<u>Persicaria perfoliata</u>	<u>5</u>	<u>No</u>	<u>FAC</u>
7.	<u>Onoclea sensibilis</u>	<u>5</u>	<u>No</u>	<u>FACW</u>
8.	<u>Fraxinus pennsylvanica</u>	<u>5</u>	<u>No</u>	<u>FACW</u>
9.	<u>Rosa multiflora</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
10.	<u>Alnus serrulata</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
11.				
12.				
		<u>90</u>	= Total Cover	

Woody Vine Stratum	(Plot size: <u>30 ft.</u>)			
1.	<u>None Observed</u>			
2.				
3.				
4.				
		<u>0</u>	= Total Cover	

Dominance Test worksheet:

 Number of Dominant Species
That Are OBL, FACW, or FAC: 5 (A)

 Total Number of Dominant
Species Across All Strata: 7 (B)

 Percent of Dominant Species
That Are OBL, FACW, or FAC: 71% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL species	<u>25</u>	x 1 =	<u>25</u>
FACW species	<u>45</u>	x 2 =	<u>90</u>
FAC species	<u>15</u>	x 3 =	<u>45</u>
FACU species	<u>15</u>	x 4 =	<u>60</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column Totals:	<u>100</u>	(A)	<u>220</u> (B)

 Prevalence Index = B/A = 2.20
Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index is ≤ 3.0 ¹
☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:

Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic
Vegetation

 Present? Yes X No

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: Wet 1 PEM

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 4/1						Mucky Silt Loam	
5-16	10YR 3/2	93	2.5YR 3/6	7	C	M	Loamy Coarse Sand	
16-18	10YR 5/4	60	5YR 4/6	40	C	M	Coarse Sand	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epipedon (A2)	☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Black Histic (A3)	☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7) (LRR K, L)
☐ Stratified Layers (A5)	☐ Polyvalue Below Surface (S8) (LRR K, L)
☐ Depleted Below Dark Surface (A11)	☐ Thin Dark Surface (S9) (LRR K, L)
☐ Thick Dark Surface (A12)	☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Sandy Mucky Mineral (S1)	☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
☐ Sandy Gleyed Matrix (S4)	☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Redox (S5)	☐ Red Parent Material (F12)
☒ Stripped Matrix (S6)	☐ Very Shallow Dark Surface (F22)
☐ Dark Surface (S7) (LRR R, MLRA 149B)	☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present? Yes ☒ No ☐
Type: _____ Depth (inches): _____	

Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/29/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 1 PSS
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14242 Long: -73.42346 Datum: #N/A
 Soil Map Unit Name: Canton and Charlton (62C) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) No (if no, explain in Remarks.)
 Are Vegetation Yes, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 1</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. The wetland is located between highway, a developed commercial lot, and a transmission line. Soils and vegetation appear to be disturbed due to the development of the surrounding properties. PSS portion of larger wetland system	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u> </u> High Water Table (A2) <u> </u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> X </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u> </u> Iron Deposits (B5) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Sparsely Vegetated Concave Surface (B8) <u> X </u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks)

Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u>>18</u> Saturation Present? Yes <u> </u> No <u> X </u> Depth (inches): <u>>18</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> X </u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 1 PSS

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Acer rubrum</u>	20	Yes	FAC
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
<u>20</u> = Total Cover			

Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Alnus serrulata</u>	40	Yes	OBL
2. <u>Frangula alnus</u>	15	Yes	FAC
3. <u>Fraxinus pennsylvanica</u>	10	No	FACW
4. <u>Cornus amomum</u>	10	No	FACW
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
<u>75</u> = Total Cover			

Herb Stratum (Plot size: <u>5 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Phragmites australis</u>	15	Yes	FACW
2. <u>Onoclea sensibilis</u>	15	Yes	FACW
3. <u>Persicaria sagittata</u>	10	Yes	OBL
4. <u>Solidago rugosa</u>	10	Yes	FAC
5. <u>Frangula alnus</u>	10	Yes	FAC
6. <u>Mikania scandens</u>	10	Yes	OBL
7. <u>Symplocarpus foetidus</u>	5	No	OBL
8. <u>Persicaria perfoliata</u>	5	No	FAC
9. <u>Alnus serrulata</u>	5	No	OBL
10. <u>Fraxinus pennsylvanica</u>	5	No	FACW
11. _____	_____	_____	_____
12. _____	_____	_____	_____
<u>90</u> = Total Cover			

Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
<u>0</u> = Total Cover			

Dominance Test worksheet:

 Number of Dominant Species
That Are OBL, FACW, or FAC: 9 (A)

 Total Number of Dominant
Species Across All Strata: 9 (B)

 Percent of Dominant Species
That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>70</u>	x 1 = <u>70</u>
FACW species <u>55</u>	x 2 = <u>110</u>
FAC species <u>60</u>	x 3 = <u>180</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>185</u> (A)	<u>360</u> (B)

 Prevalence Index = B/A = 1.95
Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index is ≤ 3.0 ¹
☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:
Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic
Vegetation

 Present? Yes X No _____

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

Sampling Point: **Wet 1 PSS**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 11/16/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Upl 1
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14205 Long: -73.42392 Datum: N/A
 Soil Map Unit Name: Canton and Charlton soils 3-15 percent slopes, extremely stony (62C) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology. The survey was completed during a mild drought. Located in lowland adjacent to on-ramp for Route 15. Upland point for Wetland 1.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>16</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>16</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

One (1) secondary indicator was present; however, due to the absence of two (2) or more secondary indicators, the hydrology criterion has not been met.

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Upl 1

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Acer rubrum</i>		50	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)														
2. <i>Ulmus americana</i>		40	Yes	FACW															
3. <i>Acer saccharum</i>		10	No	FACU															
4. <i>Prunus serotina</i>		5	No	FACU															
5. _____		_____	_____	_____															
6. _____		_____	_____	_____															
7. _____		_____	_____	_____															
		105	= Total Cover																
Sapling/Shrub Stratum	(Plot size: <u>15 ft.</u>)				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>40</u></td> <td>x 2 = <u>80</u></td> </tr> <tr> <td>FAC species <u>80</u></td> <td>x 3 = <u>240</u></td> </tr> <tr> <td>FACU species <u>70</u></td> <td>x 4 = <u>280</u></td> </tr> <tr> <td>UPL species <u>40</u></td> <td>x 5 = <u>200</u></td> </tr> <tr> <td>Column Totals: <u>230</u> (A)</td> <td><u>800</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.48</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>40</u>	x 2 = <u>80</u>	FAC species <u>80</u>	x 3 = <u>240</u>	FACU species <u>70</u>	x 4 = <u>280</u>	UPL species <u>40</u>	x 5 = <u>200</u>	Column Totals: <u>230</u> (A)	<u>800</u> (B)
Total % Cover of:	Multiply by:																		
OBL species <u>0</u>	x 1 = <u>0</u>																		
FACW species <u>40</u>	x 2 = <u>80</u>																		
FAC species <u>80</u>	x 3 = <u>240</u>																		
FACU species <u>70</u>	x 4 = <u>280</u>																		
UPL species <u>40</u>	x 5 = <u>200</u>																		
Column Totals: <u>230</u> (A)	<u>800</u> (B)																		
1. <i>Acer rubrum</i>		15	Yes	FAC															
2. <i>Frangula alnus</i>		10	Yes	FAC															
3. _____		_____	_____	_____															
4. _____		_____	_____	_____															
5. _____		_____	_____	_____															
6. _____		_____	_____	_____															
7. _____		_____	_____	_____															
		25	= Total Cover																
Herb Stratum	(Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <i>Alliaria petiolata</i>		50	Yes	FACU															
2. <i>Celastrus orbiculatus</i>		10	No	UPL															
3. <i>Lonicera japonica</i>		5	No	FACU															
4. <i>Toxicodendron radicans</i>		5	No	FAC															
5. _____		_____	_____	_____															
6. _____		_____	_____	_____															
7. _____		_____	_____	_____															
8. _____		_____	_____	_____															
9. _____		_____	_____	_____															
10. _____		_____	_____	_____															
11. _____		_____	_____	_____															
12. _____		_____	_____	_____															
		70	= Total Cover																
Woody Vine Stratum	(Plot size: <u>30 ft.</u>)				Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
1. <i>Celastrus orbiculatus</i>		30	Yes	UPL															
2. _____		_____	_____	_____															
3. _____		_____	_____	_____															
4. _____		_____	_____	_____															
		30	= Total Cover																

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Sampling Point: **Upl 1**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/28/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 2
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14187 Long: -73.42670 Datum: N/A
 Soil Map Unit Name: Udorthents-Urban land complex (306) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation Yes, Soil No, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 2</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. The wetland is located adjacent to the river, a commercial development, the highway off ramp, and Main Street. It receives hydrology from overland flows and an intermittent watercourse that appears to be partially blocked by tree debris.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☒ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>16</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>16</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 2

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Acer negundo</i>		20	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)														
2. _____																			
3. _____																			
4. _____																			
5. _____																			
6. _____																			
7. _____																			
		<u>20</u>	= Total Cover																
Sapling/Shrub Stratum	(Plot size: <u>15 ft.</u>)				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 = <u>100</u></td> </tr> <tr> <td>FAC species <u>65</u></td> <td>x 3 = <u>195</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>135</u></td> <td>(A) <u>385</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.85</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>65</u>	x 3 = <u>195</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>135</u>	(A) <u>385</u> (B)
Total % Cover of:	Multiply by:																		
OBL species <u>0</u>	x 1 = <u>0</u>																		
FACW species <u>50</u>	x 2 = <u>100</u>																		
FAC species <u>65</u>	x 3 = <u>195</u>																		
FACU species <u>10</u>	x 4 = <u>40</u>																		
UPL species <u>10</u>	x 5 = <u>50</u>																		
Column Totals: <u>135</u>	(A) <u>385</u> (B)																		
1. <i>Frangula alnus</i>		10	Yes	FAC															
2. _____																			
3. _____																			
4. _____																			
5. _____																			
6. _____																			
7. _____																			
		<u>10</u>	= Total Cover																
Herb Stratum	(Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation ☒ <u>2</u> - Dominance Test is >50% ☒ <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <i>Impatiens capensis</i>		50	Yes	FACW															
2. <i>Toxicodendron radicans</i>		20	Yes	FAC															
3. <i>Artemisia vulgaris</i>		10	No	UPL															
4. <i>Solidago rugosa</i>		5	No	FAC															
5. <i>Symphytotrichum lateriflorum</i>		5	No	FAC															
6. <i>Frangula alnus</i>		5	No	FAC															
7. _____																			
8. _____																			
9. _____																			
10. _____																			
11. _____																			
12. _____																			
		<u>95</u>	= Total Cover																
Woody Vine Stratum	(Plot size: <u>30 ft.</u>)				Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
1. <i>Vitis labrusca</i>		10	Yes	FACU															
2. _____																			
3. _____																			
4. _____																			
		<u>10</u>	= Total Cover																

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Sampling Point: **Wet 2**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 11/16/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Upl 2 & 3
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14161 Long: -73.42691 Datum: N/A
 Soil Map Unit Name: Udorthents-Urban Land Complex (306) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation Yes, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: This point was determined not to be within a wetland due to the lack of all three wetland criteria. The survey was completed during a mild drought. Upland point for Wetlands 2 and 3 located adjacent to a parking garage, highly disturbed and evidence of fill. Upland between two wetlands is largely manicured lawn and landscaped plants.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u> </u> High Water Table (A2) <u> </u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u> </u> Iron Deposits (B5) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Sparsely Vegetated Concave Surface (B8) <u> </u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No positive indication of wetland hydrology was observed.

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Upl 2 & 3

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Betula populifolia</i>	30	Yes	FAC
2. <i>Acer platanoides</i>	20	Yes	UPL
3. <i>Acer rubrum</i>	10	No	FAC
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	60 = Total Cover		

Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Acer rubrum</i>	10	Yes	FAC
2. <i>Frangula alnus</i>	5	Yes	FAC
3. <i>Acer platanoides</i>	5	Yes	UPL
4. <i>Rubus phoenicolasius</i>	2	No	FACU
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	22 = Total Cover		

Herb Stratum (Plot size: <u>5 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Mowed grass</i>	75	Yes	UPL
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	75 = Total Cover		

Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
	0 = Total Cover		

Dominance Test worksheet:

 Number of Dominant Species
That Are OBL, FACW, or FAC: 3 (A)

 Total Number of Dominant
Species Across All Strata: 6 (B)

 Percent of Dominant Species
That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>55</u>	x 3 = <u>165</u>
FACU species <u>2</u>	x 4 = <u>8</u>
UPL species <u>100</u>	x 5 = <u>500</u>
Column Totals: <u>157</u> (A)	<u>673</u> (B)

 Prevalence Index = B/A = 4.29
Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index is ≤ 3.0 ¹
 - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:
Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic
Vegetation

 Present? Yes _____ No X

Remarks:

 No positive indication of hydrophytic vegetation was observed ($\geq 50\%$ of dominant species indexed as FAC- or drier).

Mowed grass composed the majority of the sample plot.

Sampling Point: **Upl 2 & 3**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/28/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 3
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14069 Long: -73.42700 Datum: N/A
 Soil Map Unit Name: Udorthents-Urban land complex (306) NWI Classification: R2UBH
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation Yes, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 3</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. The wetland is disturbed by the development of the nearby commercial building; a portion of the wetland has been landscaped and planted.	

HYDROLOGY

Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
<u> </u> Surface Water (A1) <u> </u> High Water Table (A2) <u> X </u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> X </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u> </u> Iron Deposits (B5) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Sparsely Vegetated Concave Surface (B8)	<u> X </u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks)	<u> X </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> X </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> N/A </u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u> >16 </u> Saturation Present? Yes <u> X </u> No <u> </u> Depth (inches): <u> 12 </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> X </u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 3

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>Fraxinus pennsylvanica</u>	25	Yes	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>25</u> = Total Cover																		
				Prevalence Index Worksheet:														
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				<table style="width: 100%;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>110</u></td> <td>x 2 = <u>220</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>115</u> (A)</td> <td><u>240</u> (B)</td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>110</u>	x 2 = <u>220</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>115</u> (A)	<u>240</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>110</u>	x 2 = <u>220</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>5</u>	x 4 = <u>20</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>115</u> (A)	<u>240</u> (B)																	
Herb Stratum (Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)														
Woody Vine Stratum (Plot size: <u>30 ft.</u>)				Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
1. <u>Impatiens capensis</u> 30 Yes FACW 2. <u>Onoclea sensibilis</u> 5 No FACW 3. <u>Parthenocissus quinquefolia</u> 5 No FACU 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____ 12. _____ <u>40</u> = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <u>None Observed</u> 2. _____ 3. _____ 4. _____ <u>0</u> = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No _____														

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1-0	10YR 2/1	100					Peat	
0-4	10YR 2/2	100					Silt Loam	
4-12	10YR 3/2	85	7.5YR 4/6	15	C	M, PL	Silt Loam	
12-16	2.5Y 3/1	85	7.5YR 4/6	15	C	M	Silt Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epipedon (A2)	☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Black Histic (A3)	☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7) (LRR K, L)
☐ Stratified Layers (A5)	☐ Polyvalue Below Surface (S8) (LRR K, L)
☐ Depleted Below Dark Surface (A11)	☐ Thin Dark Surface (S9) (LRR K, L)
☐ Thick Dark Surface (A12)	☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Sandy Mucky Mineral (S1)	☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
☐ Sandy Gleyed Matrix (S4)	☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Redox (S5)	☐ Red Parent Material (F12)
☐ Stripped Matrix (S6)	☐ Very Shallow Dark Surface (F22)
☐ Dark Surface (S7) (LRR R, MLRA 149B)	☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present? Yes ☒ No ☐
Type: _____ Depth (inches): _____	

Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/29/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wetland 4
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14192 Long: -73.42729 Datum: #N/A
 Soil Map Unit Name: Hollis-Chatfeild -Rock outcrop complex (75C) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation Yes, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 4</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. Wetland is adjacent to the railroad, highway fill embankment, and the river. An upland berm is located within the wetland boundary and was delineated as an upland exclusion. Area is disturbed due to the presence of the highway and railroad.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) <u>X</u> _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) <u>X</u> _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): <u>>18</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>10</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wetland 4

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Acer rubrum</i>		60	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>83%</u> (A/B)														
2. <i>Quercus palustris</i>		10	No	FACW															
3. _____		_____	_____	_____															
4. _____		_____	_____	_____															
5. _____		_____	_____	_____															
6. _____		_____	_____	_____															
7. _____		_____	_____	_____															
		<u>70</u>	= Total Cover																
Sapling/Shrub Stratum	(Plot size: <u>15 ft.</u>)				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>60</u></td> <td>x 1 = <u>60</u></td> </tr> <tr> <td>FACW species <u>65</u></td> <td>x 2 = <u>130</u></td> </tr> <tr> <td>FAC species <u>85</u></td> <td>x 3 = <u>255</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>220</u> (A)</td> <td><u>495</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.25</u>	Total % Cover of:	Multiply by:	OBL species <u>60</u>	x 1 = <u>60</u>	FACW species <u>65</u>	x 2 = <u>130</u>	FAC species <u>85</u>	x 3 = <u>255</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>220</u> (A)	<u>495</u> (B)
Total % Cover of:	Multiply by:																		
OBL species <u>60</u>	x 1 = <u>60</u>																		
FACW species <u>65</u>	x 2 = <u>130</u>																		
FAC species <u>85</u>	x 3 = <u>255</u>																		
FACU species <u>0</u>	x 4 = <u>0</u>																		
UPL species <u>10</u>	x 5 = <u>50</u>																		
Column Totals: <u>220</u> (A)	<u>495</u> (B)																		
1. <i>Cornus amomum</i>		30	Yes	FACW															
2. <i>Frangula alnus</i>		10	Yes	FAC															
3. <i>Fraxinus pennsylvanica</i>		5	No	FACW															
4. _____		_____	_____	_____															
5. _____		_____	_____	_____															
6. _____		_____	_____	_____															
7. _____		_____	_____	_____															
		<u>45</u>	= Total Cover																
Herb Stratum	(Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation ☒ <u>2</u> - Dominance Test is >50% ☒ <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <i>Persicaria sagittata</i>		40	Yes	OBL															
2. <i>Symphotrichum lateriflorum</i>		15	Yes	FAC															
3. <i>Peltandra virginica</i>		10	No	OBL															
4. <i>Mikania scandens</i>		10	No	OBL															
5. <i>Impatiens capensis</i>		10	No	FACW															
6. <i>Phragmites australis</i>		10	No	FACW															
7. _____		_____	_____	_____															
8. _____		_____	_____	_____															
9. _____		_____	_____	_____															
10. _____		_____	_____	_____															
11. _____		_____	_____	_____															
12. _____		_____	_____	_____															
		<u>95</u>	= Total Cover																
Woody Vine Stratum	(Plot size: <u>30 ft.</u>)				Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
1. <i>Ampelopsis brevipedunculata</i> *		10	Yes	UPL															
2. _____		_____	_____	_____															
3. _____		_____	_____	_____															
4. _____		_____	_____	_____															
		<u>10</u>	= Total Cover																

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

*Species does not appear on the 2016 National Wetland Plant List; therefore the species is assumed a UPL indicator status.

Sampling Point: **Wetland 4**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 11/16/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Upl 4
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 10-12
 Subregion (LRR or MLRA): LRR-R Lat: 41.14204 Long: -73.42776 Datum: #N/A
 Soil Map Unit Name: Urban Land (307) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: This point was determined not to be within a wetland due to the lack of all three wetland criteria. The survey was completed during a mild drought. Upland for Wetland 4 located on a fill embankment adjacent to Route 15 and railroad.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No positive indication of wetland hydrology was observed.

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Upl 4

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Acer rubrum</i>		30	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>14%</u> (A/B)														
2. <i>Quercus rubra</i>		20	Yes	FACU															
3. <i>Malus sp.*</i>		15	Yes	UPL															
4. <i>Betula populifolia</i>		10	No	FAC															
5. _____		_____	_____	_____															
6. _____		_____	_____	_____															
7. _____		_____	_____	_____															
		<u>75</u>	= Total Cover																
Sapling/Shrub Stratum	(Plot size: <u>15 ft.</u>)																		
1. <i>Euonymus alatus**</i>		30	Yes	UPL	Prevalence Index Worksheet: <table style="width: 100%;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>45</u></td> <td>x 4 = <u>180</u></td> </tr> <tr> <td>UPL species <u>60</u></td> <td>x 5 = <u>300</u></td> </tr> <tr> <td>Column Totals: <u>145</u> (A)</td> <td><u>600</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>4.14</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>45</u>	x 4 = <u>180</u>	UPL species <u>60</u>	x 5 = <u>300</u>	Column Totals: <u>145</u> (A)	<u>600</u> (B)
Total % Cover of:	Multiply by:																		
OBL species <u>0</u>	x 1 = <u>0</u>																		
FACW species <u>0</u>	x 2 = <u>0</u>																		
FAC species <u>40</u>	x 3 = <u>120</u>																		
FACU species <u>45</u>	x 4 = <u>180</u>																		
UPL species <u>60</u>	x 5 = <u>300</u>																		
Column Totals: <u>145</u> (A)	<u>600</u> (B)																		
2. <i>Rosa multiflora</i>		10	Yes	FACU															
3. _____		_____	_____	_____															
4. _____		_____	_____	_____															
5. _____		_____	_____	_____															
6. _____		_____	_____	_____															
7. _____		_____	_____	_____															
		<u>40</u>	= Total Cover																
Herb Stratum	(Plot size: <u>5 ft.</u>)																		
1. <i>Lonicera japonica</i>		15	Yes	FACU	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <i>Euonymus alatus**</i>		15	Yes	UPL															
3. _____		_____	_____	_____															
4. _____		_____	_____	_____															
5. _____		_____	_____	_____															
6. _____		_____	_____	_____															
7. _____		_____	_____	_____															
8. _____		_____	_____	_____															
9. _____		_____	_____	_____															
10. _____		_____	_____	_____															
11. _____		_____	_____	_____															
12. _____		_____	_____	_____															
		<u>30</u>	= Total Cover																
Woody Vine Stratum	(Plot size: <u>30 ft.</u>)																		
1. <i>None Observed</i>		_____	_____	_____	Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
2. _____		_____	_____	_____															
3. _____		_____	_____	_____															
4. _____		_____	_____	_____															
		<u>0</u>	= Total Cover																

Hydrophytic Vegetation
 Present? Yes _____ No X

Remarks:

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

*Genus does not appear on the 2016 National Wetland Plant List; therefore the species is assumed a UPL indicator status.

**Species does not appear on the 2016 National Wetland Plant List; therefore the species is assumed a UPL indicator status.

Sampling Point: **Upl 4**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/28/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 5
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14423 Long: -73.42695 Datum: N/A
 Soil Map Unit Name: Urban land (307) NWI Classification: R5UBH, R4SBC, R2UBH
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) YES (if no, explain in Remarks.)
 Are Vegetation Yes, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 5</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. Adjacent to Norwalk River, highly disturbed and manipulated, landscaped riprap embankment.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u> </u> High Water Table (A2) <u> X </u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> X </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u> </u> Iron Deposits (B5) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Sparsely Vegetated Concave Surface (B8) <u> </u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> X </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u> </u> No <u> X </u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u> X </u> Depth (inches): <u>>12</u> Saturation Present? Yes <u> X </u> No <u> </u> Depth (inches): <u>10</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> X </u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 5

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	<u>0</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
	<u>0</u>	= Total Cover	

Herb Stratum (Plot size: <u>5 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>Boehmeria cylindrica</u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Symphotrichum lanceolatum</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Rosa multiflora</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>
4. <u>Myosotis scorpioides</u>	<u>10</u>	<u>No</u>	<u>OBL</u>
5. <u>Lythrum salicaria</u>	<u>10</u>	<u>No</u>	<u>OBL</u>
6. <u>Persicaria hydropiperoides</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
7. <u>Mikania scandens</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
8. _____			
9. _____			
10. _____			
11. _____			
12. _____			
	<u>105</u>	= Total Cover	

Woody Vine Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
	<u>0</u>	= Total Cover	

Dominance Test worksheet:

 Number of Dominant Species
That Are OBL, FACW, or FAC: 2 (A)

 Total Number of Dominant
Species Across All Strata: 3 (B)

 Percent of Dominant Species
That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>55</u>	x 1 = <u>55</u>
FACW species <u>25</u>	x 2 = <u>50</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>25</u>	x 4 = <u>100</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>105</u> (A)	<u>205</u> (B)

 Prevalence Index = B/A = 1.95
Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index is ≤ 3.0 ¹
☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:
Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic
Vegetation

 Present? Yes X No _____

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Sampling Point: **Wet 5**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 11/16/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Upl 5
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 10-12
 Subregion (LRR or MLRA): LRR-R Lat: 41.14424 Long: -73.42700 Datum: #N/A
 Soil Map Unit Name: Urban Land (307) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation Yes, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology. The survey was completed during a mild drought. Upland point for Wetland 5, located on a landscaped fill embankment adjacent to a parking lot.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u> </u> High Water Table (A2) <u> </u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u> </u> Iron Deposits (B5) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Sparsely Vegetated Concave Surface (B8) <u> </u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No positive indication of wetland hydrology was observed.

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Upl 5

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																												
1. <i>Liquidambar styraciflua</i>	40	Yes	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																												
2. <i>Quercus bicolor</i>	40	Yes	FACW																													
3. <i>Acer rubrum</i>	10	No	FAC																													
4. _____	_____	_____	_____																													
5. _____	_____	_____	_____																													
6. _____	_____	_____	_____																													
7. _____	_____	_____	_____																													
<u>90</u> = Total Cover																																
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				Prevalence Index Worksheet: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 40%;"></th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td><u>10</u></td> <td>x 1 =</td> <td><u>10</u></td> </tr> <tr> <td>FACW species</td> <td><u>40</u></td> <td>x 2 =</td> <td><u>80</u></td> </tr> <tr> <td>FAC species</td> <td><u>65</u></td> <td>x 3 =</td> <td><u>195</u></td> </tr> <tr> <td>FACU species</td> <td><u>5</u></td> <td>x 4 =</td> <td><u>20</u></td> </tr> <tr> <td>UPL species</td> <td><u>5</u></td> <td>x 5 =</td> <td><u>25</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>125</u></td> <td>(A)</td> <td><u>330</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>2.64</u>	Total % Cover of:		Multiply by:		OBL species	<u>10</u>	x 1 =	<u>10</u>	FACW species	<u>40</u>	x 2 =	<u>80</u>	FAC species	<u>65</u>	x 3 =	<u>195</u>	FACU species	<u>5</u>	x 4 =	<u>20</u>	UPL species	<u>5</u>	x 5 =	<u>25</u>	Column Totals:	<u>125</u>	(A)	<u>330</u> (B)
Total % Cover of:		Multiply by:																														
OBL species	<u>10</u>	x 1 =	<u>10</u>																													
FACW species	<u>40</u>	x 2 =	<u>80</u>																													
FAC species	<u>65</u>	x 3 =	<u>195</u>																													
FACU species	<u>5</u>	x 4 =	<u>20</u>																													
UPL species	<u>5</u>	x 5 =	<u>25</u>																													
Column Totals:	<u>125</u>	(A)	<u>330</u> (B)																													
1. <i>None Observed</i>	_____	_____	_____																													
2. _____	_____	_____	_____																													
3. _____	_____	_____	_____																													
4. _____	_____	_____	_____																													
5. _____	_____	_____	_____																													
6. _____	_____	_____	_____																													
7. _____	_____	_____	_____																													
<u>0</u> = Total Cover																																
Herb Stratum (Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u> </u> 1 - Rapid Test for Hydrophytic Vegetation <u> X </u> 2 - Dominance Test is >50% <u> X </u> 3 - Prevalence Index is ≤ 3.0 ¹ <u> </u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																												
1. <i>Toxicodendron radicans</i>	15	Yes	FAC																													
2. <i>Boehmeria cylindrica</i>	10	Yes	OBL																													
3. <i>Celastrus orbiculatus</i>	5	No	UPL																													
4. <i>Vitis aestivalis</i>	5	No	FACU																													
5. _____	_____	_____	_____																													
6. _____	_____	_____	_____																													
7. _____	_____	_____	_____																													
8. _____	_____	_____	_____																													
9. _____	_____	_____	_____																													
10. _____	_____	_____	_____																													
11. _____	_____	_____	_____																													
12. _____	_____	_____	_____																													
<u>35</u> = Total Cover																																
Woody Vine Stratum (Plot size: <u>30 ft.</u>)																																
1. <i>None Observed</i>	_____	_____	_____																													
2. _____	_____	_____	_____																													
3. _____	_____	_____	_____																													
4. _____	_____	_____	_____																													
<u>0</u> = Total Cover																																

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

 Landscaped hillside - Sweet gum (*L. styraciflua*) and swamp white oak (*Q. bicolor*) appear to have been planted.

Sampling Point: **Upl 5**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/29/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 6
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14156 Long: -73.42816 Datum: N/A
 Soil Map Unit Name: Hollis-Chatfield-Rock Outcrop complex (75E) NWI Classification: PUBHx
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 6</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. The wetland is located at the base of a steep embankment for Route 15, and is immediately adjacent to the railroad. Land to the west consists of rocky outcrops. Receives flows from INT-4.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<u> </u> Surface Water (A1) <u>X</u> <u>X</u> High Water Table (A2) <u>X</u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u> </u> Iron Deposits (B5) <u>X</u> Inundation Visible on Aerial Imagery (B7) <u>X</u> Sparsely Vegetated Concave Surface (B8)	<u> </u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks)	<u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u>X</u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>8</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 6

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <u>Carpinus caroliniana</u>		<u>20</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)														
2. _____		_____	_____	_____															
3. _____		_____	_____	_____															
4. _____		_____	_____	_____															
5. _____		_____	_____	_____															
6. _____		_____	_____	_____															
7. _____		_____	_____	_____															
		<u>20</u>	= Total Cover																
Sapling/Shrub Stratum	(Plot size: <u>15 ft.</u>)				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>90</u></td> <td>x 1 = <u>90</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 = <u>100</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>25</u></td> <td>x 4 = <u>100</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>185</u> (A)</td> <td><u>350</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.89</u>	Total % Cover of:	Multiply by:	OBL species <u>90</u>	x 1 = <u>90</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>25</u>	x 4 = <u>100</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>185</u> (A)	<u>350</u> (B)
Total % Cover of:	Multiply by:																		
OBL species <u>90</u>	x 1 = <u>90</u>																		
FACW species <u>50</u>	x 2 = <u>100</u>																		
FAC species <u>20</u>	x 3 = <u>60</u>																		
FACU species <u>25</u>	x 4 = <u>100</u>																		
UPL species <u>0</u>	x 5 = <u>0</u>																		
Column Totals: <u>185</u> (A)	<u>350</u> (B)																		
1. <u>Cornus amomum</u>		<u>50</u>	<u>Yes</u>	<u>FACW</u>															
2. _____		_____	_____	_____															
3. _____		_____	_____	_____															
4. _____		_____	_____	_____															
5. _____		_____	_____	_____															
6. _____		_____	_____	_____															
7. _____		_____	_____	_____															
		<u>50</u>	= Total Cover																
Herb Stratum	(Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <u>Asclepias incarnata</u>		<u>55</u>	<u>Yes</u>	<u>OBL</u>															
2. <u>Nymphaea odorata</u>		<u>25</u>	<u>Yes</u>	<u>OBL</u>															
3. <u>Mikania scandens</u>		<u>10</u>	<u>No</u>	<u>OBL</u>															
4. _____		_____	_____	_____															
5. _____		_____	_____	_____															
6. _____		_____	_____	_____															
7. _____		_____	_____	_____															
8. _____		_____	_____	_____															
9. _____		_____	_____	_____															
10. _____		_____	_____	_____															
11. _____		_____	_____	_____															
12. _____		_____	_____	_____															
		<u>90</u>	= Total Cover																
Woody Vine Stratum	(Plot size: <u>30 ft.</u>)				Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
1. <u>Vitis labrusca</u>		<u>15</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Lonicera japonica</u>		<u>10</u>	<u>Yes</u>	<u>FACU</u>															
3. _____		_____	_____	_____															
4. _____		_____	_____	_____															
		<u>25</u>	= Total Cover																

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Sampling Point: **Wet 6**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 11/16/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Upl 6
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 5-8
 Subregion (LRR or MLRA): LRR-R Lat: 41.14183 Long: -73.42864 Datum: N/A
 Soil Map Unit Name: Hollis-Chatfield-Rock Outcrop Complex 15 to 45 percent slopes (75E) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: This point was determined not to be within a wetland due to the lack of all three wetland criteria. The survey was completed during a mild drought. Upland point for Wetland 6, located on steep fill embankment adjacent to Route 15.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No positive indication of wetland hydrology was observed.

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Upl 6

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Acer platanoides</i>	60	Yes	UPL	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. <i>Quercus rubra</i>	40	Yes	FACU															
3. <i>Carya ovata</i>	5	No	FACU															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>105</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>110</u></td> <td>x 4 = <u>440</u></td> </tr> <tr> <td>UPL species <u>100</u></td> <td>x 5 = <u>500</u></td> </tr> <tr> <td>Column Totals: <u>210</u> (A)</td> <td><u>940</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.48</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>110</u>	x 4 = <u>440</u>	UPL species <u>100</u>	x 5 = <u>500</u>	Column Totals: <u>210</u> (A)	<u>940</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>110</u>	x 4 = <u>440</u>																	
UPL species <u>100</u>	x 5 = <u>500</u>																	
Column Totals: <u>210</u> (A)	<u>940</u> (B)																	
1. <i>Rosa multiflora</i>	40	Yes	FACU															
2. <i>Euonymus alatus*</i>	15	Yes	UPL															
3. <i>Carya ovata</i>	10	No	FACU															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>65</u> = Total Cover																		
Herb Stratum (Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <i>Rosa multiflora</i>	15	Yes	FACU															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>15</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft.</u>)				Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
1. <i>Celastrus orbiculatus</i>	25	Yes	UPL															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>25</u> = Total Cover																		

Remarks:

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

*Species does not appear on the 2016 National Wetland Plant List; therefore the species is assumed a UPL indicator status.

Sampling Point: **Upl 6**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 11/16/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 7
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.13990 Long: -73.42819 Datum: N/A
 Soil Map Unit Name: Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes (75E) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 7</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. A depression located on top of a rock outcrop.	

HYDROLOGY

Wetland hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<u> </u> Surface Water (A1)	<u>X</u> Water-Stained Leaves (B9)	<u> </u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Marl Deposits (B15)	<u> </u> Moss Trim Lines (B16)
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)	<u>X</u> Crayfish Burrows (C8)
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> Geomorphic Position (D2)
<u>X</u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Other (Explain in Remarks)	<u> </u> Shallow Aquitard (D3)
<u> </u> Sparsely Vegetated Concave Surface (B8)		<u> </u> Microtopographic Relief (D4)
		<u> </u> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>16</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>16</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 7

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Quercus palustris</i>		25	Yes	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>80%</u> (A/B)														
2. _____																			
3. _____																			
4. _____																			
5. _____																			
6. _____																			
7. _____																			
		<u>25</u>	= Total Cover																
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)																			
1. <i>Vaccinium corymbosum</i>		20	Yes	FACW	Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>55</u></td> <td>x 2 = <u>110</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>75</u> (A)</td> <td><u>180</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.40</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>55</u>	x 2 = <u>110</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>75</u> (A)	<u>180</u> (B)
Total % Cover of:	Multiply by:																		
OBL species <u>0</u>	x 1 = <u>0</u>																		
FACW species <u>55</u>	x 2 = <u>110</u>																		
FAC species <u>10</u>	x 3 = <u>30</u>																		
FACU species <u>10</u>	x 4 = <u>40</u>																		
UPL species <u>0</u>	x 5 = <u>0</u>																		
Column Totals: <u>75</u> (A)	<u>180</u> (B)																		
2. <i>Quercus palustris</i>		10	Yes	FACW															
3. <i>Kalmia latifolia</i>		10	Yes	FACU															
4. <i>Clethra alnifolia</i>		10	Yes	FAC															
5. _____																			
6. _____																			
7. _____																			
		<u>50</u>	= Total Cover																
Herb Stratum (Plot size: <u>5 ft.</u>)																			
1. <i>None Observed</i>					Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. _____																			
3. _____																			
4. _____																			
5. _____																			
6. _____																			
7. _____																			
8. _____																			
9. _____																			
10. _____																			
11. _____																			
12. _____																			
		<u>0</u>	= Total Cover																
Woody Vine Stratum (Plot size: <u>30 ft.</u>)																			
1. <i>None Observed</i>					Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
2. _____																			
3. _____																			
4. _____																			
		<u>0</u>	= Total Cover																

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

All plants were rooted along the wetland boundary - no plants were present throughout the concave portion of the wetland.

Sampling Point: **Wet 7**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 11/16/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Upl 7
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.13982 Long: -73.42821 Datum: #N/A
 Soil Map Unit Name: Holls-Chatfield-Rock outcrop complex, 15 to 45 percent slopes (75E) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: This point was determined not to be within a wetland due to the lack of all three wetland criteria. The survey was completed during a mild drought. Upland point for Wetland 7, located on top of rock outcrop.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>10</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>10</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No positive indication of wetland hydrology was observed.

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Upl 7

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <u>Quercus alba</u>	35	Yes	FACU	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>20%</u> (A/B)														
2. <u>Fagus grandifolia</u>	25	Yes	FACU															
3. <u>Quercus palustris</u>	5	No	FACW															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
65 = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				Prevalence Index Worksheet: <table style="width: 100%;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>45</u></td> <td>x 2 = <u>90</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>115</u></td> <td>x 4 = <u>460</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>160</u> (A)</td> <td><u>550</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>3.44</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>45</u>	x 2 = <u>90</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>115</u>	x 4 = <u>460</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>160</u> (A)	<u>550</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>45</u>	x 2 = <u>90</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>115</u>	x 4 = <u>460</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>160</u> (A)	<u>550</u> (B)																	
1. <u>Vaccinium corymbosum</u>	40	Yes	FACW															
2. <u>Kalmia latifolia</u>	20	Yes	FACU															
3. <u>Fagus grandifolia</u>	10	No	FACU															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
70 = Total Cover																		
Herb Stratum (Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes _____ No <u>X</u>														
1. <u>Vaccinium angustifolium</u>	25	Yes	FACU															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
25 = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft.</u>)																		
1. <u>None Observed</u>	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
0 = Total Cover																		

Remarks:

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Sampling Point: **Upl 7**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/29/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 8
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14028 Long: -73.42907 Datum: N/A
 Soil Map Unit Name: Hollis-Chatfield-Rock outcrop complex (75E) NWI Classification: PFO1E
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation Yes, Soil No, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 8</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. Wetland is located in an interchange gore area and is surrounded by bituminous pavement, causing disturbance to hydrology. Large rocky outcrops are also present within the gore area. Potential vernal pool.	

HYDROLOGY

Wetland hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<u> </u> Surface Water (A1)	<u>X</u> Water-Stained Leaves (B9)	<u>X</u> Surface Soil Cracks (B6)
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u>X</u> Drainage Patterns (B10)
<u> </u> Saturation (A3)	<u> </u> Marl Deposits (B15)	<u> </u> Moss Trim Lines (B16)
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)	<u> </u> Crayfish Burrows (C8)
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Saturation Visible on Aerial Imagery (C9)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> Geomorphic Position (D2)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Other (Explain in Remarks)	<u> </u> Shallow Aquitard (D3)
<u>X</u> Sparsely Vegetated Concave Surface (B8)		<u> </u> Microtopographic Relief (D4)
		<u> </u> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>10</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>10</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 8

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <u>Acer rubrum</u>		75	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)														
2. _____																			
3. _____																			
4. _____																			
5. _____																			
6. _____																			
7. _____																			
		75	= Total Cover																
Sapling/Shrub Stratum	(Plot size: <u>15 ft.</u>)				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>18</u></td> <td>x 1 = <u>18</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u>100</u></td> <td>x 3 = <u>300</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>143</u></td> <td>(A) <u>368</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.57</u>	Total % Cover of:	Multiply by:	OBL species <u>18</u>	x 1 = <u>18</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>100</u>	x 3 = <u>300</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>143</u>	(A) <u>368</u> (B)
Total % Cover of:	Multiply by:																		
OBL species <u>18</u>	x 1 = <u>18</u>																		
FACW species <u>25</u>	x 2 = <u>50</u>																		
FAC species <u>100</u>	x 3 = <u>300</u>																		
FACU species <u>0</u>	x 4 = <u>0</u>																		
UPL species <u>0</u>	x 5 = <u>0</u>																		
Column Totals: <u>143</u>	(A) <u>368</u> (B)																		
1. <u>Fraxinus pennsylvanica</u>		15	Yes	FACW															
2. <u>Clethra alnifolia</u>		15	Yes	FAC															
3. <u>Acer rubrum</u>		10	Yes	FAC															
4. _____																			
5. _____																			
6. _____																			
7. _____																			
		40	= Total Cover																
Herb Stratum	(Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation ☒ <u>2</u> - Dominance Test is >50% ☒ <u>3</u> - Prevalence Index is ≤ 3.0 ¹ ☒ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <u>Boehmeria cylindrica</u>		15	Yes	OBL															
2. <u>Fraxinus pennsylvanica</u>		10	Yes	FACW															
3. <u>Lycopus americanus</u>		3	No	OBL															
4. _____																			
5. _____																			
6. _____																			
7. _____																			
8. _____																			
9. _____																			
10. _____																			
11. _____																			
12. _____																			
		28	= Total Cover																
Woody Vine Stratum	(Plot size: <u>30 ft.</u>)				Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
1. <u>None Observed</u>																			
2. _____																			
3. _____																			
4. _____																			
		0	= Total Cover																

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

A positive indication of hydrophytic vegetation was observed (Morphological Adaptations). Buttressed tree roots are present throughout the wetland

Sampling Point: **Wet 8**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 11/16/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Upl 8
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): None Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14028 Long: -73.42880 Datum: N/A
 Soil Map Unit Name: Hollis-Chatfield-Rock outcrop complexes, 15 to 45 percent slopes (75E) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation Yes, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: This point was determined not to be within a wetland due to the lack of hydric soils and wetland hydrology. The survey was completed during a mild drought. Upland Point for Wetland 8.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u> </u> High Water Table (A2) <u> </u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u> </u> Iron Deposits (B5) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Sparsely Vegetated Concave Surface (B8) <u> </u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>16</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>16</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No positive indication of wetland hydrology was observed.

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Upl 8

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Acer rubrum</i>		60	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>57%</u> (A/B)														
2. <i>Quercus rubra</i>		20	Yes	FACU															
3. _____																			
4. _____																			
5. _____																			
6. _____																			
7. _____																			
		<u>80</u>	= Total Cover																
Sapling/Shrub Stratum	(Plot size: <u>15 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Clethra alnifolia</i>		35	Yes	FAC	Prevalence Index Worksheet: <table style="width: 100%;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>130</u></td> <td>x 3 = <u>390</u></td> </tr> <tr> <td>FACU species <u>47</u></td> <td>x 4 = <u>188</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>192</u> (A)</td> <td><u>653</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>3.40</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>130</u>	x 3 = <u>390</u>	FACU species <u>47</u>	x 4 = <u>188</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>192</u> (A)	<u>653</u> (B)
Total % Cover of:	Multiply by:																		
OBL species <u>0</u>	x 1 = <u>0</u>																		
FACW species <u>0</u>	x 2 = <u>0</u>																		
FAC species <u>130</u>	x 3 = <u>390</u>																		
FACU species <u>47</u>	x 4 = <u>188</u>																		
UPL species <u>15</u>	x 5 = <u>75</u>																		
Column Totals: <u>192</u> (A)	<u>653</u> (B)																		
2. <i>Acer rubrum</i>		20	Yes	FAC															
3. _____																			
4. _____																			
5. _____																			
6. _____																			
7. _____																			
		<u>55</u>	= Total Cover																
Herb Stratum	(Plot size: <u>5 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Reynoutria japonica</i>		25	Yes	FACU	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <i>Clethra alnifolia</i>		10	Yes	FAC															
3. <i>Frangula alnus</i>		5	No	FAC															
4. <i>Celastrus orbiculatus</i>		5	No	UPL															
5. <i>Rosa multiflora</i>		2	No	FACU															
6. _____																			
7. _____																			
8. _____																			
9. _____																			
10. _____																			
11. _____																			
12. _____																			
		<u>47</u>	= Total Cover																
Woody Vine Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Celastrus orbiculatus</i>		10	Yes	UPL	Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
2. _____																			
3. _____																			
4. _____																			
		<u>10</u>	= Total Cover																

Hydrophytic Vegetation
 Present? Yes X No _____

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Sampling Point: **Upl 8**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/28/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 9
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14519 Long: -73.43115 Datum: N/A
 Soil Map Unit Name: Udorthents-Pits complex (305), and Udorthents-Urban land complex (306) NWI Classification: PEM1F, R5UBH
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 9</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. Located adjacent to Route 7 at the base of a steeply sloped hill.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u>X</u> <u> </u> High Water Table (A2) <u>X</u> <u> </u> Saturation (A3) <u> </u> <u> </u> Water Marks (B1) <u> </u> <u> </u> Sediment Deposits (B2) <u> </u> <u> </u> Drift Deposits (B3) <u> </u> <u> </u> Algal Mat or Crust (B4) <u> </u> <u> </u> Iron Deposits (B5) <u> </u> <u>X</u> Inundation Visible on Aerial Imagery (B7) <u> </u> Sparsely Vegetated Concave Surface (B8) <u> </u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u>X</u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>8</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>8</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 9

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status																																				
1. <u><i>Acer rubrum</i></u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71%</u> (A/B)																																			
2. <u><i>Fraxinus pennsylvanica</i></u>	<u>10</u>	<u>No</u>	<u>FACW</u>																																				
3. <u><i>Quercus bicolor</i></u>	<u>10</u>	<u>No</u>	<u>FACW</u>																																				
4. _____	_____	_____	_____																																				
5. _____	_____	_____	_____																																				
6. _____	_____	_____	_____																																				
7. _____	_____	_____	_____																																				
<u>70</u> = Total Cover																																							
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> <tr> <td>OBL species</td> <td><u>4</u></td> <td>x 1 =</td> <td><u>4</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td><u>103</u></td> <td>x 2 =</td> <td><u>206</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td><u>65</u></td> <td>x 3 =</td> <td><u>195</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td><u>20</u></td> <td>x 4 =</td> <td><u>80</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td><u>15</u></td> <td>x 5 =</td> <td><u>75</u></td> <td></td> </tr> <tr> <td>Column Totals:</td> <td><u>207</u></td> <td>(A)</td> <td><u>560</u></td> <td>(B)</td> </tr> </table> Prevalence Index = B/A = <u>2.71</u>	Total % Cover of:		Multiply by:			OBL species	<u>4</u>	x 1 =	<u>4</u>		FACW species	<u>103</u>	x 2 =	<u>206</u>		FAC species	<u>65</u>	x 3 =	<u>195</u>		FACU species	<u>20</u>	x 4 =	<u>80</u>		UPL species	<u>15</u>	x 5 =	<u>75</u>		Column Totals:	<u>207</u>	(A)	<u>560</u>	(B)
Total % Cover of:		Multiply by:																																					
OBL species	<u>4</u>	x 1 =	<u>4</u>																																				
FACW species	<u>103</u>	x 2 =	<u>206</u>																																				
FAC species	<u>65</u>	x 3 =	<u>195</u>																																				
FACU species	<u>20</u>	x 4 =	<u>80</u>																																				
UPL species	<u>15</u>	x 5 =	<u>75</u>																																				
Column Totals:	<u>207</u>	(A)	<u>560</u>	(B)																																			
1. <u><i>Lindera benzoin</i></u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																																				
2. <u><i>Rosa multiflora</i></u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>																																				
3. <u><i>Acer rubrum</i></u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>																																				
4. _____	_____	_____	_____																																				
5. _____	_____	_____	_____																																				
6. _____	_____	_____	_____																																				
7. _____	_____	_____	_____																																				
<u>40</u> = Total Cover																																							
Herb Stratum (Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation¹ (Explain)</u> ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																			
1. <u><i>Phragmites australis</i></u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																																				
2. <u><i>Impatiens capensis</i></u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>																																				
3. <u><i>Thelypteris palustris</i></u>	<u>10</u>	<u>No</u>	<u>FACW</u>																																				
4. <u><i>Toxicodendron radicans</i></u>	<u>5</u>	<u>No</u>	<u>FAC</u>																																				
5. <u><i>Onoclea sensibilis</i></u>	<u>3</u>	<u>No</u>	<u>FACW</u>																																				
6. <u><i>Persicaria hydropiperoides</i></u>	<u>2</u>	<u>No</u>	<u>OBL</u>																																				
7. <u><i>Boehmeria cylindrica</i></u>	<u>2</u>	<u>No</u>	<u>OBL</u>																																				
8. _____	_____	_____	_____																																				
9. _____	_____	_____	_____																																				
10. _____	_____	_____	_____																																				
11. _____	_____	_____	_____																																				
12. _____	_____	_____	_____																																				
<u>77</u> = Total Cover																																							
Woody Vine Stratum (Plot size: <u>30 ft.</u>)				Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.																																			
1. <u><i>Celastrus orbiculatus</i></u>	<u>10</u>	<u>Yes</u>	<u>UPL</u>																																				
2. <u><i>Vitis labrusca</i></u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>																																				
3. <u><i>Ampelopsis brevipedunculata</i>*</u>	<u>5</u>	<u>Yes</u>	<u>UPL</u>																																				
4. _____	_____	_____	_____																																				
<u>20</u> = Total Cover																																							

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

*Species does not appear on the 2016 National Wetland Plant List; therefore the species is assumed a UPL indicator status.

Sampling Point: **Wet 9**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/28/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 9 PEM
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14519 Long: -73.43115 Datum: N/A
 Soil Map Unit Name: Udorthents-Pits complex (305), and Udorthents-Urban land complex (306) NWI Classification: PEM1F, R5UBH
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 6</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. Located adjacent to Route 7 at the base of a steeply sloped hill.	

HYDROLOGY

Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☒ Surface Water (A1) ☒ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☒ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☒ Water-Stained Leaves (B9) ☒ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☒ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>2</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 9 PEM

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <u>None observed</u>					Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>60%</u> (A/B)														
2. _____																			
3. _____																			
4. _____																			
5. _____																			
6. _____																			
7. _____																			
		<u>0</u>	= Total Cover																
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)																			
1. <u>Lindera benzoin</u>		<u>10</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u>30</u></td> <td>x 1 = <u>30</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 = <u>100</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>100</u></td> <td>(A) <u>220</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.20</u>	Total % Cover of:	Multiply by:	OBL species <u>30</u>	x 1 = <u>30</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>100</u>	(A) <u>220</u> (B)
Total % Cover of:	Multiply by:																		
OBL species <u>30</u>	x 1 = <u>30</u>																		
FACW species <u>50</u>	x 2 = <u>100</u>																		
FAC species <u>0</u>	x 3 = <u>0</u>																		
FACU species <u>10</u>	x 4 = <u>40</u>																		
UPL species <u>10</u>	x 5 = <u>50</u>																		
Column Totals: <u>100</u>	(A) <u>220</u> (B)																		
2. <u>Rosa multiflora</u>		<u>10</u>	<u>Yes</u>	<u>FACU</u>															
3. _____																			
4. _____																			
5. _____																			
6. _____																			
7. _____																			
		<u>20</u>	= Total Cover																
Herb Stratum (Plot size: <u>5 ft.</u>)																			
1. <u>Phragmites australis</u>		<u>40</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation¹ (Explain)</u> ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Typha latifolia</u>		<u>20</u>	<u>Yes</u>	<u>OBL</u>															
3. <u>Typha angustifolia</u>		<u>10</u>	<u>No</u>	<u>OBL</u>															
4. _____																			
5. _____																			
6. _____																			
7. _____																			
8. _____																			
9. _____																			
10. _____																			
11. _____																			
12. _____																			
		<u>70</u>	= Total Cover																
Woody Vine Stratum (Plot size: <u>30 ft.</u>)																			
1. <u>Celastrus orbiculatus</u>		<u>10</u>	<u>Yes</u>	<u>UPL</u>	Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
2. _____																			
3. _____																			
4. _____																			
		<u>10</u>	= Total Cover																

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Sampling Point: **Wet 9 PEM**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 11/16/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Upl 9
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14493 Long: -73.43086 Datum: #N/A
 Soil Map Unit Name: Udorthents-Urban land complex (306) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: This point was determined not to be within a wetland due to the lack of wetland hydrology. The survey was completed during a mild drought. Upland point for Wetland 9, located in a forest adjacent to commercial buildings.	

HYDROLOGY

Wetland hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No positive indication of wetland hydrology was observed.

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Upl 9

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>Betula populifolia</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)														
2. <u>Quercus palustris</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>															
3. <u>Fraxinus americana</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>80</u> = Total Cover				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: right;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>45</u></td> <td>x 2 = <u>90</u></td> </tr> <tr> <td>FAC species <u>90</u></td> <td>x 3 = <u>270</u></td> </tr> <tr> <td>FACU species <u>35</u></td> <td>x 4 = <u>140</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: <u>175</u> (A)</td> <td><u>525</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.00</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>45</u>	x 2 = <u>90</u>	FAC species <u>90</u>	x 3 = <u>270</u>	FACU species <u>35</u>	x 4 = <u>140</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: <u>175</u> (A)	<u>525</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>45</u>	x 2 = <u>90</u>																	
FAC species <u>90</u>	x 3 = <u>270</u>																	
FACU species <u>35</u>	x 4 = <u>140</u>																	
UPL species <u>5</u>	x 5 = <u>25</u>																	
Column Totals: <u>175</u> (A)	<u>525</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)																		
1. <u>Carpinus caroliniana</u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>															
2. <u>Quercus palustris</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>60</u> = Total Cover																		
Herb Stratum (Plot size: <u>5 ft.</u>)																		
1. <u>Smilax rotundifolia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Prunus serotina</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>15</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft.</u>)																		
1. <u>Smilax rotundifolia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
2. <u>Celastrus orbiculatus</u>	<u>5</u>	<u>Yes</u>	<u>UPL</u>															
3. <u>Vitis aestivalis</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
<u>20</u> = Total Cover																		
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																		

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Sampling Point: **Upl 9**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/27/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 10
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14578 Long: -73.43254 Datum: #N/A
 Soil Map Unit Name: Udorthents-Pits complex (305) NWI Classification: PEM1E, PEM5E
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation Yes, Soil Yes, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 10</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. Wetland is located at the base of a rock outcropping and adjacent to Route 7, receives hydrology from Schaab Creek. The wetland appears to be highly disturbed and manipulated, previously a ConnDOT mitigation area.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <table style="width: 100%;"> <tr> <td><u>X</u> Surface Water (A1)</td> <td><u> </u> Water-Stained Leaves (B9)</td> </tr> <tr> <td><u>X</u> High Water Table (A2)</td> <td><u>X</u> Aquatic Fauna (B13)</td> </tr> <tr> <td><u>X</u> Saturation (A3)</td> <td><u> </u> Marl Deposits (B15)</td> </tr> <tr> <td><u> </u> Water Marks (B1)</td> <td><u>X</u> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><u> </u> Sediment Deposits (B2)</td> <td><u> </u> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td><u> </u> Drift Deposits (B3)</td> <td><u> </u> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><u> </u> Algal Mat or Crust (B4)</td> <td><u> </u> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td><u> </u> Iron Deposits (B5)</td> <td><u> </u> Thin Muck Surface (C7)</td> </tr> <tr> <td><u>X</u> Inundation Visible on Aerial Imagery (B7)</td> <td><u> </u> Other (Explain in Remarks)</td> </tr> <tr> <td><u> </u> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<u>X</u> Surface Water (A1)	<u> </u> Water-Stained Leaves (B9)	<u>X</u> High Water Table (A2)	<u>X</u> Aquatic Fauna (B13)	<u>X</u> Saturation (A3)	<u> </u> Marl Deposits (B15)	<u> </u> Water Marks (B1)	<u>X</u> Hydrogen Sulfide Odor (C1)	<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)	<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u>X</u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Other (Explain in Remarks)	<u> </u> Sparsely Vegetated Concave Surface (B8)		<u>Secondary Indicators (minimum of two required)</u> <table style="width: 100%;"> <tr><td><u> </u> Surface Soil Cracks (B6)</td></tr> <tr><td><u> </u> Drainage Patterns (B10)</td></tr> <tr><td><u> </u> Moss Trim Lines (B16)</td></tr> <tr><td><u> </u> Dry-Season Water Table (C2)</td></tr> <tr><td><u> </u> Crayfish Burrows (C8)</td></tr> <tr><td><u>X</u> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><u> </u> Stunted or Stressed Plants (D1)</td></tr> <tr><td><u>X</u> Geomorphic Position (D2)</td></tr> <tr><td><u> </u> Shallow Aquitard (D3)</td></tr> <tr><td><u> </u> Microtopographic Relief (D4)</td></tr> <tr><td><u> </u> FAC-Neutral Test (D5)</td></tr> </table>	<u> </u> Surface Soil Cracks (B6)	<u> </u> Drainage Patterns (B10)	<u> </u> Moss Trim Lines (B16)	<u> </u> Dry-Season Water Table (C2)	<u> </u> Crayfish Burrows (C8)	<u>X</u> Saturation Visible on Aerial Imagery (C9)	<u> </u> Stunted or Stressed Plants (D1)	<u>X</u> Geomorphic Position (D2)	<u> </u> Shallow Aquitard (D3)	<u> </u> Microtopographic Relief (D4)	<u> </u> FAC-Neutral Test (D5)
<u>X</u> Surface Water (A1)	<u> </u> Water-Stained Leaves (B9)																															
<u>X</u> High Water Table (A2)	<u>X</u> Aquatic Fauna (B13)																															
<u>X</u> Saturation (A3)	<u> </u> Marl Deposits (B15)																															
<u> </u> Water Marks (B1)	<u>X</u> Hydrogen Sulfide Odor (C1)																															
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)																															
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)																															
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)																															
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)																															
<u>X</u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Other (Explain in Remarks)																															
<u> </u> Sparsely Vegetated Concave Surface (B8)																																
<u> </u> Surface Soil Cracks (B6)																																
<u> </u> Drainage Patterns (B10)																																
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<u>X</u> Geomorphic Position (D2)																																
<u> </u> Shallow Aquitard (D3)																																
<u> </u> Microtopographic Relief (D4)																																
<u> </u> FAC-Neutral Test (D5)																																

Field Observations: Surface Water Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

Areas of inundation present throughout the wetland. Frogs were observed within the wetland,

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 10

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <u>None observed</u>				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
<u>0</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)																		
1. <u>None Observed</u>				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>110</u></td> <td>x 1 = <u>110</u></td> </tr> <tr> <td>FACW species <u>55</u></td> <td>x 2 = <u>110</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>165</u> (A)</td> <td><u>220</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.33</u>	Total % Cover of:	Multiply by:	OBL species <u>110</u>	x 1 = <u>110</u>	FACW species <u>55</u>	x 2 = <u>110</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>165</u> (A)	<u>220</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>110</u>	x 1 = <u>110</u>																	
FACW species <u>55</u>	x 2 = <u>110</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>165</u> (A)	<u>220</u> (B)																	
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
<u>0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5 ft.</u>)																		
1. <u>Typha latifolia</u>	<u>40</u>	<u>Yes</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ☒ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☒ 3 - Prevalence Index is ≤ 3.0 ¹ ☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Onoclea sensibilis</u>	<u>35</u>	<u>Yes</u>	<u>FACW</u>															
3. <u>Carex stricta</u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>															
4. <u>Juncus effusus</u>	<u>30</u>	<u>Yes</u>	<u>OBL</u>															
5. <u>Vaccinium corymbosum</u>	<u>20</u>	<u>No</u>	<u>FACW</u>															
6. <u>Persicaria hydropiperoides</u>	<u>5</u>	<u>No</u>	<u>OBL</u>															
7. <u>Boehmeria cylindrica</u>	<u>5</u>	<u>No</u>	<u>OBL</u>															
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
<u>165</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft.</u>)																		
1. <u>None Observed</u>				Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
2. _____																		
3. _____																		
4. _____																		
<u>0</u> = Total Cover																		

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

A positive indication of hydrophytic vegetation was observed (Rapid Test for Hydrophytic Vegetation).

Sampling Point: **Wet 10**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/27/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Upl 10
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Toe slope Local relief (concave, convex, none): None Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14522 Long: -73.43298 Datum: #N/A
 Soil Map Unit Name: Udorthents-Pits complex (305) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation Yes, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: This point was determined not to be within a wetland due to the lack of all three wetland criteria. The survey was completed during a mild drought. Upland 2 is the upland point for Wetland 10, it is located within a transmission ROW along a rock outcrop and is maintained.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u> </u> High Water Table (A2) <u> </u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u> </u> Iron Deposits (B5) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Sparsely Vegetated Concave Surface (B8) <u> </u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No positive indication of wetland hydrology was observed.

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Upl 10

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status
1.	<u>None observed</u>			
2.				
3.				
4.				
5.				
6.				
7.				
		<u>0</u>	= Total Cover	

Sapling/Shrub Stratum	(Plot size: <u>15 ft.</u>)			
1.	<u>Pyrus calleryana*</u>	<u>5</u>	<u>Yes</u>	<u>UPL</u>
2.				
3.				
4.				
5.				
6.				
7.				
		<u>5</u>	= Total Cover	

Herb Stratum	(Plot size: <u>5 ft.</u>)			
1.	<u>Artemisia vulgaris</u>	<u>25</u>	<u>Yes</u>	<u>UPL</u>
2.	<u>Ambrosia artemisiifolia</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>
3.	<u>Lotus corniculatus</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>
4.	<u>Solidago canadensis</u>	<u>10</u>	<u>No</u>	<u>FACU</u>
5.	<u>Vitis labrusca</u>	<u>10</u>	<u>No</u>	<u>FACU</u>
6.	<u>Lepidium densiflorum</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
7.	<u>Coronilla varia</u>	<u>5</u>	<u>No</u>	<u>UPL*</u>
8.	<u>Symphyotrichum ericoides</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
9.				
10.				
11.				
12.				
		<u>100</u>	= Total Cover	

Woody Vine Stratum	(Plot size: <u>30 ft.</u>)			
1.	<u>None Observed</u>			
2.				
3.				
4.				
		<u>0</u>	= Total Cover	

Dominance Test worksheet:

 Number of Dominant Species
 That Are OBL, FACW, or FAC: 0 (A)

 Total Number of Dominant
 Species Across All Strata: 4 (B)

 Percent of Dominant Species
 That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index Worksheet:

	Total % Cover of:		Multiply by:	
OBL species	<u>0</u>	x 1 =	<u>0</u>	
FACW species	<u>0</u>	x 2 =	<u>0</u>	
FAC species	<u>0</u>	x 3 =	<u>0</u>	
FACU species	<u>70</u>	x 4 =	<u>280</u>	
UPL species	<u>30</u>	x 5 =	<u>150</u>	
Column Totals:	<u>100</u>	(A)	<u>430</u>	(B)

 Prevalence Index = B/A = 4.30
Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤ 3.0 ¹
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:
Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic
Vegetation

 Present? Yes No X

Remarks:

 No positive indication of hydrophytic vegetation was observed ($\geq 50\%$ of dominant species indexed as FAC- or drier).

*Species does not appear on the 2016 National Wetland Plant List; therefore the species is assumed a UPL indicator status.

Sampling Point: **Upl 10**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/27/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 11
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14223 Long: -73.43392 Datum: N/A
 Soil Map Unit Name: Ridgebuy, Leicester, and Whitman soil (3) and Canton and Charlton soils (62C) NWI Classification: PUBHx
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 11</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. Receives flows from INT 8, which hydraulically connects Wetland 11 to Wetland 12. Additionally, Wetland 11 flows through a culvert under a paved road and outlets north of the road into a ponded area. Potential vernal pool.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u>X</u> <u> </u> High Water Table (A2) <u> </u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u> </u> Iron Deposits (B5) <u>X</u> Inundation Visible on Aerial Imagery (B7) <u> </u> Sparsely Vegetated Concave Surface (B8) <u> </u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks)		<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u>X</u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>20</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>20</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 11

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>Acer rubrum</u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71%</u> (A/B)														
2. <u>Ulmus americana</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>60</u> = Total Cover				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>60</u></td> <td>x 2 = <u>120</u></td> </tr> <tr> <td>FAC species <u>77</u></td> <td>x 3 = <u>231</u></td> </tr> <tr> <td>FACU species <u>21</u></td> <td>x 4 = <u>84</u></td> </tr> <tr> <td>UPL species <u>7</u></td> <td>x 5 = <u>35</u></td> </tr> <tr> <td>Column Totals: <u>170</u> (A)</td> <td><u>475</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.79</u>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>60</u>	x 2 = <u>120</u>	FAC species <u>77</u>	x 3 = <u>231</u>	FACU species <u>21</u>	x 4 = <u>84</u>	UPL species <u>7</u>	x 5 = <u>35</u>	Column Totals: <u>170</u> (A)	<u>475</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>5</u>	x 1 = <u>5</u>																	
FACW species <u>60</u>	x 2 = <u>120</u>																	
FAC species <u>77</u>	x 3 = <u>231</u>																	
FACU species <u>21</u>	x 4 = <u>84</u>																	
UPL species <u>7</u>	x 5 = <u>35</u>																	
Column Totals: <u>170</u> (A)	<u>475</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)																		
1. <u>Rosa multiflora</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Ulmus americana</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>															
3. <u>Hydrangea paniculata</u>	<u>7</u>	<u>No</u>	<u>FAC</u>															
4. <u>Acer rubrum</u>	<u>5</u>	<u>No</u>	<u>FAC</u>															
5. <u>Quercus palustris</u>	<u>5</u>	<u>No</u>	<u>FACW</u>															
6. <u>Berberis thunbergii</u>	<u>3</u>	<u>No</u>	<u>FACU</u>															
7. _____	_____	_____	_____															
<u>45</u> = Total Cover																		
Herb Stratum (Plot size: <u>5 ft.</u>)																		
1. <u>Fraxinus pennsylvanica</u>	<u>25</u>	<u>Yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation¹ (Explain)</u> ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Smilax rotundifolia</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>															
3. <u>Toxicodendron radicans</u>	<u>10</u>	<u>No</u>	<u>FAC</u>															
4. <u>Glyceria striata</u>	<u>5</u>	<u>No</u>	<u>OBL</u>															
5. <u>Parthenocissus quinquefolia</u>	<u>3</u>	<u>No</u>	<u>FACU</u>															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>58</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft.</u>)																		
1. <u>Celastrus orbiculatus</u>	<u>7</u>	<u>Yes</u>	<u>UPL</u>	Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>7</u> = Total Cover																		
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																		

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Sampling Point: **Wet 11**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/27/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Upl 11 and 12
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14185 Long: -73.43403 Datum: #N/A
 Soil Map Unit Name: Canton and Charlton soil (62C) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: This point was determined not to be within a wetland due to the lack of all three wetland criteria. The survey was completed during a mild drought. Upland point for Wetland 11 and Wetland 12, located in forested habitat.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>12</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>12</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No positive indication of wetland hydrology was observed.

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Upl 11 and 12

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <u>Acer rubrum</u>	<u>55</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>43%</u> (A/B)														
2. <u>Quercus rubra</u>	<u>15</u>	<u>No</u>	<u>FACU</u>															
3. <u>Pinus strobus</u>	<u>10</u>	<u>No</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>80</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>3</u></td> <td>x 1 = <u>3</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>60</u></td> <td>x 3 = <u>180</u></td> </tr> <tr> <td>FACU species <u>58</u></td> <td>x 4 = <u>232</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>131</u> (A)</td> <td><u>435</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.32</u>	Total % Cover of:	Multiply by:	OBL species <u>3</u>	x 1 = <u>3</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>60</u>	x 3 = <u>180</u>	FACU species <u>58</u>	x 4 = <u>232</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>131</u> (A)	<u>435</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>3</u>	x 1 = <u>3</u>																	
FACW species <u>10</u>	x 2 = <u>20</u>																	
FAC species <u>60</u>	x 3 = <u>180</u>																	
FACU species <u>58</u>	x 4 = <u>232</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>131</u> (A)	<u>435</u> (B)																	
1. <u>Acer saccharum</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Quercus rubra</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Rosa multiflora</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>25</u> = Total Cover																		
Herb Stratum (Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation¹ (Explain)</u> ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>															
2. <u>Parthenocissus quinquefolia</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Acer saccharum</u>	<u>3</u>	<u>No</u>	<u>FACU</u>															
4. <u>Boehmeria cylindrica</u>	<u>3</u>	<u>No</u>	<u>OBL</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>21</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft.</u>)				Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
1. <u>Smilax rotundifolia</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>5</u> = Total Cover																		

Remarks:

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Sampling Point: **Upl 11 and 12**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/27/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 12
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0-3
 Subregion (LRR or MLRA): LRR R Lat: 41.14116 Long: -73.43417 Datum: N/A
 Soil Map Unit Name: Canton and Charlton (62C) ex. Stony NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation Yes, Soil Yes, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 12</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. Wetland is located at the base of a highway and adjacent to a transmission ROW and receives runoff from the surrounding areas. Highly disturbed and manipulated landscape. ConnDOT mitigation wetland.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u> </u> High Water Table (A2) <u> </u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u> </u> Iron Deposits (B5) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Sparsely Vegetated Concave Surface (B8) <u> </u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> <u>X</u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>10</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>10</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 12

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <u><i>Acer rubrum</i></u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>8</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)														
2. <u><i>Salix nigra</i></u>	<u>5</u>	<u>Yes</u>	<u>OBL</u>															
3. <u><i>Fraxinus pennsylvanica</i></u>	<u>2</u>	<u>No</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>17</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>100</u></td> <td>x 1 = <u>100</u></td> </tr> <tr> <td>FACW species <u>9</u></td> <td>x 2 = <u>18</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>129</u> (A)</td> <td><u>178</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.38</u>	Total % Cover of:	Multiply by:	OBL species <u>100</u>	x 1 = <u>100</u>	FACW species <u>9</u>	x 2 = <u>18</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>129</u> (A)	<u>178</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>100</u>	x 1 = <u>100</u>																	
FACW species <u>9</u>	x 2 = <u>18</u>																	
FAC species <u>20</u>	x 3 = <u>60</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>129</u> (A)	<u>178</u> (B)																	
1. <u><i>Cephalanthus occidentalis</i></u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>															
2. <u><i>Hydrangea paniculata</i></u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>															
3. <u><i>Vaccinium corymbosum</i></u>	<u>2</u>	<u>No</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>27</u> = Total Cover																		
Herb Stratum (Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <u><i>Typha angustifolia</i></u>	<u>25</u>	<u>Yes</u>	<u>OBL</u>															
2. <u><i>Iris versicolor</i></u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>															
3. <u><i>Hypericum virginicum</i></u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>															
4. <u><i>Boehmeria cylindrica</i></u>	<u>10</u>	<u>Yes</u>	<u>OBL</u>															
5. <u><i>Galium asprellum</i></u>	<u>5</u>	<u>No</u>	<u>OBL</u>															
6. <u><i>Thelypteris palustris</i></u>	<u>5</u>	<u>No</u>	<u>FACW</u>															
7. <u><i>Persicaria sagittata</i></u>	<u>5</u>	<u>No</u>	<u>OBL</u>															
8. <u><i>Bidens laevis</i></u>	<u>5</u>	<u>No</u>	<u>OBL</u>															
9. <u><i>Glyceria striata</i></u>	<u>3</u>	<u>No</u>	<u>OBL</u>															
10. <u><i>Juncus effusus</i></u>	<u>2</u>	<u>No</u>	<u>OBL</u>															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>85</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft.</u>)				Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
1. <u><i>None Observed</i></u>	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Sampling Point: **Wet 12**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/28/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 13 PEM
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Toe slope Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14028 Long: -73.43354 Datum: N/A
 Soil Map Unit Name: Ridgebury, Leicester, and Whitman soils (3) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 13</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. Wetland is located at the base of a riprap embankment for the Route 7 South on-ramp.	

HYDROLOGY

Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☒ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☒ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>16</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>16</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 13 PEM

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status	
1.					
2.					
3.					
4.					
5.					
6.					
7.					
		<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)					
1.	<u>Clethra alnifolia</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>Ulmus rubra</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
3.					
4.					
5.					
6.					
7.					
		<u>10</u>	= Total Cover		
Herb Stratum (Plot size: <u>5 ft.</u>)					
1.	<u>Carex stricta</u>	<u>55</u>	<u>Yes</u>	<u>OBL</u>	
2.	<u>Leersia oryzoides</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>	
3.	<u>Panicum pensylvanicum</u>	<u>5</u>	<u>No</u>	<u>FACW</u>	
4.	<u>Festuca rubra</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	
5.	<u>Solidago rugosa</u>	<u>3</u>	<u>No</u>	<u>FAC</u>	
6.	<u>Smilax rotundifolia</u>	<u>3</u>	<u>No</u>	<u>FAC</u>	
7.					
8.					
9.					
10.					
11.					
12.					
		<u>91</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30 ft.</u>)					
1.	<u>Vitis labrusca</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
2.					
3.					
4.					
		<u>5</u>	= Total Cover		

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

 Total Number of Dominant Species Across All Strata: 5 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>75</u>	x 1 = <u>75</u>
FACW species <u>5</u>	x 2 = <u>10</u>
FAC species <u>16</u>	x 3 = <u>48</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>106</u> (A)	<u>173</u> (B)

Prevalence Index = B/A = 1.63

Hydrophytic Vegetation Indicators:
1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index is ≤ 3.0¹
4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:
Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation
 Present? Yes ☒ No ☐

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Sampling Point: **Wet 13 PEM**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/28/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 13 PFO
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Toe slope Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14028 Long: -73.43354 Datum: N/A
 Soil Map Unit Name: Ridgebury, Leicester, and Whitman soils (3) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 13</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. Wetland is located at the base of a riprap embankment for the Route 7 South on-ramp. PFO portion of wetland 13.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u> </u> High Water Table (A2) <u> </u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u> </u> Iron Deposits (B5) <u> </u> Inundation Visible on Aerial Imagery (B7) <u>X</u> Sparsely Vegetated Concave Surface (B8) <u>X</u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> <u>X</u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u>X</u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>16</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>16</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 13 PFO

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Acer rubrum</i>		20	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>86%</u> (A/B)														
2. <i>Ulmus americana</i>		10	Yes	FACW															
3. _____																			
4. _____																			
5. _____																			
6. _____																			
7. _____																			
		<u>30</u>	= Total Cover																
Sapling/Shrub Stratum	(Plot size: <u>15 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Clethra alnifolia</i>		15	Yes	FAC	Prevalence Index Worksheet: <table style="width: 100%;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>40</u></td> <td>x 2 = <u>80</u></td> </tr> <tr> <td>FAC species <u>60</u></td> <td>x 3 = <u>180</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>105</u> (A)</td> <td><u>280</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>2.67</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>40</u>	x 2 = <u>80</u>	FAC species <u>60</u>	x 3 = <u>180</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>105</u> (A)	<u>280</u> (B)
Total % Cover of:	Multiply by:																		
OBL species <u>0</u>	x 1 = <u>0</u>																		
FACW species <u>40</u>	x 2 = <u>80</u>																		
FAC species <u>60</u>	x 3 = <u>180</u>																		
FACU species <u>5</u>	x 4 = <u>20</u>																		
UPL species <u>0</u>	x 5 = <u>0</u>																		
Column Totals: <u>105</u> (A)	<u>280</u> (B)																		
2. <i>Vaccinium corymbosum</i>		15	Yes	FACW															
3. <i>Fraxinus pennsylvanica</i>		15	Yes	FACW															
4. _____																			
5. _____																			
6. _____																			
7. _____																			
		<u>45</u>	= Total Cover																
Herb Stratum	(Plot size: <u>5 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Smilax rotundifolia</i>		25	Yes	FAC	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation¹ (Explain)</u> ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. _____																			
3. _____																			
4. _____																			
5. _____																			
6. _____																			
7. _____																			
8. _____																			
9. _____																			
10. _____																			
11. _____																			
12. _____																			
		<u>25</u>	= Total Cover																
Woody Vine Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Vitis labrusca</i>		5	Yes	FACU	Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
2. _____																			
3. _____																			
4. _____																			
		<u>5</u>	= Total Cover																

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

SOIL

Sampling Point: Wet 13 PFO

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/2	100					Silt Loam	
2-10	10YR 4/2	80	5YR 4/6	20	C	M, PL	Silty Clay Loam	
10-16+	10YR 2/1	95	5YR 3/4	5	C	M	Mucky Silty Clay Loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils ³ :
☐ Histosol (A1)	☐ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
☐ Histic Epipedon (A2)	☐ Coast Prairie Redox (A16) (LRR K, L, R)
☐ Black Histic (A3)	☐ 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7) (LRR K, L)
☐ Stratified Layers (A5)	☐ Polyvalue Below Surface (S8) (LRR K, L)
☐ Depleted Below Dark Surface (A11)	☐ Thin Dark Surface (S9) (LRR K, L)
☐ Thick Dark Surface (A12)	☐ Iron-Manganese Masses (F12) (LRR K, L, R)
☐ Sandy Mucky Mineral (S1)	☐ Piedmont Floodplain Soils (F19) (MLRA 149B)
☐ Sandy Gleyed Matrix (S4)	☐ Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
☐ Sandy Redox (S5)	☐ Red Parent Material (F12)
☐ Stripped Matrix (S6)	☐ Very Shallow Dark Surface (F22)
☐ Dark Surface (S7) (LRR R, MLRA 149B)	☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):	Hydric Soil Present? Yes ☒ No ☐
Type: _____ Depth (inches): _____	

Remarks:

A positive indication of hydric soil was observed.

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 11/16/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Upl 13
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14018 Long: -73.43397 Datum: N/A
 Soil Map Unit Name: Ridgebury, Leicester, and Whitman soils (3) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: This point was determined not to be within a wetland due to the lack of all three wetland criteria. The survey was completed during a mild drought. Upland point for Wetland 13, located adjacent to Perry Road.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <u> </u> Surface Water (A1) <u> </u> High Water Table (A2) <u> </u> Saturation (A3) <u> </u> Water Marks (B1) <u> </u> Sediment Deposits (B2) <u> </u> Drift Deposits (B3) <u> </u> Algal Mat or Crust (B4) <u> </u> Iron Deposits (B5) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Sparsely Vegetated Concave Surface (B8) <u> </u> Water-Stained Leaves (B9) <u> </u> Aquatic Fauna (B13) <u> </u> Marl Deposits (B15) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Thin Muck Surface (C7) <u> </u> Other (Explain in Remarks)	<u>Secondary Indicators (minimum of two required)</u> <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>16</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>16</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No positive indication of wetland hydrology was observed.

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Upl 13

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <u>Quercus alba</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>10</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40%</u> (A/B)														
2. <u>Betula lenta</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Robinia pseudoacacia</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>60</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>95</u></td> <td>x 4 = <u>380</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>150</u> (A)</td> <td><u>535</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.57</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>95</u>	x 4 = <u>380</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>150</u> (A)	<u>535</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>30</u>	x 2 = <u>60</u>																	
FAC species <u>15</u>	x 3 = <u>45</u>																	
FACU species <u>95</u>	x 4 = <u>380</u>																	
UPL species <u>10</u>	x 5 = <u>50</u>																	
Column Totals: <u>150</u> (A)	<u>535</u> (B)																	
1. <u>Acer saccharum</u>	<u>15</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Betula lenta</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>															
4. <u>Vaccinium corymbosum</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>															
5. <u>Prunus serotina</u>	<u>5</u>	<u>No</u>	<u>FACU</u>															
6. <u>Juniperus virginiana</u>	<u>5</u>	<u>No</u>	<u>FACU</u>															
7. _____	_____	_____	_____															
<u>55</u> = Total Cover																		
Herb Stratum (Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <u>Solidago rugosa</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>															
2. <u>Dichanthelium clandestinum</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>25</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft.</u>)				Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
1. <u>Celastrus orbiculatus</u>	<u>10</u>	<u>Yes</u>	<u>UPL</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>10</u> = Total Cover																		

Remarks:

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Sampling Point: **Upl 13**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/27/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 14
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Toe slope Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14066 Long: -73.43561 Datum: N/A
 Soil Map Unit Name: Ridgebury, Leicester, and Whitman (3), and Canton and Charlton (62C) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil Yes, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 14</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. Located at the base of Route 7 on-ramp adjacent to a riprap slope.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
☐ Surface Water (A1) ☒ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☒ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☒ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>14</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>14</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 14

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <i>Acer rubrum</i>		25	Yes	FAC	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>86%</u> (A/B)														
2. <i>Ulmus americana</i>		20	Yes	FACW															
3. _____		_____	_____	_____															
4. _____		_____	_____	_____															
5. _____		_____	_____	_____															
6. _____		_____	_____	_____															
7. _____		_____	_____	_____															
		<u>45</u>	= Total Cover																
Sapling/Shrub Stratum	(Plot size: <u>15 ft.</u>)				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>86</u></td> <td>x 2 = <u>172</u></td> </tr> <tr> <td>FAC species <u>80</u></td> <td>x 3 = <u>240</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>186</u> (A)</td> <td><u>492</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.65</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>86</u>	x 2 = <u>172</u>	FAC species <u>80</u>	x 3 = <u>240</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>186</u> (A)	<u>492</u> (B)
Total % Cover of:	Multiply by:																		
OBL species <u>0</u>	x 1 = <u>0</u>																		
FACW species <u>86</u>	x 2 = <u>172</u>																		
FAC species <u>80</u>	x 3 = <u>240</u>																		
FACU species <u>20</u>	x 4 = <u>80</u>																		
UPL species <u>0</u>	x 5 = <u>0</u>																		
Column Totals: <u>186</u> (A)	<u>492</u> (B)																		
1. <i>Lindera benzoin</i>		30	Yes	FACW															
2. <i>Cornus amomum</i>		20	Yes	FACW															
3. <i>Clethra alnifolia</i>		10	No	FAC															
4. <i>Rosa multiflora</i>		5	No	FACU															
5. _____		_____	_____	_____															
6. _____		_____	_____	_____															
7. _____		_____	_____	_____															
		<u>65</u>	= Total Cover																
Herb Stratum	(Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation ☒ <u>2</u> - Dominance Test is >50% ☒ <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <i>Toxicodendron radicans</i>		30	Yes	FAC															
2. <i>Rubus hispidus</i>		10	No	FACW															
3. <i>Solidago rugosa</i>		5	No	FAC															
4. <i>Ulmus americana</i>		3	No	FACW															
5. <i>Onoclea sensibilis</i>		3	No	FACW															
6. _____		_____	_____	_____															
7. _____		_____	_____	_____															
8. _____		_____	_____	_____															
9. _____		_____	_____	_____															
10. _____		_____	_____	_____															
11. _____		_____	_____	_____															
12. _____		_____	_____	_____															
		<u>51</u>	= Total Cover																
Woody Vine Stratum	(Plot size: <u>30 ft.</u>)				Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
1. <i>Vitis labrusca</i>		15	Yes	FACU															
2. <i>Toxicodendron radicans</i>		10	Yes	FAC															
3. _____		_____	_____	_____															
4. _____		_____	_____	_____															
		<u>25</u>	= Total Cover																

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Sampling Point: **Wet 14**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 11/16/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Upl 14 & 15
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14064 Long: -73.43601 Datum: #N/A
 Soil Map Unit Name: Canton and Charlton soils (62D) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: This point was determined not to be within a wetland due to the lack of all three wetland criteria. The survey was completed during a mild drought. Upland point for Wetlands 14 and 15 in a forested area. Evidence of recent tree cutting.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☐ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u> </u> No <u>X</u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No positive indication of wetland hydrology was observed.

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Upl 14 & 15

Tree Stratum	Absolute % cover	Dominant Species?	Indicator Status	
(Plot size: <u>30 ft.</u>)				
1. <u><i>Acer rubrum</i></u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>	
2. <u><i>Quercus bicolor</i></u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
3. <u><i>Quercus palustris</i></u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	
4. <u><i>Liriodendron tulipifera</i></u>	<u>15</u>	<u>No</u>	<u>FACU</u>	
5. <u><i>Carya ovata</i></u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>115</u>	<u>= Total Cover</u>		

Sapling/Shrub Stratum	Absolute % cover	Dominant Species?	Indicator Status	
(Plot size: <u>15 ft.</u>)				
1. <u><i>Berberis thunbergii</i></u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	
2. <u><i>Euonymus alatus</i>*</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>	
3. <u><i>Acer rubrum</i></u>	<u>10</u>	<u>No</u>	<u>FAC</u>	
4. <u><i>Rosa multiflora</i></u>	<u>10</u>	<u>No</u>	<u>FACU</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>65</u>	<u>= Total Cover</u>		

Herb Stratum	Absolute % cover	Dominant Species?	Indicator Status	
(Plot size: <u>5 ft.</u>)				
1. <u><i>Solidago rugosa</i></u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	
2. <u><i>Alliaria petiolata</i></u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
3. <u><i>Celastrus orbiculatus</i></u>	<u>5</u>	<u>Yes</u>	<u>UPL</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>20</u>	<u>= Total Cover</u>		

Woody Vine Stratum	Absolute % cover	Dominant Species?	Indicator Status	
(Plot size: <u>30 ft.</u>)				
1. <u><i>None Observed</i></u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>0</u>	<u>= Total Cover</u>		

Dominance Test worksheet:

 Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

 Total Number of Dominant Species Across All Strata: 8 (B)

 Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index Worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>40</u>	x 2 = <u>80</u>
FAC species <u>70</u>	x 3 = <u>210</u>
FACU species <u>70</u>	x 4 = <u>280</u>
UPL species <u>20</u>	x 5 = <u>100</u>
Column Totals: <u>200</u> (A)	<u>670</u> (B)

 Prevalence Index = B/A = 3.35
Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤ 3.0 ¹
- 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Five Vegetation Strata:
Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height.

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic
Vegetation

 Present? Yes _____ No X

Remarks:

 No positive indication of hydrophytic vegetation was observed ($\geq 50\%$ of dominant species indexed as FAC- or drier).

*Species does not appear on the 2016 National Wetland Plant List; therefore the species is assumed a UPL indicator status.

Evidence of recent tree cutting.

Sampling Point: **Upl 14 & 15**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/27/2016
 Applicant/Owner: CTDOT State: CT Sample Point: Wet 15
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14057 Long: -73.43619 Datum: N/A
 Soil Map Unit Name: Canton and Charlton soils (62D) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u> If yes, optional Wetland Site ID: <u>Wetland 15</u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria. The survey was completed during a mild drought. Wetland 5 is located adjacent to Route 15 on-ramp, receives flows from a drainage outfall (INT-13).	

HYDROLOGY

Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)
☐ Surface Water (A1) ☒ High Water Table (A2) ☒ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☒ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>8</u> Saturation Present? Yes <u>X</u> No <u> </u> Depth (inches): <u>8</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: Wet 15

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u>Salix discolor</u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>63%</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>5</u> = Total Cover																		
				Prevalence Index Worksheet:														
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				<table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>19</u></td> <td>x 1 = <u>19</u></td> </tr> <tr> <td>FACW species <u>45</u></td> <td>x 2 = <u>90</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>35</u></td> <td>x 4 = <u>140</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>144</u> (A)</td> <td><u>414</u> (B)</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>19</u>	x 1 = <u>19</u>	FACW species <u>45</u>	x 2 = <u>90</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>35</u>	x 4 = <u>140</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>144</u> (A)	<u>414</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>19</u>	x 1 = <u>19</u>																	
FACW species <u>45</u>	x 2 = <u>90</u>																	
FAC species <u>30</u>	x 3 = <u>90</u>																	
FACU species <u>35</u>	x 4 = <u>140</u>																	
UPL species <u>15</u>	x 5 = <u>75</u>																	
Column Totals: <u>144</u> (A)	<u>414</u> (B)																	
1. <u>Salix discolor</u>	<u>35</u>	<u>Yes</u>	<u>FACW</u>	Prevalence Index = B/A = <u>2.88</u>														
2. <u>Rosa multiflora</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Rubus phoenicolasius</u>	<u>5</u>	<u>No</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>50</u> = Total Cover																		
Herb Stratum (Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation ☒ <u>2</u> - Dominance Test is >50% ☒ <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)														
1. <u>Persicaria sagittata</u>	<u>15</u>	<u>Yes</u>	<u>OBL</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
2. <u>Symphytotrichum lateriflorum</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>															
3. <u>Solidago rugosa</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>															
4. <u>Reynoutria japonica</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>															
5. <u>Thelypteris palustris</u>	<u>3</u>	<u>No</u>	<u>FACW</u>															
6. <u>Toxicodendron radicans</u>	<u>3</u>	<u>No</u>	<u>FAC</u>															
7. <u>Onoclea sensibilis</u>	<u>2</u>	<u>No</u>	<u>FACW</u>															
8. <u>Typha latifolia</u>	<u>2</u>	<u>No</u>	<u>OBL</u>															
9. <u>Rumex crispus</u>	<u>2</u>	<u>No</u>	<u>FAC</u>															
10. <u>Carex stipata</u>	<u>2</u>	<u>No</u>	<u>OBL</u>															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>64</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft.</u>)																		
1. <u>Celastrus orbiculatus</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No _____														
2. <u>Vitis labrusca</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>25</u> = Total Cover																		

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.00).

Sampling Point: **Wet 15**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/27/2016
 Applicant/Owner: CTDOT State: CT Sample Point: SP-1
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.14440 Long: -73.43244 Datum: #N/A
 Soil Map Unit Name: Ridgebury, Leicester, and Whitman soil (3), and Udorthents-Pits complex (305) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: This point was determined not to be within a wetland due to the lack of hydric soils. The survey was completed during a mild drought. Located between transmission ROW and Route 15 on-ramp in a low spot. Previously delineated as a wetland, 2016 investigations determined that it lacked hydric soils and therefore should not be considered a wetland.	

HYDROLOGY

Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) <u> </u> Surface Water (A1) <u>X</u> Water-Stained Leaves (B9) <u> </u> High Water Table (A2) <u> </u> Aquatic Fauna (B13) <u> </u> Saturation (A3) <u> </u> Marl Deposits (B15) <u> </u> Water Marks (B1) <u> </u> Hydrogen Sulfide Odor (C1) <u> </u> Sediment Deposits (B2) <u> </u> Oxidized Rhizospheres on Living Roots (C3) <u> </u> Drift Deposits (B3) <u> </u> Presence of Reduced Iron (C4) <u> </u> Algal Mat or Crust (B4) <u> </u> Recent Iron Reduction in Tilled Soils (C6) <u> </u> Iron Deposits (B5) <u> </u> Thin Muck Surface (C7) <u> </u> Inundation Visible on Aerial Imagery (B7) <u> </u> Other (Explain in Remarks) <u>X</u> Sparsely Vegetated Concave Surface (B8)		Secondary Indicators (minimum of two required) <u> </u> Surface Soil Cracks (B6) <u> </u> Drainage Patterns (B10) <u> </u> Moss Trim Lines (B16) <u> </u> Dry-Season Water Table (C2) <u> </u> Crayfish Burrows (C8) <u> </u> Saturation Visible on Aerial Imagery (C9) <u> </u> Stunted or Stressed Plants (D1) <u> </u> Geomorphic Position (D2) <u> </u> Shallow Aquitard (D3) <u> </u> Microtopographic Relief (D4) <u> </u> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>10</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>10</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (primary and secondary indicators were present).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: SP-1

Tree Stratum	(Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status																																				
1. <u>Acer rubrum</u>		<u>90</u>	<u>Yes</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)																																			
2. _____		_____	_____	_____																																				
3. _____		_____	_____	_____																																				
4. _____		_____	_____	_____																																				
5. _____		_____	_____	_____																																				
6. _____		_____	_____	_____																																				
7. _____		_____	_____	_____																																				
		<u>90</u>	= Total Cover																																					
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)																																								
1. <u>Acer rubrum</u>		<u>5</u>	<u>Yes</u>	<u>FAC</u>	Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 10%;"></th> <th style="width: 10%;">Multiply by:</th> <th style="width: 10%;"></th> <th style="width: 10%;"></th> </tr> <tr> <td>OBL species</td> <td><u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td><u>0</u></td> <td>x 2 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td><u>95</u></td> <td>x 3 =</td> <td><u>285</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td><u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td><u>15</u></td> <td>x 5 =</td> <td><u>75</u></td> <td></td> </tr> <tr> <td>Column Totals:</td> <td><u>110</u></td> <td>(A)</td> <td><u>360</u></td> <td>(B)</td> </tr> </table> Prevalence Index = B/A = <u>3.27</u>	Total % Cover of:		Multiply by:			OBL species	<u>0</u>	x 1 =	<u>0</u>		FACW species	<u>0</u>	x 2 =	<u>0</u>		FAC species	<u>95</u>	x 3 =	<u>285</u>		FACU species	<u>0</u>	x 4 =	<u>0</u>		UPL species	<u>15</u>	x 5 =	<u>75</u>		Column Totals:	<u>110</u>	(A)	<u>360</u>	(B)
Total % Cover of:		Multiply by:																																						
OBL species	<u>0</u>	x 1 =	<u>0</u>																																					
FACW species	<u>0</u>	x 2 =	<u>0</u>																																					
FAC species	<u>95</u>	x 3 =	<u>285</u>																																					
FACU species	<u>0</u>	x 4 =	<u>0</u>																																					
UPL species	<u>15</u>	x 5 =	<u>75</u>																																					
Column Totals:	<u>110</u>	(A)	<u>360</u>	(B)																																				
2. _____		_____	_____	_____																																				
3. _____		_____	_____	_____																																				
4. _____		_____	_____	_____																																				
5. _____		_____	_____	_____																																				
6. _____		_____	_____	_____																																				
7. _____		_____	_____	_____																																				
		<u>5</u>	= Total Cover																																					
Herb Stratum (Plot size: <u>5 ft.</u>)																																								
1. <u>None Observed</u>		_____	_____	_____	Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																			
2. _____		_____	_____	_____																																				
3. _____		_____	_____	_____																																				
4. _____		_____	_____	_____																																				
5. _____		_____	_____	_____																																				
6. _____		_____	_____	_____																																				
7. _____		_____	_____	_____																																				
8. _____		_____	_____	_____																																				
9. _____		_____	_____	_____																																				
10. _____		_____	_____	_____																																				
11. _____		_____	_____	_____																																				
12. _____		_____	_____	_____																																				
		<u>0</u>	= Total Cover																																					
Woody Vine Stratum (Plot size: <u>30 ft.</u>)																																								
1. <u>Celastrus orbiculatus</u>		<u>15</u>	<u>Yes</u>	<u>UPL</u>	Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.																																			
2. _____		_____	_____	_____																																				
3. _____		_____	_____	_____																																				
4. _____		_____	_____	_____																																				
		<u>15</u>	= Total Cover																																					

Hydrophytic Vegetation
 Present? Yes X No _____

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

Sampling Point: **SP-1**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 15/Route 7 Interchange County: Fairfield Sampling Date: 9/29/2016
 Applicant/Owner: CTDOT State: CT Sample Point: SP-2
 Investigator(s): KB and RMH Section, Township, Range: N/A
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): None Slope (%): 0-3
 Subregion (LRR or MLRA): LRR-R Lat: 41.13701 Long: -73.42939 Datum: #N/A
 Soil Map Unit Name: Udorthents-Urban land complex (306) NWI Classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? (Yes / No) NO (if no, explain in Remarks.)
 Are Vegetation No, Soil Yes, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u> If yes, optional Wetland Site ID: <u> </u>
Remarks: This point was determined not to be within a wetland due to the lack of hydrophytic vegetation and hydric soils. The survey was completed during a mild drought. The area receives flows from several drainage outfalls. Sedimentation is very high. Previously delineated as a wetland, no longer meets criteria.	

HYDROLOGY

Wetland hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
☐ Surface Water (A1) ☐ High Water Table (A2) ☐ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☒ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Sparsely Vegetated Concave Surface (B8)	☐ Water-Stained Leaves (B9) ☐ Aquatic Fauna (B13) ☐ Marl Deposits (B15) ☐ Hydrogen Sulfide Odor (C1) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Presence of Reduced Iron (C4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Thin Muck Surface (C7) ☐ Other (Explain in Remarks)	☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☐ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>N/A</u> Water Table Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>10</u> Saturation Present? Yes <u> </u> No <u>X</u> Depth (inches): <u>>10</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No <u> </u>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (at least one primary indicator).

VEGETATION (Four Strata) - Use scientific names of plants.

 Sampling Point: SP-2

Tree Stratum (Plot size: <u>30 ft.</u>)	Absolute % cover	Dominant Species?	Indicator Status															
1. <u>Populus grandidentata</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. <u>Catalpa speciosa</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>45</u> = Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)				Prevalence Index Worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>3</u></td> <td>x 1 = <u>3</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>120</u></td> <td>x 4 = <u>480</u></td> </tr> <tr> <td>UPL species <u>50</u></td> <td>x 5 = <u>250</u></td> </tr> <tr> <td>Column Totals: <u>173</u> (A)</td> <td><u>733</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.24</u>	Total % Cover of:	Multiply by:	OBL species <u>3</u>	x 1 = <u>3</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>120</u>	x 4 = <u>480</u>	UPL species <u>50</u>	x 5 = <u>250</u>	Column Totals: <u>173</u> (A)	<u>733</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>3</u>	x 1 = <u>3</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>120</u>	x 4 = <u>480</u>																	
UPL species <u>50</u>	x 5 = <u>250</u>																	
Column Totals: <u>173</u> (A)	<u>733</u> (B)																	
1. <u>Rosa multiflora</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>30</u> = Total Cover																		
Herb Stratum (Plot size: <u>5 ft.</u>)				Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤ 3.0 ¹ <u>4</u> - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>Problematic Hydrophytic Vegetation</u> ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
1. <u>Artemisia vulgaris</u>	<u>40</u>	<u>Yes</u>	<u>UPL</u>															
2. <u>Solidago canadensis</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Rosa multiflora</u>	<u>5</u>	<u>No</u>	<u>FACU</u>															
4. <u>Typha angustifolia</u>	<u>3</u>	<u>No</u>	<u>OBL</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>88</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30 ft.</u>)				Definitions of Five Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine - All woody vines greater than 3.28 ft in height.														
1. <u>Celastrus orbiculatus</u>	<u>10</u>	<u>Yes</u>	<u>UPL</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>10</u> = Total Cover																		

Remarks:

No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FAC- or drier).

Sampling Point: **SP-2**

US Army Corps of Engineers Northcentral and Northeast - Version 1.0

APPENDIX E:
Resource Mapping

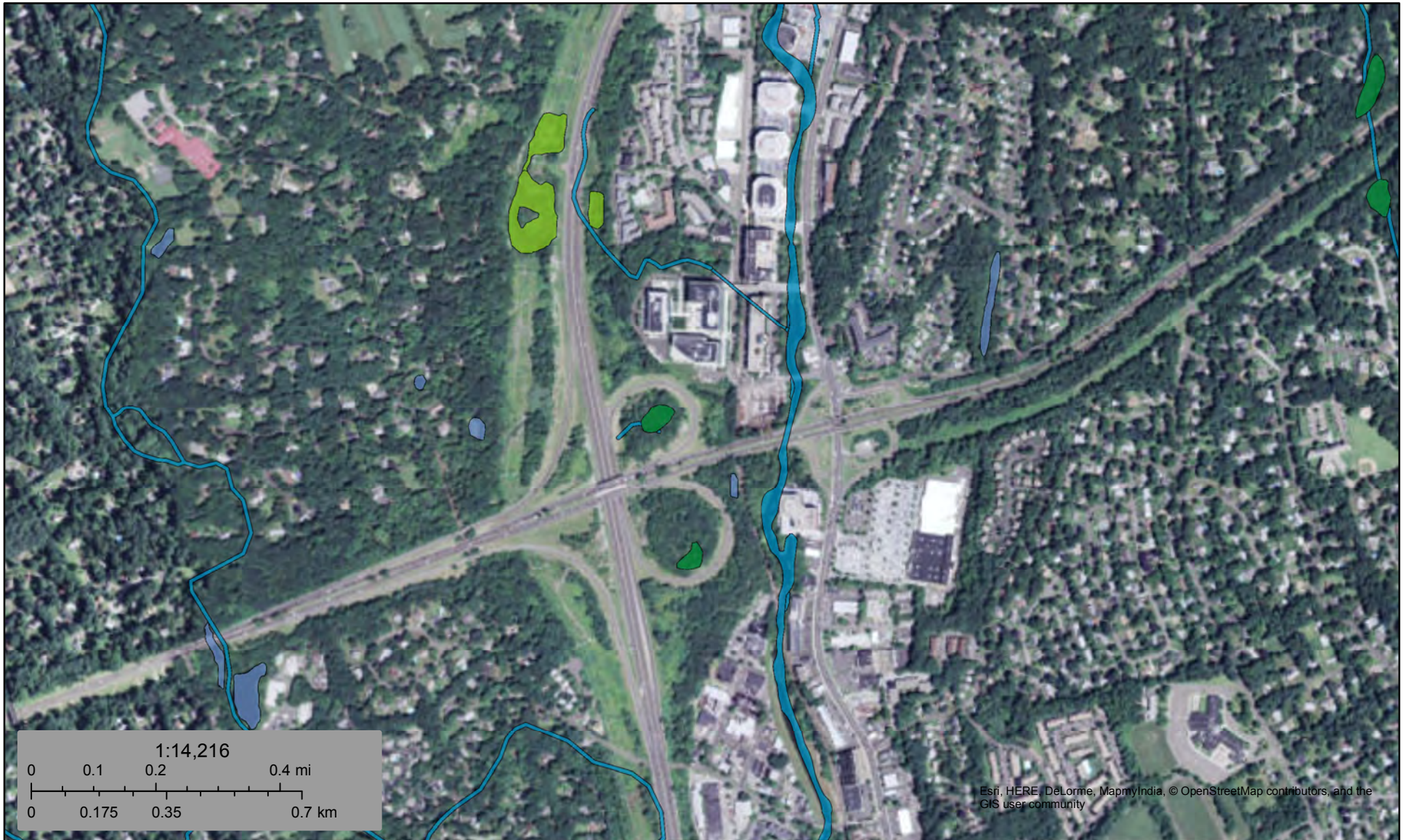
APPENDIX F:
Resource ID



U.S. Fish and Wildlife Service

National Wetlands Inventory

Route 7 and 15 Interchange

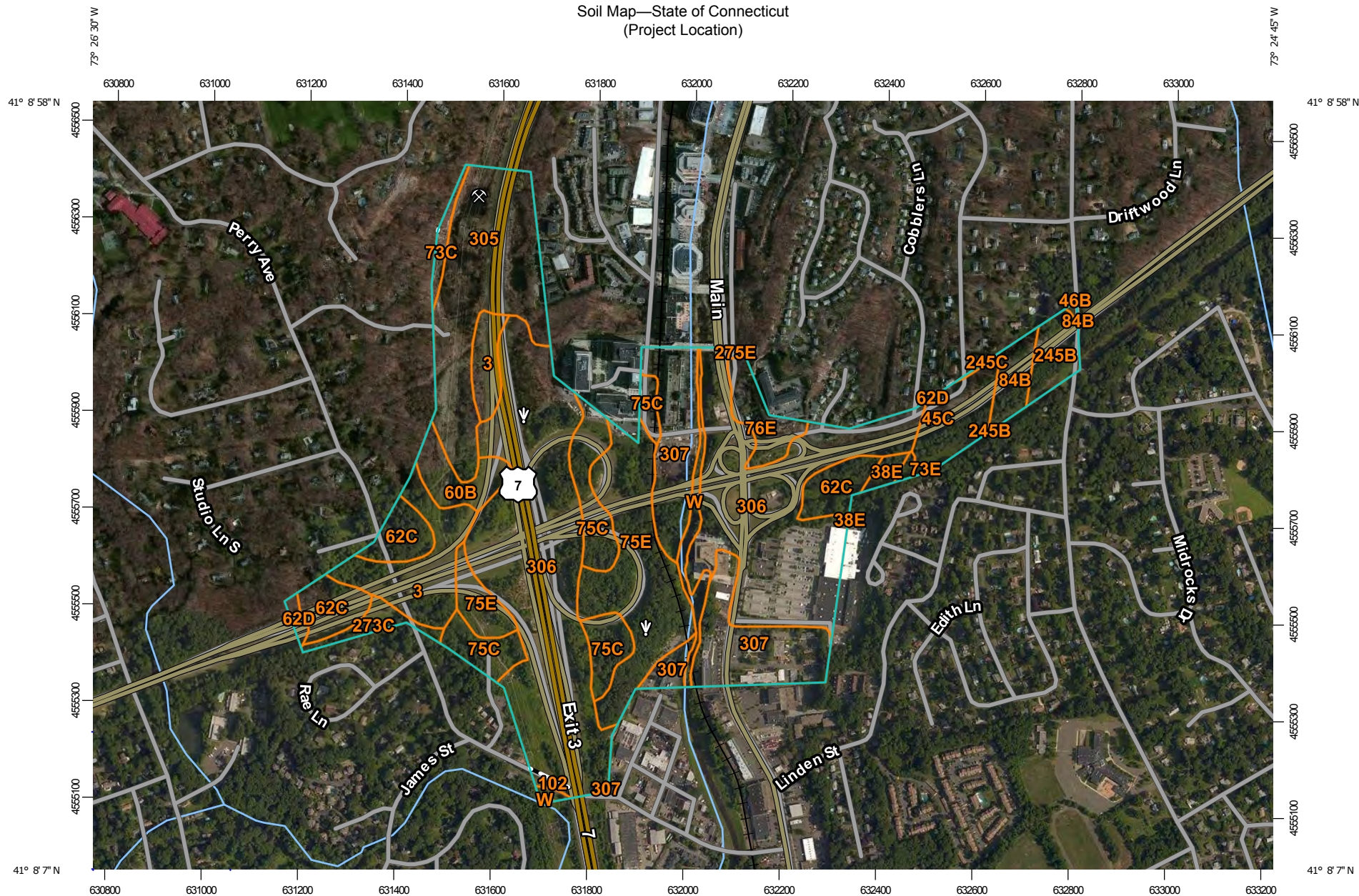


January 23, 2017

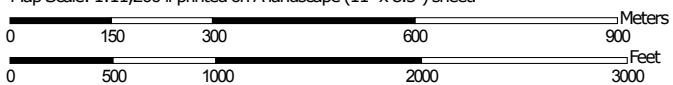
- | | | |
|--------------------------------|-----------------------------------|----------|
| Estuarine and Marine Deepwater | Freshwater Forested/Shrub Wetland | Other |
| Estuarine and Marine Wetland | Freshwater Pond | Riverine |
| Freshwater Emergent Wetland | Lake | |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Soil Map—State of Connecticut (Project Location)



Map Scale: 1:11,200 if printed on A landscape (11" x 8.5") sheet.



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



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

1/23/2017
Page 1 of 4

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: State of Connecticut

Survey Area Data: Version 15, Sep 28, 2016

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

Date(s) aerial images were photographed: Mar 28, 2011—Aug 27, 2014

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

Map Unit Legend

State of Connecticut (CT600)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	12.0	6.1%
38E	Hinckley loamy sand, 15 to 45 percent slopes	0.9	0.5%
45C	Woodbridge fine sandy loam, 8 to 15 percent slopes	5.8	3.0%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	0.1	0.1%
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	4.0	2.1%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	9.9	5.0%
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	0.6	0.3%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	1.2	0.6%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	0.3	0.2%
75C	Hollis-Chatfield-Rock outcrop complex, 3 to 15 percent slopes	12.0	6.1%
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	20.7	10.5%
76E	Rock outcrop-Hollis complex, 3 to 45 percent slopes	4.1	2.1%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	2.9	1.5%
102	Pootatuck fine sandy loam	0.3	0.2%
245B	Woodbridge-Urban land complex, 0 to 8 percent slopes	3.4	1.7%
245C	Woodbridge-Urban land complex, 8 to 15 percent slopes	0.1	0.0%

State of Connecticut (CT600)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
273C	Urban land-Charlton-Chatfield complex, rocky, 3 to 15 percent slopes	2.0	1.0%
275E	Urban land-Chatfield-Rock outcrop complex, 15 to 45 percent slopes	0.1	0.1%
305	Udorthents-Pits complex, gravelly	21.3	10.8%
306	Udorthents-Urban land complex	70.9	36.1%
307	Urban land	20.7	10.6%
W	Water	2.8	1.4%
Totals for Area of Interest		196.1	100.0%

Natural Diversity Data Base Areas

NORWALK, CT

December 2016

 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.

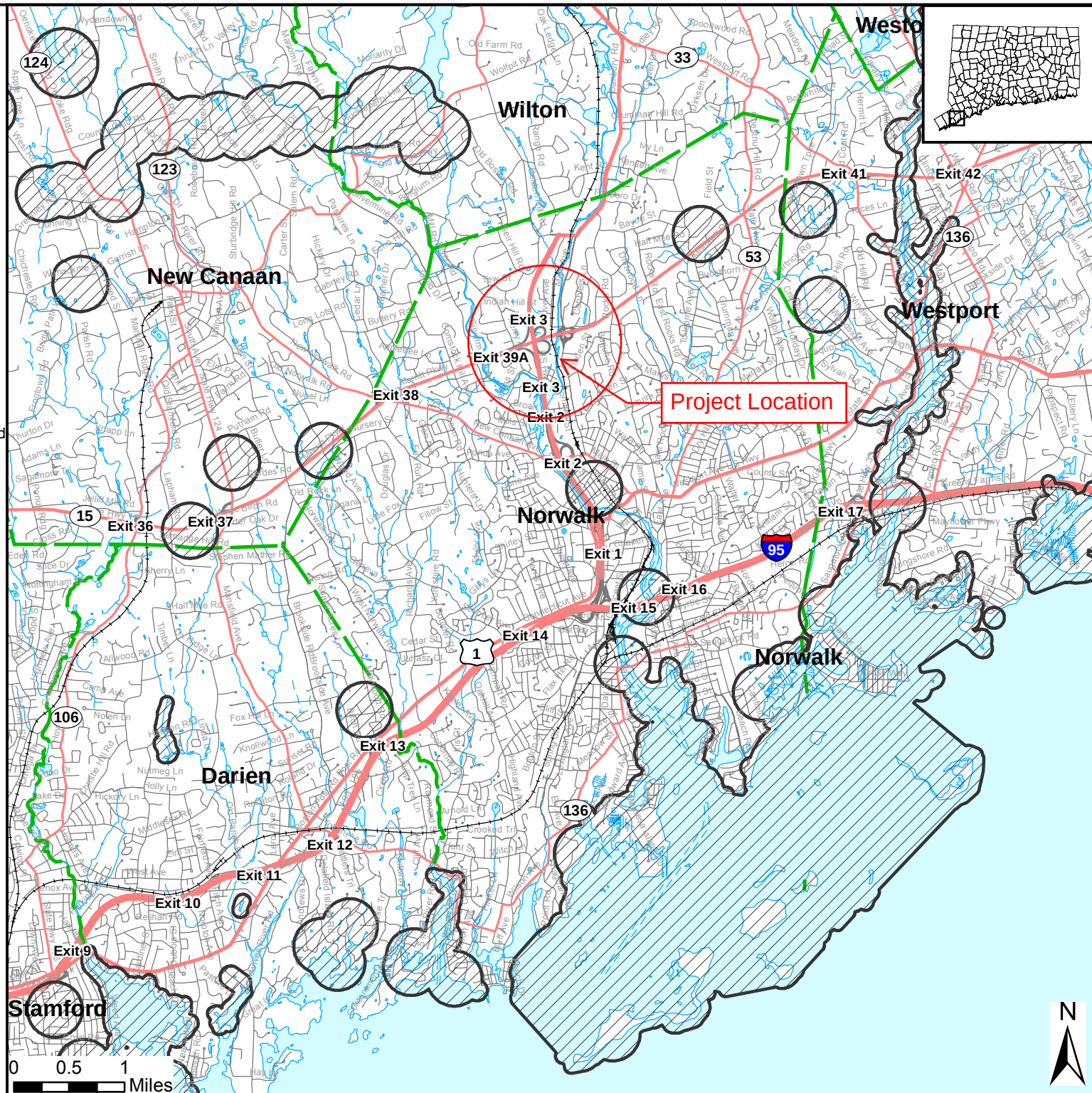
www.ct.gov/deep/nddbrequest

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



AQUIFER PROTECTION AREAS

Norwalk, CT

October 6, 2016

-  Level A APA (Final Adopted)
 Level A APA (Final)
 Level B APA (Preliminary)
 Town Boundary

NOTE: The Aquifer Protection Areas were delineated through Connecticut's Level A and Level B Mapping Processes. Aquifer Protection Areas are delineated for active public water supply wells in stratified drift that serve more than 1000 people, in accordance with Sections 22a-354c and 22a-354z of the Connecticut General Statutes. Level B Mapping delineates a preliminary aquifer protection area, providing an estimate of the land area from which the well draws its water. Level A Mapping delineates the final Aquifer Protection Area, which becomes the regulatory boundary for land use controls designed to protect the well from contamination. As Level A Mapping is completed for each well field and approved by DEEP, it replaces the Level B Mapping. Final Adopted Level A Areas are those where towns have land use regulations for them.

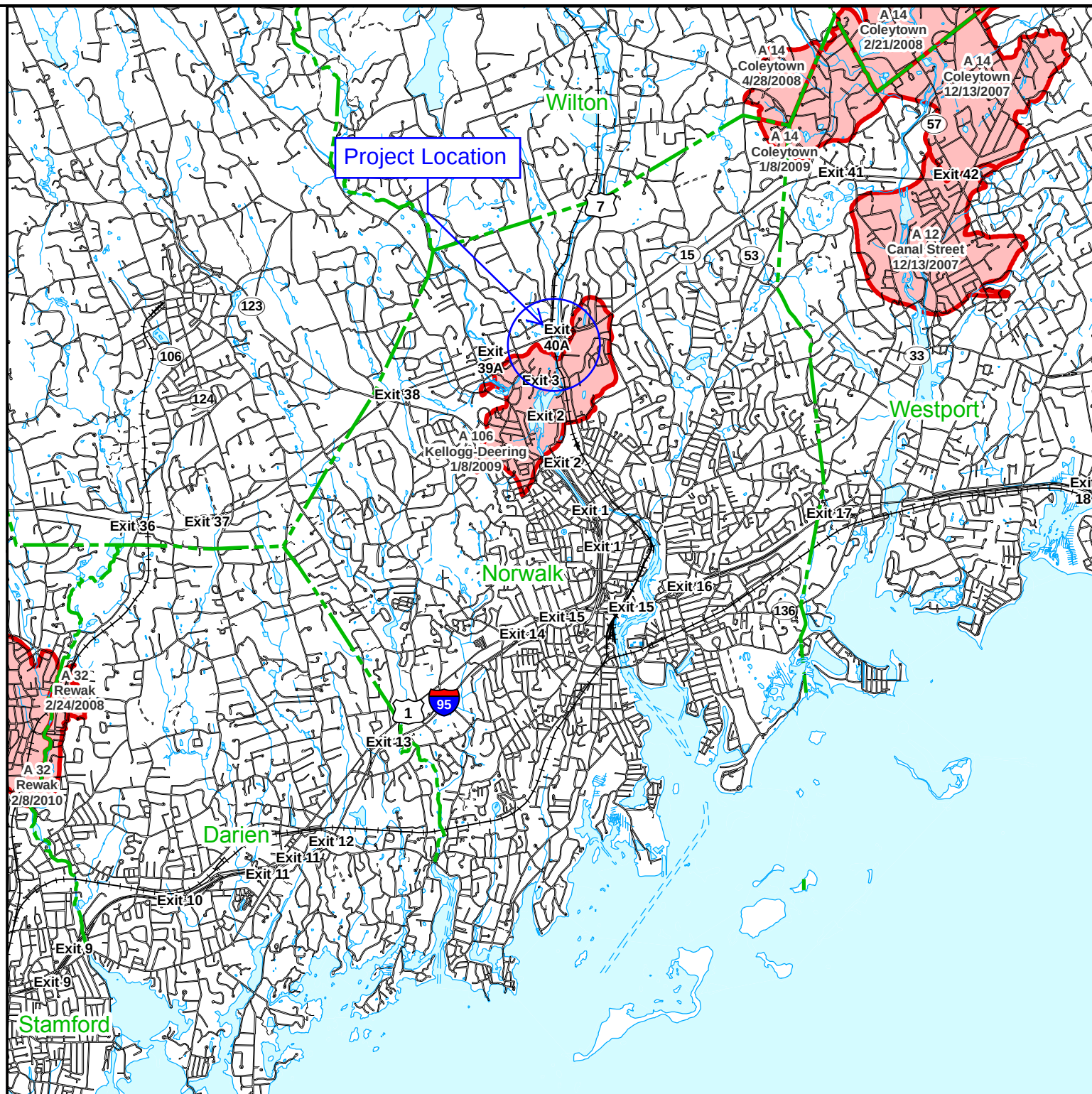
Massachusetts and Rhode Island Wellhead Protection Areas may be shown for informational purposes.

QUESTIONS:

Bureau of Water Protection and Land Reuse
Planning and Standards Division
Phone: (860) 424-3020
www.ct.gov/deep/aquiferprotection

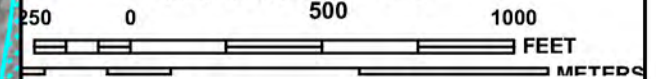


STATE OF CONNECTICUT
DEPARTMENT OF
ENERGY & ENVIRONMENTAL PROTECTION
79 Elm Street
Hartford, CT 06106-5127





MAP SCALE 1" = 500'



NFP

PANEL 0393G

FIRM

FLOOD INSURANCE RATE MAP
FAIRFIELD COUNTY,
CONNECTICUT
(ALL JURISDICTIONS)

PANEL 393 OF 626

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
NORWALK, CITY OF	090012	0393	G
WILTON, TOWN OF	090020	0393	G

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.

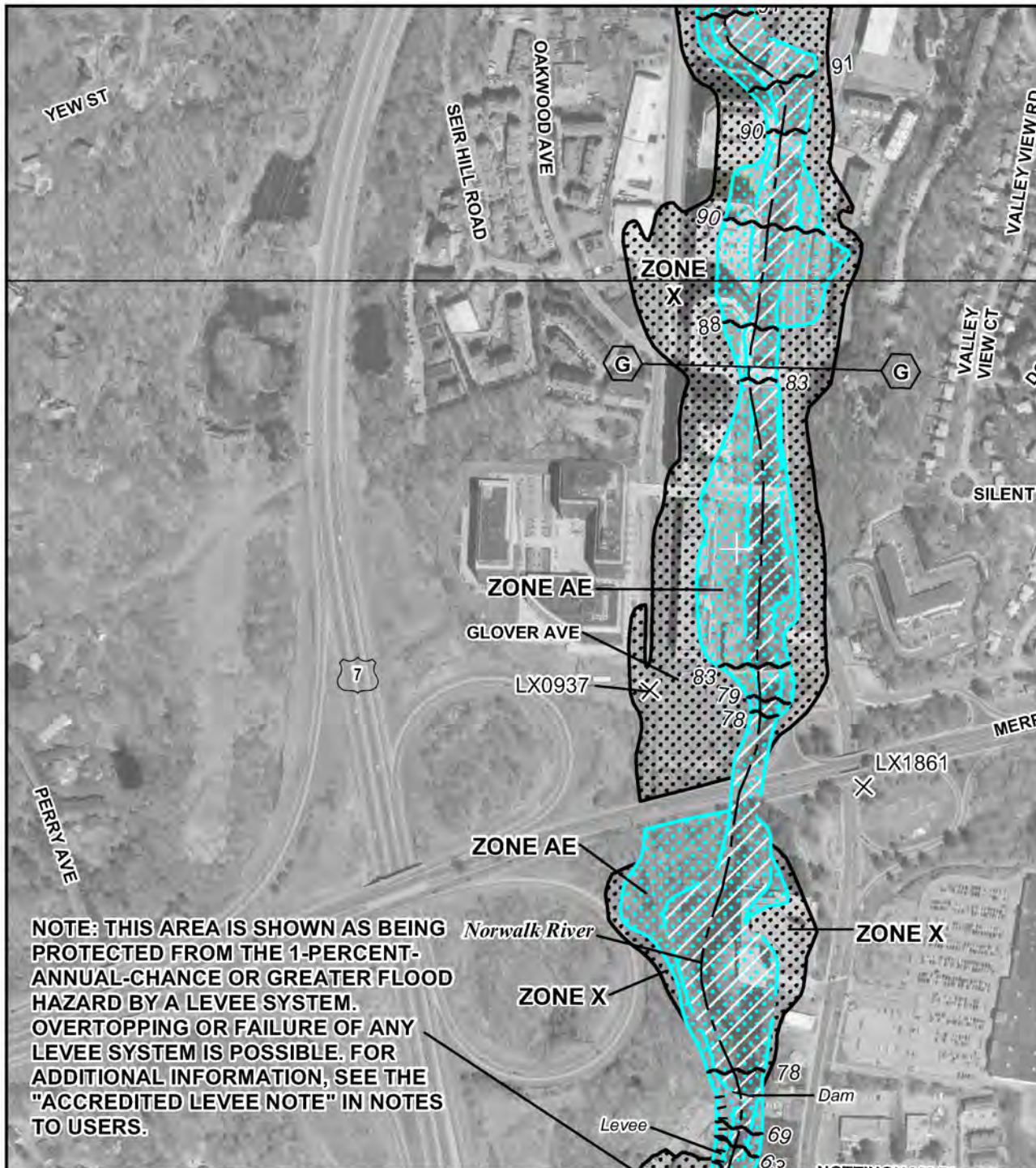


MAP NUMBER
09001C0393G

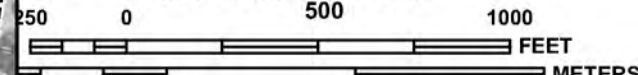
MAP REVISED
OCTOBER 16, 2013

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



MAP SCALE 1" = 500'



NFP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0393G

FIRM

FLOOD INSURANCE RATE MAP
FAIRFIELD COUNTY,
CONNECTICUT
(ALL JURISDICTIONS)

PANEL 393 OF 626

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
NORWALK, CITY OF	090012	0393	G
WILTON, TOWN OF	090020	0393	G

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.

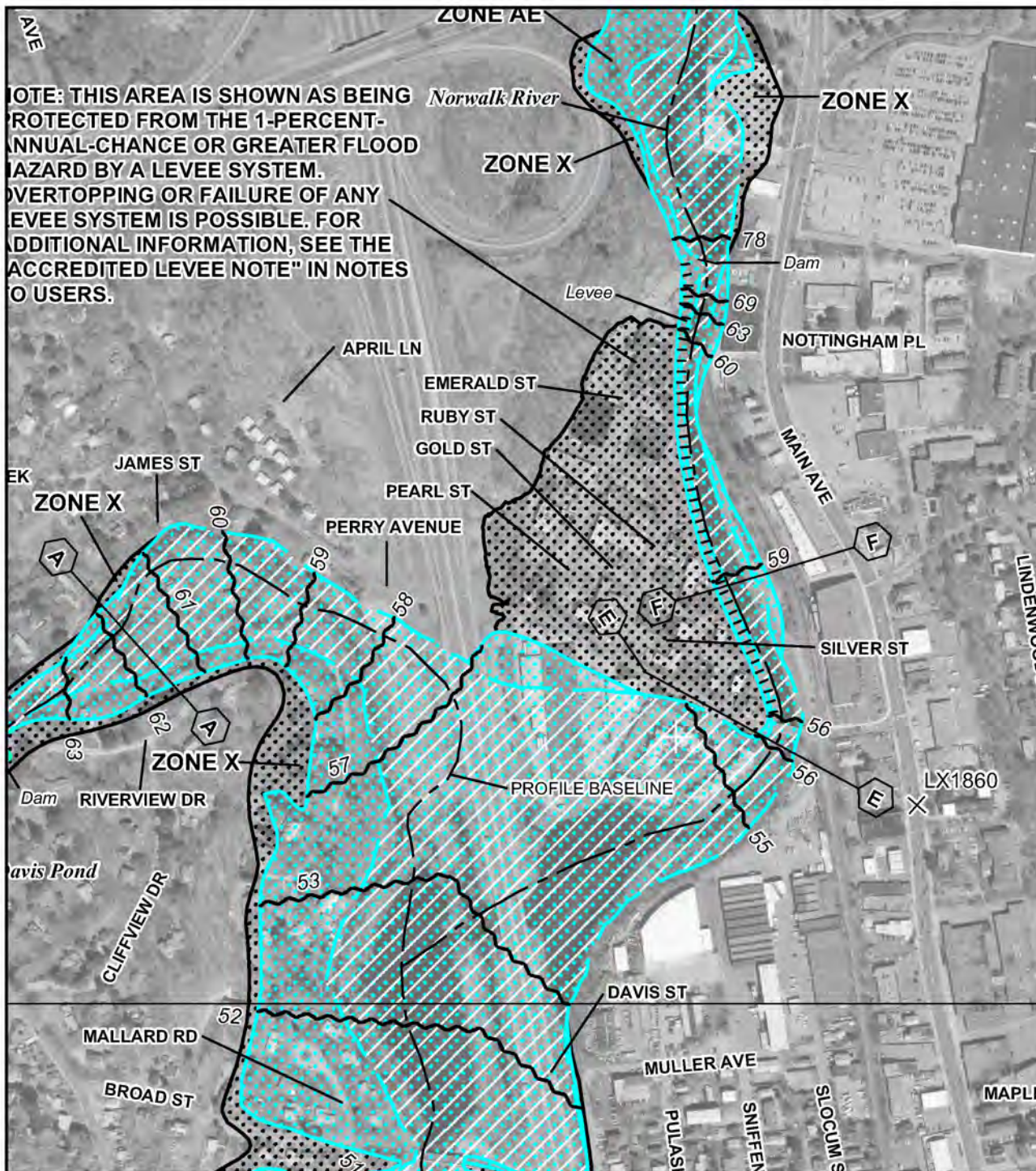


MAP NUMBER
09001C0393G

MAP REVISED
OCTOBER 16, 2013

Federal Emergency Management Agency

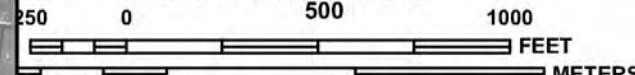
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



NOTE: THIS AREA IS SHOWN AS BEING PROTECTED FROM THE 1-PERCENT-ANNUAL-CHANCE OR GREATER FLOOD HAZARD BY A LEVEE SYSTEM. OVERTOPPING OR FAILURE OF ANY LEVEE SYSTEM IS POSSIBLE. FOR ADDITIONAL INFORMATION, SEE THE ACCREDITED LEVEE NOTE IN NOTES TO USERS.



MAP SCALE 1" = 500'



NFP

PANEL 0393G

FIRM

FLOOD INSURANCE RATE MAP
FAIRFIELD COUNTY,
CONNECTICUT
(ALL JURISDICTIONS)

PANEL 393 OF 626
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
NORWALK, CITY OF	090012	0393	G
WILTON, TOWN OF	090020	0393	G

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.

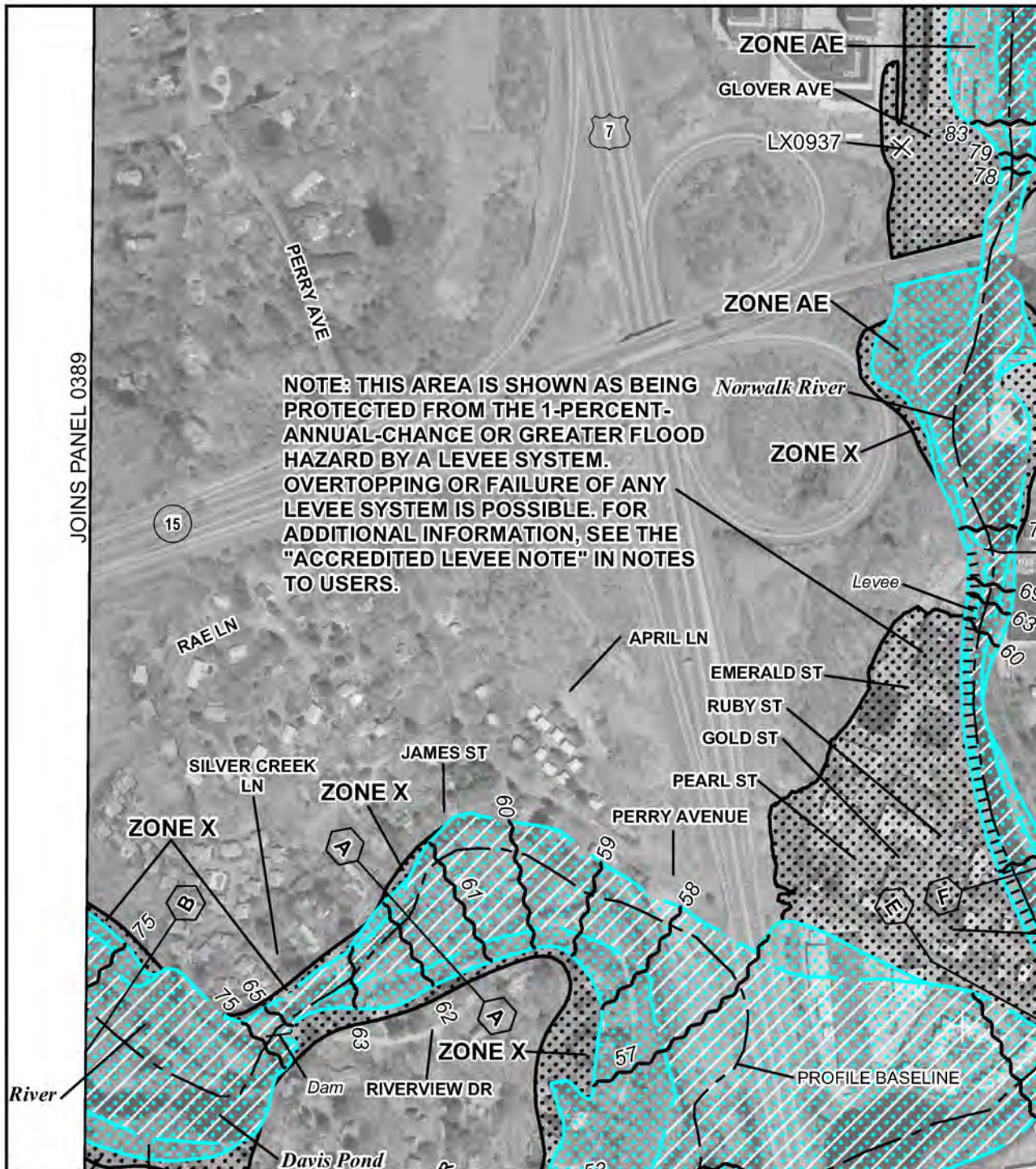


MAP NUMBER
09001C0393G
MAP REVISED
OCTOBER 16, 2013

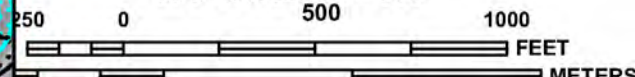
Federal Emergency Management Agency

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JOINS PANEL 0389



MAP SCALE 1" = 500'



NFP

PANEL 0393G

FIRM

FLOOD INSURANCE RATE MAP
FAIRFIELD COUNTY,
CONNECTICUT
(ALL JURISDICTIONS)

PANEL 393 OF 626

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
NORWALK, CITY OF	090012	0393	G
WILTON, TOWN OF	090020	0393	G

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MAP REVISED
OCTOBER 16, 2013

Federal Emergency Management Agency

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Appendix F: Resource ID

Wetlands		Watercourses	
Report ID	Field ID	Report ID	Field ID
Wet 1 (PEM/PSS)	Wet 9	INT 1	INT 9
Wet 2 (PEM)	Wet 11	INT 2	INT 11
Wet 3 (PSS)	Wet 10	INT 3	INT 12
Wet 4 (PFO)	Wet 12	INT 4	INT13
Wet 5 (PEM)	Wet 7	INT 5	INT 1
Wet 6 (PSS)	Wet 13	INT 6	INT 6
Wet 7 (PSS)	Wet 15	INT 7	INT 7
Wet 8 (PFO)	Wet 14	INT 8	INT 3
Wet 9 (PEM, PFO)	Wet 6	INT 9	INT 4
Wet 10 (PEM, PSS)	Wet 2	INT 10	INT 2
Wet 11 (PAB, PFO)	Wet 3	PER 1	INT 5
Wet 12 (PEM)	Wet 1	PER1	INT 8
Wet 13 (PEM, PFO)	Wet 8	Pond 1	Pond 1
Wet 14 (PFO)	Wet 4	RIVER	RIVER
Wet 15 (PSS)	Wet 5		



**Routes 7/15 Interchange
Norwalk, Connecticut
State Project No. 102-358**

**Environmental Assessment,
Draft Section 4(F) Evaluation and
Environmental Impact Evaluation**

**Appendix G2
2019 Wetland Delineation Update**

August 2022

Prepared for:
Connecticut Department of
Transportation Federal Highway
Administration

To:	John Eberle, Project Manager	From:	Rodney Kelshaw, Wetland and Soil Scientist
	New Haven, CT Office		Topsham, ME Office
File:	192310508	Date:	October 28, 2019

Reference: Updated Wetland, Watercourse, and Potential Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut

The Connecticut Department of Transportation proposes modifications to the Routes 7/15 interchange in Norwalk, Connecticut (project). In September 2016, BL Companies (BL) conducted an on-site wetland and watercourse delineation of the proposed project area.¹ In 2019, the project area was expanded (project area extension) to include areas beyond those that were initially delineated in 2016 (Attachment A, Figure 1). Stantec Consulting Services Inc. (Stantec) conducted an on-site wetland, watercourse, and potential vernal pool delineation within the project area extension along Route 7, north of the previously delineated area. This memo summarizes the results of the 2019 Stantec delineation.

METHODOLOGY

The revised project area was expanded to the north and south along Route 7 compared with the initial project area that was delineated in 2016. The original project area was centered primarily on the interchange ramps at Route 7 and Route 15, as well as Main Avenue. The project area extension includes an approximate 0.7-mile section extending to the south of the previous project area along Route 7 as well as an approximately 0.26-mile section that extends north along Route 7 beyond the previous project area limits (Attachment A, Figure 1). The expanded project area to the south is restricted to the existing Route 7 roadway and does not intersect undeveloped areas. Further, the proposed project activities within the project area extension to the south are anticipated to be limited to roadway work, such as line painting and signage, and no expansion of the roadway footprint itself. Since the additional section of the project area to the south is restricted to the existing Route 7 paved roadway, there is no potential for direct impacts on wetlands, watercourses, or vernal pools and there will be no work that could cause indirect impacts associated with erosion or sedimentation. Therefore, no additional field surveys were conducted in the southern portion of the project area extension. Proposed work within the project area extension to the north may include minor road widening along Route 7 in areas with the potential for wetlands, watercourses, and vernal pools to occur; therefore, this memo includes the methodology and results of delineating wetlands, watercourses, and potential vernal pools in the northern portion of the project area extension.

Rodney Kelshaw, a Certified Professional Soil Scientist and Professional Wetland Scientist at Stantec conducted a wetland, watercourse, and potential vernal pool survey in the northern portion of the project area extension. The northern portion of the project area extension is approximately 15 acres in size and extends along both sides of Route 7, starting at the northern end of the 2016 wetland delineation limits

¹ BL Companies. 2016. Wetland Report Route 7 and 15 Interchange, Norwalk, CT. CDOT Project 102-358. June 2017.

Reference: Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut

(Attachment A, Figure 1) and extending 1,500 feet to the north and to a width of approximately 450 feet in total width (including Route 7).

Wetland boundaries under the jurisdiction of the US Army Corps of Engineers (Corps) were determined using the technical criteria presented in the *Corps of Engineers Wetlands Delineation Manual*² and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*.³ Inland wetland boundaries under the jurisdiction of the Connecticut Department of Environmental Protection (DEEP) were determined based upon the definition provided in the Connecticut General Statutes (CGS) Section 22a-38. Based on the definition of tidal wetlands provided in the Connecticut Tidal Wetlands Act⁴, tidal wetland areas under the jurisdiction of DEEP were not observed on-site. Data were collected on dominant vegetation, evidence of hydrology, hydric soil criteria, and soil drainage classification. Wetland characteristics observed and reported in this memo also include wetland functions and values, as detailed in Corps Highway Methodology⁵.

Watercourse boundaries were determined based on the definition provided in CGS Section 22a-18 and guidance available from the Corps regarding identification of an Ordinary High Water Mark (Regulatory Guidance Letter No. 05-05, December 7, 2005).

The wetland delineation was performed outside the spring amphibian breeding season so a formal vernal pool survey could not be performed. However, the presence of potential vernal pools was reviewed based on the following definition of vernal pools provided in the Corps Connecticut General Permit⁶:

Vernal pools (VPs): For the purposes of General Permits, VPs are depressional wetland basins that typically go dry in most years and may contain inlets or outlets, typically of intermittent flow. Vernal pools range in both size and depth depending upon landscape position and parent material(s). In most years, VPs support one or more of the following obligate indicator species: wood frog, spotted salamander, blue-spotted salamander, marbled salamander, Jefferson's salamander and fairy shrimp. However, they should preclude sustainable populations of predatory fish. VP areas are:

- Depression (includes the VP depression up to the spring or fall high water mark, and includes any vegetation growing within the depression),
- Envelope (area within 0-100 feet of the VP depression's edge), and
- Critical terrestrial habitat (area within 100-750 feet of the VP depression's edge).

² Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1, US Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS. January 1987.

³ US Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*. ERDC/EL TR-12, Vicksburg, MS: US Army Corps of Engineers, Engineer Research and Development Center. January 2012.

⁴ Connecticut Tidal Wetlands Act, Sections 22a-30-1 through 22a-30-17, defines Tidal Wetlands as those areas at or below 1 foot above extreme high water and upon which certain species of vegetation are capable of growing.

⁵ US Army Corps of Engineers New England District. 1999. The Highway Methodology Workbook Supplement. September 1999.

⁶ Department of the Army General Permits for the State of Connecticut & Lands Located within the Boundaries of an Indian Reservation. 2016.

Reference: Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut

The envelope and critical terrestrial habitat protect the water quality of the breeding site (e.g., providing shade, leaf litter, and coarse woody material) and support the non-larval life-cycle stages of amphibian species. Note: The Corps may determine that a waterbody should not be designated as a VP based on available evidence.

Wetland boundaries and watercourse centerlines were demarcated with prelabeled "Wetland Delineation" flagging. These flags were then labeled with an alphanumeric numbering system. Wetland and watercourse flags were located with a Trimble® mapping grade Global Positioning System (GPS) with a stated accuracy of within 1 meter. Representative photographs were taken as appropriate.

RESULTS

The following summarizes the results of the 2019 wetland and watercourse delineation. The locations of the delineated resources are provided on Figure 2 (Attachment A), summary tables are provided in Attachment B, Wetland Determination Data Forms are provided in Attachment C, and representative photographs are included in Attachment D.

Potential Vernal Pools

No potential vernal pools were observed within the project area extension.

Tidal Wetlands

No tidal wetlands were observed within the project area extension.

Federal Wetlands

Three federally jurisdictional wetlands were delineated within the 2019 project area extension (i.e., Wetlands 16, 17 and 18). Wetland numbering continues from the wetlands as enumerated during the September 2016 wetland delineation (Wetlands 1 through 15 were identified by BL). Further details of these delineated wetlands are provided in Table 1 (Attachment B). Previously delineated Wetland 9 partially extends into the project area extension.

Wetlands 16 and 17 emergent marsh/scrub shrub dominated wetlands are riparian to an intermittent stream (Int 11, discussed further below). The wetlands are separated by a culvert crossing under an existing access road in a maintained transmission line right-of-way. Due to the riparian nature of these wetlands, they exhibit primary functions for groundwater recharge/discharge, floodflow alteration, and sediment/shoreline stabilization. Since these wetlands are located downgradient of municipal roads and a golf course, they also exhibit primary indicators for sediment/toxicant/pathogen retention and nutrient removal/retention/transformation. Secondary indicators are the potential for fish and shellfish habitat and wildlife habitat. Wetland Determination Data Forms completed for these wetlands are included in Attachment C.

Wetland 18 is located in the Route 7 roadside ditch, with a significant source of hydrology contributed from a stormwater culvert outlet that drains to the wetland from the west. This wetland exhibits primary functions for groundwater recharge/discharge, sediment/toxicant/pathogen retention, and nutrient removal/retention/transformation. The functionality of this wetland is diminished for other typical functions

Reference: Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut

and values because of its small size, location in a ditch proximate to Route 7, and source of hydrology being stormwater; therefore, a Wetland Determination Data Form was not completed for this wetland.

Inland Wetlands

The three federally jurisdictional delineated wetlands also qualify as wetlands subject to jurisdiction under the state Inland Wetlands and Watercourses Act based on their soil drainage classification. The boundaries of the Inland Wetlands are coincident with the federal wetland boundary. Further details are provided in Table 1 (Attachment B).

Watercourses

Two watercourses were observed within and extending beyond the project area extension: one intermittent (Int 11) and one perennial (Per 2). Stream numbering continues from the streams as enumerated during the September 2016 wetland delineation (intermittent streams 1 through 10 and perennial stream 1 were identified by BL). The locations of the delineated watercourses are illustrated on Figure 2 (Attachment A) and further details of the watercourse characteristics are provided in Table 2 (Attachment B).

Invasive Plant Species

During the delineation, invasive plant species observations were also documented within wetlands and uplands. In general, this site appeared to contain many species observed in similarly disturbed landscapes across Connecticut.

Purple loosestrife (*Lythrum salicaria*) was observed in Wetlands 16, 17 and 18. Common reed (*Phragmites australis*) was present as a dominant plant in sections of in Wetlands 16 and 17. Oriental bittersweet (*Celastrus orbiculatus*) was ubiquitous in many uplands and was observed growing into wetlands. Other upland invasive plant species observed were Russian olive (*Elaeagnus angustifolia*), rugosa rose (*rosa rugosa*), burning bush/winged euonymus (*Euonymos alatus*), and Japanese barberry (*Berberis thunbergii*).

Stantec Consulting Services Inc.



Rodney Kelshaw CPSS, PWS, CWB, CPESC, CSS, LSE
Project Scientist/Project Manager

Phone: 207 406 5485

Fax: 207 729 2715

rodney.kelshaw@stantec.com

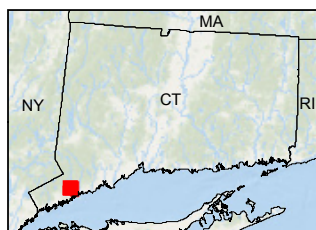
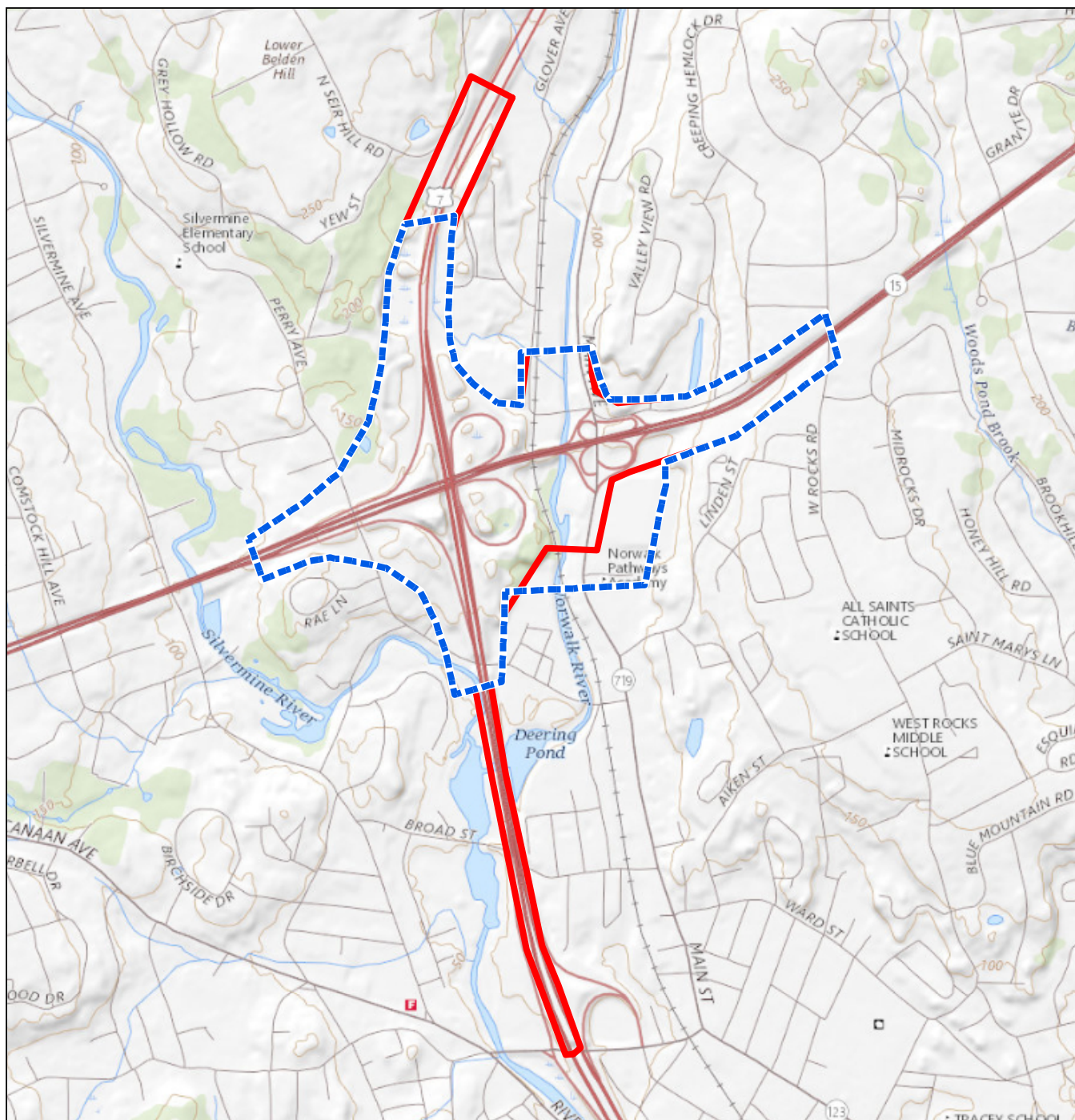
Attachments: Attachment A – Figures
Attachment B – Tables
Attachment C – Wetland Determination Data Forms
Attachment D – Representative Photographs

October 28, 2019

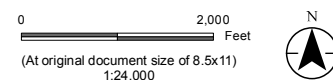
Attachment A – Figures

Reference: Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut

ATTACHMENT A – FIGURES



- Legend**
- ▭ Project Area (approx.)
 - ▭ 2016 Wetland Delineation Area

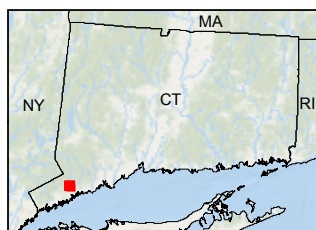
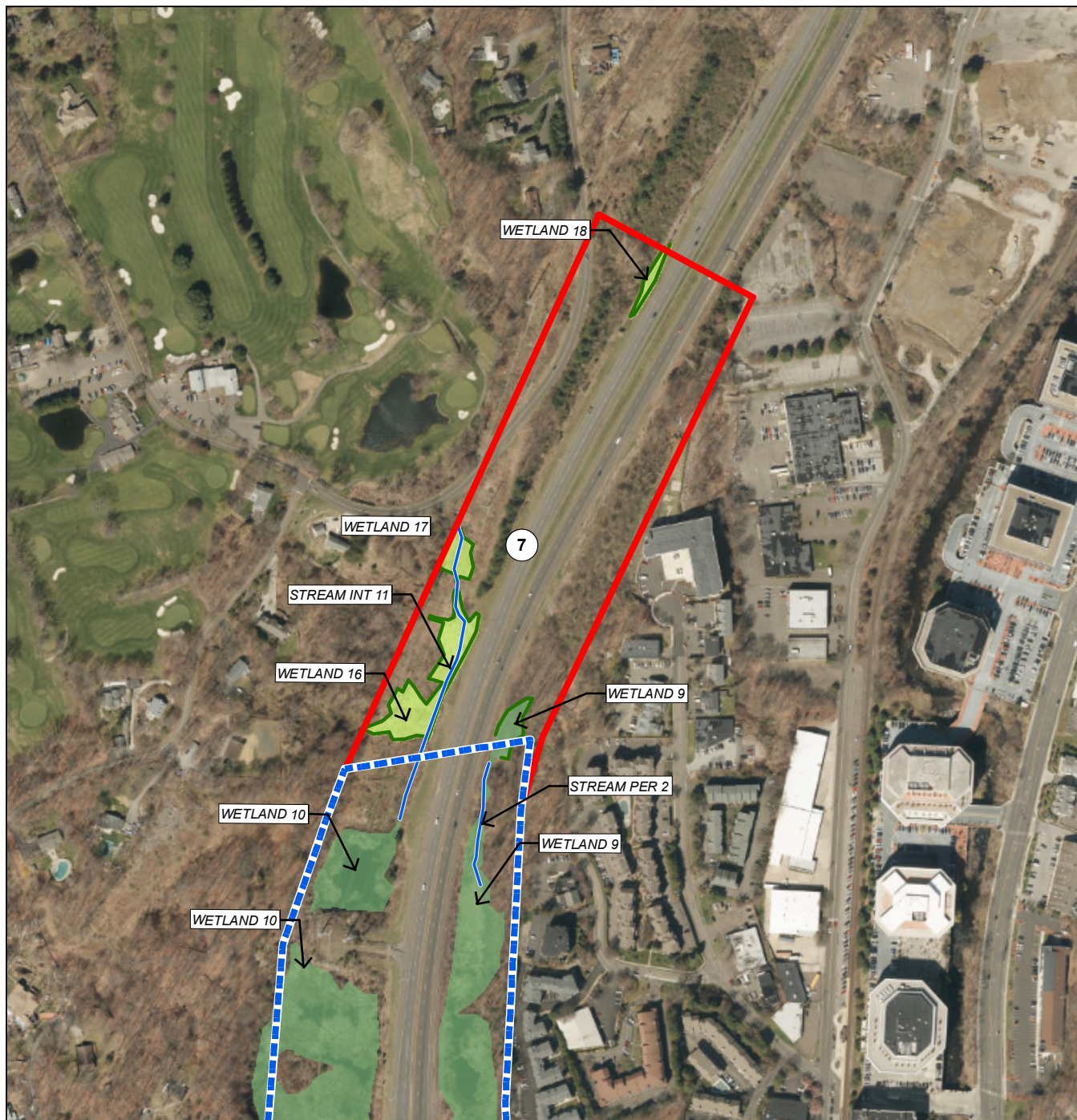


Project Location
 Norwalk, CT
 Client/Project
 Route 7/15 Interchange
 Connecticut Department of Transportation (CTDOT)

Prepared by KWH on 2019-10-21
 TR by MPA on 2019-10-21
 IR Review by JH on 2019-10-21
 192310508

Figure No.
1
Title
Project Location Map

Notes
 1. Coordinate System: WGS 1984 Web Mercator
 Auxiliary Sphere
 2. Data Sources: Stantec
 3. Background: USGS The National Map, US Topo Maps.



Notes
 1. Coordinate System: NAD 1983 StatePlane Connecticut FIPS 0600 Feet
 2. Data Sources: Stantec, BL Companies
 3. Background: ESRI World Imagery, Web Mapping Service.

- Legend**
- 2019 Project Area Extension (approx.)
 - - - 2016 Wetland Delineation Area
 - Field Delineated Stream (Stantec, 2019)
 - Field Delineated Wetland Boundary (Stantec, 2019)
 - Field Delineated Wetland (Stantec, 2019)
 - Previously Delineated Wetland (BL Companies, 2016)

0 300 Feet
 (At original document size of 8.5x11)
 1:4,800



Project Location Prepared by KWH on 2019-10-21
 Norwalk, CT TR by MPA on 2019-10-21
 IR Review by JH on 2019-10-21
Client/Project 192310508
 Route 7/15 Interchange
 Connecticut Department of Transportation (CTDOT)

Figure No.
2

Title
**2019 Wetland and Watercourse
 Delineation Map**

October 28, 2019

Attachment B – Tables

Reference: Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut

ATTACHMENT B – TABLES

Reference: Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut

Table 1. Summary of Delineated Wetlands

Wetland Number	Wetland Classification ¹	Jurisdiction			Dominant and Characteristic Vegetation	Hydric Soil Criteria	Evidence of Hydrology	Soil Drainage & Classification	Additional Comments
		Inland Wetland (DEEP)	Tidal Wetland (DEEP)	Federal Wetland (Corps)					
Wetland 16	PEM/PSS	X		X	Herbs: common reed, spotted touch-me-not, (<i>Impatiens capensis</i>), halberd-leaved tearthumb (<i>Persicaria arifolia</i>), spotted trumpetweed (<i>Eutrochium maculatum</i>), broad-leaf cat-tail (<i>Typhya latifolia</i>), lamp rush (<i>Juncus effusus</i>), multiple sedge species (<i>Carex</i> sp.), purple loosestrife (<i>Lythrum salicaria</i>). Shrubs: red osier (<i>Cornus alba</i>), smooth arrow-wood (<i>Viburnum recognitum</i>) Vines: fox grape (<i>Vitis labrusca</i>) and oriental bittersweet (<i>Celastrus orbiculatus</i>)	F3: Depleted Matrix	A3: Saturation (0") B8: Sparsely vegetated concave surface B9: Water-stained leaves B10: Drainage patterns D1: Stunted or stressed plants D2: Geomorphic position D4: Microtopographic relief D5: FAC-neutral test	Wetland: Ridgebury, poorly and very poorly drained observed Upland: Ridgebury, somewhat poorly drained	Wetland begins at two culverts; one outlet of Wetland 17 and the other open at project area boundary to the east. Located within maintained transmission line right-of-way and along Route 7 southbound lane at the edge of fill. Riparian to stream Int 11.
Wetland 17	PEM/PSS	X		X	Herbs: common reed, spotted touch-me-not, sensitive fern (<i>Onoclea sensibilis</i>), rough-stemmed goldenrod (<i>Solidago rugosa</i>), eastern poison ivy (<i>Toxicodendron radicans</i>) Shrubs: Black willow (<i>Salix nigra</i>) Vines: fox grape and oriental bittersweet	A5: Stratified Layers	A1: Surface Water (1") A2: High Water Table (1") A3: Saturation (0") B2: Sediment Deposits B8: Sparsely vegetated concave surface B10: Drainage patterns D2: Geomorphic position	Wetland: Whitman, poorly and very poorly drained observed Upland: Hinckley, moderately well drained or better	Wetland open at the Project boundary to the northwest toward North Seir Hill Road. Located within maintained transmission line right-of-way and along Route 7 southbound lane at the edge of fill. Riparian to stream Int 11.
Wetland 18	PEM	X		X	Herbs: common reed, spotted touch-me-not, halberd-leaved tearthumb, lamp rush, rice cut grass (<i>Leersia oryzoides</i>), purple loosestrife, multiple sedge species	F3: Depleted Matrix	A2: High Water Table (0") A3: Saturation (0") B10: Drainage patterns D2: Geomorphic position D4: Microtopographic relief D5: FAC-neutral test	Wetland: Whitman, poorly drained	Wetland located between the base of a steep slope and Route 7 southbound lane edge of fill. Situated in maintained ditch, hydrology source large culvert; scoured channel of an apparent stormwater drainage.

¹ Wetland classification follows Federal Geographic Data Committee (2013)

PEM = Palustrine (freshwater) Emergent Marsh
PSS = Scrub Shrub

Reference: Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut

Table 2. Summary of Delineated Streams

Stream Number	Flow Type	Bankfull Width (ft)	Ordinary High Water Mark Width (ft)	Bank Height (ft)	Water Depth During Delineation (in)	Dominant Substrate	Additional Comments
Int 11	Intermittent	2–4	2–4	1–3	2–4	Upstream end comprised of sand and cobble; downstream section flows within a rip-rap ditch along the Route 7 edge of fill.	Located in Wetlands 16 and 17; enters the site from the northeast within the maintained transmission line right-of-way, flows through a culvert in a transmission line access road, then along the Route 7 edge of fill to where it exits Wetland 16 and flows southerly within the rip-rap Route 7 ditch and into Wetland 10.
Per 2	Perennial	4–12	4–12	1–3	2–4	Rip-rap ditch along the Route 7 edge of fill; remaining areas comprised of muck, sand and stone.	Located in Wetland 9; flows from a culvert at Route 7 into Wetland 9, and southerly within the wetland, with the western bank located along the Route 7 edge of fill. The southern downstream end of the stream appears to dissipate into the wetland.

October 28, 2019

Attachment C – Wetland Determination Data Forms

Reference: Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut

ATTACHMENT C – WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 7/15 Interchange-Norwalk City/County: Norwalk/Fairfield Sampling Date: 10/8/2019
Applicant/Owner: CTDOT State: CT Sampling Point: W-17 Upland
Investigator(s): Rodney Kelshaw Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Side Slope Local relief (concave, convex, none): Linear Slope (%) 8 - 15
Subregion (LRR or MLRA): LRR R Lat: 41.149870 Long: -73.431500 Datum: NAD83
Soil Map Unit Name: _____ NWI Classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> if yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)		Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible in Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsley Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)

Surface Water Present? Yes _____ No <u>X</u> Depth (inches) _____	Wetland Hydrology Present? Yes _____ No <u>X</u>
Water Table Present? Yes _____ No <u>X</u> Depth (inches) _____	
Saturation Present? Yes _____ No <u>X</u> Depth (inches) _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

 Sampling Point: **Upland - Wetland 17**

Tree Stratum (Plot Size: <u>30'</u>radius) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td colspan="4" style="text-align: right;">_____ = Total Cover</td> </tr> </tbody> </table> Shrub Stratum (Plot Size: <u>15'</u>radius) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td colspan="4" style="text-align: right;">_____ = Total Cover</td> </tr> </tbody> </table> Herb Stratum (Plot Size: <u>5'</u>radius) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td><u>Phalaris arundinacea</u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">X</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td><u>Solidago rugosa</u></td> <td style="text-align: center;">15</td> <td style="text-align: center;">X</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td><u>Lythrum salicaria</u></td> <td style="text-align: center;">5</td> <td></td> <td style="text-align: center;">OBL</td> </tr> <tr> <td><u>Rubus allegheniensis</u></td> <td style="text-align: center;">5</td> <td></td> <td style="text-align: center;">FACU</td> </tr> <tr> <td colspan="4" style="text-align: right;">45 = Total Cover</td> </tr> </tbody> </table> Woody Vine Stratum (Plot Size: <u>30'</u>radius) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td><u>Vitis labrusca</u></td> <td style="text-align: center;">70</td> <td style="text-align: center;">X</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td><u>Amphicarpaea bracteata</u></td> <td style="text-align: center;">30</td> <td style="text-align: center;">X</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td colspan="4" style="text-align: right;">100 = Total Cover</td> </tr> </tbody> </table>		Absolute % Cover	Dominant Species?	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Indicator Status	<u>Vitis labrusca</u>	70	X	FACU	<u>Amphicarpaea bracteata</u>	30	X	FAC	100 = Total Cover				Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B) Prevalence Index Worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td>OBL species</td> <td style="text-align: center;"><u>5</u></td> <td style="text-align: center;">x 1</td> <td style="text-align: center;"><u>5</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>20</u></td> <td style="text-align: center;">x 2</td> <td style="text-align: center;"><u>40</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>45</u></td> <td style="text-align: center;">x 3</td> <td style="text-align: center;"><u>135</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>75</u></td> <td style="text-align: center;">x 4</td> <td style="text-align: center;"><u>300</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 5</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>145</u> (A)</td> <td></td> <td style="text-align: center;"><u>480</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>3.31</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u> </u> 1- Rapid Test For Hydrophytic Vegetation <u>X</u> 2- Dominance Test is > 50% <u> </u> 3- Prevalence Index is =< 3.0 <u> </u> 4- Morphological Adaptations <u> </u> 5- Problematic Hydrophytic Vegetation Definitions of Vegetation Strata: Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall. Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall. Woody Vines- All woody vines greater than 3.28ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	OBL species	<u>5</u>	x 1	<u>5</u>	FACW species	<u>20</u>	x 2	<u>40</u>	FAC species	<u>45</u>	x 3	<u>135</u>	FACU species	<u>75</u>	x 4	<u>300</u>	UPL species	<u>0</u>	x 5	<u>0</u>	Column Totals	<u>145</u> (A)		<u>480</u> (B)	Prevalence Index = B/A =			<u>3.31</u>
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Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: **Upland - Wetland 17**

Depth (inches)	Matrix		Redox Features					Remarks	
	Color	%	Color	%	Type	Loc	Texture		
0-2	7.5YR	2.5/2	100					Sandy Loam	
2-8	7.5YR	3/3	100					Fine Sandy Loam	
8-16	10YR	3/3	100					Loamy Sand	Gravelly
Hydric Soil Indicators: ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Stratified Layers (A5) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Dark Surface (S7) ☐ Polyvalue Below Surface (B15) ☐ Thin Dark Surface (S9) ☐ Loamy Mucky Mineral (F1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8) Indicators for Problematic Soils: ☐ 2 cm Muck (A10) ☐ Coast Prairie Redox (A16) ☐ 5 cm Mucky Peat or Peat (S3) ☐ Dark Surface (S7) ☐ Polyvalue Below Surface (S8) ☐ Thin Dark Surface (S9) ☐ Iron-Manganese Masses (F12) ☐ Piedmont Floodplain Soils (F19) ☐ Mesic Spodic (TA6) ☐ Red Parent Material (F21) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)									
Restrictive Layer (if observed): Type: _____ Depth (inches): _____								Hydric Soil Present? Yes _____ No <u> X </u>	
Remarks:									

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 7/15 Interchange-Norwalk City/County: Norwalk/Fairfield Sampling Date: 10/8/2019
Applicant/Owner: CTDOT State: CT Sampling Point: W-17 Wetland
Investigator(s): Rodney Kelshaw Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Side Slope Local relief (concave, convex, none): Linear Slope (%) 3 - 8
Subregion (LRR or MLRA): LRR R Lat: 41.149910 Long: -73.431500 Datum: NAD83
Soil Map Unit Name: _____ NWI Classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ if yes, optional Wetland Site ID: <u>Wetland 15</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)		<u> </u> Surface Soil Cracks (B6)
<u>X</u> Surface Water (A1)	<u> </u> Water-Stained Leaves (B9)	<u>X</u> Drainage Patterns (B10)
<u>X</u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Moss Trim Lines (B16)
<u>X</u> Saturation (A3)	<u> </u> Marl Deposits (B15)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)
<u>X</u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)	<u> </u> Saturation Visible in Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u>X</u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u>X</u> Thin Muck Surface (C7)	<u> </u> Shallow Aquitard (D3)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Other (Explain in Remarks)	<u> </u> Microtopographic Relief (D4)
<u>X</u> Sparsley Vegetated Concave Surface (B8)		<u> </u> FAC-Neutral Test (D5)
Surface Water Present? Yes <u>X</u> No _____	Depth (inches) <u>1</u>	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes <u>X</u> No _____	Depth (inches) <u>0</u>	
Saturation Present? Yes <u>X</u> No _____	Depth (inches) <u>0</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION - Use scientific names of plants

 Sampling Point: **Wetland 17**

Tree Stratum (Plot Size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)																												
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Shrub Stratum (Plot Size: <u>15'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u> </u> 1- Rapid Test For Hydrophytic Vegetation <u> </u> 2- Dominance Test is > 50% <u> X </u> 3- Prevalence Index is =< 3.0 <u> </u> 4- Morphological Adaptations <u> </u> 5- Problematic Hydrophytic Vegetation																												
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Herb Stratum (Plot Size: <u>5'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u>																												
Woody Vine Stratum (Plot Size: <u>30'</u> radius)	Absolute % Cover	Dominant Species?	Indicator Status																													

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: **Wetland 17**

Depth (inches)	Matrix		Redox Features					Remarks
	Color	%	Color	%	Type	Loc	Texture	
0-10	7.5YR	2.5/2	100					Mucky Loam
10-18	10YR	3/1	100					Mucky Loam
18-29	2.5Y	3/1	100					Loamy Sand
29-31	2.5Y	4/2	100					Very Fine Sandy Loam
Hydric Soil Indicators: ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☒ Stratified Layers (A5) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Dark Surface (S7) ☐ Polyvalue Below Surface (B15) ☐ Thin Dark Surface (S9) ☐ Loamy Mucky Mineral (F1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8) Indicators for Problematic Soils: ☐ 2 cm Muck (A10) ☐ Coast Prairie Redox (A16) ☐ 5 cm Mucky Peat or Peat (S3) ☐ Dark Surface (S7) ☐ Polyvalue Below Surface (S8) ☐ Thin Dark Surface (S9) ☐ Iron-Manganese Masses (F12) ☐ Piedmont Floodplain Soils (F19) ☐ Mesic Spodic (TA6) ☐ Red Parent Material (F21) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)								
Restrictive Layer (if observed): Type: _____ Depth (inches): _____								Hydric Soil Present? Yes ☒ No _____
Remarks:								

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 7/15 Interchange-Norwalk City/County: Norwalk/Fairfield Sampling Date: 10/8/2019
Applicant/Owner: CTDOT State: CT Sampling Point: W-16 Upland
Investigator(s): Rodney Kelshaw Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Side Slope Local relief (concave, convex, none): Linear Slope (%) 8 - 15
Subregion (LRR or MLRA): LRR R Lat: 41.149300 Long: -73.431600 Datum: NAD83
Soil Map Unit Name: _____ NWI Classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> if yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible in Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsley Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)

Surface Water Present? Yes _____ No X Depth (inches) _____
Water Table Present? Yes _____ No X Depth (inches) _____
Saturation Present? Yes _____ No X Depth (inches) _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION - Use scientific names of plants

Sampling Point: **Upland - Wetland 16**

Tree Stratum		(Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:		
						Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)		
						Total Number of Dominant Species Across All Strata: 4 (B)		
						Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)		
Shrub Stratum		(Plot Size: 15'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index Worksheet:		
Elaeagnus angustifolia			10	X	FACU	OBL species 0 x 1 0		
Quercus rubra			3	X	FACU	FACW species 75 x 2 150		
Rhamnus cathartica			2		FAC	FAC species 27 x 3 81		
			15			FACU species 13 x 4 52		
						UPL species 0 x 5 0		
						Column Totals 115 (A) 283 (B)		
						Prevalence Index = B/A = 2.46		
Herb Stratum		(Plot Size: 5'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:		
Solidago gigantea			75	X	FACW	1- Rapid Test For Hydrophytic Vegetation		
Toxicodendron radicans			25	X	FAC	2- Dominance Test is > 50%		
			100			X 3- Prevalence Index is =< 3.0		
						4- Morphological Adaptations		
						5- Problematic Hydrophytic Vegetation		
Woody Vine Stratum		(Plot Size: 30'radius)	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata:		
						Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.		
						Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall.		
						Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall.		
						Woody Vines- All woody vines greater than 3.28ft in height.		
						Hydrophytic Vegetation Present? Yes X No		
Remarks: (Include photo numbers here or on a separate sheet.)								

SOIL

Sampling Point: **Upland - Wetland 16**

Depth (inches)	Matrix		Redox Features						Remarks
	Color	%	Color	%	Type	Loc	Texture		
0-4	7.5YR 3/3	100					Loam	Very Gravelly	
4-10	10YR 4/3	100					Sandy Loam	Very Cobbly	
10-14	10YR 4/3	98	2.5Y 5/2	2	D	M	Sandy Loam	Very Cobbly	
Hydric Soil Indicators: ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Stratified Layers (A5) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Dark Surface (S7) ☐ Polyvalue Below Surface (B15) ☐ Thin Dark Surface (S9) ☐ Loamy Mucky Mineral (F1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8) Indicators for Problematic Soils: ☐ 2 cm Muck (A10) ☐ Coast Prairie Redox (A16) ☐ 5 cm Mucky Peat or Peat (S3) ☐ Dark Surface (S7) ☐ Polyvalue Below Surface (S8) ☐ Thin Dark Surface (S9) ☐ Iron-Manganese Masses (F12) ☐ Piedmont Floodplain Soils (F19) ☐ Mesic Spodic (TA6) ☐ Red Parent Material (F21) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)									
Restrictive Layer (if observed): Type: _____ Depth (inches): _____							Hydric Soil Present? Yes _____ No <u> X </u>		
Remarks:									

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 7/15 Interchange-Norwalk City/County: Norwalk/Fairfield Sampling Date: 10/8/2019
Applicant/Owner: CTDOT State: CT Sampling Point: W-16 Wetland
Investigator(s): Rodney Kelshaw Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Footslope Local relief (concave, convex, none): Linear Slope (%) 3 - 8
Subregion (LRR or MLRA): LRR R Lat: 41.149320 Long: -73.431500 Datum: NAD83
Soil Map Unit Name: _____ NWI Classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ if yes, optional Wetland Site ID: <u>Wetland 14</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)		<u> </u> Surface Soil Cracks (B6)
<u> </u> Surface Water (A1)	<u> </u> Water-Stained Leaves (B9)	<u>X</u> Drainage Patterns (B10)
<u>X</u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Moss Trim Lines (B16)
<u>X</u> Saturation (A3)	<u> </u> Marl Deposits (B15)	<u> </u> Dry-Season Water Table (C2)
<u> </u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)	<u> </u> Saturation Visible in Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u>X</u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u>X</u> Shallow Aquitard (D3)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Other (Explain in Remarks)	<u>X</u> Microtopographic Relief (D4)
<u> </u> Sparsley Vegetated Concave Surface (B8)		<u> </u> FAC-Neutral Test (D5)
Surface Water Present? Yes _____ No <u>X</u> Depth (inches) _____	Wetland Hydrology Present? Yes <u>X</u> No _____	
Water Table Present? Yes <u>X</u> No _____ Depth (inches) <u>0</u>		
Saturation Present? Yes <u>X</u> No _____ Depth (inches) <u>0</u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION - Use scientific names of plants

 Sampling Point: **Wetland 16**

Tree Stratum (Plot Size: <u>30'</u>radius) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 30%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td><u>Salix nigra</u></td> <td style="text-align: center;">10</td> <td style="text-align: center;">X</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td></td> <td style="text-align: center;">10</td> <td colspan="2" style="text-align: right;">= Total Cover</td> </tr> </tbody> </table> Shrub Stratum (Plot Size: <u>15'</u>radius) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 30%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td colspan="2" style="text-align: right;">_____ = Total Cover</td> </tr> </tbody> </table> Herb Stratum (Plot Size: <u>5'</u>radius) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 30%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td><u>Phalaris arundinacea</u></td> <td style="text-align: center;">98</td> <td style="text-align: center;">X</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td><u>Impatiens capensis</u></td> <td style="text-align: center;">2</td> <td></td> <td style="text-align: center;">FACW</td> </tr> <tr> <td></td> <td style="text-align: center;">100</td> <td colspan="2" style="text-align: right;">= Total Cover</td> </tr> </tbody> </table> Woody Vine Stratum (Plot Size: <u>30'</u>radius) <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 30%;">Indicator Status</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td colspan="2" style="text-align: right;">_____ = Total Cover</td> </tr> </tbody> </table>		Absolute % Cover	Dominant Species?	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Indicator Status	_____						_____ = Total Cover		Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B) Prevalence Index Worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td>OBL species</td> <td style="text-align: center;"><u>10</u></td> <td style="text-align: center;">x 1</td> <td style="text-align: center;"><u>10</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>100</u></td> <td style="text-align: center;">x 2</td> <td style="text-align: center;"><u>200</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 3</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 4</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td style="text-align: center;">x 5</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>110</u></td> <td style="text-align: center;">(A)</td> <td style="text-align: center;"><u>210</u> (B)</td> </tr> <tr> <td colspan="3">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>1.91</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;"><u>X</u></td> <td>1- Rapid Test For Hydrophytic Vegetation</td> </tr> <tr> <td style="text-align: center;"><u>X</u></td> <td>2- Dominance Test is > 50%</td> </tr> <tr> <td style="text-align: center;"><u>X</u></td> <td>3- Prevalence Index is =< 3.0</td> </tr> <tr> <td style="text-align: center;">_____</td> <td>4- Morphological Adaptations</td> </tr> <tr> <td style="text-align: center;">_____</td> <td>5- Problematic Hydrophytic Vegetation</td> </tr> </table> Definitions of Vegetation Strata: Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall. Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall. Woody Vines- All woody vines greater than 3.28ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No _____	OBL species	<u>10</u>	x 1	<u>10</u>	FACW species	<u>100</u>	x 2	<u>200</u>	FAC species	<u>0</u>	x 3	<u>0</u>	FACU species	<u>0</u>	x 4	<u>0</u>	UPL species	<u>0</u>	x 5	<u>0</u>	Column Totals	<u>110</u>	(A)	<u>210</u> (B)	Prevalence Index = B/A =			<u>1.91</u>	<u>X</u>	1- Rapid Test For Hydrophytic Vegetation	<u>X</u>	2- Dominance Test is > 50%	<u>X</u>	3- Prevalence Index is =< 3.0	_____	4- Morphological Adaptations	_____	5- Problematic Hydrophytic Vegetation
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Remarks: (Include photo numbers here or on a separate sheet.)																																																																																											

SOIL

Sampling Point: **Wetland 16**

Depth (inches)	Matrix			Redox Features						Remarks
	Color		%	Color	%	Type	Loc	Texture		
0-3	7.5YR	3/3	100					Sandy Loam		
3-10	10YR	4/2	90	10YR	4/6	10	C	M	Loam	Gravelly

Hydric Soil Indicators:

☐ Histosol (A1)
☐ Histic Epipedon (A2)
☐ Black Histic (A3)
☐ Hydrogen Sulfide (A4)
☐ Stratified Layers (A5)
☐ Depleted Below Dark Surface (A11)
☐ Thick Dark Surface (A12)
☐ Sandy Mucky Mineral (S1)
☐ Sandy Gleyed Matrix (S4)
☐ Sandy Redox (S5)
☐ Stripped Matrix (S6)
☐ Dark Surface (S7)

☐ Polyvalue Below Surface (B15)
☐ Thin Dark Surface (S9)
☐ Loamy Mucky Mineral (F1)
☐ Loamy Gleyed Matrix (F2)
☒ Depleted Matrix (F3)
☐ Redox Dark Surface (F6)
☐ Depleted Dark Surface (F7)
☐ Redox Depressions (F8)

Indicators for Problematic Soils:

☐ 2 cm Muck (A10)
☐ Coast Prairie Redox (A16)
☐ 5 cm Mucky Peat or Peat (S3)
☐ Dark Surface (S7)
☐ Polyvalue Below Surface (S8)
☐ Thin Dark Surface (S9)
☐ Iron-Manganese Masses (F12)
☐ Piedmont Floodplain Soils (F19)
☐ Mesic Spodic (TA6)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: Stony
 Depth (inches): 10

Hydric Soil Present? Yes X No

Remarks:

October 28, 2019

Attachment D – Representative Photographs

Reference: Updated Wetland, Watercourse, and Vernal Pool Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut

ATTACHMENT D – REPRESENTATIVE PHOTOGRAPHS



Photo 1. Looking southwesterly within Wetland 16. Stantec, October 8, 2019.



Photo 2. Looking southwesterly within Wetland 17. Stantec, October 8, 2019.

October 28, 2019

Attachment D – Representative Photographs

Reference: Updated Wetland and Watercourse Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut



Photo 3. Looking southwesterly within Wetland 18. Stantec, October 8, 2019.



Photo 4. Looking southeasterly within Wetland 9. Stantec, October 8, 2019.

October 28, 2019

Attachment D – Representative Photographs

Reference: Updated Wetland and Watercourse Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut



Photo 5. Looking northwesterly, upstream along stream Int 11 within Wetland 16. Stantec, October 8, 2019.



Photo 6. Looking northerly, upstream along stream Int 11. Stantec, October 8, 2019.

October 28, 2019

Attachment D – Representative Photographs

Reference: Updated Wetland and Watercourse Delineation in the Project Area Expansion; Routes 7/15 Interchange, Norwalk, Connecticut



Photo 7. Looking northerly, upstream along stream Per 2 within Wetland 9. Stantec, October 8, 2019.



Photo 8. Looking southeasterly, downstream along stream Per 2 within Wetland 9. Stantec, October 8, 2019.



**Routes 7/15 Interchange
Norwalk, Connecticut
State Project No. 102-358**

**Environmental Assessment,
Draft Section 4(F) Evaluation and
Environmental Impact Evaluation**

**Appendix G3
2021 Wetland Delineation Update**

August 2022

Prepared for:
Connecticut Department of
Transportation Federal Highway
Administration

To:	John Eberle, Project Manager Stantec (New Haven, CT)	From:	Matt Arsenault, Ecologist Stantec (Topsham, ME)
File:	192310508	Date:	May 24, 2021

Reference: Wetland and Watercourse Delineation Report Addendum, Route 7/15 Interchange Project, Norwalk, Connecticut

The Connecticut Department of Transportation (CTDOT) proposes modifications to the Routes 7/15 interchange in Norwalk, Connecticut (project). In September 2016, BL Companies (BL) conducted an on-site wetland and watercourse delineation of the proposed project area.¹ Following their delineations, the Flock Process Dam located approximately 0.2 miles downstream of the project area on the Norwalk River was removed in 2018 by the City of Norwalk, the Connecticut Department of Energy and Environmental Protection (DEEP), and the US Fish and Wildlife Service (USFWS). The dam was removed to improve public safety and improve aquatic habitats in the Norwalk River.

On March 25, 2021, wetland and soil scientists from Stantec Consulting Services Inc. (Stantec) conducted a site visit to verify if the removal of the Flock Process Dam affected the jurisdictional status or wetland community types of the wetland previously delineated along the Norwalk River within the project area. The field review was prompted by comments received in February 2021 from the Federal Highway Administration on the draft Environmental Assessment report prepared for CTDOT. This memo summarizes these efforts.

In addition, during a May 13, 2021 site walk, Perennial Watercourse 1 through Wetland 1 was incidentally observed to extend beyond the limits shown on the project mapping available at time of the site walk. Therefore, the current extent of Perennial Watercourse 1 through Wetland 1 was delineated at that time.

METHODOLOGY

The March 25, 2021 wetland and watercourse verification field survey was conducted by Ann McMenemy, a Professional Wetland Scientist and soil scientist qualified to delineate wetlands in CT, and Matt Arsenault, a Certified Ecologist. Wetland boundaries under the jurisdiction of the US Army Corps of Engineers (Corps) were determined using the technical criteria presented in the *Corps of Engineers Wetlands Delineation Manual*² and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*.³ Inland wetland boundaries under DEEP jurisdiction were determined based upon soil type, as defined in the Connecticut General Statutes (CGS) Section 22a-38. Watercourse boundaries were determined based on the definition provided in CGS Section 22a-18 and guidance available from the Corps regarding identification of an Ordinary High Water Mark (Regulatory Guidance Letter No. 05-05, December 7, 2005).

Wetland and watercourse boundaries as determined during the initial 2016 delineation by BL were uploaded to a Geographic Information Systems (GIS)-enabled tablet device mounted with a Global Positioning System (GPS) receiver capable of submeter accuracy. Each previously delineated wetland along the Norwalk River

¹ BL Companies. 2016. Wetland Report Route 7 and 15 Interchange, Norwalk, CT. CDOT Project 102-358. June 2017.

² Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1, US Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS. January 1987.

³ US Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*. ERDC/EL TR-12, Vicksburg, MS: US Army Corps of Engineers, Engineer Research and Development Center. January 2012.

May 24, 2021

John Eberle, Project Manager

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Reference: Wetland and Watercourse Delineation Report Addendum, Route 7/15 Interchange Project, Norwalk, Connecticut

was visited during the field survey. In addition, each side of the Norwalk River was evaluated to determine if additional wetlands may be present. The previously delineated boundaries were compared to the wetland and watercourse boundaries observed during the March 25, 2021 field survey. If changes to the wetland boundary were observed, the revised boundary was flagged and located with the GPS. Data were collected on hydrophytic vegetation, evidence of wetland hydrology, hydric soil criteria, and soil drainage classification using a Corps Wetland Determination Data Form. Where wetland changes were observed, Stantec also conducted a revised function and values assessment using the Corps Highway Methodology⁴. Representative photographs were taken to document the existing conditions.

Observed changes to watercourse boundaries were located with the GPS and data were collected on bank, substrate, and flow characteristics. Representative photographs were taken, as appropriate.

The May 13, 2021 site walk was conducted by Matt Arsenault. The revised extent of Perennial Watercourse 1 through Wetland 1 was located with a hand-held GPS receiver and refined through aerial imagery interpretation. Data were collected on bank, flow, and substrate characteristics and representative photos were taken.

RESULTS

In 2016, BL delineated four wetlands along the Norwalk River, designated as Wetland 2, Wetland 3, Wetland 4, and Wetland 5. Other than the Norwalk River, no additional watercourses were delineated in the vicinity of the Norwalk River. The results of the March 25, 2021 field survey and May 13, 2021 site walk are summarized below. The revised wetland and watercourse delineation results are provided on Figure 1. Appendix A includes representative photographs, and Appendix B includes completed Corps Wetland Determination Data Forms. Appendix C includes completed Corps Wetland Function – Value Evaluation Forms for revised wetland areas.

EXISTING WETLANDS

Wetland 2

There were no measurable changes to Wetland 2 observed as a result of the downstream dam removal.

Wetland 3

Wetland 3 is the closest wetland within the project area along the Norwalk River to the former Flock Process Dam. This wetland experienced several changes as a result of the dam removal. Previously, Wetland 3 was delineated as a palustrine scrub-shrub (PSS) wetland with two wetland areas separated by an area of open water. The removal of the dam resulted in a lower ordinary high water level on the Norwalk River upstream of the dam. As a result, the area of open water area previously separating the two sections of Wetland 3 is no longer underwater and has been replaced by a palustrine emergent marsh (PEM). The previously delineated northern PSS section of Wetland 3 remains unchanged compared with the previous delineation. However, the southern section of Wetland 3 has been largely replaced by a natural rechanneling of the Norwalk River channel.

⁴ US Army Corps of Engineers New England District. 1999. The Highway Methodology Workbook Supplement. September 1999.

May 24, 2021

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Reference: Wetland and Watercourse Delineation Report Addendum, Route 7/15 Interchange Project, Norwalk, Connecticut

The recently created PEM portion of Wetland 3 is dominated by deer-tongue rosette grass (*Dichanthelium clandestinum*), lamp rush (*Juncus effusus*), common woolgrass (*Scirpus cyperinus*), and spotted touch-me-not (*Impatiens capensis*). Soils within the wetland are very poorly drained organic soils. Evidence of hydrology included water marks, water stained leaves, and drainage patterns. The wetland extends underneath the existing parking garage and office building complex. No wetland vegetation is present under the building due to the permanently shaded conditions. Figure 1 shows an approximate wetland boundary under the office building complex due to poor GPS reception in this area.

In addition, a new small intermittent watercourse (designated as Intermittent Watercourse 12) flows southerly through the PEM portion of Wetland 3 into the Norwalk River. The top of bank and ordinary highwater mark widths were approximately two feet, and the watercourse contains a scoured silt substrate.

The removal of the Flock Process Dam created a revised natural channel and bank geomorphology of the Norwalk River upstream of the dam location and adjacent to Wetland 3. The revised bank was located with the GPS and is provided on Figure 1.

The functions and values of Wetland 3 remain unchanged compared to the previous assessment and continue to include groundwater recharge/discharge, fish habitat, sediment/toxicant retention, nutrient removal/retention/transformation, production export, sediment/shoreline stabilization, wildlife habitat, passive recreation, and visual quality/aesthetics.

The revised portions of Wetland 3 and Intermittent Watercourse 12 meet both the federal and state criteria for jurisdiction.

Wetland 4

There were no measurable changes to Wetland 4 observed as a result of the downstream dam removal.

Wetland 5

There were no measurable changes to Wetland 5 observed as a result of the downstream dam removal.

NEW WETLAND AREAS

Two additional wetland areas were delineated during the March 25, 2021 field survey, Wetlands 19 and 20.

Wetland 19

Wetland 19 is a narrow, forested floodplain wetland located along the western bank of the Norwalk River between Route 15 and Glover Ave. The wetland is dominated by hydrophytic vegetation, including American sycamore (*Platanus occidentalis*) trees with glossy false buckthorn (*Frangula alnus*) and Eurasian-buttercup (*Ficaria verna*) in the understory. Evidence of hydrology at the time of the delineation included drift and alluvial deposits, water marks, and geomorphic position. The soils qualified as alluvial floodplain soils but were determined not to meet hydric soil criteria.

Wetland 19 meets the DEEP jurisdictional criteria for inland wetlands but does not meet the Corps definition of a wetland due to an absence of hydric soil indicators.

May 24, 2021

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Reference: Wetland and Watercourse Delineation Report Addendum, Route 7/15 Interchange Project, Norwalk, Connecticut

The wetland provides limited functions and values due to its small size but includes sediment/toxicant retention, floodflow alteration, nutrient removal/retention/transformation, wildlife habitat, fish habitat, and sediment/shoreline stabilization.

Wetland 20

Wetland 20 is a newly formed small PEM wetland that was formerly an open water area located within the Norwalk River. The area is no longer underwater, as a result of the removal of the Flock Process Dam, and now supports a small PEM wetland community. The wetland is dominated by white panicked American-aster (*Symphyotrichum lanceolatum*). A few individuals of silky dogwood (*Cornus amomum*) shrubs are present along the wetland edge. Evidence of hydrology at the time of the delineation included water marks. Soils were alluvial floodplain soils, and hydric soil criteria included sandy redox. Wetland 20 meets both the federal and state wetland criteria for jurisdiction.

The wetland abuts a lawn and patio area associated with the neighboring office complex. The wetland does not provide significant functions and values due to its small size, but given its location and surrounding development it does provide some sediment/toxicant retention, nutrient removal/retention/transformation, and sediment/shoreline stabilization.

UPDATED WATERCOURSES

The revised reach of Perennial Watercourse 1 begins at a culvert on the south side of Route 15 and flows southerly through Wetland 1 and into the previously delineated watercourse reach beginning at the southern end of Wetland 1 (Figure 1). The banks through Wetland 1 are approximately 6–8 feet wide and the stream contains a gravel, sand, and mucky substrate. There was approximately 3–4 inches of water flowing in the channel at the time of the field survey, and fish were observed within the reach.

The 2016 delineation by BL noted that the Perennial Watercourse 1 channel lost definition through Wetland 1. Landscape changes, including significant runoff events over the past 5 years, may have influenced the channel morphology through Wetland 1, thereby resulting in development of the present well-defined channel.

Note that the delineation of this resource was conducted incidentally at the time of the May 13, 2021 site walk and the location of the watercourse through Wetland 1 as shown on Figure 1 is approximate. A delineation with survey-grade equipment accuracy is recommended if impacts to this watercourse are anticipated during the project design phase.

Please let us know if you have any questions on the information presented in this report.

May 24, 2021

John Eberle, Project Manager

Page 5 of 5

Reference: Wetland and Watercourse Delineation Report Addendum, Route 7/15 Interchange Project, Norwalk, Connecticut

Stantec Consulting Services Inc.

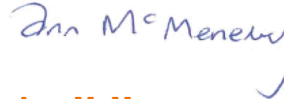


Matt Arsenault

Botanist / Ecologist - Sr. Project Manager

Phone: 207 406 5488

matt.arsenault@stantec.com



Ann McMenemy

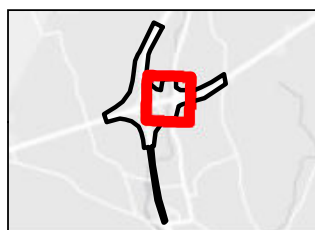
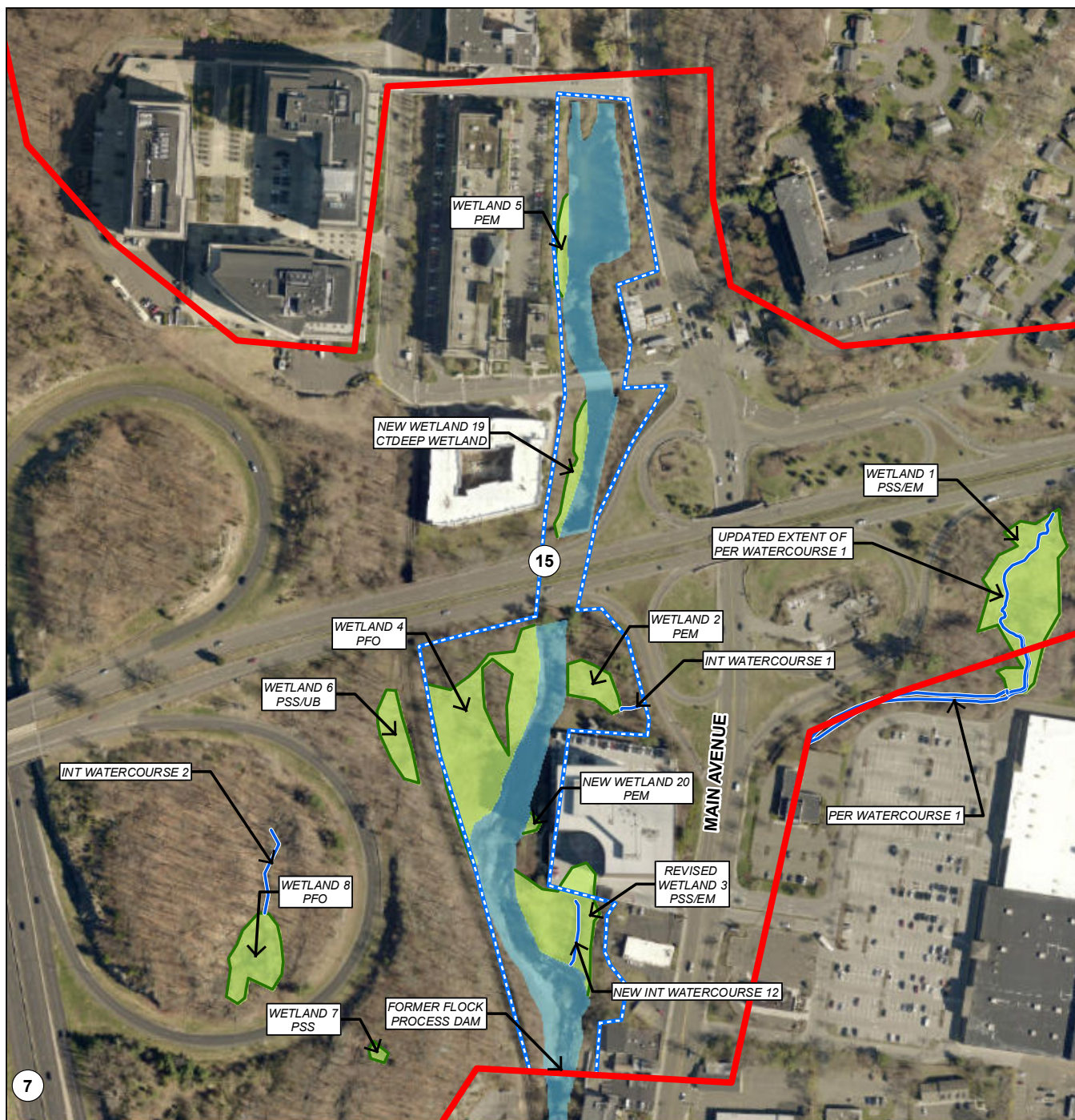
Senior Wetland Scientist

Phone: 617 620 6961

ann.mcmenemy@stantec.com

Attachment: Figure 1 – Revised Wetland and Watercourse Delineation Map
Appendix A. Representative Photographs
Appendix B. Corps Wetland Determination Data Forms
Appendix C. Corps Wetland Function – Value Evaluation Forms

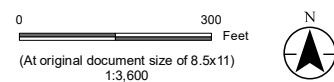
Figure



Notes
 1. Coordinate System: NAD 1983 StatePlane Connecticut FIPS 0600 Feet
 2. Data Sources: Stantec, BL Companies
 3. Background: ESRI World Imagery, Web Mapping Service.

- Legend**
- Field Delineated Stream (see note below)
 - Field Delineated Wetland Boundary
 - Field Delineated Wetland
 - Riverine Wetland (Norwalk River)
 - 2021 Wetland and Watercourse Delineation Verification Area
 - Project Area Boundary

** The portion of PER Watercourse 1 within Wetland 1 was observed in 2021 and mapped using aerial photo interpretation and limited GPS data.



Project Location
 Norwalk, CT

Prepared by KWH on 2021-04-05
 TR by MPA on 2021-04-06
 IR Review by JH on 2021-04-05

Client/Project
 Route 7/15 Interchange
 Connecticut Department of Transportation (CTDOT)

192310508

Figure No.
1

Title
2021 Wetland and Watercourse Delineation Map

Appendix A. Representative Photographs



Photo 1. Recently created PEM portion of Wetland 3, view to the south. Stantec. March 25, 2021.



Photo 2. Recently created PEM portion of Wetland 3, view to the north. Stantec. March 25, 2021.



Photo 3. Portion of Wetland 3 under office building. Stantec. March 25, 2021.



Photo 4. View to the east of the revised Norwalk River channel alignment adjacent to Wetland 3. Stantec. March 25, 2021.



Photo 5. Former location of southern segment of Wetland 3 that has been since replaced by the revised Norwalk River channel, view to the north. Stantec. March 25, 2021.



Photo 6. View to the south towards the former location of the Flock Process Dam on the Norwalk River. Stantec. March 25, 2021.



Photo 7. Intermittent Watercourse 12 in Wetland 3, view to the south. Stantec. March 25, 2021.



Photo 8. Floodplain Wetland 19 along west edge of Norwalk River, view to the north. Stantec. March 25, 2021.



Photo 9. Wetland 20, view to the north. Stantec. March 25, 2021.



Photo 10. Wetland 20, view to the east across the Norwalk River. Stantec. March 25, 2021.



Photo 21. Perennial Watercourse 1 through Wetland 1, view to the southwest. Stantec. May 13, 2021.



Photo 22. Perennial Watercourse 1 through Wetland 1, view to the south. Stantec. May 13, 2021.

Appendix B. Corps Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 7/15 Interchange-Norwalk City/County: Norwalk/Fairfield Sampling Date: 3/25/2021
Applicant/Owner: ConnDOT State: CT Sampling Point: Wetland
Investigator(s): Matt Arsenault Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Linear Slope (%) 0 - 0
Subregion (LRR or MLRA): LRR R Lat: 41.140490 Long: -73.426744 Datum: NAD83
Soil Map Unit Name: _____ NWI Classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ if yes, optional Wetland Site ID: <u>W3</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Recently exposed wetland as a result of dewatering from downstream dam removal	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)		Surface Soil Cracks (B6)
<u> </u> Surface Water (A1)	<u>X</u> Water-Stained Leaves (B9)	<u>X</u> Drainage Patterns (B10)
<u> </u> High Water Table (A2)	<u> </u> Aquatic Fauna (B13)	<u> </u> Moss Trim Lines (B16)
<u> </u> Saturation (A3)	<u> </u> Marl Deposits (B15)	<u> </u> Dry-Season Water Table (C2)
<u>X</u> Water Marks (B1)	<u> </u> Hydrogen Sulfide Odor (C1)	<u> </u> Crayfish Burrows (C8)
<u> </u> Sediment Deposits (B2)	<u> </u> Oxidized Rhizospheres on Living Roots (C3)	<u>X</u> Saturation Visible in Aerial Imagery (C9)
<u> </u> Drift Deposits (B3)	<u> </u> Presence of Reduced Iron (C4)	<u> </u> Stunted or Stressed Plants (D1)
<u> </u> Algal Mat or Crust (B4)	<u> </u> Recent Iron Reduction in Tilled Soils (C6)	<u>X</u> Geomorphic Position (D2)
<u> </u> Iron Deposits (B5)	<u> </u> Thin Muck Surface (C7)	<u> </u> Shallow Aquitard (D3)
<u> </u> Inundation Visible on Aerial Imagery (B7)	<u> </u> Other (Explain in Remarks)	<u> </u> Microtopographic Relief (D4)
<u> </u> Sparsely Vegetated Concave Surface (B8)		<u> </u> FAC-Neutral Test (D5)
Surface Water Present? Yes _____ No <u>X</u> Depth (inches) _____	Wetland Hydrology Present? Yes <u>X</u> No _____	
Water Table Present? Yes _____ No <u>X</u> Depth (inches) _____		
Saturation Present? Yes _____ No <u>X</u> Depth (inches) _____		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION - Use scientific names of plants

 Sampling Point: **Wetland-W3**

Tree Stratum (Plot Size: <u>30'</u>radius) <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 35%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 15%;">Indicator Status</th> </tr> <tr> <td style="border-bottom: 1px solid black; height: 40px;"></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td colspan="3" style="text-align: right;">_____ = Total Cover</td> </tr> </table> Shrub Stratum (Plot Size: <u>15'</u>radius) <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 35%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 15%;">Indicator Status</th> </tr> <tr> <td style="border-bottom: 1px solid black; height: 40px;"></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td colspan="3" style="text-align: right;">_____ = Total Cover</td> </tr> </table> Herb Stratum (Plot Size: <u>5'</u>radius) <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 35%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 15%;">Indicator Status</th> </tr> <tr> <td><u>Dichanthelium clandestinum</u></td> <td style="text-align: center;">70</td> <td style="text-align: center;">X</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td><u>Juncus effusus</u></td> <td style="text-align: center;">15</td> <td></td> <td style="text-align: center;">OBL</td> </tr> <tr> <td><u>Impatiens capensis</u></td> <td style="text-align: center;">10</td> <td></td> <td style="text-align: center;">FACW</td> </tr> <tr> <td></td> <td colspan="3" style="text-align: right;">95 = Total Cover</td> </tr> </table> Woody Vine Stratum (Plot Size: <u>30'</u>radius) <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 35%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 15%;">Indicator Status</th> </tr> <tr> <td style="border-bottom: 1px solid black; height: 40px;"></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td colspan="3" style="text-align: right;">_____ = Total Cover</td> </tr> </table>		Absolute % Cover	Dominant Species?	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Indicator Status						_____ = Total Cover			Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B) Prevalence Index Worksheet: <table style="width: 100%; border-collapse: collapse;"> <tr> <td>OBL species</td> <td style="text-align: center;"><u>15</u></td> <td>x 1</td> <td style="text-align: center;"><u>15</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: center;"><u>80</u></td> <td>x 2</td> <td style="text-align: center;"><u>160</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: center;"><u>0</u></td> <td>x 3</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: center;"><u>0</u></td> <td>x 4</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: center;"><u>0</u></td> <td>x 5</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>Column Totals</td> <td style="text-align: center;"><u>95</u> (A)</td> <td></td> <td style="text-align: center;"><u>175</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align: right;">Prevalence Index = B/A =</td> <td style="text-align: center;"><u>1.84</u></td> </tr> </table> Hydrophytic Vegetation Indicators: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;"><u>X</u></td> <td>1- Rapid Test For Hydrophytic Vegetation</td> </tr> <tr> <td style="text-align: center;"><u>X</u></td> <td>2- Dominance Test is > 50%</td> </tr> <tr> <td style="text-align: center;"><u>X</u></td> <td>3- Prevalence Index is =< 3.0</td> </tr> <tr> <td></td> <td>4- Morphological Adaptations</td> </tr> <tr> <td></td> <td>5- Problematic Hydrophytic Vegetation</td> </tr> </table> Definitions of Vegetation Strata: Tree- Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub- Woody plants less than 3 in. DBH and greater than or equal to 3.28ft (1m) tall. Herb- All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28ft tall. Woody Vines- All woody vines greater than 3.28ft in height. Hydrophytic Vegetation Present? Yes <u>X</u> No _____	OBL species	<u>15</u>	x 1	<u>15</u>	FACW species	<u>80</u>	x 2	<u>160</u>	FAC species	<u>0</u>	x 3	<u>0</u>	FACU species	<u>0</u>	x 4	<u>0</u>	UPL species	<u>0</u>	x 5	<u>0</u>	Column Totals	<u>95</u> (A)		<u>175</u> (B)	Prevalence Index = B/A =			<u>1.84</u>	<u>X</u>	1- Rapid Test For Hydrophytic Vegetation	<u>X</u>	2- Dominance Test is > 50%	<u>X</u>	3- Prevalence Index is =< 3.0		4- Morphological Adaptations		5- Problematic Hydrophytic Vegetation
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Remarks: (Include photo numbers here or on a separate sheet.)																																																																																															

SOIL

Sampling Point: **Wetland-W3**

Depth (inches)	Matrix		Redox Features					Remarks
	Color	%	Color	%	Type	Loc	Texture	
0-20	10YR 3/1	100					Peaty Muck	
Hydric Soil Indicators: ☒ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Stratified Layers (A5) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Dark Surface (S7) ☐ Polyvalue Below Surface (B15) ☐ Thin Dark Surface (S9) ☐ Loamy Mucky Mineral (F1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8) Indicators for Problematic Soils: ☐ 2 cm Muck (A10) ☐ Coast Prairie Redox (A16) ☐ 5 cm Mucky Peat or Peat (S3) ☐ Dark Surface (S7) ☐ Polyvalue Below Surface (S8) ☐ Thin Dark Surface (S9) ☐ Iron-Manganese Masses (F12) ☐ Piedmont Floodplain Soils (F19) ☐ Mesic Spodic (TA6) ☐ Red Parent Material (F21) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)								
Restrictive Layer (if observed): Type: _____ Depth (inches): _____							Hydric Soil Present? Yes ☒ No _____	
Remarks:								

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 7/15 Interchange-Norwalk City/County: Norwalk/Fairfield Sampling Date: 3/25/2021
Applicant/Owner: ConnDOT State: CT Sampling Point: Upland
Investigator(s): Matt Arsenault Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%) 0 - 0
Subregion (LRR or MLRA): LRR R Lat: 41.142891 Long: -73.426867 Datum: NAD83
Soil Map Unit Name: _____ NWI Classification: UPL

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u> if yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) State-regulated Inland Wetland; Corps upland	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)		Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
<u>X</u> Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible in Aerial Imagery (C9)
<u>X</u> Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	<u>X</u> Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)
Surface Water Present? Yes _____ No <u>X</u> Depth (inches) _____	Wetland Hydrology Present? Yes <u>X</u> No _____	
Water Table Present? Yes _____ No <u>X</u> Depth (inches) _____		
Saturation Present? Yes _____ No <u>X</u> Depth (inches) _____		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION - Use scientific names of plants

 Sampling Point: **Upland-W19**

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SOIL

Sampling Point: **Upland-W19**

Depth (inches)	Matrix		Redox Features					Remarks
	Color	%	Color	%	Type	Loc	Texture	
0-8	10YR 3/2	100					Fine Sandy Loam	
8-16	10R 3/4	100					Sandy Loam	
Hydric Soil Indicators: ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Stratified Layers (A5) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☐ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Dark Surface (S7) ☐ Polyvalue Below Surface (B15) ☐ Thin Dark Surface (S9) ☐ Loamy Mucky Mineral (F1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8) Indicators for Problematic Soils: ☐ 2 cm Muck (A10) ☐ Coast Prairie Redox (A16) ☐ 5 cm Mucky Peat or Peat (S3) ☐ Dark Surface (S7) ☐ Polyvalue Below Surface (S8) ☐ Thin Dark Surface (S9) ☐ Iron-Manganese Masses (F12) ☐ Piedmont Floodplain Soils (F19) ☐ Mesic Spodic (TA6) ☐ Red Parent Material (F21) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)								
Restrictive Layer (if observed): Type: _____ Depth (inches): _____							Hydric Soil Present? Yes _____ No <u> X </u>	
Remarks:								

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Route 7/15 Interchange-Norwalk City/County: Norwalk/Fairfield Sampling Date: 3/25/2021
Applicant/Owner: ConnDOT State: CT Sampling Point: Wetland
Investigator(s): Matt Arsenault Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%) 0 - 0
Subregion (LRR or MLRA): LRR R Lat: 41.141113 Long: -73.427116 Datum: NAD83
Soil Map Unit Name: _____ NWI Classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (if no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (if needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____ if yes, optional Wetland Site ID: <u>W20</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.)	

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)		Surface Soil Cracks (B6)
☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☐ Drainage Patterns (B10)
☐ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
☐ Saturation (A3)	☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☒ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible in Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☐ Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)		☐ FAC-Neutral Test (D5)
Surface Water Present? Yes _____ No <u>X</u> Depth (inches) _____	Wetland Hydrology Present? Yes <u>X</u> No _____	
Water Table Present? Yes _____ No <u>X</u> Depth (inches) _____		
Saturation Present? Yes _____ No <u>X</u> Depth (inches) _____		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION - Use scientific names of plants

 Sampling Point: **Wetland-W20**

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Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: **Wetland-W20**

Depth (inches)	Matrix		Redox Features						Remarks
	Color	%	Color	%	Type	Loc	Texture		
0-2	10R 3/1	100						Sandy Loam	
2-3	2.5Y 4/2	100						Sand	
3-13	10YR 3/2	85	7.5YR 4/6	15	C	PL		Loamy Sand	
13-20	10R 4/2	85	7.5YR 4/6	15	C	PL		Loamy Sand	
Hydric Soil Indicators: ☐ Histosol (A1) ☐ Histic Epipedon (A2) ☐ Black Histic (A3) ☐ Hydrogen Sulfide (A4) ☐ Stratified Layers (A5) ☐ Depleted Below Dark Surface (A11) ☐ Thick Dark Surface (A12) ☐ Sandy Mucky Mineral (S1) ☐ Sandy Gleyed Matrix (S4) ☒ Sandy Redox (S5) ☐ Stripped Matrix (S6) ☐ Dark Surface (S7) ☐ Polyvalue Below Surface (B15) ☐ Thin Dark Surface (S9) ☐ Loamy Mucky Mineral (F1) ☐ Loamy Gleyed Matrix (F2) ☐ Depleted Matrix (F3) ☐ Redox Dark Surface (F6) ☐ Depleted Dark Surface (F7) ☐ Redox Depressions (F8) Indicators for Problematic Soils: ☐ 2 cm Muck (A10) ☐ Coast Prairie Redox (A16) ☐ 5 cm Mucky Peat or Peat (S3) ☐ Dark Surface (S7) ☐ Polyvalue Below Surface (S8) ☐ Thin Dark Surface (S9) ☐ Iron-Manganese Masses (F12) ☐ Piedmont Floodplain Soils (F19) ☐ Mesic Spodic (TA6) ☐ Red Parent Material (F21) ☐ Very Shallow Dark Surface (TF12) ☐ Other (Explain in Remarks)									
Restrictive Layer (if observed): Type: _____ Depth (inches): _____								Hydric Soil Present? Yes ☒ No _____	
Remarks:									

Appendix C. Corps Wetland Function – Value Evaluation Forms

Wetland Function – Value Evaluation Form

Wetland Description: Wetland 19 is a narrow floodplain forest along the Norwalk River. It is dominated by <i>Platanus occidentalis</i> , <i>Frangula alnus</i> , and	File number:	
<i>Ficaria verna</i>	Wetland identifier: W19	
	Latitude: 41.14289167	Longitude: -73.426867
	Preparer(s): Matt Arsenault	
	Date: 4/2/2021	

Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 Groundwater Recharge/Discharge		X	No evidence of groundwater discharge was observed; wetland is small to provide measurable groundwater recharge	
 Floodwater Alteration	X		Wetland is adjacent to Norwalk River and is within its floodplain but small size prohibits it from providing substantial flood storage. Qualifiers: 4, 6, 9, 11, 12	No
 Fish and Shellfish Habitat		X	Norwalk River adjacent to wetland provides fish and shellfish habitat but terrestrial wetland area does not provide this function	
 Sediment/Toxicant Retention	X		Wetland is adjacent to impervious surfaces; potential for sediment and toxicants in runoff. Qualifiers: 1, 2, 10	Yes
 Nutrient Removal	X		Wetland is adjacent to impervious surfaces; potential for nutrient removal and retention. Qualifiers: 3, 4, 10, 11	Yes
 Production Export	X		Wetland has vegetation and can flush organic material downstream. Qualifiers: 1, 2, 12	No
 Sediment/Shoreline Stabilization	X		Wetland is adjacent to Norwalk River. Qualifiers: 1, 3, 4, 5	Yes
 Wildlife Habitat		X	Wetland is too small to be used in a measurable capacity by wetland-dependent species	
 Recreation		X	Wetland does not provide recreation value	
 Education/Scientific Value		X	Wetland is small and does not provide this value.	
 Uniqueness/Heritage		X	Wetland is small and consists of common species	
 Visual Quality/Aesthetics		X	Wetland is small and does not provide this value	
ES Endangered Species Habitat		X	Endangered species are not present in wetland.	
Other				

Notes:

* Attach list of considerations.

Wetland Function – Value Evaluation Form

Wetland Description: Wetland 20 is a small wetland dominated by wet meadow species including <i>Symphytotrichum lanceolatum</i> . It is located in the	File number:	
floodplain of the Norwalk River. A lawn and patio area as well as parking garage associated with an adjacent office complex is located next to the wetland	Wetland identifier: W20	
	Latitude: 41.1411137	Longitude: -73.427116
	Preparer(s): Matt Arsenaault	
	Date: 4/2/2021	

Function/Value	Capability		Summary	Principal Yes/No
	Y	N		
 Groundwater Recharge/Discharge		X	No evidence of groundwater discharge was observed; wetland is small to provide measurable groundwater recharge	
 Floodwater Alteration	X		Wetland is adjacent to Norwalk River and is within its floodplain but small size prohibits it from providing substantial flood storage. Qualifiers: 4, 6, 9, 11, 12	No
 Fish and Shellfish Habitat		X	Norwalk River adjacent to wetland provides fish and shellfish habitat but terrestrial wetland area does not provide this function	
 Sediment/Toxicant Retention	X		Wetland is adjacent to lawn and patio area as well as impervious surfaces; potential for sediment and toxicants in runoff. Qualifiers: 1, 2, 10, 16	No
 Nutrient Removal	X		Wetland is adjacent to lawn and patio area as well as impervious surfaces; potential for nutrient removal and retention. Qualifiers: 3, 4, 8, 10, 11	Yes
 Production Export	X		Wetland has dense vegetation and can flush organic material downstream. Qualifiers: 1, 2, 12	No
 Sediment/Shoreline Stabilization	X		Wetland is adjacent to Norwalk River. Qualifiers: 1, 3, 4, 5	No
 Wildlife Habitat		X	Wetland is too small to be used in a measurable capacity by wetland-dependent species	
 Recreation		X	Wetland does not provide recreation value	
 Education/Scientific Value		X	Wetland is small and does not provide this value.	
 Uniqueness/Heritage		X	Wetland is small and consists of common species	
 Visual Quality/Aesthetics		X	Wetland is small and does not provide this value	
ES Endangered Species Habitat		X	Endangered species are not present in wetland.	
Other				

Notes:

* Attach list of considerations.



**Routes 7/15 Interchange
Norwalk, Connecticut
State Project No. 102-358**

**Environmental Assessment,
Draft Section 4(F) Evaluation and
Environmental Impact Evaluation**

**Appendix G4
Wetland Impact Tables**

August 2022

Prepared for:
Connecticut Department of
Transportation Federal Highway
Administration



Wetland/Watercourse ID	Existing Wetlands and Watercourses		Alternative 21D				Alternative 26			
			Permanent Wetland Impact	Temporary Wetland/Watercourse Impact	Permanent Watercourse Impact	Temporary Watercourse Impact	Permanent Wetland Impact	Temporary Wetland/Watercourse Impact	Permanent Watercourse Impact	Temporary Watercourse Impact
	AC	LF	AC	AC	LF	LF	AC	AC	LF	LF
Wetland 1	0.8	-	0.6	0	-	-	0.2	0	-	-
Wetland 2	0.2	-	0.1	0	-	-	0.1	0	-	-
Wetland 3	0.6	-	0	0	-	-	0	0	-	-
Wetland 4	0.9	-	0.7	0	-	-	0.5	0	-	-
Wetland 5	0.1	-	0	0	-	-	0	0	-	-
Wetland 6	0.2	-	0.2	0	-	-	0.1	0	-	-
Wetland 7	0.02	-	0	0	-	-	0	0	-	-
Wetland 8	0.3	-	0.01	0	-	-	0	0	-	-
Wetland 9	2.3	-	0.9	0.004	-	-	0.4	0.001	-	-
Wetland 10	3.8	-	0.1	0.03	-	-	0	0	-	-
Wetland 11	0.3	-	0	0	-	-	0	0	-	-
Wetland 12	0.4	-	0.004	0	-	-	0	0	-	-
Wetland 13	0.1	-	0.1	0	-	-	0	0	-	-
Wetland 14	0.02	-	0	0	-	-	0	0	-	-
Wetland 15	0.1	-	0	0	-	-	0	0	-	-
Wetland 16	0.7	-	0	0	-	-	0	0	-	-
Wetland 17	0.2	-	0	0	-	-	0	0	-	-
Wetland 18	0.1	-	0	0	-	-	0	0	-	-
Wetland 19	0.1	-	0.02	0.01	-	-	0.02	0.01	-	-
Wetland 20	0.02	-	0	0	-	-	0	0	-	-
POND 1	0.1	-	0	0	-	-	0	0	-	-
Norwalk River	3.1	-	-	0.5	-	-	-	0.4	-	-
Intermittent Stream 1	-	40	-	-	40	0	-	-	40	0
Intermittent Stream 2	-	180	-	-	0	0	-	-	0	0
Intermittent Stream 3	-	270	-	-	0	0	-	-	0	0
Intermittent Stream 4	-	60	-	-	0	0	-	-	0	0
Intermittent Stream 5	-	330	-	-	0	0	-	-	0	0
Intermittent Stream 6	-	50	-	-	50	0	-	-	0	0
Intermittent Stream 7	-	30	-	-	30	0	-	-	0	0
Intermittent Stream 8	-	90	-	-	0	0	-	-	0	0
Intermittent Stream 9	-	40	-	-	0	0	-	-	0	0
Intermittent Stream 10	-	150	-	-	0	0	-	-	0	0
Intermittent Stream 11	-	800	-	-	0	0	-	-	0	0
Intermittent Stream 12	-	128	-	-	0	0	-	-	0	0
Perennial Stream 1	-	1,500	-	-	320	170	-	-	200	170
Perennial Stream 2	-	330	-	-	330	0	-	-	210	0

Note: Wetland and watercourse acreage (AC) and linear feet (LF) are approximate.

Wetland ID	Existing Wetland Area (AC)	Alternative 21D Percent potential permanent wetland impact	Alternative 26 Percent potential permanent wetland impact	Wetland Functions and Values							
				Groundwater recharge/discharge	Flood flow alteration	Fish habitat	Sediment/toxicant retention	Nutrient removal/retention/transformation	Production export	Sediment/shoreline stabilization	Wildlife habitat
Wetland 1	0.8	75	25	x	x		x	x	x		x
Wetland 2	0.2	50	50		x		x	x		x	x
Wetland 4	0.9	75	55	x	x		x	x	x	x	x
Wetland 6	0.2	100	50	x	x		x	x			x
Wetland 8	0.3	<5	0	x	x		x	x			x
Wetland 9	2.3	40	20	x	x	x	x	x	x	x	x
Wetland 10	3.8	<5	0	x		x	x	x		x	x
Wetland 12	0.4	<5	0	x	x		x	x			x
Wetland 13	0.1	100	0	x	x						x
Wetland 19	0.1	20	20		x		x	x	x	x	

Notes:

1. Wetlands not anticipated to be impacted are not included in this table.
2. Percentages have been rounded to nearest 5 percent.