

***67 Kennedy Road  
Warehouse & Distribution  
Center***

***352 Sullivan Avenue  
67 & 68 Kennedy Road  
South Windsor, Connecticut***

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# Wetland Assessment

This document is submitted in accordance with the Connecticut Inland Wetlands and Watercourses Act (Section 22a-36 through 22a-45 of the Connecticut General Statutes) and in accordance with the Inland Wetlands and Watercourses Regulations of the Town of South Windsor, Connecticut.

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## Introduction

The Applicant, Scannell Properties #644, LLC ("Scannell"; the "Applicant") respectfully seeks approval from the Town of South Windsor Inland Wetlands Agency/Conservation Commission ("IWA/CC") for a warehouse/distribution center facility ("Facility") proposed on an industrially zoned  $\pm 18.83$ -acre site collectively located at 352 Sullivan Avenue, 67 and 68 Kennedy Road in South Windsor, Connecticut (the "Site" or "Project"). The Site is located within an industrially developed section of town, bound by Sullivan Avenue and industrial developments to the South, industrial developments to the east and west, Kennedy Road splits the 67 and 68 Kennedy Road properties, and a freight rail line and industrial properties to the north.

The following 3 parcels have been assembled to form the proposed Kennedy Road Warehouse & Distribution Center development.

- 352 Sullivan Avenue - Map No. 122, Block No. 13 ( $\pm 12.2$  ac)
- 67 Kennedy Road - Map No. 122, Block No. 12 ( $\pm 3.75$  ac)
- 68 Kennedy Road - Map No. 122, Block No. 11, Lot No. 4 ( $\pm 2.88$  ac)

All three properties are zoned Industrial and owned by Four Woods LLC.

Historically, the majority of the Site has been subject to agricultural use at one time or another that resulted in anthropogenic (influenced by man-made activities) changes to both upland and wetland areas. One of the better examples of anthropogenic changes to the Site was the alteration of the boundaries of Wetland 2 and creation of Wetland 1. Evidence of this manipulation is present in the form of cut slopes forming the boundaries of Wetland 1, and spoil piles north of Wetland 1. Similarly, the aforementioned rail line to the north interrupts hydrology through the creation of a shallow drainage swale which conveys flows under the tracks to off-Site wetland resources to the north.



Four isolated wetlands and one wetland connected to an off-site seasonal intermittent transitioning to a perennial watercourse were identified on the Subject Property. All of the wetland resources identified on the Site have experienced varying degrees of anthropogenic influence resulting from historic agricultural use and industrial development on the Subject Property and industrial development of surrounding properties including an adjacent freight rail line. Wetlands 1/2 consist of isolated depressional wetland with seasonally flooded and saturated soils which have experienced significant historic alteration. Wetland 5 occurs adjacent to the rail line as a constructed drainage ditch which conveys flows under the rail line to the north providing connectivity to a larger intermittent transitioning to perennial watercourse system. Wetland 3 occurs in central portions of the Site as an isolated depressional forested wetland with seasonally saturated soils. Finally, Wetland 4 occupies much of the southern extents of 352 Sullivan Avenue as a broad depressional forested wetland system with complexes of scrub/shrub vegetation and pockets of deeper seasonal flooding. Wetland 5 is associated with a railroad track drainage ditch.

Various layouts of the proposed development were considered in an attempt to avoid and minimize impacts to wetland resources. The largest developable area that could support the proposed Facility on the Site is located in the southern and central portions of the Site that front along Sullivan Avenue and Kennedy Road. Comparatively, Wetlands 1 and by association Wetland 2 provides the highest functions and values on Site so avoidance of these wetland areas was weighted heavier than the isolated Wetlands 3 and 4. With the distribution of Wetlands 3 and 4 across the interior of the Site, the ability to site the proposed development without any wetland resource impacts just does not exist.

To compensate for unavoidable wetland impacts, a comprehensive wetland mitigation plan is proposed in the northeast portion of the Site in areas bordering Wetland 1 and more importantly Wetland 2. This wetland mitigation plan will include the following components: wetland restoration of historically impacted areas separating Wetlands 1 and 2; creation of new wetlands adjacent to Wetland 2; and placement of a conservation easement area that encompasses Wetlands 1 and 2, the wetland restoration and creation areas, and adjacent forested upland buffer. In totality, this wetland mitigation plan provides an opportunity for ecological connectivity between open space parcels to the east (Rye Street Park and Barton Property) and to the west (Scantic River CTDEEP properties) thereby further enhancing the functions and values of the proposed mitigation site.

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## Location Description

The ±18.83-acre industrial Site is located along the north side of Sullivan Avenue (State Route 194) and the east and west sides of Kennedy Road in South Windsor, Connecticut.

The following 3 parcels have been assembled to form the Kennedy Road Warehouse & Distribution Center.

- 352 Sullivan Avenue - Map No. 122, Block No. 13 (12.2 ac)
- 67 Kennedy Road - Map No. 122, Block No. 12 (3.75 ac)
- 68 Kennedy Road - Map No. 122, Block No. 11, Lot No. 4 (2.88 ac)

All three properties are zoned Industrial.

The property primarily consists of even aged early successional deciduous forest with two interior isolated wetland pockets, vacant residential and industrial buildings, and wetlands in the northeast property corner. Generally, the Site is fairly level with slight micro depressions interspersed throughout the property, largely coinciding with wetland resource areas. Kennedy Road bisects the 67 and 68 Kennedy Road parcels.

Access to the Site is provided by frontage along Sullivan Avenue and Kennedy Road.

A Site Location Map and Aerial Map (depicting existing conditions) are provided in the Figures Attachment. Representative photographs of the proposed Site and wetlands are provided in Attachment A.

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## Site Vicinity

The Site is located along the north side of Sullivan Avenue while Kennedy Road bisects the 67 and 68 Kennedy Road parcels.

The following is a summary of properties, and their observed uses, which abut the Site.

**North** – Freight rail line, industrial development and undeveloped industrial property .

**East** – Industrial properties including FedEx Ground Warehouse.

**South** – Sullivan Avenue, Industrial properties including Condor Industrial Park.

**West** – Industrial properties including Boardwalk Auto Sales.

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## Mapped Soil Types

Digitally available updated soil survey information was reviewed from the Natural Resources Conservation Service ("NRCS"). Soil classifications present on the Site have developed primarily in sandy glaciofluvial (outwash) parent material and were field verified and classified as follows:

### Upland Soils:

- Windsor loamy sand
- Sudbury sandy loam
- Ninigret fine sandy loam
- Udorthents

### Wetland soils:

- Walpole sandy loam
- Aquents

These soil types were generally confirmed during wetland investigations performed during the fall of 2021 and winter of 2022.

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## Rare Species Habitat

A review of the December 2021 Connecticut Department of Energy & Environmental Protection ("DEEP") Natural Diversity Data Base ("NDDDB") map revealed no known populations of State Listed Endangered, Threatened, or Special Concern species occur on the Site. The nearest NDDDB buffer area is located  $\pm 500$  feet to the east. Since the Site is not located within a NDDDB buffer area, consultation with DEEP is not required in accordance with their review policy.

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## Flood Hazard Areas

United States Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Maps ("FIRM") were reviewed for the Site. The Site is located within Flood Zone X (unshaded) per FEMA Flood Insurance Rate Map 09003C0377F, effective September 26, 2008, areas beyond the 100-year and 500-year flood hazard zones. As such, the Project will not impact any flood hazard areas.

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## Wetland Description and Evaluation

Wetlands occupy interior and northeastern areas of the Site with a total of five (5) resources identified for descriptive purposes. Two isolated interior wetlands and three wetlands connected to an off-site seasonal intermittent watercourse were identified on the Subject Property. All of the wetland resources identified on the Site have experienced varying degrees of anthropogenic influence resulting from historic agricultural use and industrial development on the Subject Property and industrial development of surrounding properties including a freight rail line. These wetlands, with the exception of Wetland 5 which is maintained due to its proximity to the freight rail line, generally consist of early successional forest that has emerged since cultivation activities ceased in the mid-1990s. Please refer to the Existing Wetland Resources map provided in the Figures Attachment.

Historically, the Site was used for agricultural purposes and was in cultivation until sometime in the 1990's, remaining as open fallow field in the late 1990's and slowly succeeding to young forest cover that exists today. Based on a review of historic aerial photographs from the 1930s through 1970s, it appears the Site was used for the production of tobacco due to the presence of tobacco sheds on and adjacent to the Site. An industrial building was constructed on 67 Kennedy Avenue sometime in the 1960's, which altered adjacent upland and wetland areas. It appears based on these aerials that the alteration/construction of Wetland 1 coincided with the construction of this building. Three historic aerial maps from 1934, 1965 and 1991 are provided in the Figures Attachment which exhibit the various anthropogenic changes that have occurred over that time period to the Site.

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## Wetland Resource Area Delineation

A Connecticut registered Soil Scientists conducted field investigations of the Site on August 17, 2021 and a follow-up inspection on January 28, 2022 to identify and delineate wetland resources throughout the Site. The wetland boundaries were delineated in accordance with both the Connecticut Inland Wetlands and Watercourses Act ("IWWA") regulations and the *Corps of Engineers Wetland Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, Version 2.0 (January 2012; "Corps Manual"). The results of this wetland investigation are summarized in the discussions below with additional details provided in the APT Wetland Inspection Report provided in Attachment B.

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## Federal and State Wetlands

The Corps Manual defines wetlands as "[t]hose areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of

vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

The Connecticut IWWA defines wetlands as areas of poorly drained, very poorly drained, floodplain, and alluvial soils, as delineated by a soil scientist. Watercourses are defined as bogs, swamps, or marshes, as well as lakes, ponds, rivers, streams, etc., whether natural or man-made, permanent or intermittent. Intermittent watercourse determinations are 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.

For descriptive purposes, a total of five (5) wetlands were identified on Site. The Project Site Plans, provided by Design Professionals, Inc. under separate cover, depict these delineated resources along with the associated 80-foot upland review areas.

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## **Wetlands 1/2**

Wetland 1, a  $\pm 0.63$ -acre wetland located within a local isolated topographical depression, is located in the northern end of the 67 Kennedy Road parcel, immediately adjacent to the northern side of the abandoned industrial building and end of Kennedy Road. Wetland 2, a  $\pm 1.05$ -acre wetland, is located in the northeast corner of the 352 Sullivan Avenue parcel and northern ends of the 67 and 68 Kennedy Road parcels, immediately adjacent to freight railroad tracks located along the northern property boundary. These two wetlands are connected via a shallow slope cut associated with historic disturbance to these wetland areas. As they share direct surface connectivity and similar characteristics, they have been grouped together for the purposes of this assessment since they can be thought to function as a single wetland system. Spoil piles surrounding this wetland and fill/graded/buried soil horizons within this wetland provide evidence to the disturbed nature of this wetland area. A soil pile and berm separate the northwest side of Wetland 1 from Wetland 2 where historically it is anticipated they were one continuous wetland area. This wetland does not contain a topographical depression of sufficient depth to sustain inundation levels or hydroperiod to support vernal pool breeding. A recent inspection on March 30, 2022 confirmed no vernal breeding activity. Wetland 1's vegetative cover is dominated by very early successional forest, saplings, and scrub-shrub while Wetland 2 is characterized by early to mid-successional forest cover. Both wetlands have been disturbed by historic industrial development associated with the construction of an abandoned industrial building in circa mid-1960s as well as the adjacent freight rail line, with Wetland 1 being more heavily impacted than Wetland 2.

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### **Wetland 3**

Wetland 3, a small  $\pm 0.12$ -acre wetland located within a local isolated shallow topographical depression, occupies the central eastern portion of the 352 Sullivan Avenue parcel. A review of soil profiles within and around the perimeter of this wetland reveal previous agricultural disturbances. This isolated wetland does not contain a topographical depression of sufficient depth to sustain inundation levels or hydroperiod to support vernal pool breeding. A recent inspection on March 30, 2022 confirmed no vernal breeding activity. Wetland 3's vegetative cover is dominated by very early successional forest and saplings.

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### **Wetland 4**

Wetland 4, a  $\pm 0.57$ -acre wetland located within a local isolated shallow topographical depression, is located in the southern portion of the 352 Sullivan Avenue parcel. A review of soil profiles within and around the perimeter of this wetland reveal previous agricultural disturbances. This isolated wetland does not contain a topographical depression of sufficient depth to sustain inundation levels or hydroperiod to support vernal pool breeding. A recent inspection on March 30, 2022 confirmed no vernal breeding activity. Wetland 4's vegetative cover is dominated by very early successional forest and saplings.

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### **Wetland 5**

Wetland 5, a  $\pm 0.02$ -acre wetland is located adjacent to the northcentral portion of the 352 Sullivan Avenue parcel on the freight railroad track property. This wetland functions primarily as a drainage swale along the south side of the tracks and conveys mainly seasonal surface flows directing them to the west. A culvert conveys those seasonal flows under the tracks, which discharges onto the adjacent property on the north side of the tracks. This discharge flows into an unnamed intermittent watercourse that is a tributary to the Scantic River, which is located  $\pm 4,000$  feet downstream of the Subject Property.

The Applicant is currently in consultation with the Army Corps of Engineers, New England District ("Corps") requesting an approved jurisdictional determination ("AJD") under the CWA regulations for a determination on all of the aforementioned wetland resources. The Corps jurisdictional determination of these resources remain pending.

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### **Wetland Evaluation**

There are many methods of evaluating wetlands, all incorporating different parameters to assess these resources. This study uses methodology recommended by the Corps, *The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach* issued by the Corps, dated September 1999. This evaluation provides a qualitative approach in which

wetland functions can be considered Principal, Secondary, or unlikely to be provided at a significant level. Functions and values can be Principal if they are an important physical component of a wetland ecosystem (function only), and/or are considered of special value to society, from a local, regional, and/or national perspective. The Corps recommends that wetland values and functions be determined through “best professional judgment” based on a qualitative description of the physical attributes of wetlands and the functions and values exhibited.

The basis for determination of this qualitative approach relies on over 30 years of field experience and extensive knowledge of other scientific methods used for wetland evaluation purposes.

These functions and values can be grouped into four basic categories as follows:

#### Biological Functions

Fish and Shellfish Habitat — This function considers the effectiveness of seasonal or permanent waterbodies associated with the wetland in question for fish and shellfish habitat.

Wildlife Habitat — This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered. Species lists of observed and potential animals should be included in the wetland assessment report.

Production Export (Nutrient) — This function relates to the effectiveness of the wetland to produce food or usable products for humans or other living organisms

#### Hydrologic Functions

Floodflow Alteration (Storage & Desynchronization) — This function considers the effectiveness of the wetland in reducing flood damage by attenuation of floodwaters for prolonged periods following precipitation events.

Groundwater Recharge/Discharge — This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. Recharge should relate to the potential for the wetland to contribute water to an aquifer. Discharge should relate to the potential for the wetland to serve as an area where groundwater can be discharged to the surface.

#### Water Quality Functions

Sediment/Toxicant/Pathogen Retention — This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens.

Nutrient Removal/Retention/Transformation — This function relates to the effectiveness of the wetland to prevent adverse effects of excess nutrients

entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

Sediment/Shoreline Stabilization — This function relates to the effectiveness of a wetland to stabilize streambanks and shorelines against erosion.

#### Societal Values

Recreation (Consumptive and Non-Consumptive) — This value considers the effectiveness of the wetland and associated watercourses to provide recreational opportunities such as canoeing, boating, fishing, hunting, and other active or passive recreational activities. Consumptive activities consume or diminish the plants, animals, or other resources that are intrinsic to the wetland, whereas non-consumptive activities do not.

Educational/Scientific Value — This value considers the effectiveness of the wetland as a site for an “outdoor classroom” or as a location for scientific study or research.

Uniqueness/Heritage — This value relates to the effectiveness of the wetland or its associated waterbodies to produce certain special values. Special values may include such things as archaeological sites, unusual aesthetic quality, historical events, or unique plants, animals, or geologic features.

Visual Quality/Aesthetics — This value relates to the visual and aesthetic qualities of the wetland.

Threatened or Endangered Species Habitat — This value relates to the effectiveness of the wetland or associated waterbodies to support threatened or endangered species.

The degree to which a wetland provides each of these functions is determined by one or more of the following factors: landscape position, substrate, hydrology, vegetation, history of disturbance, and size. Each wetland may provide one or more of the listed functions at Principal levels.

The determining factors that affect the level of function provided by a wetland can often be broken into two categories. The effectiveness of a wetland to provide a specified function is generally dependent on factors within the wetland whereas the opportunity to provide a function is often influenced by the wetland’s position in the landscape and adjacent land uses. For example, a depressed wetland with a restricted outlet may be considered highly effective in trapping sediment due to the long residence time of runoff water passing through the system. If this wetland is located in gently sloping woodland, however, there is no significant source of sediment in the runoff therefore the wetland is considered to have a small opportunity of providing this function.

Table 1 provides a summary of functions and values supported by wetlands identified on the Site.



**Table 1**  
**Wetlands Functions and Values Summary**

Wetland I.D. Number	Groundwater Recharge/ Discharge	Floodflow Alteration	Fish & Shellfish Habitat	Sediment/Toxicant/ Pathogen Retention	Nutrient Removal/Retention/ Transformation	Production Export	Sediment/Shoreline Stabilization	Wildlife Habitat	Recreation	Educational/Scientific Value	Uniqueness/Heritage	Visual Quality/Aesthetics	Endangered Species Habitat
1	-	-	-	S	S	-	-	-	-	-	-	-	-
2	S	-	-	S	S	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-
4	S	-	-	S	S	-	-	-	-	-	-	-	-
P = Principal Function/Value													
S = Secondary Function/Value													
- = Not a Significant Function/Value													

## Proposed Regulated Activities and Impact Analysis

The proposed development will include the construction of one 241,800 SF industrial building. Associated site improvements will include but not be limited to new access driveways, parking areas for vehicles, sidewalks, landscaping, lighting, utilities, and stormwater management BMP's. Existing grades will be modified to accommodate the proposed development and the operational needs of the Facility.

The following section summarizes development activities classified as "regulated activities" as defined by the IWA/CC's regulations and for which a permit application has been submitted to the IWA/CC. All proposed activities in and around wetlands, including the 80-foot Upland Review Area to wetlands and watercourses, are depicted on the Regulated Activities map provided in the Figures Attachment. Details of the proposed regulated activities are also shown on the Project Site Plans, submitted by Design Professionals, Inc. under separate cover.

The fundamental concept of wetland impact analysis is based on the precept that wetland impacts should first be avoided where possible. Secondly, if practicable

alternatives do not exist to avoid wetland impacts, then impacts should be minimized. Thirdly, unavoidable wetland impacts should be mitigated.

The proposed Facility development has been designed to the extent possible to avoid impact to wetland resource areas and minimize development in the 80-foot upland review areas while satisfying the building program needs. Due primarily to the central locations of the two isolated wetlands which precludes wetland impact avoidance for any effective development of this property, the Project will result in unavoidable direct wetland and upland review area impacts associated with the proposed Facility.

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### **Direct Wetland Impacts**

The largest developable area that is capable of supporting the proposed warehouse and distribution building program on the Site is located in the central-south portion of the Subject Property on the 67 Kennedy Road and 352 Sullivan Avenue parcels. These areas are largely dominated by early successional deciduous forest and well-drained to moderately drained upland sandy soils. Two isolated wetlands occupy interior pockets of the Site's developable footprint. Far southwestern and northeastern extents of the proposed development will occur within existing developed areas associated with the existing residential/agricultural buildings and industrial building, respectively. As a result, unavoidable impacts to Wetlands 3 and 4 would result from the proposed development with a total of  $\pm 30,123$  sf of wetlands to be directly impacted. However, with the limited functions supported by isolated Wetlands 3 and 4, no significant loss of wetland functions and values that could be important to downstream resources would occur. No direct impacts would occur to Wetlands 1, 2, or 5.

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### **80-foot Wetland Upland Review Area Activities**

In total, the Project will result in  $\pm 229,098$  sf of activities within the 80-foot wetland upland review area with the majority of that area associated with the two wetlands to be directly impacted in Wetlands 3 and 4. The upland review areas associated with Wetlands 3 and 4 total 128,285 sf, or 56% of the Site's total upland review area. Of that total upland review area activity,  $\pm 174,808$  sf is associated with development of the warehouse building and associated drives, parking, landscaping, etc. The remaining  $\pm 54,290$  sf of proposed impacts are associated with the proposed wetland mitigation plan detailed in subsequent sections. Table 3 summarizes the upland review area activities specified by wetland area.

**Table 3**  
**80-foot Wetland Upland Review Area Activities**

Wetland ID	Total Area of Activity within 80' Upland Review Area (sf)	Proposed Impervious Activity within 80' Upland Review Area (sf)	Proposed Pervious Activity within 80' Upland Review Area (sf)
Wetlands 1/2	80,414	7,476	72,938
Wetland 3	43,516	43,516	0
Wetland 4	84,769	79,001	5,768
Wetland 5	9,883	4,177	5,706
Off-Site FedEx Detention Pond	10,516	0	10,516

### Stormwater Runoff Impacts

The Project has been designed in compliance with DEEP's guidance and recommendations contained in the *2004 Connecticut Stormwater Quality Manual* ("SQM"). A primary goal of the SQM is to provide a comprehensive framework for the long-term protection of natural resources in and around the Site from degradation as a result of stormwater discharges. Another goal of the SQM is to ensure that long-term post-development stormwater quality is protected and that there will be no erosion caused by the development. Details of this analysis are provided in the Stormwater Management Report, prepared by Design Professionals, Inc., submitted under separate cover and summarized below.

This project incorporates a vast array of stormwater quality measures, including primary treatment practices, secondary treatment practices, and innovative/emerging technologies as defined by the SQM. Site generated runoff from all proposed roofs, roadways, parking, and landscaped areas will be either collected in an underground storm water conveyance system or allowed to sheet flow to one of five proposed detention systems. In addition, all proposed peak flows leaving the site will meet or be reduced from their existing condition.

The proposed treatment measures include sediment forebays, extended detention basin, underground detention systems, landscaped areas, and deep-sump catch basins. The combination of the aforementioned treatment facilities has been designed to provide stormwater treatment with the objective of removing a minimum of 80 percent of total suspended solids. The five stormwater detention systems are as follows:

- Proposed Pond 1 (PP1) : 97,500+ cft underground storage system collecting runoff from the proposed roof area and detained flow from pond PP2. Detained discharge from this pond will be released to a proposed preformed scour hole near the 18" Pipe outlet (DP1) within the Railroad Property.

- Proposed Pond 2 (PP2) : 55,500+ cft Water quality basin collecting runoff from the west truck parking and loading area. Detained discharge from this pond will be released pond PP1.
- Proposed Pond 3 (PP2) : 27,100+ cft underground storage system collecting runoff from the grass areas adjacent to Kennedy Road and Sullivan Ave. Detained discharge from this pond will be released to an Existing CB in Sullivan Ave.
- Proposed Pond 4 (PP4) : 62,769+ cft Water quality basin collecting runoff from the northern perimeter drive and detained flow from pond PP5. Detained discharge from this pond will be released to the proposed mitigation area / existing railroad depression.
- Proposed Pond 5 (PP5) : 5,000+ cft underground storage system collecting runoff from the eastern standard parking areas. Detained discharge from this pond will be released to a splitter structure conveying the majority of flow rate the pond PP4. A 6" outlet pipe is also proposed to send some runoff directly to the mitigation area / existing railroad depression.
- Proposed Pond 6 (PP6): This basin is not shown in the analysis or drainage area map yet. We just got word from the town that we will need to detain flows from the proposed cul-de-sac. A water quality basin will be provided in the area east of the cul-de-sac to detain flows from this area to a rate that matches the flows reaching Kennedy Road (DP4).

The proposed conditions drainage patterns maintain the same discharge locations as under the existing conditions for the various sub-watersheds that are associated with wetland locations to ensure the hydrology of the surrounding wetlands are not adversely affected. The proposed drainage systems have been designed to accommodate the Groundwater Recharge Volume ("GRV") and to temporarily store and infiltrate the Water Quality Volume ("WQV") for the areas being directed toward them.

The proposed stormwater management plan and drainage system have been designed to treat the Water Quality Volume (WQV) through infiltration practices which provide adequate storage to retain and infiltrate the required WQV for each contributing watershed, in accordance with the SQM. Both water quality basins are sized to provide a wet pool and forebay volume that can retain 100% and 10% of the water quality volume for the areas draining to them respectively. The underground chamber systems will have isolator rows sized to treat the water quality flow rate draining to them. The basins wet bottoms will be seeded with a native wetland seed mix. Although the basin bottoms will provide some wetland functions, their principal function is proper treatment of stormwater and therefore should not be considered to mitigate for any wetland loss. Recognizing that fact, these basin bottoms will contribute native wetland marsh-type habitat

that will effectively enhance nearby wetlands on the Site and the proposed wetland mitigation areas.

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## **Project Alternatives Analysis**

The following section provides a discussion of the alternatives that were considered during the design process and the final preferred alternative that seeks to reduce impacts to wetlands to comply with the IWA/CC's Regulations while satisfying the development goals of the proposed Facility.

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### **Alternative Design Analysis**

#### **No Build Alternative**

One alternative is a "no build" alternative. The industrial-zoned Site is adjacent to Sullivan Avenue (State Route 194) with great access to State Route 5 and from there I-291 and I-91, making the Site highly desirable from a warehouse use standpoint. In analysis of this "no build" alternative at the Site, the facility could conceivably be located in another location in South Windsor. However, this could result in placing the proposed Facility in a less desirable site which could conflict with surrounding land uses. The current Site is fully surrounded by industrially developed and zoned properties and is not proximate to any residential properties so is appropriate for the proposed warehouse and distribution use. An alternative location could also potentially result in greater overall impact to ecological resources, possibly including to higher functioning valuable wetland and watercourse areas. Therefore, the "no build" alternative is not considered to be a prudent alternative.

#### **Alternative Layouts**

The Applicant considered alternative layouts for the Site. Alternatives were considered if they satisfied the principal goals of the warehouse and distribution facility while minimizing impacts to wetlands and watercourses. As discussed previously, effective development of this Site of generally any scale is not possible without impacting some wetlands and upland review areas since two isolated wetlands occupy central portions of the Site where the largest developable footprint exists. Therefore, the principal goals with respect to activities regulated by the IWA/CC were to avoid and minimize direct impact to higher quality wetland resources and avoid and minimize development within the upland review areas to the extent practicable. The preferred alternative, considered the most prudent and feasible alternative, is exhibited in the Project Site Plans submitted by Design Professionals, Inc. under separate cover as part of this wetland permit application.

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## Mitigation Measures

To compensate for unavoidable impacts to Wetlands 3 and 4, and the 80-foot wetland upland review area, a comprehensive mitigation plan has been designed to compensate for these unavoidable impacts with the restoration of historic wetlands between Wetlands 1 and 2, creation of a new wetland adjacent to the east side of Wetland 1/2, preservation of upland buffer to the east side of the wetland creation area, and placement of all three mitigation areas and Wetlands 1/2 in a conservation easement. With incorporation of this comprehensive wetland mitigation plan, the Project's proposed regulated activities will be properly balanced with the restoration and creation of wetland habitats that will support function and value services of higher value than those being lost. As a result, the Project will not diminish the wetland resources within the Town of South Windsor either on Site or downstream of the Site and has the opportunity to actually enhance those wetland resources.

A suite of mitigation measures is proposed to prevent short- and long-term indirect impacts to wetland resource areas and compensate for unavoidable activities associated with the Project. Details of proposed mitigation measures are provided in the following sections.

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### Wetland Mitigation Plan

To compensate for the Project's unavoidable regulated activities, a comprehensive wetland mitigation plan is proposed in order to compensate for activities proposed within Wetlands 3 and 4 and the 80-foot wetland upland review area. Careful consideration has been given to devising a mitigation plan that enhances various wetland functions and values, particularly wildlife habitat benefits, through restoring and creating new wetlands. A summary of the mitigation plan is provided below.

The proposed wetland mitigation plan is depicted on the Regulated Activities map provided in the Figures Attachment. Complete details of this comprehensive mitigation plan are provided in the Project Site Plans on Sheets C-LS1, C-LS2, and C-LS3 provided under separate cover, including planting schedules, construction sequencing notes, and construction and long-term post construction monitoring of the mitigation areas.

#### Wetland Creation Area

A wetland creation area totaling  $\pm 47,000$  sf is proposed in close proximity to Wetland 1/2 within existing bordering upland forest. This particular mitigation area will roughly provide for a 1.5:1 mitigation ratio, increasing the area of new wetlands that compensates for the  $\pm 30,123$  sf of lost wetlands. This wetland creation area is designed to support a wide variety of important functions and

values including biological functions (focus on wildlife habitat), hydrologic functions (focus on groundwater recharge), water quality functions, and societal values (focus on rare species habitat, aesthetics, and education). The new wetland area will be constructed to a depth that will match or be slightly lower in elevation than the adjacent Wetland 1/2 wetland elevation through excavation of moderately well drained soils to encounter the locally shallow groundwater table to create wetland hydrology. Wetland topsoil from impacted Wetlands 3 and 4 will be extracted and stockpiled separately from other Site materials for use in the wetland creation and if necessary, the wetland restoration areas. This wetland topsoil will not be screened to ensure retainment of native wetland vegetation root and seed stock that will assist in natural attenuation of the newly created wetland habitats. The wetland creation area will be planted with a variety of native wetland trees, shrubs and herbaceous species to provide a greater diversity (both structurally and species) to what currently is supported within Wetland 1/2. Where feasible, existing mature trees will be retained. Suitable stump sprouting species requiring removal will have their root balls retained for replanting with select locations within the proposed creation area.

### **Wetland Restoration Area**

Restoration of historically filled and altered wetland areas located between Wetlands 1 and 2 will be restored to reestablish connectivity of these two wetland resources. Based on field observations (fill piles, altered soil profiles) boundaries to Wetland 2 have been historically altered and filled resulting in much of Wetland 2 being surficially isolated from Wetland 1. This filled boundary shall be excavation to a depth that is expected to match the adjacent Wetland 1/2 elevations by uncovering buried wetland topsoil. Wetland topsoil from impacted Wetlands 3 and 4 will be extracted and stockpiled separately from other Site materials for use to amend existing buried wetland topsoil within the wetland restoration area, if necessary. This wetland topsoil will not be screened to ensure retainment of native wetland vegetation root and seed stock that will assist in natural attenuation of the newly created wetland habitats. The wetland restoration area will be planted with a variety of native wetland trees, shrubs and herbaceous species to provide a greater diversity (both structurally and species) to what currently is supported within Wetlands 1 and 2. The hydrological connection between these resources shall be restored resulting in a larger, contiguous wetland resource. In conjunction with the wetland creation area, these efforts will result in a dramatic improvement in the function and value that Wetlands 1 and 2 provides.

### **Conservation Easement**

The applicant is proposing to put valuable wetland and upland resources in the northeastern portion of the Site totaling 147,510 sf into conservation easement including the following: Wetland 1, Wetland 2, wetland creation area, wetland restoration area, and upland forested buffer area. The establishment of these

areas into a conservation easement shall ensure that the remaining on-Site wetlands and mitigation areas and their newly enhanced functions and values are protected in perpetuity. In totality, this wetland mitigation plan provides an opportunity for ecological connectivity between open space parcels to the east (Rye Street Park and Barton Property) and to the west (Scantic River CTDEEP properties) thereby further enhancing the functions and values of the proposed conservation easement and associated wetland and wetland mitigation areas. As the conservation area includes headwater wetlands within the Scantic River watershed, this area provides important services to downstream aquatic resources while also serving as an ecological corridor for movement of various wildlife species. Please refer to the Open Space Map which depicts the Site and wetland mitigation and conservation easement areas in relationship to surrounding open space properties and principal riparian corridors.

---

## **Wetland Protection Plan**

As a result of the proposed development's location in the vicinity of wetlands, the following BMPs are provided to avoid unintentional impact to wetland habitats during construction activities. Complete details of the recommended BMPs are summarized below, which would be incorporated into the construction drawings upon permit approval to ensure the Contractor is fully aware of the project's environmentally sensitive setting.

A wetland scientist from APT experienced in compliance monitoring of construction activities will serve as the Environmental Monitor for this project to ensure that the following BMPs are implemented properly. The proposed wetland protection program consists of several components including: periodic inspection and maintenance of erosion controls and isolation structures; education of all contractors and sub-contractors prior to initiation of work on the site; protective measures; and reporting.

Short-term impacts associated with the proposed development proximate to the wetland resources would be minimized by the proper installation and maintenance of erosion and sedimentation controls in accordance with 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

Provided the wetland protection program is properly implemented during construction, it is APT's opinion the proposed development will not result in a likely adverse impact to nearby wetland resources.

---

## **Erosion and Sedimentation Controls**

An Erosion & Sediment Control Plan has been designed in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*. A variety of erosion and sedimentation controls will be employed to minimize erosion and transport of sediment to wetland resource areas during the earthwork and



construction phases of the Project. These controls were developed to avoid temporary impacts to wetland resource areas and represent an important element of the Project to avoid and minimize wetland impacts. Details of the erosion and sedimentation controls are provided in the separately attached Project Site Plans. A general summary of the erosion and sedimentation control plan is provided below.

The Erosion & Sediment Control Plan calls for the use of the latest erosion and sediment control measures in order to minimize and control disturbance during construction and provide a stable site under finished conditions. These measures may include, but are not limited to the following, depending on site conditions experienced during construction:

- Stabilized construction entrance
- Temporary sediment traps/basins
- Geotextile silt fence
- Staked straw wattles/compost filter socks
- Temporary soil stockpile areas
- Temporary water diversion swales
- Temporary seeding of exposed soils
- Water quality basins
- Erosion control blankets

The BMPs identified in this plan and discussed below include, but are not limited to, providing measures to minimize exposed soil areas through sequencing and temporary stabilization; placement of sediment and erosion controls suitable for the type of work and environment and appropriate Site restoration and rehabilitation techniques as soon as practicable.

The following general measures will be employed to minimize impacts to the jurisdictional resource areas:

- ▶ The Contractor will be required to maintain a reserve supply of erosion control BMPs on-site for use as required;
- ▶ Protective measures will be inspected regularly and after significant precipitation events and repaired, as necessary;
- ▶ Erosion control measures shall remain in place until soils are clearly stabilized – either by erosion control blankets, or by robust, growing vegetation. Once soils are stable, erosion controls shall be removed and properly disposed; and
- ▶ Erosion controls shall be removed and properly disposed following plant colonization of disturbed soils.

---

## Summary

The Applicant, Scannell Properties #644, LLC, proposes to construct a warehouse and distribution facility consisting of a warehouse-style building, parking areas, landscaping, and stormwater treatment facilities to be installed on properties located off Sullivan Avenue and Kennedy Road in South Windsor, Connecticut. The proposed Facility has been thoughtfully designed to minimize direct wetland and 80-foot upland review area impacts where practicable while satisfying the proposed building program needs.

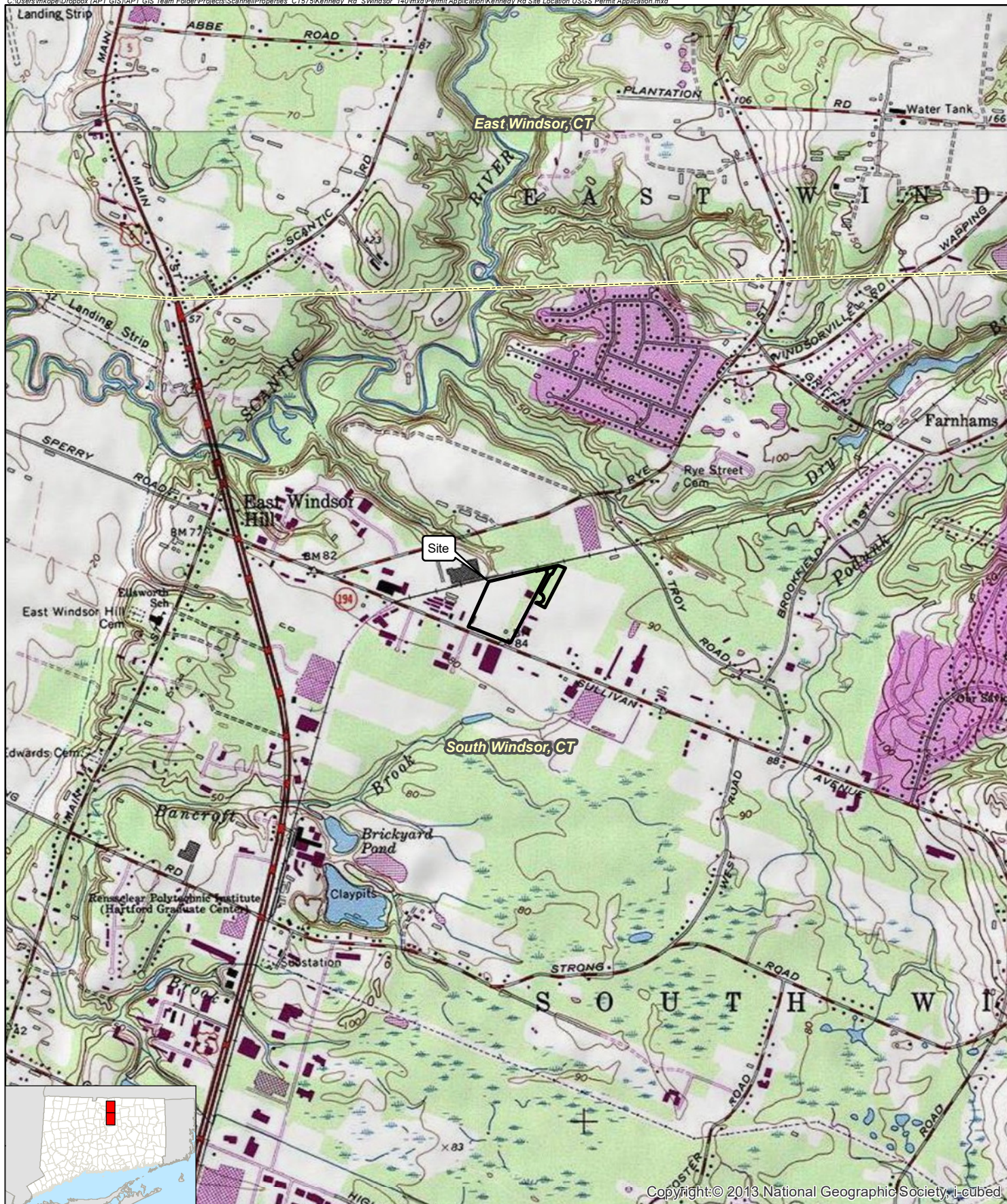
A comprehensive suite of erosion and sedimentation control measures, BMPs, protection measures and comprehensive wetland mitigation plan will be implemented to prevent direct and indirect impacts to nearby wetland resources and enhance wetland habitat and upland review areas within and proximate to the proposed Facility. As a result of design considerations and various mitigation strategies, the proposed Project represents the most prudent and feasible alternative and will not result in a likely adverse impact to nearby wetland resources with implementation of the comprehensive wetland mitigation plan.

The Applicant respectfully requests that the Town of South Windsor Inland Wetlands Agency/Conservation Commission find these measures adequately protective of the interests contained in their regulations and issue a wetland permit approving the Project.

# Figures

- ▶ Site Location Map
- ▶ Aerial Photograph
- ▶ Existing Wetland Resources
- ▶ 1934 Aerial Photograph
- ▶ 1965 Aerial Photograph
- ▶ 1991 Aerial Photograph
- ▶ Regulated Activities
- ▶ Open Space Map





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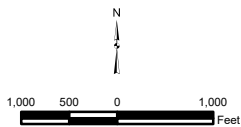
#### Legend

- Site
- Municipal Boundary

#### Site Location Map

Proposed Development  
352 Sullivan Avenue  
67 and 68 Kennedy Road  
South Windsor, Connecticut



**Map Notes:**  
Base Map Source: USGS 7.5 Minute Topographic  
Quadrangle Map, Broad Brook, CT (1984) and Manchester, CT (1992)  
Map Scale: 1:24,000  
Map Date: March 2022







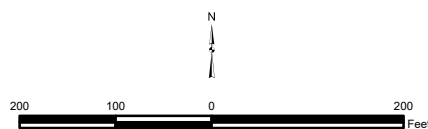
#### Legend

-  Site
-  Approximate Parcel Boundary

#### Aerial Photograph

Proposed Development  
352 Sullivan Avenue  
67 and 68 Kennedy Road  
South Windsor, Connecticut

Map Notes:  
Base Map Source: 2019 Aerial Photograph (CTECO)  
Map Scale: 1 inch = 200 feet  
Map Date: March 2022



 SCANNELL  
PROPERTIES

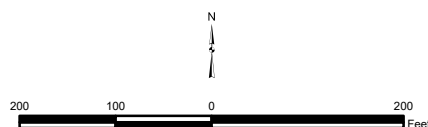
 ALL-POINTS  
TECHNOLOGY CORPORATION





- Legend**
- Site
  - Intermittent Watercourse
  - 80-Foot Upland Review Area
  - Delineated Wetland Boundary
  - Approximate Wetland Area
  - Culvert
  - Approximate Parcel Boundary

**Map Notes:**  
 Base Map Source: 2019 Aerial Photograph (CTECO)  
 Map Scale: 1 inch = 200 feet  
 Map Date: March 2022



## Existing Wetland Resources

Proposed Development  
 352 Sullivan Avenue  
 67 and 68 Kennedy Road  
 South Windsor, Connecticut

SCANNELL  
 PROPERTIES

ALL-POINTS  
 TECHNOLOGY CORPORATION



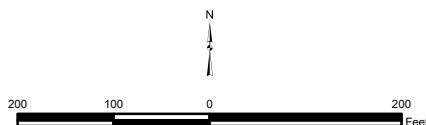


**Legend**



Site

**Map Notes:**  
Base Map Source: 1934 Aerial Photograph  
Map Scale: 1 inch = 200 feet  
Map Date: March 2022



**1934 Aerial Photograph**

Proposed Development  
352 Sullivan Avenue  
67 and 68 Kennedy Road  
South Windsor, Connecticut





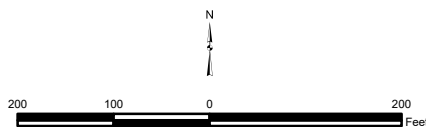


**Legend**



Site

**Map Notes:**  
Base Map Source: 1968 Aerial Photograph  
Map Scale: 1 inch = 200 feet  
Map Date: March 2022



**1965 Aerial Photograph**

Proposed Development  
352 Sullivan Avenue  
67 and 68 Kennedy Road  
South Windsor, Connecticut





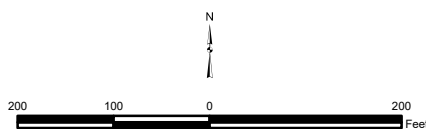


**Legend**



Site

**Map Notes:**  
Base Map Source: 1991 Aerial Photograph  
Map Scale: 1 inch = 200 feet  
Map Date: March 2022

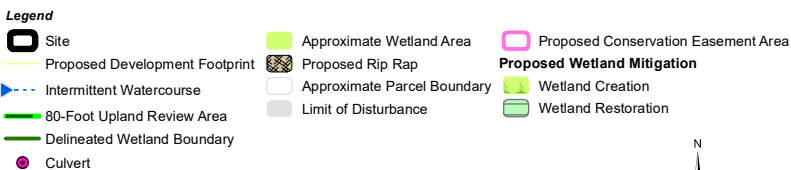


**1991 Aerial Photograph**

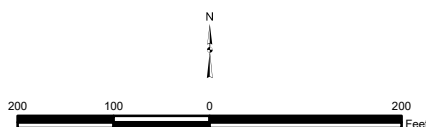
Proposed Development  
352 Sullivan Avenue  
67 and 68 Kennedy Road  
South Windsor, Connecticut







**Map Notes:**  
 Base Map Source: 2019 Aerial Photograph (CTECO)  
 Map Scale: 1 inch = 200 feet  
 Map Date: March 2022



## Regulated Activities

Proposed Development  
 352 Sullivan Avenue  
 67 and 68 Kennedy Road  
 South Windsor, Connecticut







- Legend**
- Site
  - Approximate Parcel Boundary
  - Ecological Corridor
  - Intermittent Watercourse
  - Delineated Wetland Boundary
  - Approximate Wetland Area
  - Culvert
  - ~ Watercourse (CTDEEP)
  - ~ Open Water (CTDEEP)
  - Proposed Conservation Easement Area
  - Municipal and Private Open Space Property
  - Municipal and Private Open Space Property

- Protected Open Space Property**
- Federal
  - Land Trust
  - Municipal
  - Private
  - State
- Proposed Wetland Mitigation**
- Wetland Creation
  - Wetland Restoration



900 450 0 900 Feet

**Map Notes:**  
Base Map Source: 2019 CT Aerial Imagery (CTECO)  
Map Scale: 1 inch = 900 feet  
Map Date: March 2022

## Open Space Map

Proposed Development  
352 Sullivan Avenue  
67 and 68 Kennedy Road  
South Windsor, Connecticut





# **Attachment A**

## **Photographic Documentation**



Photo 1: Overview of Wetland 1 looking north.



Photo 2: Overview of Wetland 2 looking west.





Photo 3: Overview of Wetland 3 looking west.



Photo 4: Overview of Wetland 4 looking west.





Photo 5: Overview of Wetland 5 looking east.

**Attachment B**

**Wetland Inspection Report**





## WETLAND INSPECTION

November 8, 2021

Revised February 4, 2022

APT Project No.: CT575140

**Prepared For:** Scannell Properties, LLC  
294 Grove Lane East, Suite 140  
Wayzata, MN 55391  
Attn: Daniel Madrigal

**Site Address:** 352 Sullivan Avenue and 67 and 68 Kennedy Road  
South Windsor, Connecticut

**Date of Investigation:** 8/17/2021 & 1/28/22

**Field Conditions:** **Weather:** sunny, low 80's on 8/17/22  
Sunny, low 30's on 1/28/22

**Soil Moisture:** dry to moist

**Wetland/Watercourse Delineation Methodology\*:**

- ☒ Connecticut Inland Wetlands and Watercourses
- ☒ U.S. Army Corps of Engineers

**Municipal Upland Review Area:**

**Wetlands:** 80 feet

**Watercourses:** 80 feet

The wetlands inspection was performed by<sup>†</sup>:

Dean Gustafson, Professional Soil Scientist &

Matthew Gustafson, Registered Soil Scientist

Enclosures: Wetland Delineation Field Forms & Wetland Inspection Map

*This report is provided as a brief summary of findings from APT's wetland investigation of the referenced Study Area that consists of proposed development activities and areas generally within 100 feet.<sup>‡</sup> If applicable, APT is available to provide a more comprehensive wetland impact analysis upon receipt of site plans depicting the proposed development activities and surveyed location of identified wetland and watercourse resources.*

\* Wetlands and watercourses were delineated in accordance with applicable local, state and federal statutes, regulations and guidance.

† All established wetlands boundary lines are subject to change until officially adopted by local, state, or federal regulatory agencies.

‡ APT has relied upon the accuracy of information provided by Scannell Properties, LLC regarding the Study Area limits for the purposes of identifying wetlands and watercourses.

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# Attachments

- Wetland Delineation Field Forms
- Wetland Inspection Map

### Wetland Delineation Field Form

Wetland I.D.:	Wetland 1	
Flag #'s:	WF 1-01 to 1-15 (closed loop)	
Flag Location Method:	Site Sketch <input checked="" type="checkbox"/>	GPS (sub-meter) located <input checked="" type="checkbox"/>

#### WETLAND HYDROLOGY:

##### NONTIDAL ☒

Intermittently Flooded <input type="checkbox"/>	Artificially Flooded <input type="checkbox"/>	Permanently Flooded <input type="checkbox"/>
Semipermanently Flooded <input type="checkbox"/>	Seasonally Flooded <input type="checkbox"/>	Temporarily Flooded <input type="checkbox"/>
Permanently Saturated <input type="checkbox"/>	Seasonally Saturated/seepage <input type="checkbox"/>	Seasonally Saturated/perched <input checked="" type="checkbox"/>
Comments: Wetland 1 is an isolated feature located in a local topographic depression.		

##### TIDAL ☐

Subtidal <input type="checkbox"/>	Regularly Flooded <input type="checkbox"/>	Irregularly Flooded <input type="checkbox"/>
Irregularly Flooded <input type="checkbox"/>		
Comments: None		

#### WETLAND TYPE:

##### SYSTEM:

Estuarine <input type="checkbox"/>	Riverine <input type="checkbox"/>	Palustrine <input checked="" type="checkbox"/>
Lacustrine <input type="checkbox"/>	Marine <input type="checkbox"/>	
Comments: None		

##### CLASS:

Emergent <input type="checkbox"/>	Scrub-shrub <input checked="" type="checkbox"/>	Forested <input checked="" type="checkbox"/>
Open Water <input type="checkbox"/>	Disturbed <input checked="" type="checkbox"/>	Wet Meadow <input type="checkbox"/>
Comments: Vegetative cover is dominated by very early successional forest, saplings, and scrub-shrub. Wetland has been disturbed by historic industrial development associated with the construction of an abandoned industrial building in 1965 as well as the adjacent freight rail line.		

#### WATERCOURSE TYPE:

Perennial <input type="checkbox"/>	Intermittent <input type="checkbox"/>	Tidal <input type="checkbox"/>
Watercourse Name: None		
Comments: None		

### Wetland Delineation Field Form (Cont.)

**SPECIAL AQUATIC HABITAT:**

Vernal Pool Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Potential <input type="checkbox"/>	Other <input type="checkbox"/>
Vernal Pool Habitat Type: None	
Comments: None	

**SOILS:**

Are field identified soils consistent with NRCS mapped soils?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
---	---	-----------------------------

**DOMINANT PLANTS:**

Red Maple ( <i>Acer rubrum</i> )	Silky Dogwood ( <i>Cornus amomum</i> )
Highbush Blueberry ( <i>Vaccinium corymbosum</i> )	Specked Alder ( <i>Alnus rugosa</i> )
Gray Birch ( <i>Betula populifolia</i> )	Northern Arrow-wood ( <i>Viburnum recognitum</i> )
Sensitive Fern ( <i>Onoclea sensibilis</i> )	Sphagnum moss ( <i>Sphagnum</i> spp.)
Royal Fern ( <i>Osmunda regalis</i> )	Cinnamon Fern ( <i>Osmunda cinnamomea</i> )
Black Gum ( <i>Nyssa sylvatica</i> )	Pin Oak ( <i>Quercus palustris</i> )

\* denotes Connecticut Invasive Species Council invasive plant species

**GENERAL COMMENTS:**

All-Points Technology Corp., P.C. ("APT") performed an inspection of the ±15.95-acre subject property, which consists of two adjoining parcels located at the northwest intersection of Sullivan Avenue (State Route 194) and Kennedy Road in an industrial section of South Windsor, CT. The subject property currently consists of early successional forest, having been in agricultural use with cultivated fields as late as the 1990's. An industrial building was constructed on the 67 Kennedy Road parcel in 1965. The historical agricultural use, industrial development of the subject property, and historic construction of the adjacent freight rail line (which has existed since at least the early 1900s) has resulted in various anthropogenic changes to the subject property including alternation to and possible creation of wetland areas. Three isolated wetlands and one wetland connected to an off-site seasonal intermittent watercourse were identified on the subject property.

Wetland 1, a ±0.63-acre wetland located within a local isolated topographical depression, is located in the northern end of the 67 Kennedy Road parcel, immediately adjacent to the northern side of the abandoned industrial building and end of Kennedy Road. Spoil piles surrounding this wetland and fill/graded/buried soil horizons within this wetland provide evidence to the disturbed nature of this isolated wetland. A soil pile and berm separate this wetland from another wetland area just to the northwest (identified as Wetland 2) as well as an off-site wetland to the northeast. This isolated wetland does not contain a topographical depression of sufficient depth to sustain inundation levels or hydroperiod to support vernal pool breeding.

### Wetland Delineation Field Form

Wetland I.D.:	Wetland 2	
Flag #'s:	WF 2-01 to 2-12 and WF 2-01A to 2-01Q	
Flag Location Method:	Site Sketch <input checked="" type="checkbox"/>	GPS (sub-meter) located <input checked="" type="checkbox"/>

#### WETLAND HYDROLOGY:

##### NONTIDAL ☒

Intermittently Flooded <input type="checkbox"/>	Artificially Flooded <input type="checkbox"/>	Permanently Flooded <input type="checkbox"/>
Semipermanently Flooded <input type="checkbox"/>	Seasonally Flooded <input checked="" type="checkbox"/>	Temporarily Flooded <input type="checkbox"/>
Permanently Saturated <input type="checkbox"/>	Seasonally Saturated/seepage <input checked="" type="checkbox"/>	Seasonally Saturated/perched <input type="checkbox"/>
Comments: Wetland 2 consists of seasonally saturated soils resulting from a locally high groundwater table within outwash deposits. Evidence of shallow seasonal flooding is present in the easternmost extents of this resource (<2").		

##### TIDAL ☐

Subtidal <input type="checkbox"/>	Regularly Flooded <input type="checkbox"/>	Irregularly Flooded <input type="checkbox"/>
Irregularly Flooded <input type="checkbox"/>		
Comments: None		

#### WETLAND TYPE:

##### SYSTEM:

Estuarine <input type="checkbox"/>	Riverine <input type="checkbox"/>	Palustrine <input checked="" type="checkbox"/>
Lacustrine <input type="checkbox"/>	Marine <input type="checkbox"/>	
Comments: None		

##### CLASS:

Emergent <input type="checkbox"/>	Scrub-shrub <input type="checkbox"/>	Forested <input checked="" type="checkbox"/>
Open Water <input type="checkbox"/>	Disturbed <input checked="" type="checkbox"/>	Wet Meadow <input type="checkbox"/>
Comments: Vegetative cover is dominated by early successional forest, disturbed by historical industrial development on the adjoining parcel, historical agricultural activities, and construction of a freight rail line.		

#### WATERCOURSE TYPE:

Perennial <input type="checkbox"/>	Intermittent <input type="checkbox"/>	Tidal <input type="checkbox"/>
Watercourse Name:		
Comments: None		

### Wetland Delineation Field Form (Cont.)

**SPECIAL AQUATIC HABITAT:**

Vernal Pool Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Potential <input type="checkbox"/>	Other <input type="checkbox"/>
Vernal Pool Habitat Type: None	
Comments: None	

**SOILS:**

Are field identified soils consistent with NRCS mapped soils?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
---	---	-----------------------------

**DOMINANT PLANTS:**

Red Maple ( <i>Acer rubrum</i> )	Silky Dogwood ( <i>Cornus amomum</i> )
Highbush Blueberry ( <i>Vaccinium corymbosum</i> )	Specked Alder ( <i>Alnus rugosa</i> )
Gray Birch ( <i>Betula populifolia</i> )	Northern Arrow-wood ( <i>Viburnum recognitum</i> )
Sensitive Fern ( <i>Onoclea sensibilis</i> )	Sphagnum moss ( <i>Sphagnum</i> spp.)
Royal Fern ( <i>Osmunda regalis</i> )	Cinnamon Fern ( <i>Osmunda cinnamomea</i> )
Black Gum ( <i>Nyssa sylvatica</i> )	Pin Oak ( <i>Quercus palustris</i> )

\* denotes Connecticut Invasive Species Council invasive plant species

**GENERAL COMMENTS:**

All-Points Technology Corp., P.C. ("APT") performed an inspection of the ±18.83-acre subject property, which consists of three adjoining parcels located at the northwest intersection of Sullivan Avenue (State Route 194) and Kennedy Road in an industrial section of South Windsor, CT. The subject property currently consists of early successional forest, having been in agricultural use with cultivated fields as late as the 1990's. An industrial building was constructed on the 67 Kennedy Road parcel in 1965. The historical agricultural use, industrial development of the subject property, and historic construction of the adjacent freight rail line (which has existed since at least the early 1900s) has resulted in various anthropogenic changes to the subject property including alternation to and possible creation of wetland areas. Two isolated wetlands, two wetlands with apparent season interconnectivity, and one wetland connected to an off-site seasonal intermittent watercourse were identified on the subject property.

Wetland 2 is located in the northeast corner of the 352 Sullivan Avenue parcel, immediately adjacent to freight railroad tracks located along the northern property boundary. The wetland extends to the east onto 67 and 68 Kennedy Road then continues outside the subject property where it connects to an off-site detention basin. Much of the resource is defined by shallow hummock/hollow topography to the east. Historic surface alterations have resulted in portions of Wetland 1 being artificially disconnected from Wetland 2 along the westernmost boundary. However, a surficial connection was identified along the northernmost boundary of Wetland 1 to Wetland 2. Evidence of these historic alterations are present in fill mounds located along the wetland perimeter, the presence of the freight line to the north, and altered boundaries/interface between Wetlands 1 and 2.

### Wetland Delineation Field Form

Wetland I.D.:	Wetland 3	
Flag #'s:	WF 3-01 to 3-10 (closed loop)	
Flag Location Method:	Site Sketch <input checked="" type="checkbox"/>	GPS (sub-meter) located <input checked="" type="checkbox"/>

#### WETLAND HYDROLOGY:

##### NONTIDAL ☒

Intermittently Flooded <input type="checkbox"/>	Artificially Flooded <input type="checkbox"/>	Permanently Flooded <input type="checkbox"/>
Semipermanently Flooded <input type="checkbox"/>	Seasonally Flooded <input type="checkbox"/>	Temporarily Flooded <input type="checkbox"/>
Permanently Saturated <input type="checkbox"/>	Seasonally Saturated/seepage <input type="checkbox"/>	Seasonally Saturated/perched <input checked="" type="checkbox"/>
Comments: Wetland 3 is an isolated feature located in a local topographic depression.		

##### TIDAL ☐

Subtidal <input type="checkbox"/>	Regularly Flooded <input type="checkbox"/>	Irregularly Flooded <input type="checkbox"/>
Irregularly Flooded <input type="checkbox"/>		
Comments: None		

#### WETLAND TYPE:

##### SYSTEM:

Estuarine <input type="checkbox"/>	Riverine <input type="checkbox"/>	Palustrine <input checked="" type="checkbox"/>
Lacustrine <input type="checkbox"/>	Marine <input type="checkbox"/>	
Comments: None		

##### CLASS:

Emergent <input type="checkbox"/>	Scrub-shrub <input type="checkbox"/>	Forested <input checked="" type="checkbox"/>
Open Water <input type="checkbox"/>	Disturbed <input checked="" type="checkbox"/>	Wet Meadow <input type="checkbox"/>
Comments: Vegetative cover is dominated by very early successional forest and saplings. Wetland has been disturbed by historic agricultural activities.		

#### WATERCOURSE TYPE:

Perennial <input type="checkbox"/>	Intermittent <input type="checkbox"/>	Tidal <input type="checkbox"/>
Watercourse Name: None		
Comments: None		

### Wetland Delineation Field Form (Cont.)

**SPECIAL AQUATIC HABITAT:**

Vernal Pool Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Potential <input type="checkbox"/>	Other <input type="checkbox"/>
Vernal Pool Habitat Type: None	
Comments: None	

**SOILS:**

Are field identified soils consistent with NRCS mapped soils?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
---	---	-----------------------------

**DOMINANT PLANTS:**

Red Maple ( <i>Acer rubrum</i> )	Pin Oak ( <i>Quercus palustris</i> )
Northern Arrow-wood ( <i>Viburnum recognitum</i> )	

\* denotes Connecticut Invasive Species Council invasive plant species

**GENERAL COMMENTS:**

All-Points Technology Corp., P.C. ("APT") performed an inspection of the ±15.95-acre subject property, which consists of two adjoining parcels located at the northwest intersection of Sullivan Avenue (State Route 194) and Kennedy Road in an industrial section of South Windsor, CT. The subject property currently consists of early successional forest, having been in agricultural use with cultivated fields as late as the 1990's. An industrial building was constructed on the 67 Kennedy Road parcel in 1965. The historical agricultural use, industrial development of the subject property, and historic construction of the adjacent freight rail line (which has existed since at least the early 1900s) has resulted in various anthropogenic changes to the subject property including alternation to and possible creation of wetland areas. Three isolated wetlands and one wetland connected to an off-site seasonal intermittent watercourse were identified on the subject property.

Wetland 3, a small ±0.12-acre wetland located within a local isolated topographical depression, is located in the central eastern portion of the 352 Sullivan Avenue parcel. A review of soil profiles within and around the perimeter of this wetland reveal previous agricultural disturbances. This isolated wetland does not contain a topographical depression of sufficient depth to sustain inundation levels or hydroperiod to support vernal pool breeding.



### Wetland Delineation Field Form

Wetland I.D.:	Wetland 4	
Flag #'s:	WF 4-01 to 4-20 (closed loop)	
Flag Location Method:	Site Sketch <input checked="" type="checkbox"/>	GPS (sub-meter) located <input checked="" type="checkbox"/>

#### WETLAND HYDROLOGY:

##### NONTIDAL ☒

Intermittently Flooded <input type="checkbox"/>	Artificially Flooded <input type="checkbox"/>	Permanently Flooded <input type="checkbox"/>
Semipermanently Flooded <input type="checkbox"/>	Seasonally Flooded <input type="checkbox"/>	Temporarily Flooded <input type="checkbox"/>
Permanently Saturated <input type="checkbox"/>	Seasonally Saturated/seepage <input type="checkbox"/>	Seasonally Saturated/perched <input checked="" type="checkbox"/>
Comments: Wetland 4 is an isolated feature located in a local topographic depression.		

##### TIDAL ☐

Subtidal <input type="checkbox"/>	Regularly Flooded <input type="checkbox"/>	Irregularly Flooded <input type="checkbox"/>
Irregularly Flooded <input type="checkbox"/>		
Comments: None		

#### WETLAND TYPE:

##### SYSTEM:

Estuarine <input type="checkbox"/>	Riverine <input type="checkbox"/>	Palustrine <input checked="" type="checkbox"/>
Lacustrine <input type="checkbox"/>	Marine <input type="checkbox"/>	
Comments: None		

##### CLASS:

Emergent <input type="checkbox"/>	Scrub-shrub <input type="checkbox"/>	Forested <input checked="" type="checkbox"/>
Open Water <input type="checkbox"/>	Disturbed <input checked="" type="checkbox"/>	Wet Meadow <input type="checkbox"/>
Comments: Vegetative cover is dominated by very early successional forest and saplings. Wetland has been disturbed by historic agricultural activities.		

#### WATERCOURSE TYPE:

Perennial <input type="checkbox"/>	Intermittent <input type="checkbox"/>	Tidal <input type="checkbox"/>
Watercourse Name: None		
Comments: None		

### Wetland Delineation Field Form (Cont.)

**SPECIAL AQUATIC HABITAT:**

Vernal Pool Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Potential <input type="checkbox"/>	Other <input type="checkbox"/>
Vernal Pool Habitat Type: None	
Comments: None	

**SOILS:**

Are field identified soils consistent with NRCS mapped soils?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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**DOMINANT PLANTS:**

Red Maple ( <i>Acer rubrum</i> )	Pin Oak ( <i>Quercus palustris</i> )
Northern Arrow-wood ( <i>Viburnum recognitum</i> )	Silky Dogwood ( <i>Cornus amomum</i> )
Winterberry ( <i>Ilex verticillata</i> )	Joe Pye Weed ( <i>Eupatorium maculatum</i> )
Green Ash ( <i>Fraxinus pennsylvanica</i> )	Soft Rush ( <i>Juncus effuses</i> )

\* denotes Connecticut Invasive Species Council invasive plant species

**GENERAL COMMENTS:**

All-Points Technology Corp., P.C. ("APT") performed an inspection of the ±15.95-acre subject property, which consists of two adjoining parcels located at the northwest intersection of Sullivan Avenue (State Route 194) and Kennedy Road in an industrial section of South Windsor, CT. The subject property currently consists of early successional forest, having been in agricultural use with cultivated fields as late as the 1990's. An industrial building was constructed on the 67 Kennedy Road parcel in 1965. The historical agricultural use, industrial development of the subject property, and historic construction of the adjacent freight rail line (which has existed since at least the early 1900s) has resulted in various anthropogenic changes to the subject property including alternation to and possible creation of wetland areas. Three isolated wetlands and one wetland connected to an off-site seasonal intermittent watercourse were identified on the subject property.

Wetland 4, a ±0.57-acre wetland located within a local isolated topographical depression, is located in the southern portion of the 352 Sullivan Avenue parcel. A review of soil profiles within and around the perimeter of this wetland reveal previous agricultural disturbances. This isolated wetland does not contain a topographical depression of sufficient depth to sustain inundation levels or hydroperiod to support vernal pool breeding.

### Wetland Delineation Field Form

Wetland I.D.:	Wetland 5	
Flag #'s:	WF 5-01 to 5-08 (closed loop)	
Flag Location Method:	Site Sketch <input checked="" type="checkbox"/>	GPS (sub-meter) located <input checked="" type="checkbox"/>

#### WETLAND HYDROLOGY:

##### NONTIDAL ☒

Intermittently Flooded <input type="checkbox"/>	Artificially Flooded <input type="checkbox"/>	Permanently Flooded <input type="checkbox"/>
Semipermanently Flooded <input type="checkbox"/>	Seasonally Flooded <input type="checkbox"/>	Temporarily Flooded <input type="checkbox"/>
Permanently Saturated <input type="checkbox"/>	Seasonally Saturated/seepage <input checked="" type="checkbox"/>	Seasonally Saturated/perched <input type="checkbox"/>
Comments: Wetland 5 receives surface and subsurface hydrology from an adjacent drainage swale along the rail line, conveying to a culvert that conveys flows under the rail line to an offsite intermittent watercourse to the north.		

##### TIDAL ☐

Subtidal <input type="checkbox"/>	Regularly Flooded <input type="checkbox"/>	Irregularly Flooded <input type="checkbox"/>
Irregularly Flooded <input type="checkbox"/>		
Comments: None		

#### WETLAND TYPE:

##### SYSTEM:

Estuarine <input type="checkbox"/>	Riverine <input type="checkbox"/>	Palustrine <input checked="" type="checkbox"/>
Lacustrine <input type="checkbox"/>	Marine <input type="checkbox"/>	
Comments: None		

##### CLASS:

Emergent <input type="checkbox"/>	Scrub-shrub <input type="checkbox"/>	Forested <input type="checkbox"/>
Open Water <input type="checkbox"/>	Disturbed <input checked="" type="checkbox"/>	Wet Meadow <input type="checkbox"/>
Comments: Vegetative cover is dominated by early successional forest and saplings. Wetland has been disturbed by historic clearing activities.		

##### WATERCOURSE TYPE:

Perennial <input type="checkbox"/>	Intermittent <input type="checkbox"/>	Tidal <input type="checkbox"/>
Watercourse Name: None		
Comments: None		

### Wetland Delineation Field Form (Cont.)

**SPECIAL AQUATIC HABITAT:**

Vernal Pool Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Potential <input type="checkbox"/>	Other <input type="checkbox"/>
Vernal Pool Habitat Type: None	
Comments: None	

**SOILS:**

Are field identified soils consistent with NRCS mapped soils?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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**DOMINANT PLANTS:**

Red Maple ( <i>Acer rubrum</i> )	Black Cherry ( <i>Prunus serotina</i> )
White Oak ( <i>Quercus alba</i> )	Multiflora Rose* ( <i>Rosa multiflora</i> )
Sedge ( <i>Carex</i> sp.)	
Soft Rush ( <i>Juncus effuses</i> )	

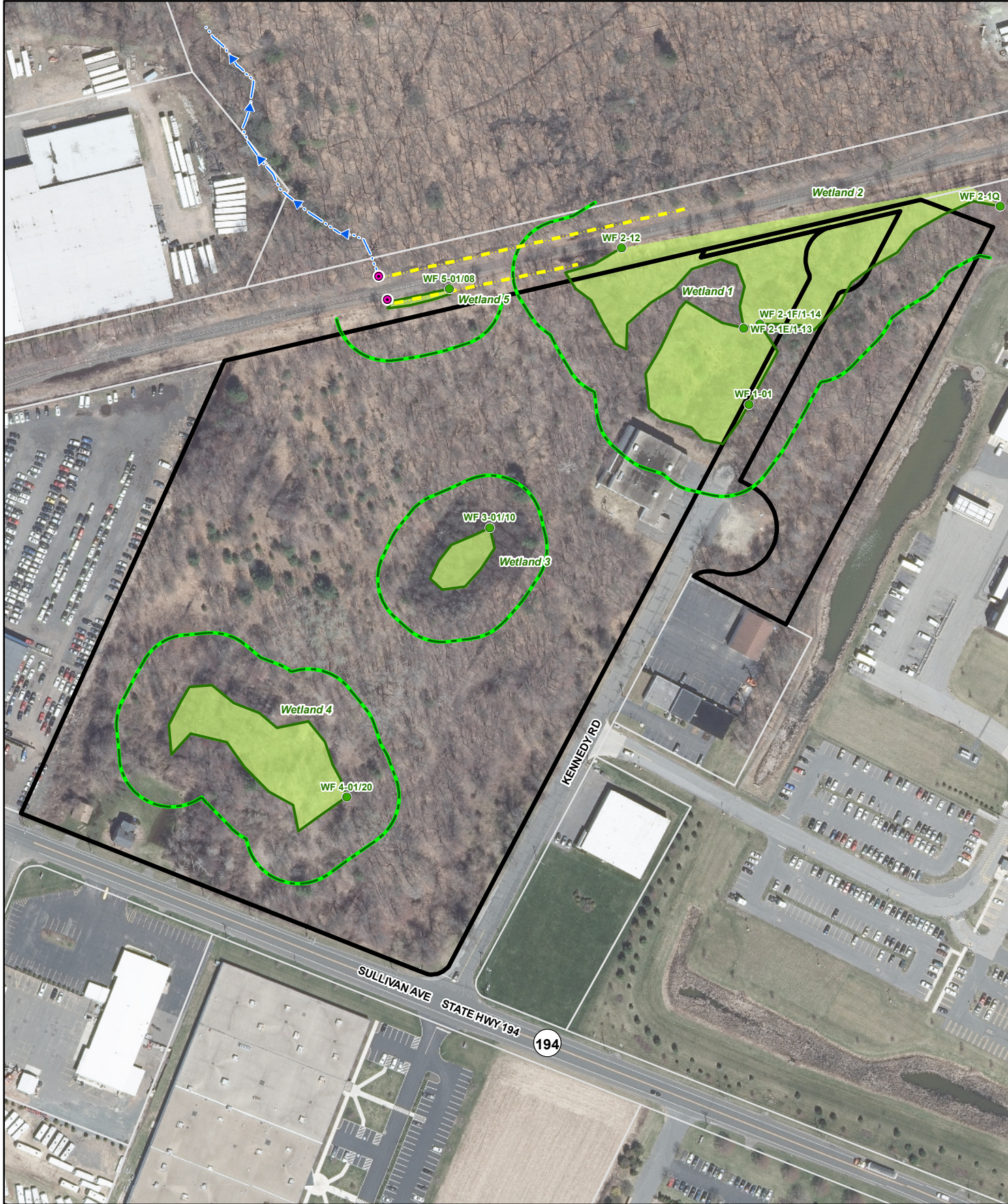
\* denotes Connecticut Invasive Species Council invasive plant species

**GENERAL COMMENTS:**

All-Points Technology Corp., P.C. ("APT") performed an inspection of the ±18.83-acre subject property, which consists of three adjoining parcels located at the northwest intersection of Sullivan Avenue (State Route 194) and Kennedy Road in an industrial section of South Windsor, CT. The subject property currently consists of early successional forest, having been in agricultural use with cultivated fields as late as the 1990's. An industrial building was constructed on the 67 Kennedy Road parcel in 1965. The historical agricultural use, industrial development of the subject property, and historic construction of the adjacent freight rail line (which has existed since at least the early 1900s) has resulted in various anthropogenic changes to the subject property including alternation to and possible creation of wetland areas. Two isolated wetlands, two wetlands with apparent season interconnectivity, and one wetland connected to an off-site seasonal intermittent watercourse were identified on the subject property.

Wetland 5 is located in the northcentral portion of the 352 Sullivan Avenue parcel, immediately adjacent to freight railroad tracks located along the northern property boundary. This wetland functions primarily as a drainage swale along the south side of the tracks and conveys seasonal surface flows directing them to the west. A culvert conveys those seasonal flows under the tracks, which discharges onto the adjacent property on the north side of the tracks. This discharge flows into an unnamed intermittent watercourse that is a tributary to the Scantic River, which is located ±4,000 feet downstream of the subject property.

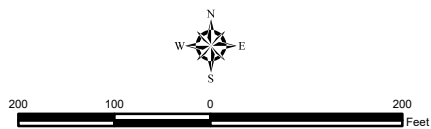




#### Legend

- Site
- Wetland Flag
- Intermittent Watercourse
- Drainage Swale
- 80-Foot Upland Review Area
- Approximate Parcel Boundary
- Delineated Wetland Boundary
- Approximate Wetland Area

**Map Notes:**  
 Base Map Source: 2019 CT Aerial Imagery (CTECO)  
 Map Scale: 1 inch = 200 feet  
 Map Date: March 2022



#### Wetland Inspection Map

Proposed Development  
 352 Sullivan Avenue & 67  
 & 68 Kennedy Road  
 South Windsor, Connecticut