Location Review
Town of Windsor
Inland Wetlands and Watercourses Commission

Rood Avenue Substation

25 Shelley Avenue and 264 Rood Avenue Windsor, Connecticut

Prepared for

Connecticut Light & Power
The Northeast Utilities System

Prepared by

VHB/Vanasse Hangen Brustlin, Inc.
54 Tuttle Place
Middletown, Connecticut 06457-1847

May 2007

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1 Introduction

The Applicant, The Connecticut Light and Power Company ("CL&P"), seeks to construct a 115- kilovolt ("kV") to 23-kV Substation ("Rood Avenue Substation" or "Substation") on its property located north of Rood Avenue and west of Shelley Avenue in Windsor, Connecticut for the purpose of increasing the capacity and reliability of its electric power distribution system in Windsor. Substation projects are subject to the jurisdiction of the Connecticut Siting Council, pursuant to Title 16, Chapter 277a et seq. of the Connecticut General Statutes. However, local wetlands and zoning commissions are provided an opportunity to participate in the Council's decision-making process with respect to the location of certain utility facilities, including electric substations.

The Rood Avenue Substation will add needed delivery-system capacity to serve the growing electric power demands in Windsor, a town that does not currently have its own bulk power substation source. This upgrade will be accomplished through the connection of a new 115-kV to 23-kV, 47-Megavolt-Ampere ("MVA") power transformer to an existing 115-kV transmission line. The Substation will be strategically positioned within an approximately 21.03-acre area (created by the combination of four contiguous CL&P parcels) to provide adequate buffer to neighboring properties, as well as Rood and Shelley Avenues, while minimizing encroachment into wetland resource areas. The Substation will physically straddle two of the CL&P parcels (25 Shelley Avenue and 264 Rood Avenue; referred to herein collectively as the "Property") that are currently

occupied by a 23-kV distribution line switching station (former substation), 115-kV and 345-kV transmission lines, 23-kV distribution lines, and a gravel access drive. Access to the general location of the Substation footprint can be gained via the existing drive, which extends from Rood Avenue to the 23-kV switching station located proximate to the northern Property boundary.

Vanasse Hangen Brustlin, Inc (VHB) conducted a wetland inspection and delineation in the vicinity of the proposed Substation on various dates in April and May 2007. Wetland areas not in proximity to the proposed Substation footprint were previously delineated in 2006, reviewed by VHB and found to be substantially correct. Wetland habitats on the Property include forested, scrub-shrub and emergent marsh wetland areas. Construction of the Substation would permanently alter approximately 2,190 square-feet of forested wetland located east of the existing gravel access. Additional details regarding wetlands on the Property as well as an alternatives analysis are included herein.

Connecting the Substation to an existing 115-kV line would require the installation of three wood poles and six guy wires within a wetland area bordering the western Property line and the removal/relocation of a wood angle structure in wetlands in the northwest Property corner. Limited construction activities are also proposed proximate to a small isolated forested wetland and wetlands located adjacent to the access drive. Planned activities include the construction of a portion of the Substation, associated grading, improvements to the existing access drive and installation of distribution feeders out to Rood Avenue.

A Site Location Map is provided as Figure 1.

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Project Description

Purpose and Description of Project

The purpose of the Substation project is to address a need for additional distribution-system capacity and reliability in Windsor by establishing a new, strategically positioned bulk power substation source in the town. Currently, the electric load in the Town of Windsor is served from bulk power substations (located in Bloomfield, North Bloomfield, Windsor Locks, and North Hartford) that cannot meet future peak load demands without reducing their service area. The Rood Avenue Substation will effectively alleviate loads on these Substations by adding new capacity to the distribution system in a location to reliably serve loads in Windsor.

Proposed Activity

The Rood Avenue Substation would have a fenced area of approximately 219 by 137 feet, east of the existing transmission line corridor. The Substation project includes installing the new bulk power transformer and connecting it to an existing 115-kV transmission line on the Property. A gravel access drive will be established along the route of the existing gravel access. Construction is expected to occur over a period of 12 to 18 months with the Substation in service by summer 2009. As part of the overall improvement plans on the Property, the 23-kV switching station near the northern

Property boundary will be remove and replaced with approximately three wood pole structures.

Location Description

The selected Property encompasses a total of approximately 20 acres. The combination of the Property and two additional, abutting and contiguous CL&P-owned parcels provides 21.03 acres of land to effectively buffer the Substation from neighboring residences as well as Rood Avenue and Shelley Avenue. These parcels are identified by the Windsor Tax Assessor as:

Property:

- 264 Rood Avenue - File Code 1564 - Map 56, Block 31, Lot 30; 11.09 acres
- 25 Shelley Avenue - File Code 1570 – Map 56, Block 31, Lot 12; 8.97 acres

Adjoining Parcels:

- 15 Shelley Avenue - File Code 1569 - Map 56, Block 31, Lot 12; 0.29 acre
- 258 Rood Avenue – File Code 1565 - Map 56, Block 31, Lot 14; 0.68 acre

According to the Tax Assessor's field cards associated with each of these parcels, they are all located within an Agricultural (AG) Land Zone area.

Several alternate site locations along the transmission line corridor were evaluated for development of this project, including other properties owned by CL&P as well as privately-owned parcels and a town-owned property. These alternative site locations were eliminated from final consideration due to various constraints such as: insufficient area for development; significant encroachment into wetlands; and inadequate buffer from nearby residences.

For the following reasons, the selected Property is best suited for the Substation:

- Existing 115-kV transmission lines currently traverse the Property;
- Optimal interconnection opportunities to existing 23-kV distribution feeders;
- Currently developed with a switching station and additional utility infrastructure;
- Formerly occupied by a distribution substation;
- Substantial buffer for neighboring residences;
- Sufficient access from a local road; and,
- Construction can be completed and the Substation can be operated with minimal effects to the surrounding environment.

Site Photographs are presented in Appendix A.

Site Vicinity Characteristics

The Property is abutted by Rood Avenue to the south and Shelley Avenue to the east. Interstate 91 lies immediately east of Shelley Avenue. A transmission line corridor extends southeast and west off the Property. Land use in the vicinity of the Property is primarily residential.

Mapped Soil Types

The latest Natural Resources Conservation Service digital map of the area depicts the following soil mapping units on the Property:

- Walpole
- Ninigret/Tisbury
- Elmridge
- Udorthents

Wetland soils on the site primarily consist of the Walpole series. Field investigations conducted on the Site generally confirm the published soil information.

Rare Species Habitat

According to the latest digital information obtained from the Connecticut Department of Environmental Protection (CT DEP) Natural Diversity Database (NDDB) no threatened, endangered, or species of special concern or significant natural communities are identified on the Site or within a half-mile radius of the Property. In addition, CL&P corresponded directly with the CT DEP and was provided a letter of "No Effect" on August 22, 2006. An Environmental Resources Screen is provided as Figure 2. A copy of the CTDEP correspondence is provided in Appendix B.

Wetland Descriptions

VHB professional soil scientists Dean Gustafson and Jeffrey Peterson delineated wetlands on the Property in proximity to the Substation footprint on various dates during the first and second week of May 2007. Delineation of wetlands on the Property not in proximity to the Substation was previously conducted in 2006. VHB field verified these boundaries and found them to be substantially correct. In all, six wetland areas were identified on the Property as described below. The location of each wetland area is provided on Figure 3, Existing Conditions. Location Review Site Plans depicting existing site conditions and the proposed activities are provided in the Site Plans included in Appendix C.

Wetland 1

Wetland 1 is a groundwater seep that has been disturbed by surrounding developments including the residential development to the north, the switching station to the south and the existing transmission lines in the western portion of the Property. This wetland experiences seasonal saturation and shallow levels of inundation. Surface waters

discharge from this wetland south through braided channels of a watercourse. Flows within this watercourse are conveyed under the existing access drive via a 32-inch reinforced concrete pipe (RCP) east to Wetland 5. This watercourse is a tributary to Deckers Brook located east of Interstate-91. The wetland is occupied by forest, scrub-shrub and emergent marsh vegetated areas. Forested sections are dominated by red maple, pin oak, American elm, arrowwood and ironwood. Scrub-shrub areas are dominated by silky dogwood, Bebb willow, sensitive fern, skunk cabbage, jewelweed and purple loosestrife. Emergent marsh areas are commonly vegetated with skunk cabbage, cat-tail, purple loosestrife, soft rush, sedges, woolgrass, goldenrod, boneset, arrow-leaved tear-thumb, joe pye-weed, deer tongue grass and eastern marsh fern.

Wetland 2

Wetland 2 is a groundwater/surface water depression that has been disturbed by the residential development to the north and the switching station to the south. The wetland contains a small potential vernal pool that supports seasonal levels of inundation. The pool was inundated with approximately 8 to 12 inches of water at the time of the inspection. Although no egg masses were found, three adult wood frogs were observed within the pool during an initial inspection on April 9, 2007. However, several follow up inspections later in April and May did not reveal any wood frogs or other obligate vernal pool species. The wetland is forested at its western extent and occupied by scrub-shrub vegetation at its eastern extent. The wetland drains north through a ditch into a lawn area and culvert. Forested areas are occupied by swamp white oak, red maple, American elm, serviceberry, arrowwood, Bebb willow, highbush blueberry, silky dogwood and skunk cabbage. Scrub-shrub areas are dominated by silky dogwood, elderberry, arrowwood, highbush blueberry, sensitive fern, jewelweed, and skunk cabbage.

Wetland 3

Wetland 3 occurs in a forested area of the Property east of the access drive. The wetland has been disturbed by historical agricultural activities, and as such, significant portions of the wetland have been partially buried. Detailed review of numerous soil test pits revealed wetland soil profiles typically buried by approximately 12 inches of loamy material. Wetland conditions have been altered by these historic events as wetland hydrology conditions only appear to dominate during seasonal peak hydroperiods. The young forest wetland is a groundwater depression dominated by red maple, red oak, apple, arrowwood and silky dogwood. Surface flow patterns within the wetland drain to the east into a culvert that extends beneath the eastern portion of the Property and Shelley Avenue.

Wetland 4

Wetland 4 is a forested groundwater and surface water depression located east of the existing access drive that drains surface flows east and south to Wetland 5 and its associated stream. Wetland 4 has also been disturbed by historic agricultural activities and other development and contains areas of buried wetland soils. The wetland supports shallow levels of inundation that have the potential to provide vernal pool habitat, however no vernal pool species have been identified within the area during inspection. In addition, during an inspection on May 4, 2007, the previously inundated area was observed to only contain saturated soils. Dominant vegetation within the wetland includes red maple, gray birch, spruce, American elm, cottonwood, winterberry, black cherry, spicebush, highbush blueberry, arrowwood, sensitive fern, skunk cabbage, cinnamon fern and Canada may flower.

Wetland 5

Wetland 5 is a riparian corridor consisting of a highly incised watercourse and forested wetland. The watercourse receives flows from Wetland 1 to the west and Wetland 4 to the north and conveys flows east off of the Property. It is unclear if the watercourse is perennial or intermittent. The watercourse appears as an intermittent stream on the USGS quadrangle map of the area. Additionally, the size of the drainage area coupled with field observations suggest that the stream will dry periodically, however no data has been collected to conclusively make a determination. Forested portions of the wetland are dominantly occupied by red maple, silky dogwood, arrowwood, cinnamon fern and skunk cabbage.

Wetland 6

Wetland 6 occurs in the western dogleg of the Property. Portions occurring beneath the transmission lines are occupied by emergent marsh and scrub-shrub vegetation while portions to the north beyond the transmission corridor are forested. Emergent vegetation consisted mainly of skunk cabbage, cattail, jewelweed, purple loosestrife, soft rush, sedges, woolgrass, goldenrod, boneset, arrow-leaved tear-thumb, joe pye-weed, deer tongue grass, and eastern marsh fern. Areas occupied by scrub-shrub habitat are dominated by buttonbush, highbush blueberry, silky dogwood, alder, elderberry, northern arrowwood and spicebush. The forested area is dominated by red maple.

Proposed Activities Relative to Wetlands

The Substation would permanently alter approximately 1,700 square feet of Wetland 4 and 490 square feet of Wetland 3. Both of these relatively small wetland areas have been disturbed by historic agricultural activities that have diminished their functions and values.

In accordance with the *2002 Connecticut Guidelines for Erosion and Sediment Control*, a series of Best Management Practices will be utilized throughout the course of construction activities at the site and maintained until disturbed areas have been stabilized and/or re-vegetated to prevent erosion and sedimentation within the wetland areas. Silt fencing and hay bales will generally be installed around the perimeter of construction activities protecting nearby resources, including the nearby wetlands. New England Wet Mix and New England Conservation Wildlife Mix, containing a variety of native grasses and forbs seed, will be used as appropriate to stabilize exposed areas post construction.

Offsite Alternatives

Location Rationale

The selection criteria for the location of a new bulk-power substation are close to an existing transmission circuit, near the center of a load area, and accessible from a public road. Locating the facility near an existing 115-kV transmission circuit avoids new right-of-way (ROW) acquisitions and significant transmission line construction. A site located near the load center minimizes distribution circuit lengths and enhances reliability. Direct access to substations from a road is important to minimize land clearing for new road construction.

Evaluated Site Locations

CL&P identified eight potential substation areas near its 115-kV transmission circuits along Park Avenue, Washington Road, Matianuck Avenue, Rood Avenue, Windsor Avenue, Deerfield Road, and Midian Avenue (see Figure 3). These eight locations were then evaluated for potential development of a new substation, using the following siting criteria:

- Proximity to existing transmission electrical circuits
- Proximity to distribution load center and existing feeders
- Ease of access
- Earthwork requirements
- Sufficient parcel size
- Wetlands and watercourses
- Existing land-use constraints, including proximity to residences
- Wildlife and habitat
- Proximity to public water supply watershed and aquifer areas

The Rood Avenue Property (Location 4A), the subject of this report, satisfied the siting criteria and the project objectives and is therefore the most prudent and feasible location, as summarized below.

Location 1, Park Avenue

- Located on westerly edge of search area, necessitating longer distribution feeders. This would require additional ROW purchases, significant land clearing and installation of new utility structures and interconnecting lines.
- Residences are located on all four potential sites where the ROW crosses Park Avenue.
- One possible substation site was identified 500± feet north of Park Avenue and east of the ROW; however, this location contains mostly wetlands.

Location 2, Washington Road

- Washington Road cul-de-sac terminus is located adjacent to transmission ROW. The area is well developed with residences.
- Insufficient buffer from neighboring residences.
- Wetland constraints exist.
- No suitable land for a substation was identified.

Location 3, Matianuck Avenue

- Residences occupy potential site areas where ROW crosses Matianuck Avenue.
- Insufficient buffer from neighboring residences.
- No suitable land for a Substation was identified.

Location 4A, Rood Avenue at ROW [Subject Property]

- Site of existing switching station and significant utility facilities.
- Site of former substation.
- Access road exists from Rood Avenue.
- New Substation at this location provides direct connections to existing 115-kV transmission circuit and distribution feeders.
- Combination of Property and abutting CL&P-owned parcels totals 21.03-acres, providing setback of 450± feet from Rood Avenue and substantial buffer for neighboring residences.
- Significant existing vegetation can be preserved.
- Minimal wetland impacts.

Location 4B, Rood Avenue at ROW

- Two-acre site does not provide sufficient buffering from neighboring residences.
- Significant wetland constraints exist.

Location 5, Windsor Avenue

- Most sites in this area are residentially developed.
- Some vacant land available, but substation would require land acquisition from adjacent church parking lot.
- Insufficient buffer from neighboring residences.
- Most of adjoining land to the west is constrained by floodplain (Deckers Brook) and bordering wetlands.

Location 6, Deerfield Road

- Close to east end of search area, necessitating longer distribution feeders. This would require additional ROW purchases, significant land clearing and installation of new utility structures and lines.
- Area is well developed with residences without t adequate buffer.
- No currently vacant land identified to support a substation.
- Significant wetland constraints exist in the east portion of this area.

Location 7, Midian Avenue

- End of Midian Avenue is adjacent to the ROW.
- East edge of search area, necessitating longer distribution feeders. This would require additional ROW purchases, extensive tree clearing and installation of new utility structures and lines.
- Nearby residences are located to the north without adequate buffer.
- No direct access to ROW exists, requiring new road construction.
- Rail line extends through the site; at-grade crossing would be required.
- Site close to CT River; flood plain and inland wetlands are major constraints.

Alternate Sites at Subject Property

Once the Rood Avenue Property was determined to provide the best opportunity to support the needed Substation development, several locations were evaluated for placement of the facility's footprint. Evaluation factors considered included proximity to: existing utility infrastructure (to accommodate interconnections and required line profile separations); wetland resources; existing vegetation; and, neighboring homes. Because an existing 115-kV circuit and access road extend through the western portion of the site, this general area was identified as having the highest potential for development of the Substation. The proposed location was ultimately selected because it best balances technical, safety and economical requirements; limits direct effects to existing natural resources by minimizing alteration of wetlands; and provides adequate buffers for neighboring properties. Numerous alternative substation footprints (size and configuration) and locations were reviewed to determine if avoidance of wetlands was possible. However, due to the minimum size requirements of the Substation and necessary separation distances from an existing transmission line, which the new 115-kV interconnection spans need to pass under, it was determined that complete avoidance of wetland areas was not feasible. Substantial minimization of wetland impacts was achieved by reducing the size, orientation, and location of the Substation footprint.

Project Contact

Correspondence and other communications regarding the proposed Rood Avenue Substation should be addressed to:

Ms. Marcella Ferrara, Project Manager - Transmission
Northeast Utilities Service Company, Transmission Projects
107 Selden Street
Berlin, CT 06037
Telephone: (860) 665-2409
E-mail address: Ferramc@nu.com

Mr. Robert Carberry, Manager – Transmission Siting and Permitting
Northeast Utilities Service Company, Municipal Relations, Siting and Permitting
107 Selden Street
Berlin, CT 06037
Telephone: (860) 665-6774
E-mail address: carbere@nu.com

Figures

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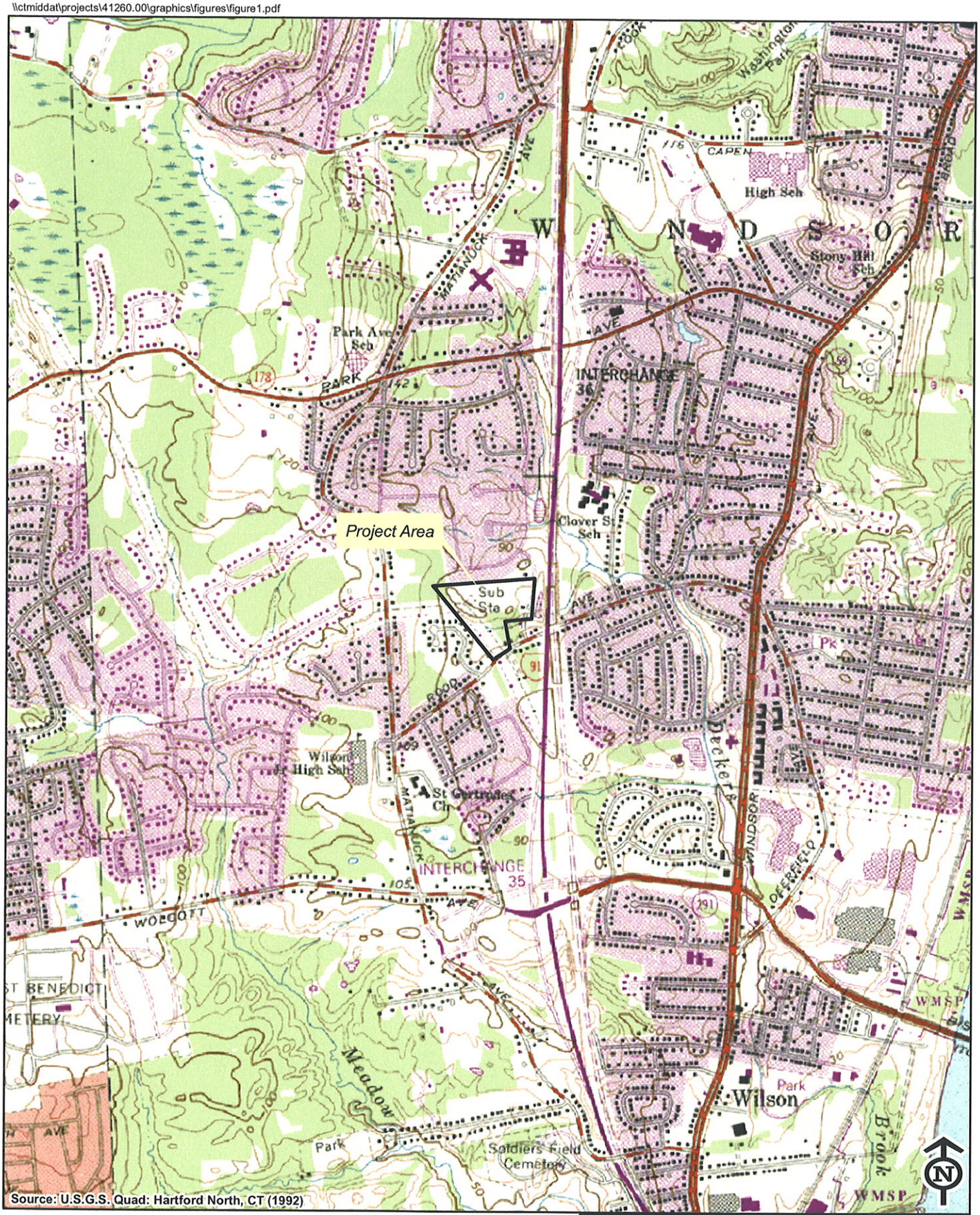
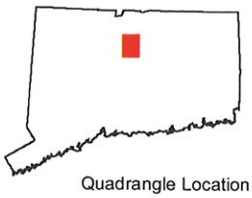


Vanasse Hangen Brustlin, Inc.



Quadrangle Location

Figure 1
Site Location Map
Proposed
Rood Avenue Substation
Windsor, Connecticut

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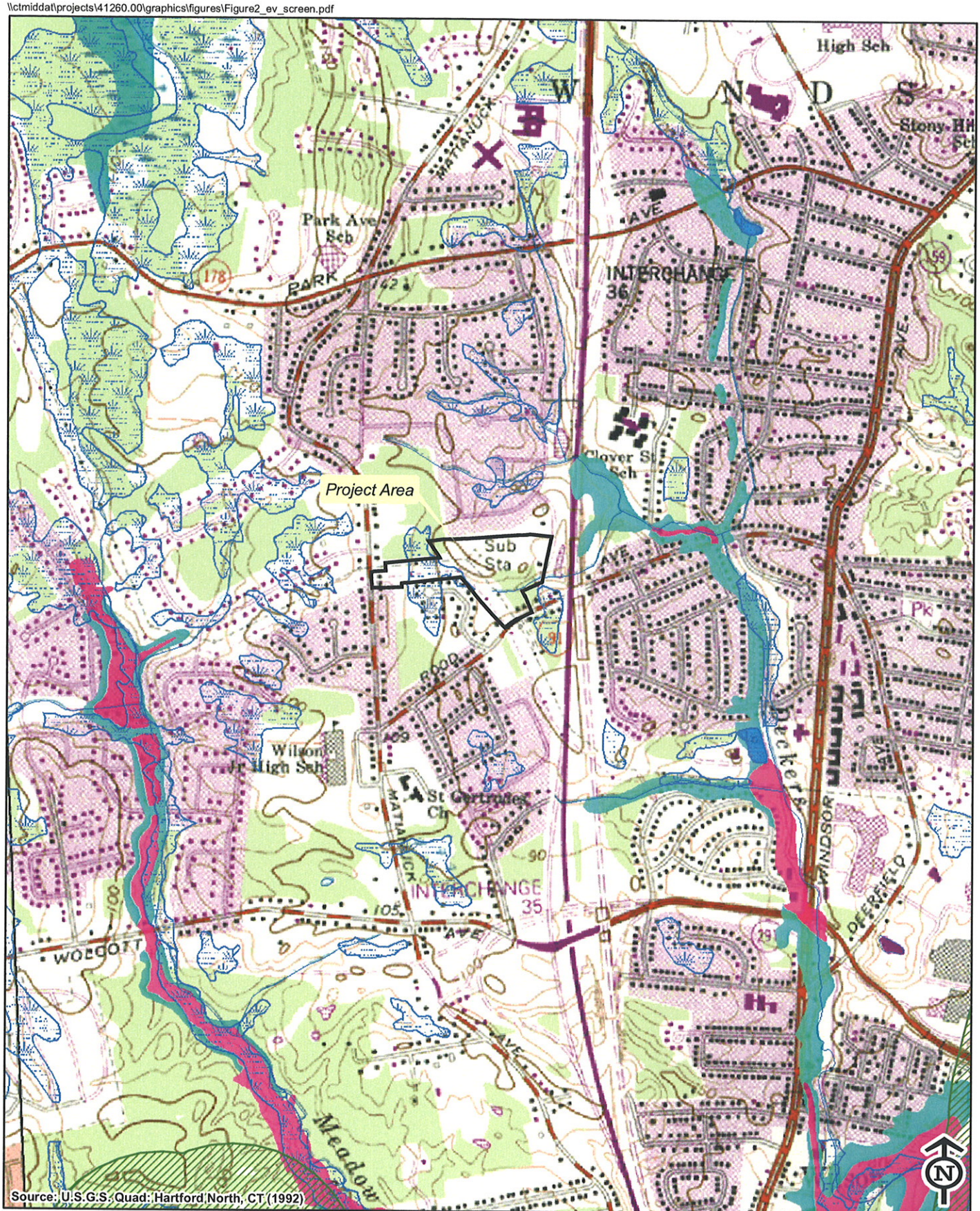

Legend

- CL&P Property Boundary
- Natural Diversity Database Areas (buffered; last updated December 2006)
- Wetlands
- Open Water
- 100 Year Floodplain
- 500 Year Floodplain
- Floodway

1,000 500 0 1,000 Feet

Vanasse Hangen Brustlin, Inc.

Figure 2
Environmental Resources Screen
NUSCO Proposed
28J Rood Avenue Substation
Windsor, Connecticut

Figure 3: Existing Conditions

Legend

- Existing Wood Poles
- Existing Steel Poles
- Existing Transmission Lines
- Existing Distribution Lines
- Existing Contours
- Existing Stream
- Windsor Assessor Parcels
- Existing Wetlands

Vegetative Communities

Common Type

- Coniferous Forest Inclusion (CFI)
- Developed Area (DA)
- Early Successional Upland Shrubland (ESUS)
- Interspersed Emergent and Scrub/Shrub Wetland (IESW)
- Mixed Mesic Forest (MMF)
- Riparian Corridor (RC)
- Palustrine Forested Wetland (PFW)
- Red Maple Hardwood Forest (RMHF)
- Remnant Sand Dune Community (RSDC)
- Woodland/Shrubland Ecotone (WSE)

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Transportation Land Development Environmental Services

N W E S

100 50 0 100 Feet

Proposed Substation Location
Rood Avenue

05/30/07

Connecticut Light & Power
The Northeast Utilities System

Figure 4: Evaluated Site Locations Map

VHB Vanasse Hangen Brustlin, Inc.

Connecticut Light & Power
The Northeast Utilities System

Appendix A
Site Photographs

Vanasse Hangen Brustlin, Inc.
PHOTOLOG DOCUMENTATION
Rood Avenue Substation – Wetland Photographs
258 & 264 Rood Avenue and 15 & 25 Shelley Avenue, Windsor, Connecticut

Photo 1: View of Wetland 1 behind existing switching station

Photo 2: View of potential vernal pool within Wetland 2 east of existing switching station

Vanasse Hangen Brustlin, Inc.
PHOTOLOG DOCUMENTATION
Rood Avenue Substation – Wetland Photographs
258 & 264 Rood Avenue and 15 & 25 Shelley Avenue, Windsor, Connecticut

Photo 3: View central portion of Wetland 3 (typical view)

Photo 4: View northern portion of Wetland 4

Vanasse Hangen Brustlin, Inc.
PHOTOLOG DOCUMENTATION
Rood Avenue Substation – Wetland Photographs
258 & 264 Rood Avenue and 15 & 25 Shelley Avenue, Windsor, Connecticut

Photo 6: View of southern end of Wetland 4

Appendix B
CT DEP Correspondence

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION

August 22, 2006

Mr. Scott A. Marotta
Northeast Utilities Service Company
P.O. Box 270
Hartford, CT 06141-0270

Re: Proposed Construction of New Substation on Rood Avenue and I-91, Windsor

Dear Mr. Marotta:

I have reviewed Natural Diversity Data Base maps and files regarding the area delineated on the map you provided for the proposed construction of a new substation on company owned land west of Rood Avenue and Interstate 91 Junction in Windsor, Connecticut. According to our information there are no known extant populations of Federal or State Endangered, Threatened or Special Concern Species that occur at the site in question.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Natural Resources Center's Geological and Natural History Survey and cooperating units of DEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as ibecomes available.

Please contact me if you have further questions at 424-3592. Thank you for consulting the Natural Diversity Data Base. Also be advised thatthis is a preliminary review and not a final determination. A more detailed review may be conducted as part of any subsequent environmental permit applications submitted to DEP for the proposed site.

Sincerely,

Dawn M. McKay
Biologist/Environmental Analyst

DMM/blm

Appendix C
Location Review Site Plans

Site Plans

Issued for: **Preliminary Location Review**

Date Issued: May 23, 2007

Latest Issue: May 30, 2007

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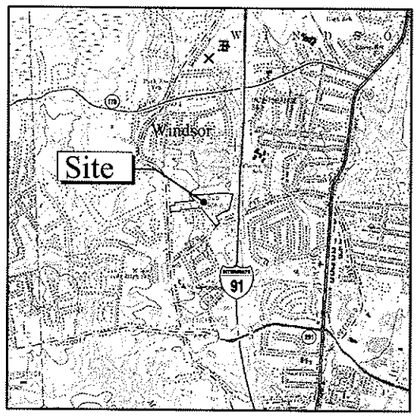
Rood Avenue 24J Substation

Rood Avenue
Windsor, Connecticut



Site Location Map

Property Information

Site:
The Connecticut Light and Power Company
258 & 264 Rood Avenue and 15 & 25 Shelley Avenue
Windsor, Connecticut

Applicant:
The Connecticut Light and Power Company
P.O. Box 270
Hartford, Connecticut 061414-0270
(860) 605-5000

Assessor's Plat: Map 56 Block 31
Lots: 14, 30 and 12

Connecticut Light & Power

The Northeast Utilities System

Vanasse Hangen Brustlin, Inc.
Transportation
Land Development
Environmental Services

VHB Project No. 41260.00
Rood Avenue, Windsor, CT
Issued for: Preliminary Location Review - 05/30/07

Legend

Exist.	Prop.	
		CONCRETE
		HEAVY DUTY PAVEMENT
		RIPRAP
		CONSTRUCTION ENTRANCE
		PROPERTY LINE
		PROJECT LIMIT LINE
		RIGHT-OF-WAY/PROPERTY LINE
		EASEMENT
		BUILDING SETBACK
10+00	10+00	BASELINE
		CONSTRUCTION LAYOUT
		ZONING LINE
		TOWN LINE
27.35 TC	27.35 TC	TOP OF CURB ELEVATION
26.85 BC	26.85 BC	BOTTOM OF CURB ELEVATION
132.75	132.75	SPOT ELEVATION
45.0 TW 38.5 BW	45.0 TW 38.5 BW	TOP & BOTTOM OF WALL ELEVATION
		BORING LOCATION
TP		TEST PIT LOCATION
MW	MW	MONITORING WELL
		LIMIT OF DISTURBANCE
		WETLAND LINE WITH FLAG BY VHB
		WETLAND BY OTHERS/REVIEWED BY VHB
BLSF		BORDERING LAND SUBJECT TO FLOODING
BZ		WETLAND BUFFER ZONE
NDZ		NO DISTURB ZONE
200'RA		200' RIVERFRONT AREA
		GRAVEL ROAD
EOP		EDGE OF PAVEMENT
BB	BB	BITUMINOUS BERM
BC	BC	BITUMINOUS CURB
CC	CC	CONCRETE CURB
CG	CG	CURB AND GUTTER
ECC	ECC	EXTRUDED CONCRETE CURB
MCC	MCC	MONOLITHIC CONCRETE CURB
PCC	PCC	PRECAST CONC. CURB
SGE	SGE	SLOPED GRAN. EDGING
VGC	VGC	VERT. GRAN. CURB
		LIMIT OF CURB TYPE
		SAWCUT
		BUILDING
EN	EN	BUILDING ENTRANCE
LD	LD	LOADING DOCK
		BOLLARD
D	D	DUMPSTER PAD
		SIGN
		DOUBLE SIGN
		STEEL GUARDRAIL
		WOOD GUARDRAIL
		PATH
		TREE LINE
		WIRE FENCE
		FENCE
		STOCKADE FENCE
		STONE WALL
		RETAINING WALL
		STREAM / POND / WATER COURSE
		DETENTION BASIN
		HAY BALES
		SILT FENCE
4	4	MINOR CONTOUR
20	20	MAJOR CONTOUR
(10)	(10)	PARKING COUNT
(C10)	(C10)	COMPACT PARKING STALLS
DYL	DYL	DOUBLE YELLOW LINE
SL	SL	STOP LINE
		CROSSWALK
		ACCESSIBLE CURB RAMP
		ACCESSIBLE PARKING
VAN	VAN	VAN-ACCESSIBLE PARKING

Exist.	Prop.	
UD	UD	UNDERDRAIN
12"D	12"D	DRAIN
6"RD	6"RD	ROOF DRAIN
12"S	12"S	SEWER
FM	FM	FORCE MAIN
OHW	OHW	OVERHEAD WIRE
6"W	6"W	WATER
4"FP	4"FP	FIRE PROTECTION
2"DW	2"DW	DOMESTIC WATER
G	G	GAS
E	E	ELECTRIC
STM	STM	STEAM
T	T	TELEPHONE
FA	FA	FIRE ALARM
CATV	CATV	CABLE TV
		CATCH BASIN
		DOUBLE CATCH BASIN
		GUTTER INLET
		DRAIN MANHOLE
		TRENCH DRAIN
		PLUG OR CAP
CO	CO	CLEANOUT
		FLARED END SECTION
		HEADWALL
		SEWER MANHOLE
CS	CS	CURB STOP & BOX
WV	WV	WATER VALVE & BOX
TSV	TSV	TAPPING SLEEVE, VALVE & BOX
		SIAMESE CONNECTION
HYD	HYD	FIRE HYDRANT
WM	WM	WATER METER
PIV	PIV	POST INDICATOR VALVE
		WATER WELL
GG	GG	GAS GATE
GM	GM	GAS METER
EMH	EMH	ELECTRIC MANHOLE
EM	EM	ELECTRIC METER
		LIGHT POLE
TMH	TMH	TELEPHONE MANHOLE
T	T	TRANSFORMER PAD
		UTILITY POLE
		GUY POLE
		GUY WIRE & ANCHOR
HH	HH	HAND HOLE
PB	PB	PULL BOX

Abbreviations

General

ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
BIT	BITUMINOUS
BS	BOTTOM OF SLOPE
BWLL	BROKEN WHITE LANE LINE
CONC	CONCRETE
DYCL	DOUBLE YELLOW CENTER LINE
EL	ELEVATION
ELEV	ELEVATION
EXIST	EXISTING
FDN	FOUNDATION
FFE	FIRST FLOOR ELEVATION
GRAN	GRANITE
GTD	GRADE TO DRAIN
LA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PERF	PERFORATED
PROP	PROPOSED
REM	REMOVE
RET	RETAIN
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TS	TOP OF SLOPE
TYP	TYPICAL

Utility

CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DCB	DOUBLE CATCH BASIN
DMH	DRAIN MANHOLE
CIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
FM	FORCE MAIN
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
GI	GUTTER INLET
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
I=	INVERT ELEVATION
LP	LIGHT POLE
MES	METAL END SECTION
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UG	UNDERGROUND
UP	UTILITY POLE

Notes:

General

1. CONTRACTOR SHALL NOTIFY "CALL BEFORE YOU DIG" (1-800-922-4455) AT LEAST 72 HOURS BEFORE EXCAVATING.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
3. AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE 6 INCHES LOAM AND SEED.
4. WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
5. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
6. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
7. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
8. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
9. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
10. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
11. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
12. THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND FALLS WITHIN THE NPDES CONSTRUCTION GENERAL PERMIT (CGP) PROGRAM AND EPA JURISDICTION. PRIOR TO THE START OF CONSTRUCTION CONTRACTOR IS TO FILE A CGP NOTICE OF INTENT WITH THE EPA AND PREPARE A STORMWATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH THE NPDES REGULATIONS. CONTRACTOR SHALL CONFIRM THE OWNER HAS ALSO FILED A NOTICE OF INTENT WITH THE EPA.

Utilities

1. THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR IT'S REPRESENTATIVE(S) HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. THE UTILITY INFORMATION SHOWN DOES NOT GUARANTEE THE ACTUAL EXISTENCE, SERVICEABILITY, OR OTHER DATA CONCERNING THE UTILITIES, NOR DOES IT GUARANTEE AGAINST THE POSSIBILITY THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLANS. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT AND CONTRACTOR'S FAILURE TO NOTIFY PRIOR TO PERFORMING ADDITIONAL WORK RELEASES OWNER FROM OBLIGATIONS FOR ADDITIONAL PAYMENTS WHICH OTHERWISE MAY BE WARRANTED TO RESOLVE THE CONFLICT.
3. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). FINAL DESIGN LOADS AND LOCATIONS TO BE COORDINATED WITH OWNER AND ARCHITECT.
4. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR AND SHALL BE RESPONSIBLE FOR PAYING FEES FOR POLE RELOCATION AND FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES, WHETHER WORK IS PERFORMED BY CONTRACTOR OR BY THE UTILITIES COMPANY.
5. UTILITY PIPE MATERIALS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLAN:
   A. WATER PIPES SHALL BE SPECIFIED BY THE WATER COMPANY.
   B. SANITARY SEWER PIPES SHALL BE POLYVINYL CHLORIDE (PVC) SEWER PIPE
   C. STORM DRAINAGE PIPES SHALL BE CLASS V RCP.
6. SITE CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND SHALL FURNISH EXCAVATION, INSTALLATION, AND BACKFILL OF ELECTRICAL FURNISHED SITEWORK RELATED ITEMS SUCH AS PULL BOXES, CONDUITS, DUCT BANKS, LIGHT POLE BASES, AND CONCRETE PADS. SITE CONTRACTOR SHALL FURNISH CONCRETE ENCASEMENT OF DUCT BANKS IF REQUIRED BY THE UTILITY COMPANY AND AS INDICATED ON THE DRAWINGS.

Layout and Materials

1. PROPOSED GRANITE BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LICENSED SURVEYOR.
2. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED ACCESS DRIVE, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.
3. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
4. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.

Demolition

1. THE CONTRACTOR TO REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS. REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS, AND UNSUITABLE MATERIAL WITHIN THE PROPOSED BUILDING FOOTPRINT AND TEN FEET BEYOND AND BENEATH PROPOSED EXTERIOR COLUMNS, PER DRAWINGS AND SPECIFICATIONS.
2. EXISTING UTILITIES SHALL BE TERMINATED, UNLESS OTHERWISE NOTED, IN CONFORMANCE WITH LOCAL, STATE, AND INDIVIDUAL UTILITY COMPANIES STANDARDS SPECIFICATIONS, AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES.
3. CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES, AND STATUTES.

Erosion Control

1. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
2. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES, AND REMOVE SEDIMENT THEREFROM ON A WEEKLY BASIS AND WITHIN TWELVE HOURS AFTER EACH STORM EVENT AND DISPOSE OF SEDIMENTS IN AN UPLAND AREA SUCH THAT THEY DO NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.

Existing Conditions Information

1. BASE PLAN: PROPERTY LINE INFORMATION SHOWN IS NOT TO BE CONSTRUED AS HAVING BEEN OBTAINED AS A RESULT OF A FIELD SURVEY BY A SURVEYPR, AND IS SUBJECT TO SUCH CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE.
   A. DELINEATION OF THE WETLANDS AND PLACEMENT OF THE FLAGS WAS PERFORMED BY: VHB, INC.
   B. FLAGS MARKING THE WETLANDS WERE LOCATED BY: VHB, INC.
   C. ALL WETLANDS BOUNDARY NOT ASSOCIATED WITH WETLAND FLAGS WERE DELINEATED BY OTHERS AND REVIEWED BY VHB.
2. TOPOGRAPHY: ELEVATIONS ARE BASED ON CT NAD 83.

PLANS AND SPECIFICATIONS ARE SUBJECT TO REVISIONS PENDING FINAL SITING COUNCIL APPROVAL

PRELIMINARY

CAD GENERATED DWG

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP
	1.	05/30/07	REVISIONS				

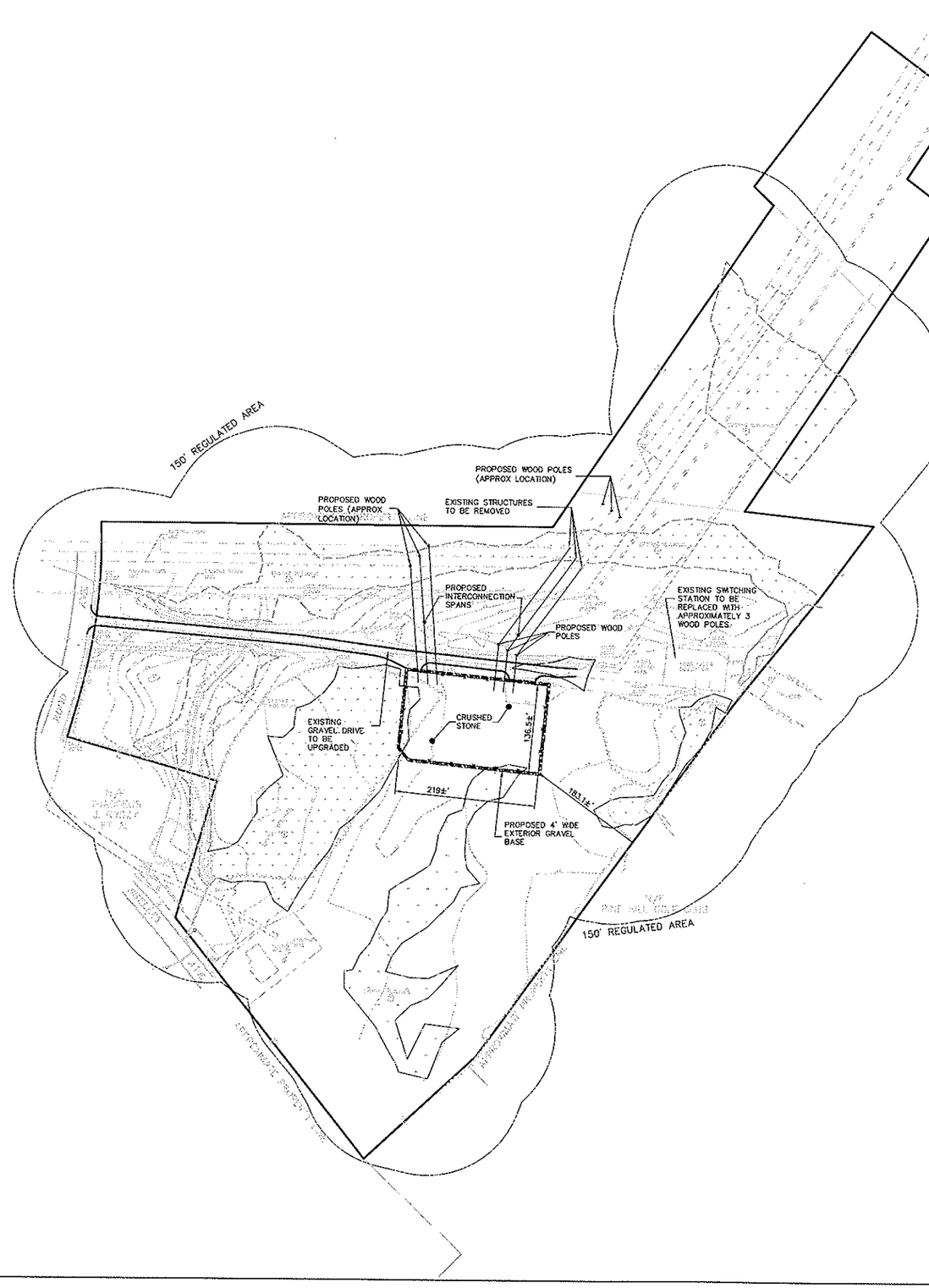
NORTHEAST UTILITIES SERVICE CO.

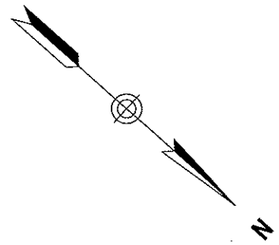
FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE

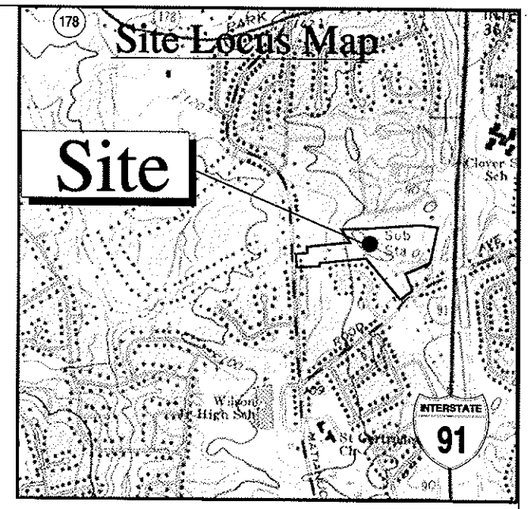
Legend and General Notes
Rood Avenue Substation
Windsor, Connecticut

BY	VHB	CHKD		APP	APP
DATE	05/23/07	DATE		DATE	DATE
SCALE	NONE		DWG. NO.	C-1	





Site Locus Map



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SCALE IN FEET

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SCALE IN FEET

PLANS AND SPECIFICATIONS ARE SUBJECT TO REVISIONS PENDING FINAL SITING COUNCIL APPROVAL

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CAD GENERATED DWG.

NF	NO.	DATE	REVISIONS	BY	CHK	APP	APP
	1.	05/30/07	REVISIONS				

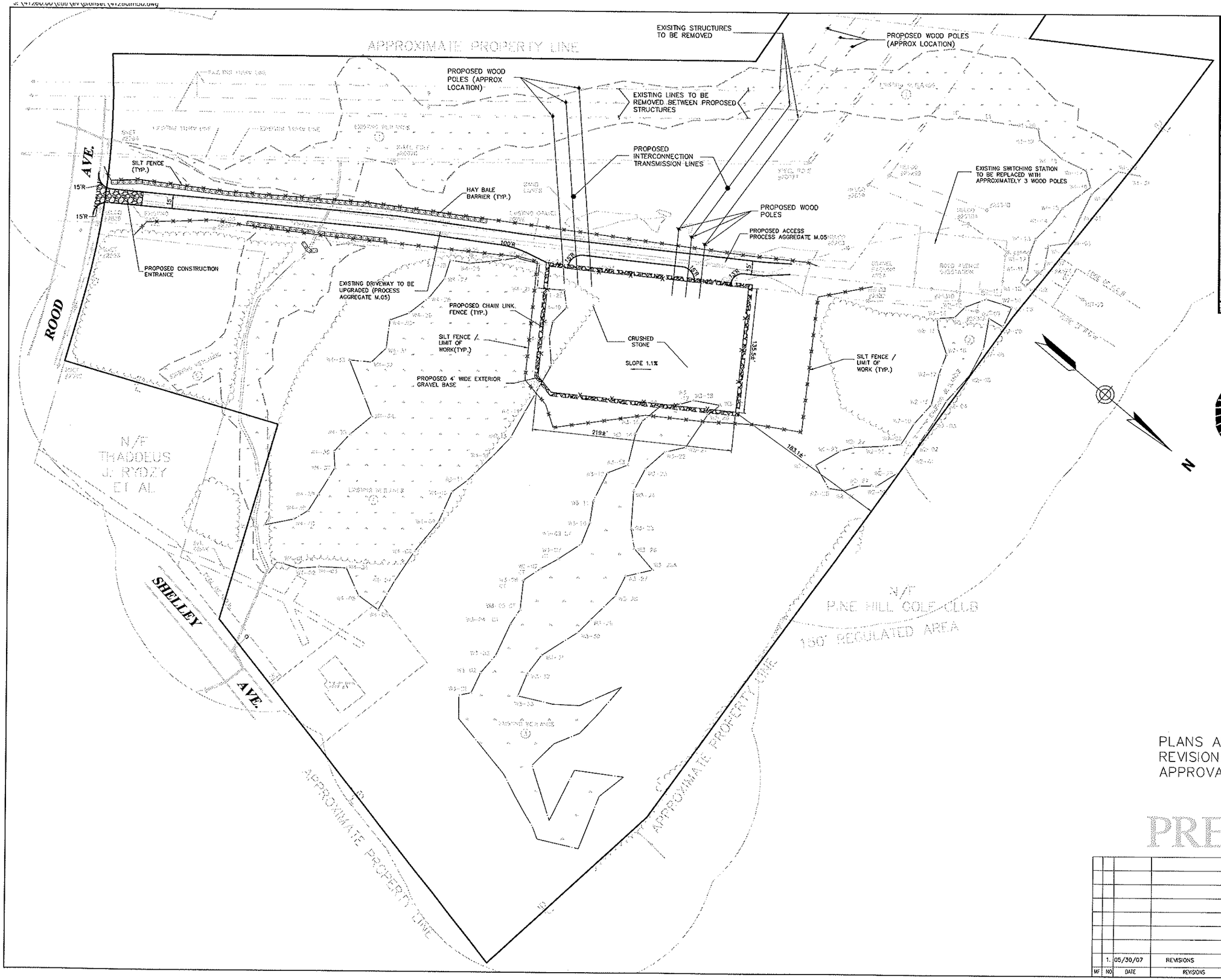
NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

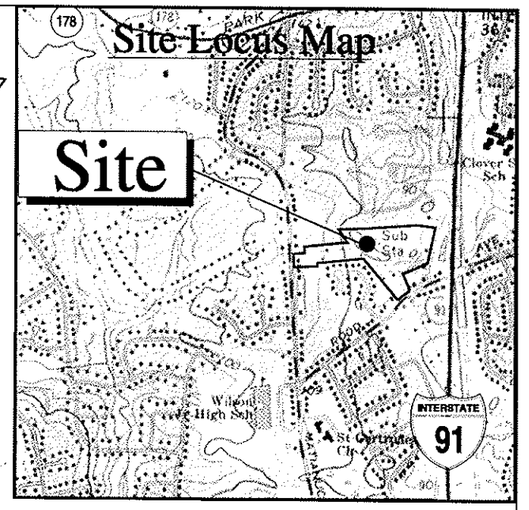
TITLE

Overall Site Plan
Rood Avenue Substation
Windsor, Connecticut

BY	VHB	CHKD	APP	APP
DATE	05/23/07	DATE	DATE	DATE
SCALE	1"=100'		DWG. NO.	C-2



Site Locus Map



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CAD GENERATED DWG

MF NO.	DATE	REVISIONS	BY	CHK	APP	APP
1.	05/30/07	REVISIONS				

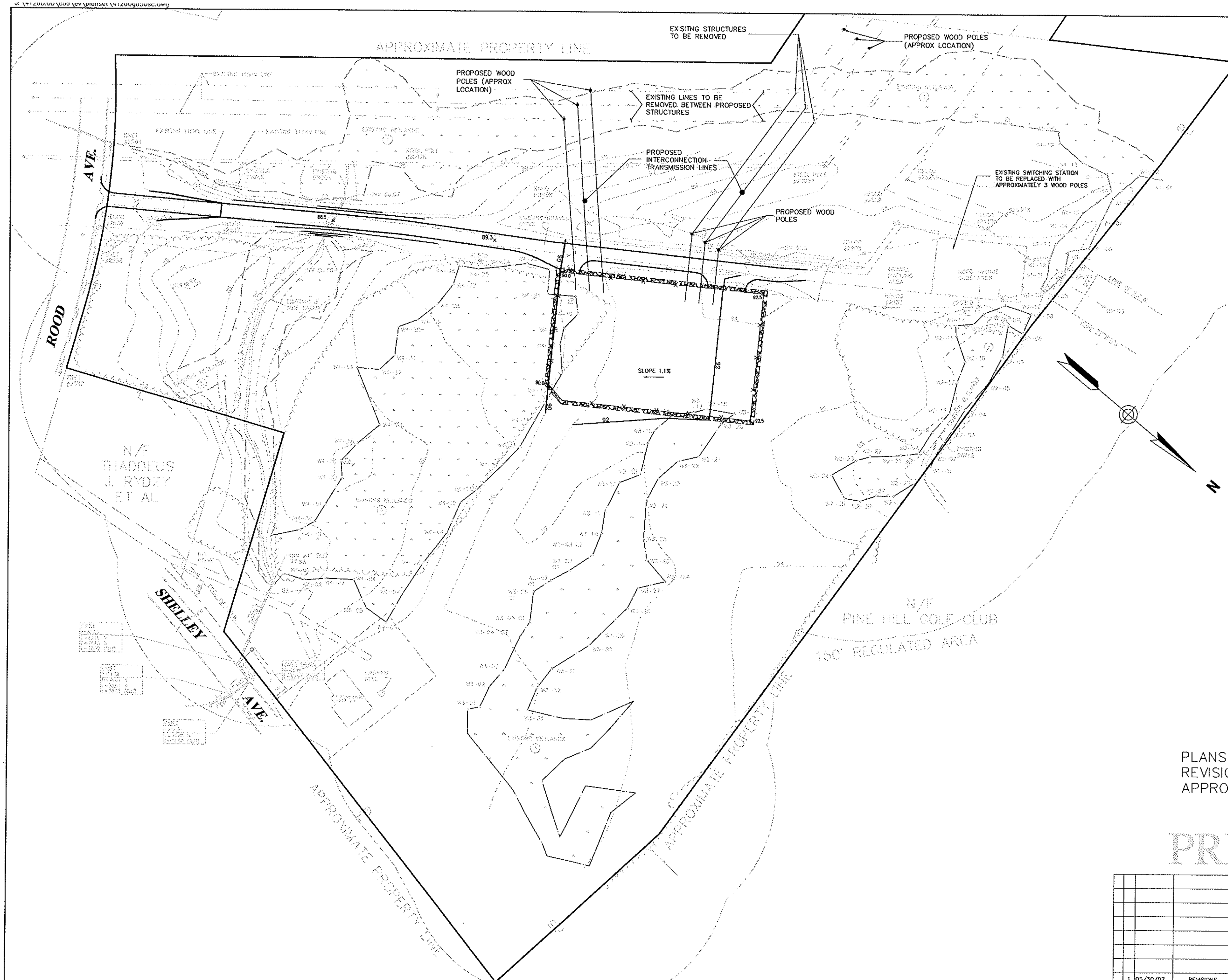
NORTHEAST UTILITIES SERVICE CO.

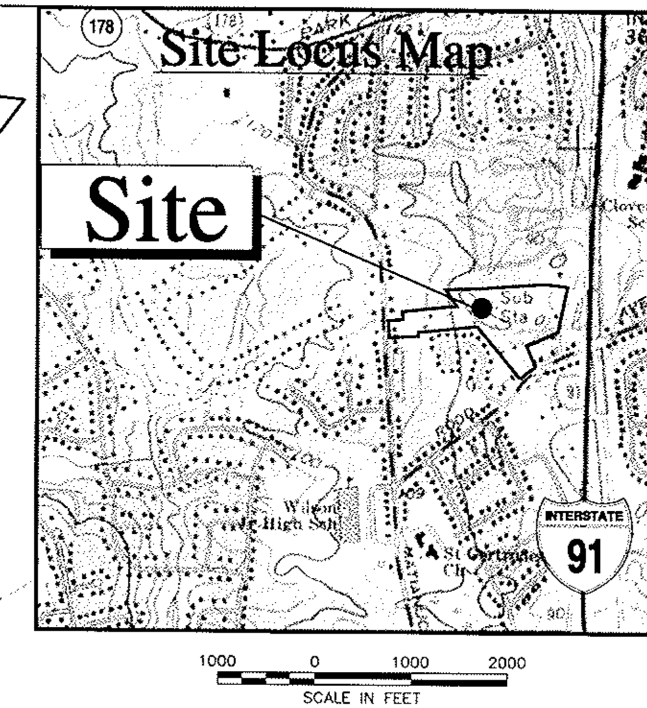
FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE

Layout and Erosion Control Plan
Rood Avenue Substation
Windsor, Connecticut

BY	VHB	CHKD	APP	APP
DATE	05/23/07	DATE	DATE	DATE
SCALE	1"=50'		DWG. NO.	C-3





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CAD GENERATED DWG

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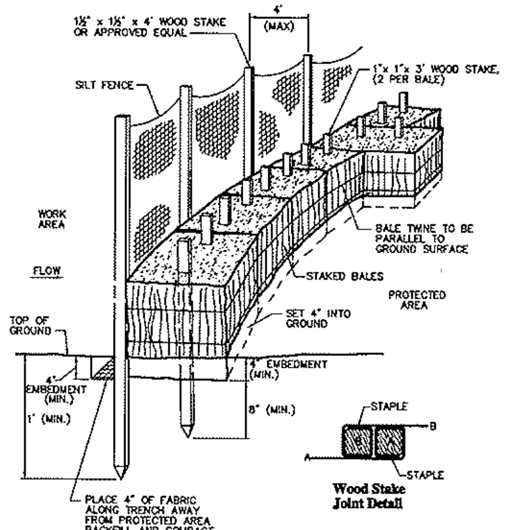
FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE **Grading, Drainage & Utility Plan**
Rood Avenue Substation
Windsor, Connecticut

BY	VHB	CHKD		APP		APP	
DATE	05/23/07	DATE		DATE		DATE	
SCALE	1" = 50'			DWG. NO.		C-4	

NO.	DATE	REVISIONS	BY	CHK	APP	APP
1.	05/30/07	REVISIONS				

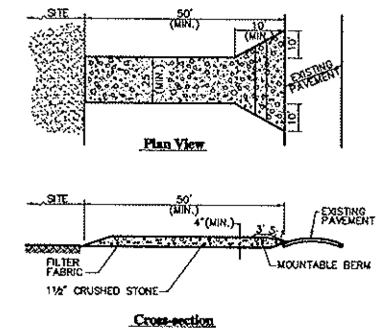


Note:

PLACE ONE HAY BALE PERPENDICULAR ALONG HAY BALE BARRIER (100' O.C.).

Silt Fence / Hay Bale Barrier (Embedded) 6/03

N.T.S. Source: VHB LD_654

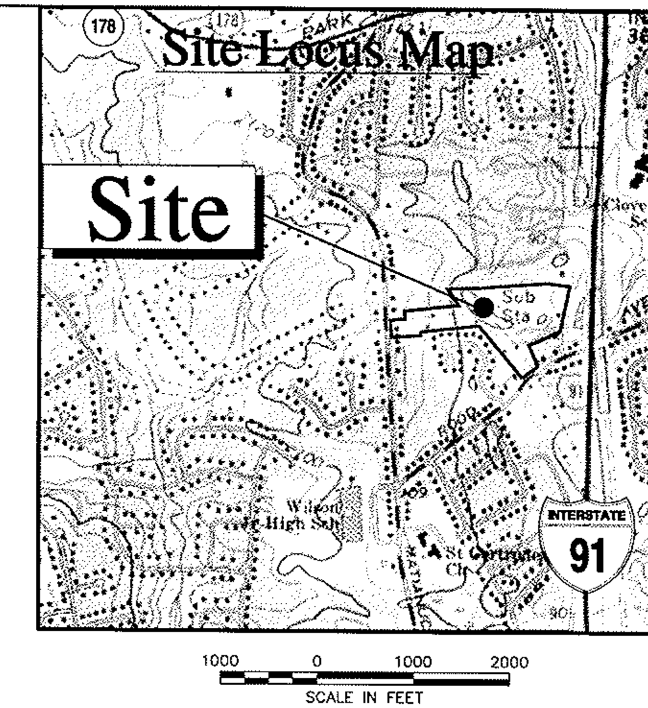


Notes:

1. ENTRANCE WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.
3. STABILIZED CONSTRUCTION EXIT SHALL BE REMOVED PRIOR TO FINAL FINISH MATERIALS BEING INSTALLED.

Stabilized Construction Exit 6/03

N.T.S. Source: VHB LD_682



Connecticut Light & Power

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PLANS AND SPECIFICATIONS ARE SUBJECT TO REVISIONS PENDING FINAL SITING COUNCIL APPROVAL

PRELIMINARY

CAD GENERATED DWG

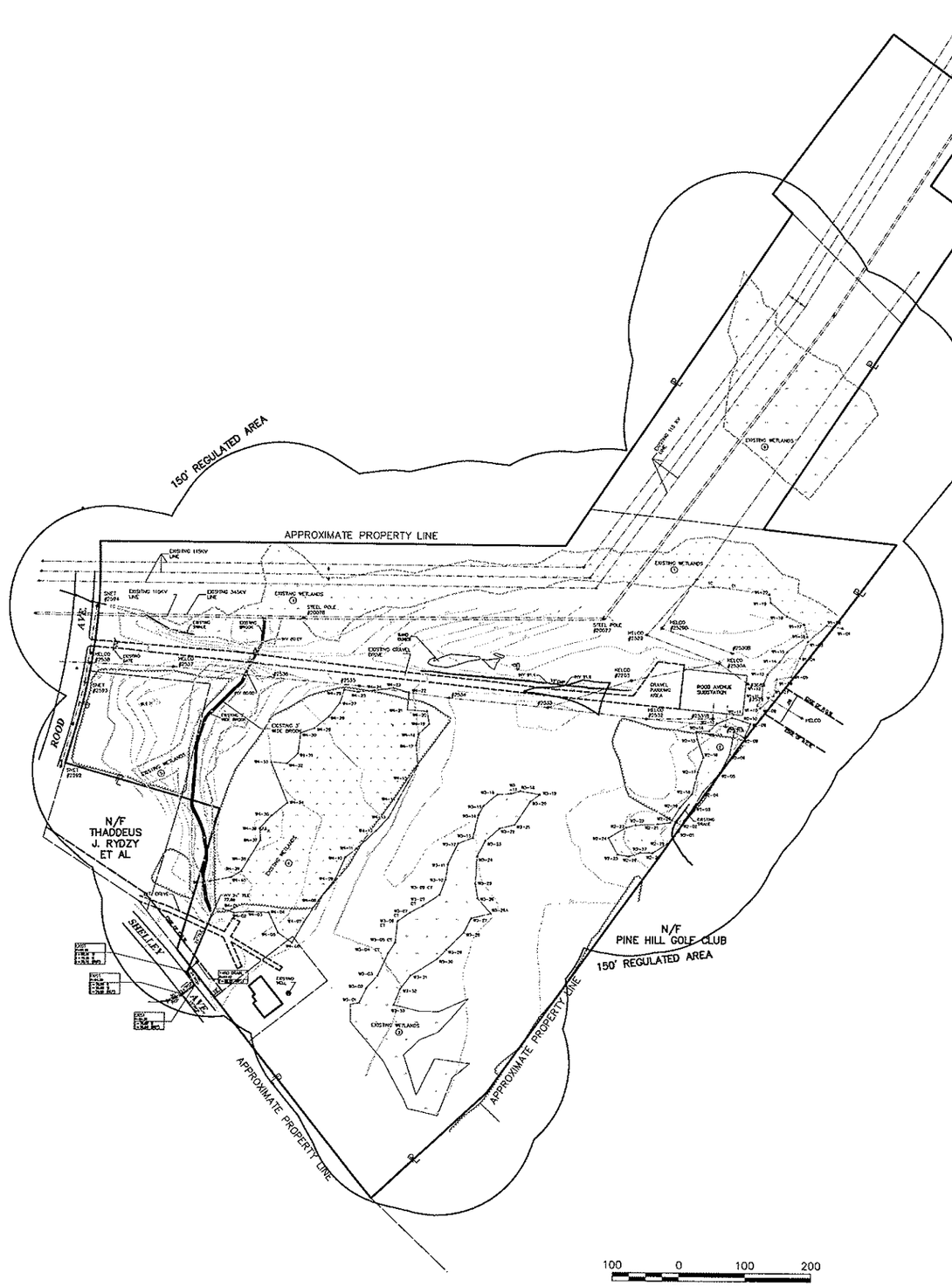
MF	NO	DATE	REVISIONS	BY	CHK	APP	APP
	1.	05/30/07	REVISIONS				

NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE **Site Details**
Rood Avenue Substation
Windsor, Connecticut

BY	VHB	CHKD	APP	APP
DATE	05/23/07	DATE	DATE	DATE
SCALE	NONE		DWG. NO. C-5	



MAP REFERENCES

1. THE HARTFORD ELECTRIC LIGHT CO MAP SHOWING LAND TO BE PURCHASED FROM THE CONNECTICUT POWER COMPANY TOWN OF WINDSOR CONNECTICUT SCALE 1" = 100' JUNE, 1954.

2. THE HARTFORD ELECTRIC COMPANY LAND ON NORTH SIDE OF ROOD ROAD TOWN OF WINDSOR SCALE 1" = 100' DATE JAN., 1955 ENGINEERING DEPT. DRAWN BY T.J.S REFERENCE 13711-C.

3. MAP OF LAND TO BE PURCHASED FROM JOHN KURLICK, JR. & JANET H. KURLICK TOWN OF WINDSOR CONNECTICUT THE HARTFORD ELECTRIC LIGHT CO. GENERAL ENGINEERING DEPARTMENT DRAWN BY T.J.S. CHECKED BY R.L. APPROVED BY R.FIELD SCALE 1" = 100' DATE SEPT. 1958 NO. M102C23.

4. LAND TO BE PURCHASED FROM JOSEPH W. DERENTHAL AND JUSTINE B. DERENTHAL WINDSOR CONN. THE HARTFORD ELECTRIC CO. GENERAL ENGINEERING DEPARTMENT DRAWN BY W.A.M. CHECKED BY R.C.F. APPROVED BY R.C.F. SCALE 1" = 100' DATE MAY 12, 1960 NO. M102E26.

5. HARTFORD-NO. BLOOMFIELD R/W LAND TO BE EXCHANGED WITH WALTER N. KRAVCHUK WINDSOR CONNECTICUT THE HARTFORD ELECTRIC CO. GENERAL ENGINEERING DEPARTMENT DRAWN BY R.H.S. CHECKED BY W.R. APPROVED BY R.C.F. SCALE 1" = 100' DATE JULY, 1960 NO. M102E30.

6. LAND TO BE PURCHASED FROM CECELIA KOLODZIEJ, ET AL WINDSOR CONNECTICUT THE HARTFORD ELECTRIC CO. GENERAL ENGINEERING DEPARTMENT DRAWN BY SLICER APPROVED BY R.C.F. SCALE 1" = 100' DATE APRIL, 1966 NO. B201T08R.

7. HARTFORD TO BLOOMFIELD R/W MAP OF LAND TO BE PURCHASED FROM IRVING P. CLARKE WINDSOR CONN. THE HARTFORD ELECTRIC CO. GENERAL ENGINEERING DEPARTMENT DRAWN BY SLICER APPROVED BY R.C.F. SCALE 1" = 100' DATE MAY, 1967 NO. B201L17R.

8. THE CONNECTICUT LIGHT AND POWER CO. BERLIN, CONN. PLAN SHOWING LAND TO BE CONVEYED TO WILLIAM PETROSKE, ET AL IN THE TOWN OF WINDSOR, CONN. SCALE:1"=40' DATE:MARCH 16, 1988 NO. 50908 PREPARED BY NORTHEAST UTILITIES SERVICE COMPANY SYSTEM REAL ESTATE DEPARTMENT DRAWN BY: J.M. CHECKED BY:E.F.F. PROJECT: WINDSOR SUBSTATION PROJ.NO. 164-3.629 DWG. NO. 50908.

Connecticut Light & Power

The Northeast Utilities System

Existing Conditions Information

1. BASE PLAN: PROPERTY LINE INFORMATION SHOWN IS NOT TO BE CONSTRUED AS HAVING BEEN OBTAINED AS A RESULT OF A FIELD SURVEY BY A SURVEYPR, AND IS SUBJECT TO SUCH CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE.
    - A. DELINEATION OF THE WETLANDS AND PLACEMENT OF THE FLAGS WAS PERFORMED BY: VHB, INC.
    - B. FLAGS MARKING THE WETLANDS WERE LOCATED BY: VHB, INC.
    - C. ALL WETLANDS BOUNDARY NOT ASSOCIATED WITH WETLAND FLAGS WERE DELINEATED BY OTHERS AND REVIEWED BY VHB.
2. TOPOGRAPHY: ELEVATIONS ARE BASED ON CT NAD 83.

PLANS AND SPECIFICATIONS ARE SUBJECT TO REVISIONS PENDING FINAL SITING COUNCIL APPROVAL

PROPERTY LINE INFORMATION WAS COMPILED FROM OTHER MAPS, RECORD RESEARCH OR OTHER SOURCES OF INFORMATION. PROPERTY LINE INFORMATION SHOWN IS NOT TO BE CONSTRUED AS HAVING BEEN OBTAINED AS THE RESULT OF A FIELD SURVEY BY THE SURVEYOR, AND IS SUBJECT TO SUCH CHANGE AS AN ACCURATE FIELD SURVEY MAY DISCLOSE.

CAD GENERATED DWG

MF	NO	DATE	REVISIONS	BY	CHK	APP	APP
	1.	05/30/07	REVISIONS				

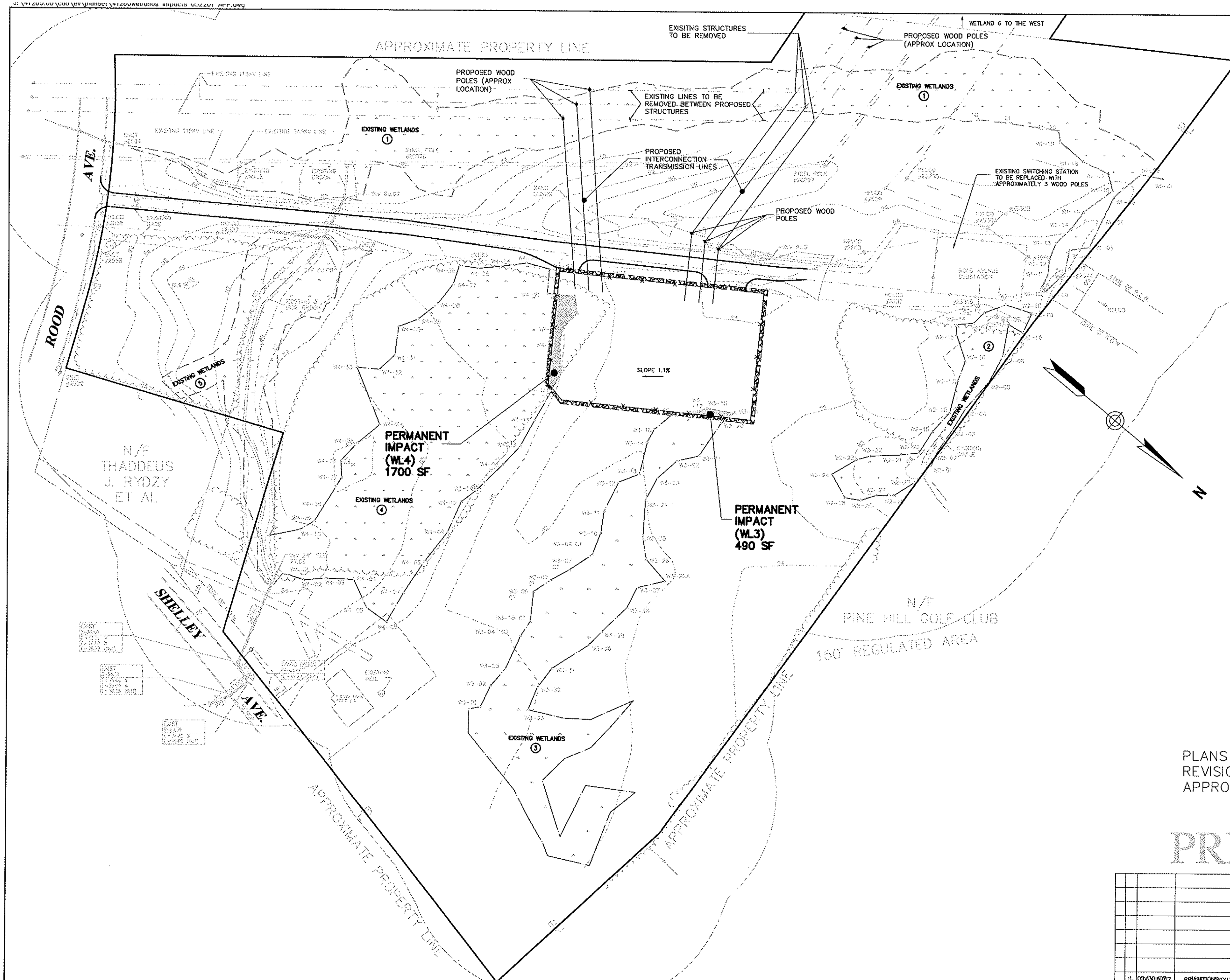
NORTHEAST UTILITIES SERVICE CO.

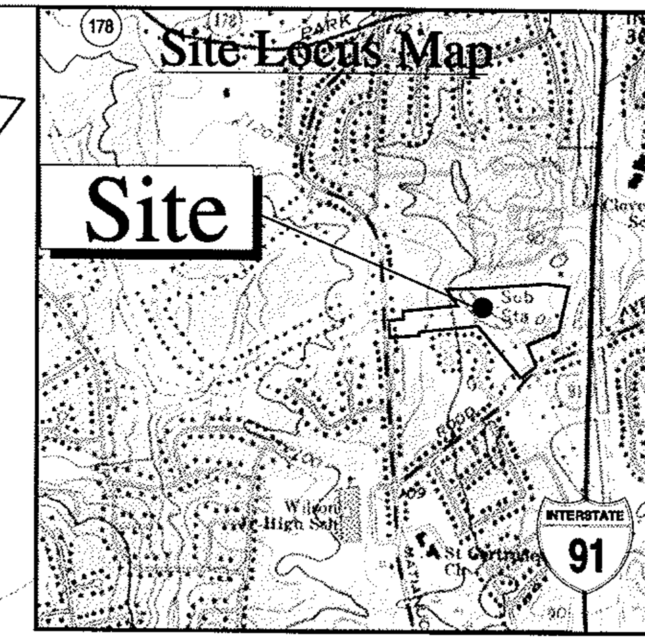
FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE

Exisitng Conditions Plan
Rood Avenue Substation
Windsor, Connecticut

BY VHB	CHKD	APP	APP
DATE 05/23/07	DATE	DATE	DATE
SCALE 1"=100'		DWG. NO. Ex-1	


APPROXIMATE PROPERTY LINE
EXISTING STRUCTURES TO BE REMOVED
WETLAND 6 TO THE WEST
PROPOSED WOOD POLES (APPROX LOCATION)
PROPOSED WOOD POLES (APPROX LOCATION)
EXISTING LINES TO BE REMOVED BETWEEN PROPOSED STRUCTURES
EXISTING WETLANDS
1
PROPOSED INTERCONNECTION TRANSMISSION LINES
EXISTING SWITCHING STATION TO BE REPLACED WITH APPROXIMATELY 3 WOOD POLES
PROPOSED WOOD POLES
ROOD AVE.
EXISTING WETLANDS
5
SLOPE 1.1%
2
PERMANENT IMPACT (WL4) 1700 SF
EXISTING WETLANDS
4
PERMANENT IMPACT (WL3) 490 SF
N/F THADDEUS J. RYDZY ET AL
SHELLEY AVE.
N/F PINE HILL GOLF CLUB
150' REGULATED AREA
EXISTING WETLANDS
3
APPROXIMATE PROPERTY LINE
APPROXIMATE PROPERTY LINE
N



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SCALE IN FEET

Connecticut Light & Power

The Northeast Utilities System

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SCALE IN FEET

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PRELIMINARY

CAD GENERATED DWG

NORTHEAST UTILITIES SERVICE CO.

FOR THE CONNECTICUT LIGHT & POWER COMPANY

TITLE **Wetland Impacts Rood Avenue Substation**
Windsor, Connecticut

BY	VHB	CHKD	APP	APP
DATE	05/23/07	DATE	DATE	DATE
SCALE	1" = 50'		DWG. NO.	WL-1

MF	NO.	DATE	REVISIONS	BY	CHK	APP	APP
	1	05/30/07	REVISED LAYOUT				