COHEN and WOLF P.C.
ATTORNEYS AT LAW

DAVID A. BALL

Please Reply To Bridgeport
E-Mail: dball@cohenandwolf.com

August 11, 2017

Via Electronic Filing and Overnight Mail

Attorney Melanie Bachman,
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: ***Docket No. 461A - Eversource Energy application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a 115-kilovolt (kV) bulk substation located at 290 Railroad Avenue, Greenwich, Connecticut, and two 115-kV underground transmission circuits extending approximately 2.3 miles between the proposed substation and the existing Cos Cob Substation, Greenwich, Connecticut, and related substation improvements. Town of Greenwich Second Set of Interrogatories.***

Dear Attorney Bachman:

I've enclosed one (1) original and fifteen (15) copies of the Town of Greenwich's Second Set of Interrogatories to Eversource Energy.

I certify that a copy has been sent on this date to all participants of record as reflected on the Council's service list.

Please do not hesitate to contact me if you have any questions regarding this filing.

Very truly yours,

David A. Ball

DAB/lcc
Enclosures

cc: Service List

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STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

EVERSOURCE ENERGY APPLICATION FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE, AND OPERATION OF A 115-KILOVOLT (KV) BULK SUBSTATION LOCATED AT 290 RAILROAD AVENUE, GREENWICH, CONNECTICUT, AND TWO 115-KV UNDERGROUND TRANSMISSION CIRCUITS EXTENDING APPROXIMATELY 2.3 MILES BETWEEN THE PROPOSED SUBSTATION AND THE EXISTING COS COB SUBSTATION, GREENWICH, CONNECTICUT, AND RELATED SUBSTATION IMPROVEMENTS.

DOCKET NO. 461A

DATE: AUGUST 11, 2017

SECOND SET OF INTERROGATORIES OF THE TOWN OF GREENWICH

The Town of Greenwich ("Town") directs the following interrogatories to Eversource:

72. For each feeder segment identified in Eversource's Response to Q-TOWN-001, provide the replacement schedule for that feeder segment and the estimated cost of the replacement. For each such feeder segment, identify all of the testing and maintenance protocols and furnish the latest test results for each of the feeders.

73. Reference Eversource's Response to Q-TOWN-001. For each feeder segment for which Eversource identified the Installation Date as "Various," please complete the attached spreadsheet entitled "Existing 27.6-kV Feeders – Greenwich" attached hereto as Exhibit 73 identifying the segments of cables that were installed in each of the following time periods:
    a. On or before December 31, 1959;
    b. Between January 1, 1960 and December 31, 1969 (inclusive);
    c. Between January 1, 1970 and December 31, 1979 (inclusive); Between January 1, 1980 and December 31, 1989 (inclusive); and
    d. On or after January 1, 1990.

74. For each feeder segment identified in response to Eversource's Response to Q-TOWN-001, identify by date and time each and every failure that has occurred on those feeders since 2013. In addition, for each failure, identify the following:
    a. The load on the feeder segment before failure;
    b. The duration the feeder was out of service;
    c. The number of customers who lost power as a result of each failure, and the length of time they were out of service; and
    d. The specific segment of cable of the feeder that failed and the date that that specific segment of cable was installed.

75. For each feeder segment identified in Eversource's Response to Q-TOWN-001, provide the actual load factor for each feeder segment.

76. For each of the loads identified below, identify the 27.6-kV feeder(s) that normally supply it, and the 27.6-kV feeder(s) that are designated as the alternate supply, under both current conditions and after completion of the Alternate Modified Project by completing the spreadsheet attached hereto as Exhibit 76 entitled "Normal and Alternate 27.6-kV Feeder Supplies – Greenwich":

    a. Tomac Substation;
    b. Mianus Substation;
    c. Greenwich Secondary Network;
    d. Prospect Substation;
    e. North Greenwich Substation;
    f. Byram Substation; and
    g. 11 commercial customers referenced in response to Q-TOWN-011. For confidentiality purposes, please list those customers as, "Customer 1," "Customer 2," etc.

77. For each year since 2010, quantify the distribution of the actual peak load (in MVA) among the feeders identified in Eversource's Response to Q-TOWN-001 by completing the spreadsheet attached hereto as Exhibit 77 entitled "Peak Load Distribution on 27.6-kV Feeders – Greenwich."

78. Reference Figure 1 on page 4 of the Pre-Filed Testimony. Please provide a corrected figure of the current Greenwich electrical system by including a line showing the 22E35 feeder and how the 11 commercial customers referenced in response to Q-TOWN-011 are currently fed, and by making all other necessary corrections in order to accurately depict the current Greenwich electrical system.

79. Reference the Town of Greenwich Building Zone Regulations Map attached hereto as Exhibit 79 (the "Greenwich Map").[1] On the Greenwich Map, please identify graphically the sections of Greenwich served primarily by each of the Cos Cob, Byram, North Greenwich, Prospect, Mianus and Tomac Substations under normal operations.

80. Reference Page 104 of the July 25, 2017 hearing transcript. Provide a list of Connecticut municipalities ranked by average customer outage time and identify the 13.2-kV circuits in Greenwich that rank in the top 500 state-wide for average customer outage time.

81. Is it possible to feed 13.2-kV circuits that normally originate in Stamford, from 13.2-kV circuits that normally originate in Greenwich? Please describe the circumstances under which this would be desirable, and for those circuits capable of this transfer, list the circuits and their normal points of origin.

82. Reference Page 60 of the July 25, 2017 hearing transcript. Please identify all of the differences between the proposed fully-enclosed indoor substation and the proposed open-air substation that cause you to conclude that the fully-enclosed indoor design is more "robust."

83. During the 2016 outage of the single, 4.8-kV transformer at the Tomac Substation, it became necessary to employ a temporary mobile transformer. At the time it was needed, where was the temporary mobile transformer stored and how much time transpired from the outage until the temporary unit was put into service?

84. Other than the outage of the single, 4.8-kV transformer at the Tomac Substation described in response to Interrogatory 83, and the mobile transformer used during construction at the North Greenwich Substation, please identify by date, duration, and location each instance since 2000 in which a temporary mobile transformer was used in Greenwich. Please list the circumstances necessitating the use of such a unit.

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[1] The Greenwich Map is also publicly-available as a PDF document entitled "Town Zoning Map" on the Web Site of the Town of Greenwich Planning and Zoning Department. See http://www.greenwichct.org/government/departments/planning_and_zoning/maps/

Respectfully submitted,

Town of Greenwich

By: _____

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EXHIBIT 73

Existing 27.6-kV Feeders - Greenwich

Feeder Designation (per Fig. 1)	Segment	Segment Length (approx.) (feet)		Installation Date		Conductor Size		Predominant Duct Size (inches)	Normal Rating (based on 75% load factor) (MVA)
		Total OH and UG	% UG			OH	UG		
15H59	Tomac - Mianus	10020	57	Pre-1960		2x 350 AL	2x 500	4	29.3
				1960-1969					
				1970-1979					
				1980-1989					
				1990-pres					
11R50	Cos Cob - Mianus	8000	100	Pre-1960		-	2x 500	4**	27.9
				1960-1969					
				1970-1979					
				1980-1989					
				1990-pres					
11R56	Cos Cob - Byram	22000	100	Pre-1960		-	500	4**	15.9
				1960-1969					
				1970-1979					
				1980-1989					
				1990-pres					

** Duct size adjacent to Cos Cob substation is 5 inch
*** Cable de-rated due to sharing same duct bank with the secondary secondary mains and services.

Existing 27.6-kV Feeders - Greenwich

Feeder Designation (per Fig. 1)	Segment	Segment Length (approx.) (feet)		Installation Date		Conductor Size		Predominant Duct Size (inches)	Normal Rating (based on 75% load factor) (MVA)
		Total OH and UG	% UG			OH	UG		
11R56	Tap to Network	2900	100	Pre-1960		-	4/0 AL	4	8.4***
				1960-1969					
				1970-1979					
				1980-1989					
				1990-pres					
11R53	Cos Cob - N. Greenwich	35600	100	Pre-1960		-	2x 500	4**	16.2
				1960-1969					
				1970-1979					
				1980-1989					
				1990-pres					
11R54	Cos Cob - N. Greenwich	37500	5	2012		750 AL	500	4**	16.2
22E36	Prospect - N. Greenwich	49200	1.5	1980		556 AL	2x 4/0 AL	4	32
22E36	Tap to Byram	900	10	1980		336 AL	500	5	23.4
22E35	Prospect - Byram	8500	100	Pre-1960		-	500	4	11.4
				1960-1969					
				1970-1979					
				1980-1989					
				1990-pres					

** Duct size adjacent to Cos Cob substation is 5 inch

*** Cable de-rated due to sharing same duct bank with the secondary secondary mains and services.

Existing 27.6-kV Feeders - Greenwich

Feeder Designation (per Fig. 1)	Segment	Segment Length (approx.) (feet)		Installation Date		Conductor Size		Predominant Duct Size (inches)	Normal Rating (based on 75% load factor) (MVA)
		Total OH and UG	% UG			OH	UG		
11R58	Cos Cob - Prospect	15400	44	Pre-1960		750 AL	2x 500	5	25.6
				1960-1969					
				1970-1979					
				1980-1989					
				1990-pres					
11R58	Tap to Network	4813	100	Pre-1960		-	4/0 AL	4	8.4***
				1960-1969					
				1970-1979					
				1980-1989					
				1990-pres					
11R55	Cos Cob - Prospect	10950	14	2009		750 AL	2x 500	5	32.5
11R55	Tap to Network	4700	100	1980		-	4/0 AL	4	8.4***
11R52	Cos Cob - Prospect	10400	58	2012		750 AL	2x 500	4**	33.5
11R52	Tap to Network	4700	100	2012		-	500	4	12.1***
11R51	Cos Cob - Prospect	10900	54	2012		750 AL	2x 500	4**	24.6

** Duct size adjacent to Cos Cob substation is 5 inch
*** Cable de-rated due to sharing same duct bank with the secondary secondary mains and services.

Existing 27.6-kV Feeders - Greenwich

Feeder Designation (per Fig. 1)	Segment	Segment Length (approx.) (feet)		Installation Date		Conductor Size		Predominant Duct Size (inches)	Normal Rating (based on 75% load factor) (MVA)
		Total OH and UG	% UG			OH	UG		
11R51	Tap to Network	4400	100	Pre-1960		-	4/0 AL	4	8.4***
				1960-1969					
				1970-1979					
				1980-1989					
				1990-pres					

** Duct size adjacent to Cos Cob substation is 5 inch
*** Cable de-rated due to sharing same duct bank with the secondary secondary mains and services.

EXHIBIT 76

Normal and Alternate 27.6-kV Feeder Supplies– Greenwich

Load	27.6-kV Feeder Supply			
	Current		Alternate Modified Project	
	Normal	Alternate	Normal	Alternate
Tomac				
Mianus				
Greenwich Secondary Network				
Prospect				
North Greenwich				
Byram				
Customer 1				
Customer 2				
Customer 3				
Customer 4				
Customer 5				
Customer 6				
Customer 7				
Customer 8				
Customer 9				
Customer 10				
Customer 11				

EXHIBIT 77

Peak Load Distribution on 27.6-kV Feeders - Greenwich

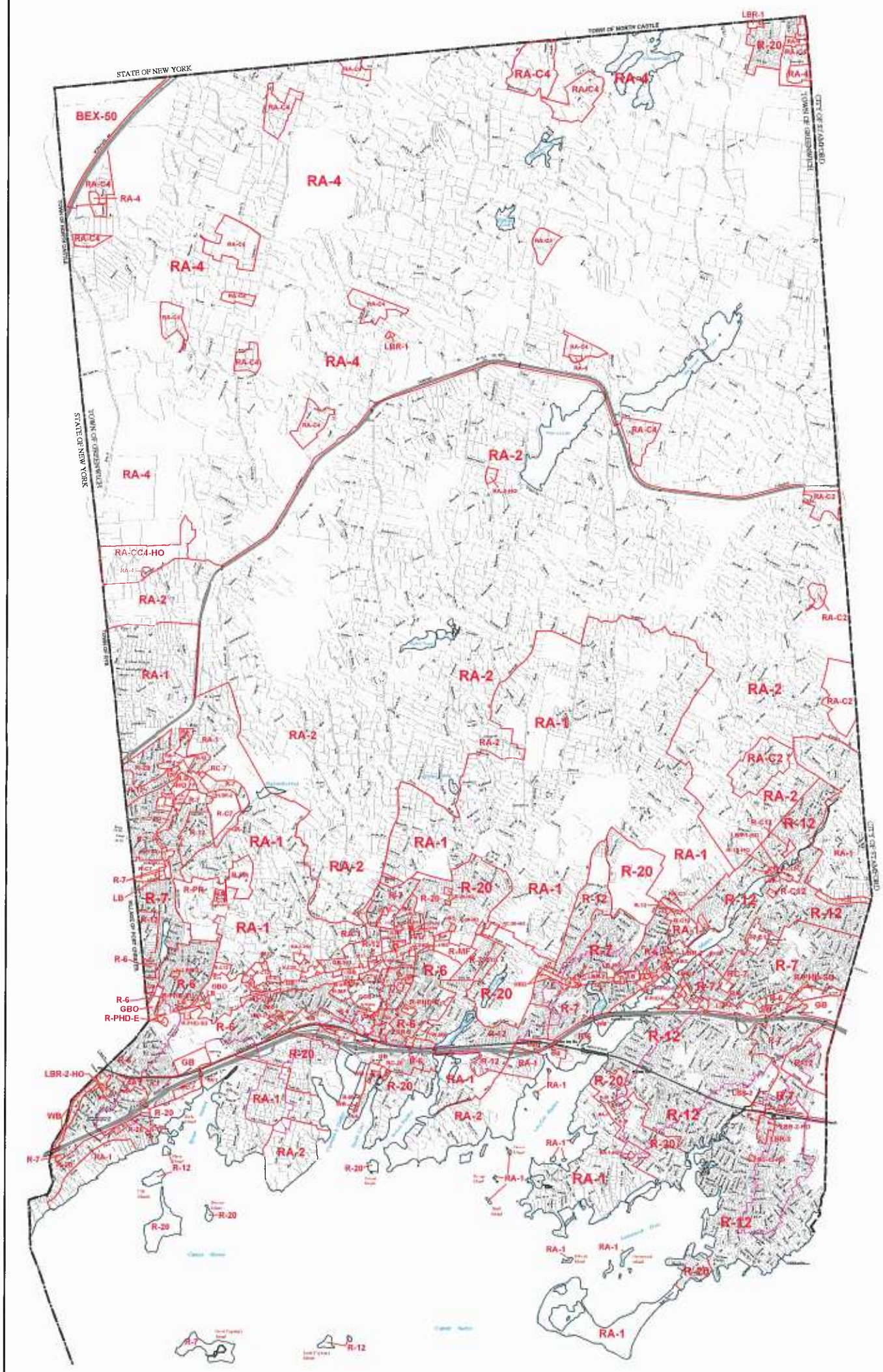
(data in MVA)

Feeder	Segment	Load at time of actual peak, Cos Cob 27.6-kV transformers							
		Year:	2010	2011	2012	2013	2014	2015	2016
		Actual Peak:	119.7	121.8	128.2	130.5	107.7	114.8	115.6
15H59	Tomac – Mianus								
11R50	Cos Cob - Mianus								
11R56	Cos Cob - Byram								
11R56	Tap to Network								
11R53	Cos Cob - N. Greenwich								
11R54	Cos Cob - N. Greenwich								
22E36	Prospect - N. Greenwich								
22E36	Tap to Byram								
22E35	Prospect - Byram								
11R58	Cos Cob - Prospect								
11R58	Tap to Network								
11R55	Cos Cob - Prospect								
11R55	Tap to Network								
11R52	Cos Cob - Prospect								
11R52	Tap to Network								
11R51	Cos Cob - Prospect								
11R51	Tap to Network								

EXHIBIT 79

TOWN OF GREENWICH, CONNECTICUT

BUILDING ZONE REGULATIONS MAP



LEGEND

RESIDENTIAL ZONES

RA-4 Single Family: 4 Acre Min. Lot Area

RA-2 Single Family: 2 Acre Min. Lot Area

RA-1 Single Family: 1 Acre Min. Lot Area

R-20 Single Family: 20,000 Sq. Ft. Min. Lot Area

R-12 Single Family: 12,000 Sq.Ft. Min. Lot Area

R-7 Single Family: 7,500 Sq. Ft. Min. Lot Area

R-6 Single & Two Family: 7,500 Sq. Ft. Min. Lot Area
Three or More Dwelling Units Require Min. Lot Area of 4,200 Sq. Ft. Per Dwelling Allowed by Special Permit

R-MF Single & Two Family: 3,600 Sq. Ft. Min. Lot Area
Three or More Dwelling Units Require Min. Lot Area of 2,400 Sq. Ft. Per Dwelling Allowed by Special Permit

R-C Residential Conservation: Min. Lot Size Varies by Zone

R-CC Residential Conservation Cluster: Min. Lot Size Varies by Zone

R-PR Residential-Planned Residential: Min. Contiguous Acreage of 100 Acres. Max. Permitted Density 0.4 Dwelling Units Per Acre

R-PHD-E Elderly Planned Housing Design: Min. Lot Area of 1,000 Sq. Ft. Per Unit.

R-PHD-N Neighborhood. Min. Lot Area Varies by Unit Type: 1 Bedroom, Lot Area of 1,200 Sq. Ft.; for Each Additional Bedroom an Additional 600 Sq. Ft. of Lot Area.

R-PHD-SU Small Units Min. Lot Area Varies by Unit Type: 1 Room Efficiency, Lot Area of 1,350 Sq. Ft.; 1 Bedroom, Lot Area of 1,350 Sq. Ft.; 2 Bedroom, Lot Area of 2,250 Sq. Ft.

R-PHD-TH Town House Unit–Min. Lot Area of 5,000 Sq. Ft. Per Unit

HRO Historical Residential Office

P Parking

BUSINESS RETAIL

BEX-50 50 Acre Executive Office

CGB Central Greenwich Business

CGBR Central Greenwich Business Retail

GB General Business

GBO General Business–Office

H-1 Hospital Zone

H-2 Hospital Zone

LB Local Business

LBR Local Business Retail 1 & 2:
LBR 1:
Banksville Round Hill
Palmer Hill/Valley Rd. (North Mianus)
LBR 2:
Chickahominy Pemberwick Byram
Davis/Bruce Park Ave Glenville
Cos Cob West Putnam Avenue
East Putnam Avenue
Riverside Ave. Old Greenwich
Valley/River Rd. Ext.
Church/William Sts., Central Greenwich

WB Waterfront Business

OVERLAY ZONES

CCRC Continuing Care Retirement Community Overlay

COZ Coastal Overlay Zone

CGIO Central Greenwich Impact Overlay

FHOZ Flood Hazard Overlay Zone

IND-RE Industrial Re-Use Overlay Zone

HO Historical Overlay Zone

PRIOZ Post Road Impact Overlay Zone Applicable to LB and LBR Zones on East Putnam Avenue

SU Zone for Small Unit Residential Development along Areas of East Putnam Avenue and West Putnam Avenue.

COSTAL OVERLAY ZONE

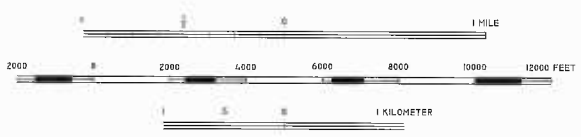
CENTRAL GREENWICH IMPACT OVERLAY ZONE

R-PHD-SU Small Unit Zone

POST ROAD IMPACT OVERLAY ZONE - LB-LBR ZONES

SOURCE: This map depicts the location of zoning district boundaries in the Town of Greenwich Building Zone Regulations and is a reproduction of the Official Zoning Map maintained by the staff of the Town of Greenwich Planning and Zoning Commision. Dimensions of zoning district boundaries, some of which are noted on the Official Zoning Map, are not shown on this reproduction because of space limitations. This map was produced from the Town of Greenwich Geographic Information System(GIS). Property lines are based on the latest property line information available to the Information Technology and the GIS Coordinator. For the most up-to-date information on property lines users of the map should consult the records in the Planning and Zoning Commission office.

SCALE: 1"=2000'



NORTH

LEGEND:

PROPERTY LINES

ZONE LINES

REVISION DATE

CERTIFICATE OF SERVICE

I hereby certify that on this day a copy of the foregoing was delivered by electronic mail to all parties and intervenors of record, as follows:

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