KATIE DELUCA, AICP
DIRECTOR PLANNING AND ZONING/ZONING ENFORCEMENT COORDINATOR/TOWN PLANNER

ROBERT SEALE,
Deputy Director Planning and Zoning/Assistant Town Planner

PATRICK LAROW, AICP, Senior Planner
CINDY TYMINSKI, AICP, Planner II
MAREK KOZIKOWSKI, AICP, Planner II
MARISA ANASTASIO, Applications Coordinator

PLANNING AND ZONING - LAND USE DEPARTMENT

Good evening, Members of the Connecticut Siting Council, Ms. Bachman,

Thank you for this opportunity to speak before you this evening on this very important topic. I am joined by all the members of the Planning and Zoning Commission despite there being a conflict with their own public hearing, also scheduled for this evening. We were able to start that meeting an hour later so please excuse the interruption around 7:30 when we will have to exit as quietly as possible. I should also note that these comments incorporate the input and concerns of town departments, including our Department of Public Works and our Department of Parks and Recreation.

I trust you have copies of the Commission's April 6, 2015 letter that outlines their findings based on two public meetings held in March. The sheer size of the application materials provided by Eversource is daunting but we do hope that you will be able to read the April 6 letter in its entirety as it summarizes many hours of public hearing and public comment from a community extremely concerned about what could potentially happen to the town.

The Municipal Consultation Filing presents technical information concerning project need, transmission line route selection process, etcetera. However, on the subject that the Commission deals with all the time, which is site plans, the technical information was woefully lacking. "Technical information" such as a survey or detailed site plan showing setbacks, building location, building heights, driveway locations, photometric plans, or noise analysis were not provided. This gave us very little to react to and frankly if this was submitted by an applicant it would swiftly be deemed incomplete. We were told that this level of detail is usually only provided at the time of submission to the Siting Council although we still find this information missing.

Having said that we are grateful to Eversource for continuing to work with us in parallel track to these meetings by hiring an architect and providing a new schematic for the building. I am submitting for the record this evening, Minutes from the July 15, 2015 Architectural Review Committee meeting and an article from a local reporter that captures the sentiment of that meeting. What is clear is that Recommendation #1 of the April 6 memo still stands, which states if the Siting Council determines that 290 Railroad Avenue is the appropriate location for the new substation, then it is critical to the community that the site be designed by an architect who considers and strongly respects the prominence of the intersection, the surrounding neighborhood and creates an architectural statement that relates to context, scale and pedestrian use. This issue is of such concern to the Commission and the community that if the design submitted to the Council is not in keeping with this

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recommendation, it is strongly recommend that the Council require the substation to be located in a less traveled and prominent location. They have claimed cost issues with other locations so it behooves them to put the cost into a building that we can also be proud of and point to and say, can you believe that's a utility building?

As a member of the Architectural Review Committee stated, "Spending millions of dollars on the utilitarian aspects of this project and then claiming budget constraints to create a building that is basically a skin, is inappropriate. This facility will be something that the residents of our Town will pass by thousands of times for generations. Covering the building with brick or stone should not be out of the budgetary realm of possibility."

Lastly on this topic, I am aware of at least two renderings by local architects that would be a welcome addition to our community. One of these architects will speak later tonight. The point is there are plenty of examples nationwide of responsible design. It is simply unacceptable to have an eyesore and embarrassment at this intersection.

The site plan area is an area we know well. Siting of transmission lines and varying routes has been a steep learning curve. Frankly we are relying very heavily on your expertise to question Eversource and make the best decision for our Town on what will be least disruptive. What will the Town of Greenwich receive in exchange for Right-Of-Way clearing, trenching/blasting, laying and/or welding pipe, duct bank and vault installation, backfilling, cable installation, adding fluids or gas, and finally site restoration that will be months and months of disruption? The answer we are told will be increased electric capacity and a more reliable electric power distribution system. This is laudable, however, despite many requests we have not seen any data to prove this point. In fact there are many questions regarding data:

1. The Executive Summary states "The Southwest Connecticut region and Greenwich in particular, continues to experience economic growth and, as a result, load has increased at a faster pace than in other parts of Connecticut." Will the Council be requiring actual consumption data as derived from revenue metering from at least the past 10 years to demonstrate that there is in fact a need in our area? Is the load generated by the residential customers or the commercial customers? How do advances in efficiency factor in to the projections? From a zoning standpoint, we are very cognizant of residential and commercial growth and if Eversource sees growth in electrical consumption, we'd like to know from what source and how the data was figured. Does the needs assessments coincide with the needs assessments for other utilities, such as water and sewer?
2. Page E-5 and E-8 of the June 2015 application to the Council include tables dealing with the 2013 actual summer peak loads. 2014 through 2024 are projected loads. Eversource should prove to the Council through load data graphed against temperature for the last 7 years that there is in fact an increase in demand and exactly what that increase is. This data will presumably help answer the question of whether maintenance fixes, such as larger transformers, or large scale capital improvements, such as what they are proposing, are warranted. The footnote states the 2014 was a particularly mild summer and below their original projections. 2015 was a hot summer and presumably this data will be available within the next few weeks. What was the strain on the system this year? Could a greater capacity transformer have mitigated that strain?

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3. Section E.4.2 Initial Determination of Need, refers to the maintenance done over the years to the distribution network. We have received questions from the public about how a new transmission feeder and substation would increase system reliability if the Town's outages are related primarily to storms.
4. Maintenance is at the expense of the utility whereas this large-scale capital project at the expense of rate payers. What maintenance options are there? We have received questions from the public regarding the possible sale of excess energy to Con Edison, given the proximity of the Prospect substation project to the Town's western border. Does the Council consider this given the impact to the Town and rate payers for this capital expense? Could the capacity and reliability issues be solved by putting in greater capacity transformers at Cos Cob?
5. Eversource is proposing two high-pressure, fluid-filled (HPFF) underground transmission lines where each consists of a steel pipe containing three high-voltage conductors. Problems associated with these lines include maintenance issues and possible contamination of surrounding soils and groundwater due to leaking oil. The high-pressure, gas-filled (HPGF) underground transmission line is a variation of the fluid-filled line. In case of a leak or break in the cable system, the nitrogen gas is easier to deal with than the dielectric oil in the surrounding environment. Better yet, could a solid dielectric cable be used instead? We believe this alternative should be evaluated.
6. Eversource has claimed they don't have the width to run underground in their existing easement/ROW. If the Council thinks this route is a possible solution, will Eversource be asked to prove the width issue? We think they should.
7. Main Disadvantages to a High Pressure Fluid Filled Systems as stated in a 2008 application to the CT Council by CL&P for THE CONNECTICUT PORTION OF THE GREATER SPRINGFIELD RELIABILITY PROJECT are as follows:
    a. If a leak occurs in the steel pipe, fluid will leak out into the surrounding soil.
        i. The route that we have been discussing goes through watercourses. Will monitoring systems be used to provide an early indication of the presence of a leak?
    b. The filling fluid is at high pressure, it is stored in large reservoirs situated at various points along the cable route and can flow easily and quickly to the point of any leak.
        i. Where will these reservoirs be stored?
    c. Steel pipes will corrode if they come into contact with water and salts in the soil, just like a car kept at the coast will rust quickly. If the protection over the surface of the pipes is damaged, corrosion is likely to occur and, eventually, the corrosion will travel through the pipe wall and result in a fluid leak. Special equipment is necessary to reduce the risk of corrosion.
        i. How are the pipes monitored?
    d. Cable cores are free to move and slide within the steel pipe. Special design measures must be taken on routes with steep slopes in order to prevent cable damage. The severity of a slope may mean that a HPFF system cannot be used at all.
        i. When will the topographic data and site analyses be provided to the Council and the Town?
    e. Some North American utilities are now installing XLPE systems in preference to HPFF at transmission voltages up to 345kV. If this trend continues the availability of HPFF spares and expertise could become a longer term problem.
        i. What has progressed in the last 7 years? What equipment will be on hand to handle maintenance issues?
8. If the Council finds that high-pressure, fluid-filled (HPFF) pipes are the answer, then the Town would expect a detailed spill control plan be required. The estimate for potential line leakage is apparently about one leak every 25 years and soil contaminated with leaking dielectric oil is classified as a

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hazardous waste. This means that contaminated soils and water would have to be remediated. The Town would also expect a detailed hazard mitigation plan to be put in place in perpetuity.

9. The question of what is the best route is up to the wisdom of the Council and we thank you for your diligence in weighing the pros and cons of each route, as we recognize it will be disruptive no matter what. If the right-of-way is in a residential area, construction hours and the amount of equipment operating simultaneously may need to be limited to reduce noise levels. In commercial or industrial areas, special measures may be needed to keep access to businesses open or to control traffic during rush hours. It is a difficult choice but regardless of the chosen route, we would expect Eversource to follow through with their statement that they will mitigate to the greatest extent feasible the environmental effects of this project. To that end, we would like the Council to require an irrevocable letter of credit requiring daily street cleaning by a third party, paid for by the contractor. We would also ask that the Council require permanent restoration of any disturbed areas. Detailed truck routing plans limiting what streets can and will be accessed by heavy machinery and trucks should be part of the design process. Full curb to curb repaving of damaged areas on this route as determined by the Town and full curb to curb restoration of any ROW used for the route may be required based on the disruption caused by transmission line construction. We would expect full restoration plans signed off on by the Town to include replacement of trees. We would expect that if the route through the Town Park is chosen that any work is conducted between November 1 and April 1 so as to avoid any disruption to the use of the ball field, which is a very precious and scarce resource in Town. If the horizontal directional drilling green route is preferred under I-95 and over to Bruce Park near the end of Kinsman Lane, it is clear the drill CANNOT come up in Indian Field garage facility and disrupt operations. The Indian Field site is not sufficiently large to encompass both the proposed construction and town operations.
10. We would expect that extreme attention be given to location of any Town infrastructure and that the Council will require a contingency plan for immediate repair if there is a disruption to sewer or water mains or other necessary buried infrastructure (e.g. gas, stormwater, other utilities). We would expect that that this will require Eversource to pay for implementation of the plan including the cost of any emergency repairs. We ask that that the Town be party to a review of the Development and Management Plan. The Town is particularly concerned about any impacts to the Old Greenwich Common Force Main, a wastewater force main that conveys a significant portion of the Town's wastewater and which the proposed transmission line must cross at more than one location.
11. There is a clear possibility of conflicts with existing utilities such as storm drains, sanitary sewers, traffic signal conduits, and other utilities, especially in the area of Arch Street, Railroad Avenue and Field Point Road. We would ask that a utility coordination meeting be required with the Town Department of Public Works (DPW) once a final survey and route is mapped. Details regarding actual construction and installation have not been forthcoming as of yet, and the Town has not seen details regarding trenches, vault structures, HDD site setup, etc. – we hope that the Siting Council will consider the impact and the nature of these in its evaluation. References discovered through external research indicate that trenching can require a 50 foot wide area along its length – yet variations must be possible, considering that utilities are often installed in very tight spaces in urban or commercial areas. Again, without such details it is difficult to determine the full impact of this project and the various routing options. The Town hopes the Siting Council is able to verify the analysis provided by Eversource.
12. The Town has projects planned for many of the areas of the proposed routes over the next couple of years. These projects may be installing new underground utilities or requesting that the utility companies relocate some above ground utilities. We ask that open communication with the Town be maintained to coordinate all future improvements.

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13. What is our recourse if something goes wrong? We would expect that Eversource would work with the Town and its Risk Manager to address this issue for the protection of all parties.

In summary, the Town is very grateful to the Council for their diligence in ensuring that there is in fact a **fully documented** need for what is being proposed. Assuming there is a documented need that the Council is diligent in uncovering whether this need can be met through maintenance expenditure as opposed to through a large capital expenditure. If capital expenditure is warranted, we ask that Eversource be required to use solid dielectric cable. If high pressure fluid filled lines are warranted, we ask that the Council require a detailed spill control plan and a detailed hazard mitigation plan to be put in place prior to any start of construction, and in perpetuity given concerns regarding the fluid itself. We also ask that the an irrevocable letter of credit be required for daily street cleaning by a third party, paid for by the contractor and that the Council require permanent restoration of any disturbed areas. As part of the Development and Management Plan we would ask that detailed truck routing plans are outlined limiting what streets can and will be accessed by heavy machinery and trucks and that full curb to curb repaving of damaged areas on this route be done post-construction. We would further ask that extreme attention be given to location of any Town infrastructure and that the Council require a contingency plan for immediate repair if there is a disruption to the sewer or water mains or other utilities. We would expect that this will require Eversource to pay for implementation of the plan including cost of any emergency repairs. We ask that the Town be party to a review of the Development and Management Plan.

We hope the Council will require full restoration plans signed off on by the Town to include replacement of trees. We would expect that if the route through the Town Park is chosen that any work is conducted between Nov 1 and April 1 so as to avoid any disruption to the use of the ball field, which is a very precious and scarce resource in Town.

And lastly, the visual impact of this project will be the new substation. We cannot express how imperative it is to the Town that this site and building be designed with the community in mind. What has been produced based on our suggestions is a far cry from what we would expect as good architecture on this prominent corner. If this site is chosen, it is critical that a significant effort be made by the Eversource team to design a building and site that is complimentary to the character of Greenwich and provides the citizens architecture that we will be proud of for decades to come.

While Eversource has been forthcoming with us on their conceptual plans, to date we do not have the details to comment sufficiently or to fully understand the impacts associated with this project. As this plan proceeds, the Town expects to receive even more detailed information that will be available for our comments and input. We expect to have a role in this project going forward, given its impact to our Town's infrastructure.

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7:00 – 10:15 PM

ARCHITECTURAL REVIEW COMMITTEE

Wednesday, July 15, 2015

ACTION AGENDA

CONE ROOM

7:00 PM

Greenwich Town Hall

Second Floor

101 Field Point Road, Greenwich, CT

ARC MEMBERS PRESENT: Paul Pugliese (chair), Ken Deck (vice-chair), Louis Contadino, James Doyle, Heidi Brake Smith, Mark Strazza.

STAFF MEMBER PRESENT: Cindy Tyminski

EXTERIOR ALTERATION

12. Eversource

Application PLPZ2015 00050 for Exterior Alteration review for the construction of a new substation on a property located at 290 RAILROAD AVENUE, GREENWICH in the GB zone. Proposed use: utility Existing use: retail (Pet Pantry)

DECISION STATUS: RETURN

Proposal:

Changes made to the plans since the Proposal was originally reviewed at the March 4, 2015 meeting:

- **Moved the building 16 to 20 feet back from Railroad Avenue, was previously right on the sidewalk.**
- **Lowered the overall height of the building**
- **Bay door moved to back of the building.**
- **Brick veneer to better match the building next door.**
- **Concrete panels are primary siding component.**

Comments on revised plan:

- **Great improvement that the building was moved and lowered in height. The massing and way it sits on the site is also improved from what was previously presented.**

- The architecture, as presented, is still not acceptable due to the following:
  - Building does not have proportion and integrity that it should or could have.
  - It does not fit in with the character of the neighborhood.
  - Better detailing and materials need to be reviewed.
  - Too much framework (cement panel) compared to brick.
  - They should use real windows that are not transparent because it will allow for liveliness from the reflections.
  - The front door is out of proportion and looks too residential.
  - Need actual architectural drawings and not just renderings.
- This intersection is an entrance to Downtown Greenwich and the elevation along Field Point needs to be addressed as well.
- There are 2 or 3 high quality, large caliper, fastigiate oaks on the property and they should be preserved. Need a landscape plan for entire site for ARC review.
- The accessory structures need to be clad in a similar material to the main structure.
- Wrought iron fences should relate to one another and be of similar size and scale.
- There are many local architectural inspirations to draw from that were presented to Eversource. For example, the building across street was constructed by C L & P (n/k/a/ Eversource) and details from this building should be brought over. 209 Railroad Avenue Extension was another example of appropriate architecture given to Eversource. This is a historic building that was constructed originally to house a power station.

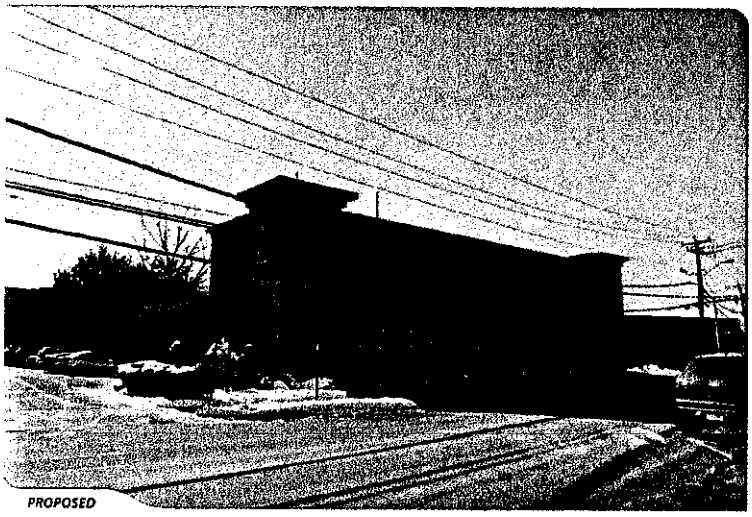
DECISION STATUS (6/3/2015): APPROVED AS SUBMITTED
TO APPROVE the recommendations of the Sign Sub-committee:
Voting to approve: Pugliese, Deck, Contadino, Doyle, Smith and Strazza.

Greenwich Free Press (http://greenwichfreepress.com/uncategorized/architectural-review-committee-revised-eversource-rendering-still-god-awful-44458/)

Architectural Review Committee: Revised Eversource Rendering Still God Awful

By: **GREENWICHFREEPRESS** | July 16, 2015

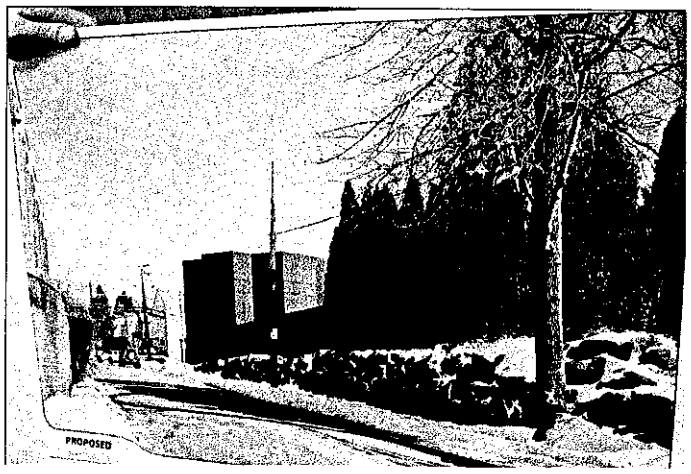
Members of the Architectural Review Committee react to the rendering of Eversource's proposed substation Wednesday night in Town Hall Cone Room. Left to right: Cindy Tyminski, Louis Contadino, Ken Deck, Paul Pugliese, Heidi Smith, Mark Strazza and James Doyle. Credit: Leslie Yager



Eversource hired an architect at the advice of Greenwich's Architectural Review Commission (ARC), but on Wednesday night the architect was nowhere to be

seen.

Wherever he was, his ears must have been ringing because the ARC was not impressed.



Eversource's original rendering of proposed building, which measured 120 ft by 50 ft gray building, with a height of 35 ft. Credit: Leslie Yager

Back in early March, ARC blasted Eversource on the aesthetics of their rendering of the building that will replace the warehouse they sublet to Pet Pantry.

A member of the committee described the building was "an assault on the intersection."

On Wednesday night, Kate Shanley, manager for transmission, said several changes had been made, including setting the building back further from the road to accommodate landscaping. She said the siding was changed to a brick veneer and that there was variation in the roofline.

The building at 330 Railroad Ave that Eversource refers to as their "work center," will become the new home of Richard Granoff Architects. Mr. Granoff said "It is a work of architecture and whatever goes across the street should be inspired by this." Credit: Leslie Yager

Earlier in the evening, the Eversource open-house downstairs in the meeting room, drew an inquisitive crowd.

"They're asking informed questions," said Frank Poirot, the Eversource

spokesperson. "They have a healthy sense of skepticism," he said, adding that if there are any revisions to the proposal, it'll go through the Siting Council.

Also, at the open house, a representative of Eversource said the windows visible on the revised rendering are actually real, but they do not open.

Also, she said the concrete appears pink in the rendering, but won't actually be pink. As for the brick veneer, the bricks are will be real. Lastly, she said no landscaping appears in the rendering because it will be tricky to select plantings whose roots won't interfere with the transmission lines coming into the building. She said the situation was unique and until they research the right plantings, they hesitated to guess on what they might look like.

After the update from Eversource, around 9:30pm, the ARC members politely dispensed a barrage of criticism.

"It looks like an abandoned hotel. And I'm being nice," Paul Pugliese said. He said the small residential-looking door at the front looked out of place.

When Eversource was asked if their architect was present, the answer was no.

"He's a lucky guy," Mr. Pugliesi said.

"He's too embarrassed to be seen," Mr. Deck said.

"It looks like a cartoon of a building," Mr. Contadino observed.

"It wouldn't even fit in a strip mall in Florida," another ARC member said.

Mr. Pugliese shared a photo of an attractive looking utility building in Greenwich at 209 River Road extension. (Across from Louis Restaurant). It was constructed as a power station for the railroad at the turn of the century. The river at the dam used for cooling. Credit: Leslie Yager

Mr. Pugliesi shared a photo blowup of a utility building with large windows and red bricks, as an example of what the ARC had hoped for.

In fact, back in March ARC said Eversource's "work center" at 330 Railroad Ave, built in 1928, had some nice architectural elements an architect could mimic.

Mr. Pugliese said the ARC would like to see proposed landscaping and asked that Eversource to follow up with drawings versus renderings. Another request of Eversource from ARC was to keep in mind that Field Point Road is just as important as Hamilton Ave, which has been the focus of conversation to date.

Eversource's Marcia Wellman and Kate Shanley take the podium at the Architectural Review Committee meeting on Wednesday night. Credit: Leslie Yager

After ARC lambasted Eversource, residents had their turn.

"It looks like a sex shop," Dwight Uedo exclaimed. Mr. Uedo said the rendering reminded him of an Very Intimate Pleasures adult entertainment store he had seen in Hartford.

Mr. Uedo, Nancy Matthews, Joan Stewart Pratt, and Christine Edwards, are part of a group formed along with the owners of Pet Pantry called GASP, short for

Dwight Uedo likened Eversource's rendering to an MVP sex shop in Hartford. In background, Richard Granoff waited to speak. He said he intends to locate the offices of his architectural firm to 330 Railroad Ave, the former home of CL&P. Credit: Leslie Yager

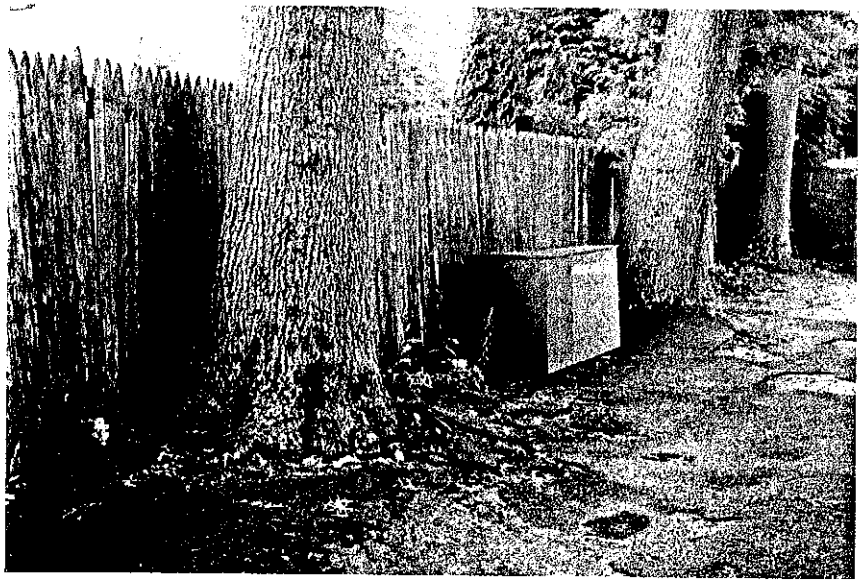
Greenwich for an Alternate Substation Placement.
(http://www.gaspct.com/)

"I am moving my new offices to 330 Railroad Ave," Richard Granoff said. "It's the future Granoff Architects building," he said. "It is a work of architecture and whatever goes across the street should be inspired by this," he said.

And yet, at the end of the day, the exercise may have been futile. Eversource representatives said their the application is in the hands of the Connecticut Siting Council.

If they accept the application, they will schedule a public hearing in Greenwich at the end of the summer. At that hearing, members of the public will have a chance to step up to the podium and voice their opinions to the five-member council.

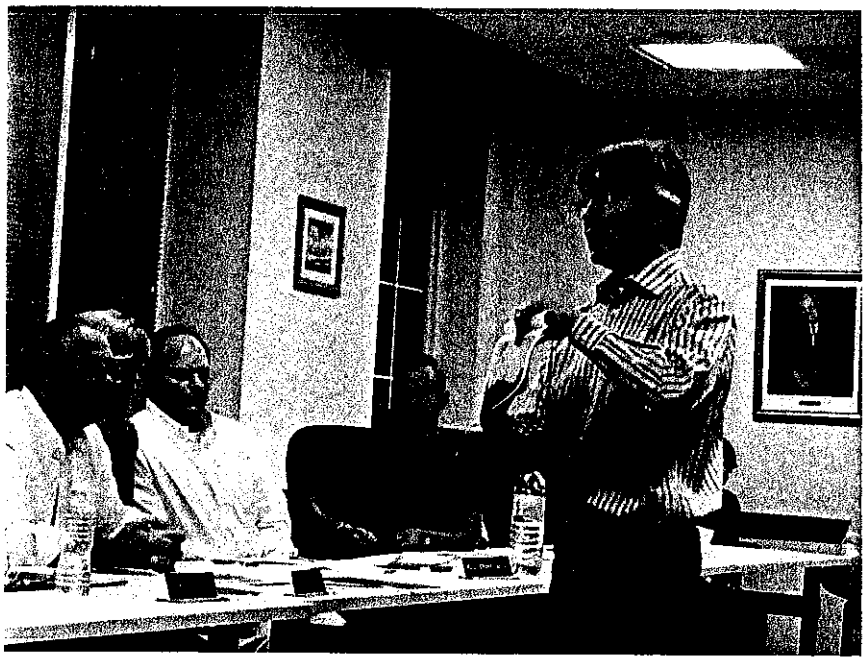
1191 East Putnam Ave was purchased by Pet Pantry. They intend to add a second story to the abandoned restaurant. Credit: Leslie Yager

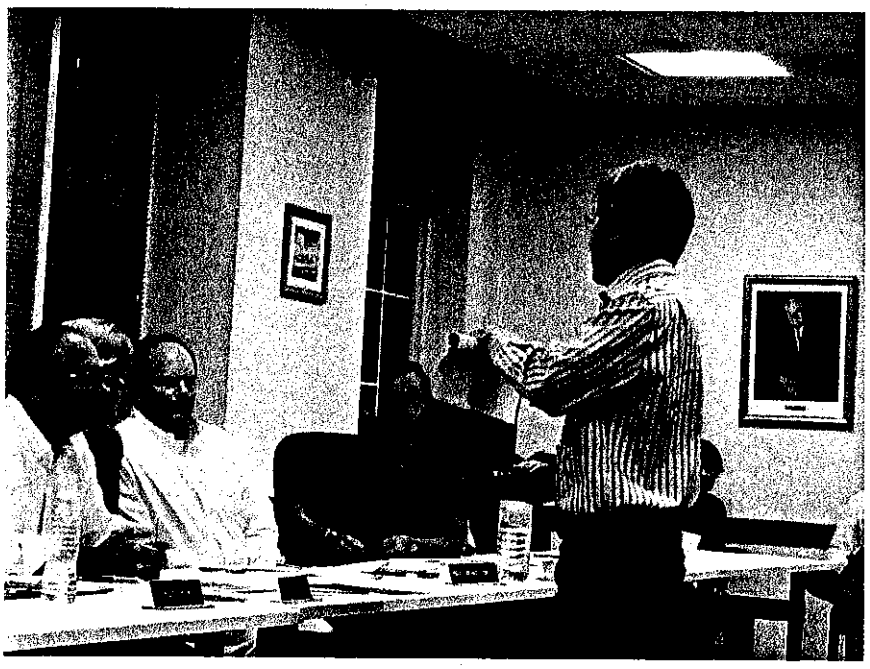


Asphalt pavement in the parking lot of the former restaurant Baang goes right up to the tree trunks. Pet Pantry plans to remove the three trees, which they say are a hazard to the neighbors on Neil Lane. Credit: Leslie Yager

Earlier in the ARC meeting Pet Pantry got the green light from ARC to move forward in their plans to add a second story to their outpost at 1191 East Putnam Ave.

They plan to remove three mature trees near the property line, which they said neighbors on Neil Lane view as a hazard. The owners of Pet Pantry said they plan to replace the landscaping.





See also:

ARC on Eversource Sub Station Rendering: "An Assault on the Intersection" (http://greenwichfreepress.com/news/business/arc-on-eversource-sub-station-rendering-an-assault-on-the-intersection-33960/)

Eversource Shares Revised Rendering & Cable Routes to Proposed Substation (http://greenwichfreepress.com/news/business/eversource-shares-revised-rendering-cable-routes-to-proposed-substation-43102/)

Eversource to Provide Revised Rendering of 290 Railroad Ave Substation (http://greenwichfreepress.com/news/business/eversource-to-provide-revised-rendering-of-proposed-substation-at-290-railroad-ave-41890/)

Tesei on Proposed Eversource Substation: Heinous Looking (http://greenwichfreepress.com/news/business/tesei-on-proposed-eversource-substation-heinous-looking-too-close-to-road-36147/)

Eversource Takes a Licking: Greenwich Residents, P&Z and Pet Pantry Owners Unite Against Electric Utility (http://greenwichfreepress.com/news/business/eversource-takes-a-licking-greenwich-residents-pz-and-pet-pantry-owners-unite-against-electric-utility-34354/)

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SOLTEX
SYNTHETIC OILS & LUBRICANTS OF TEXAS, INC
SOLTEX SOLVENTS, LTD.

DF 100

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations
Revision Date: 02/10/2015 Date of issue: 01/14/2015 Version: 1.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Mixture

Product Name: DF 100

1.2. Intended Use of the Product

No use is specified.

1.3. Name, Address, and Telephone of the Responsible Party

Company

Soltex Inc. (Synthetic Oils & Lubricants of Texas)
3707 FM 1960 W Ste. 560
Houston, TX 77068
(281)-587-0900
soltexinc.com

1.4. Emergency Telephone Number

Emergency Number : (800)-424-9300 (CHEMTREC); (281)-587-0900 (Other Safety Information)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Asp. Tox. 1 H304

Full text of H-phrases: see section 16

2.2. Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US) :

GHS08

Signal Word (GHS-US) : Danger

Hazard Statements (GHS-US) : H304 - May be fatal if swallowed and enters airways.

Precautionary Statements (GHS-US) : P301+P310 - If swallowed: Immediately call a doctor, a POISON CENTER.
P331 - Do NOT induce vomiting.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

2.3. Other Hazards

A significant portion of the mixture consists of a substance capable of producing an aspiration hazard. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure, and even death.

2.4. Unknown Acute Toxicity (GHS-US) No data available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable

3.2. Mixture

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Benzene, mono-C10-13-alkyl derivatives, distillation residues	(CAS No) 84961-70-6	100	Asp. Tox. 1, H304

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Remove contaminated clothing. Drench affected area with water or soap and water for at least 15 minutes. Wash contaminated clothing before reuse. Obtain medical attention if irritation develops or persists.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: May be fatal if swallowed and enters airways.

Inhalation: Overexposure may be irritating to the respiratory system.

Skin Contact: Repeated or prolonged skin contact may cause irritation.

Eye Contact: Direct contact with the eyes is likely irritating.

Ingestion: May be fatal if swallowed and enters airways. Aspiration into the lungs can cause severe pulmonary edema/hemorrhage.

Chronic Symptoms: None expected under normal conditions of use.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable but will support combustion.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Under fire conditions, may produce fumes, smoke, oxides of carbon and hydrocarbons.

Reference to Other Sections

Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray).

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s)

No use is specified.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

8.2. Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.

Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Environmental Exposure Controls: Do not allow the product to be released into the environment.

Consumer Exposure Controls: Do not eat, drink or smoke during use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	:	Liquid
Color, D-1500	:	1
Odor	:	Not available
Odor Threshold	:	Not available
pH	:	Not available
Evaporation Rate	:	Not available
Melting Point	:	Not available
Freezing Point	:	Not available
Boiling Point	:	Not available
Flash Point, COC	:	150 °C (302 °F)
Auto-ignition Temperature	:	Not available
Decomposition Temperature	:	Not available
Flammability (solid, gas)	:	Not available

Lower Flammable Limit	:	Not available
Upper Flammable Limit	:	Not available
Vapor Pressure	:	Not available
Relative Vapor Density at 20 °C	:	Not available
Relative Density	:	Not available
Specific Gravity, 15.6°/15.6°C	:	0.86
Solubility	:	Not available
Partition Coefficient: N-Octanol/Water	:	Not available
Viscosity	:	Not available
Viscosity, Kinematic	:	18 - 24 cSt @ 40 °C
Explosive Properties	:	Product is not explosive
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact
Explosion Data – Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: Hazardous reactions will not occur under normal conditions.

10.2. Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

10.4. Conditions to Avoid: Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

10.5. Incompatible Materials: Strong acids, strong bases, strong oxidizers.

10.6. Hazardous Decomposition Products: Thermal decomposition generates: Carbon oxides (CO, CO_2).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity: Not classified

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not classified

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Teratogenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): Not classified

Aspiration Hazard: May be fatal if swallowed and enters airways.

Symptoms/Injuries After Inhalation: Overexposure may be irritating to the respiratory system.

Symptoms/Injuries After Skin Contact: Repeated or prolonged skin contact may cause irritation.

Symptoms/Injuries After Eye Contact: Direct contact with the eyes is likely irritating.

Symptoms/Injuries After Ingestion: May be fatal if swallowed and enters airways. Aspiration into the lungs can cause severe pulmonary edema/hemorrhage.

Chronic Symptoms: None expected under normal conditions of use.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Benzene, mono-C10-13-alkyl derivatives, distillation residues (84961-70-6)	
LD50 Oral Rat	> 2000 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

No additional information available

12.2. Persistence and Degradability
Not available

12.3. Bioaccumulative Potential
Not available

12.4. Mobility in Soil
Not available

12.5. Other Adverse Effects
Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Sewage Disposal Recommendations: Do not empty into drains; dispose of this material and its container in a safe way. Do not empty into drains. Do not dispose of waste into sewer.

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

14.1. In Accordance with DOT Not regulated for transport

14.2. In Accordance with IMDG Not regulated for transport

14.3. In Accordance with IATA Not regulated for transport

14.4. In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

DF 100	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

Benzene, mono-C10-13-alkyl derivatives, distillation residues (84961-70-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State Regulations
Neither this product nor its chemical components appear on any US state lists.

15.3. Canadian Regulations

DF 100	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

Benzene, mono-C10-13-alkyl derivatives, distillation residues (84961-70-6)
Listed on the Canadian NDSL (Non-Domestic Substances List)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

International Regulations

Benzene, mono-C10-13-alkyl derivatives, distillation residues (84961-70-6)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on the Canadian NDSL (Non-Domestic Substances List) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) Listed on the United States TSCA (Toxic Substances Control Act) inventory

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 02/10/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Asp. Tox. 1	Aspiration hazard Category 1

H304	May be fatal if swallowed and enters airways

Party Responsible for the Preparation of This Document

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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

North America GHS US 2012 & WHMIS 2

Connecticut Light & Power
The Northeast Utilities System

NEW ENGLAND EAST-WEST SOLUTION

reference used

THE CONNECTICUT VALLEY ELECTRIC TRANSMISSION RELIABILITY PROJECTS

APPLICATION TO THE

CONNECTICUT SITING COUNCIL

FOR CERTIFICATES OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR

THE CONNECTICUT PORTION

OF THE GREATER SPRINGFIELD RELIABILITY PROJECT

AND FOR

THE MANCHESTER TO MEEKVILLE JUNCTION CIRCUIT SEPARATION PROJECT

BY

THE CONNECTICUT LIGHT & POWER COMPANY

VOLUME 6 of 11

OCTOBER 2008

reference used.

Underground Electric Transmission Lines

Introduction

This overview contains information about electric transmission lines which are installed underground, rather than overhead on poles or towers. Underground cables have different technical requirements than overhead lines and have different environmental impacts. Due to their different physical, environmental, and construction needs, underground transmission generally costs more and may be more complicated to construct than overhead lines. Issues discussed in this pamphlet include:

- Types of Underground Electric Transmission Cables
- Ancillary Facilities
- Construction and Operation Considerations
- Costs
- Repairs

The design and construction of underground transmission lines differ from overhead lines because of two significant technical challenges that need to be overcome. These are: 1) providing sufficient insulation so that cables can be within inches of grounded material; and 2) dissipating the heat produced during the operation of the electrical cables. Overhead lines are separated from each other and surrounded by air. Open air circulating between and around the conductors cools the wires and dissipates heat very effectively. Air also provides insulation that can recover if there is a flashover.

In contrast, a number of different systems, materials, and construction methods have been used during the last century in order to achieve the necessary insulation and heat dissipation required for undergrounding transmission lines. The first underground transmission line was a 132 kV line constructed in 1927. The cable was fluid-filled and paper insulated. The fluid was necessary to dissipate the heat. For decades, reliability problems continued to be associated with constructing longer cables at higher voltages. The most significant issue was maintenance difficulties. Not until the mid-1960s did the technology advance sufficiently so that a high-voltage 345 kV line could be constructed underground. The lines though were still fluid filled. This caused significant maintenance, contamination, and infrastructure issues. In the 1990s the first solid cable transmission line was constructed more than one mile in length and greater than 230 kV.