

# Request to Modify Site Plan Approval Town Garage Site Improvements

2 Dedham Street  
Dover, Massachusetts



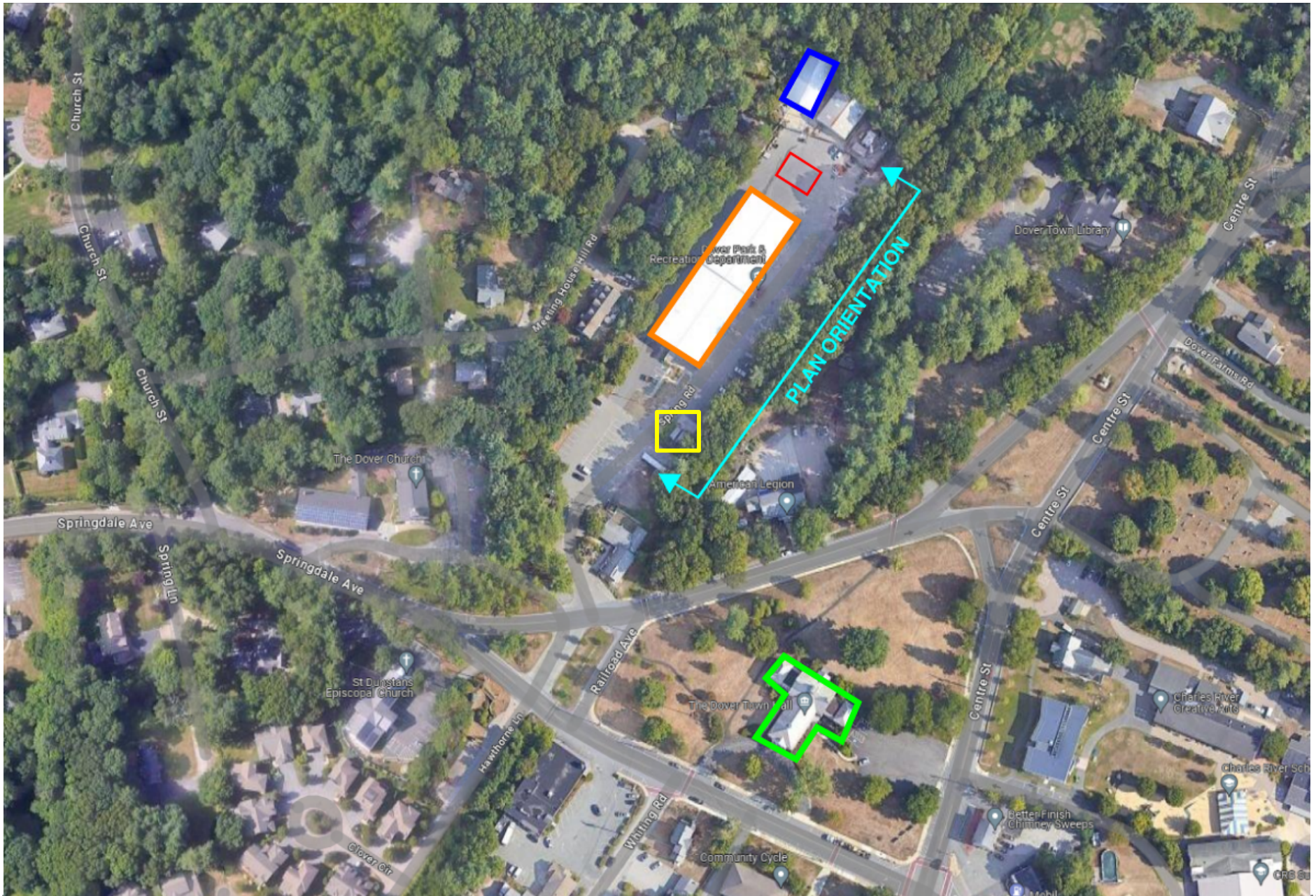
## Planning Board Meeting 01/27/2025





transform your environment

# Dover, MA Town Garage Site Improvements

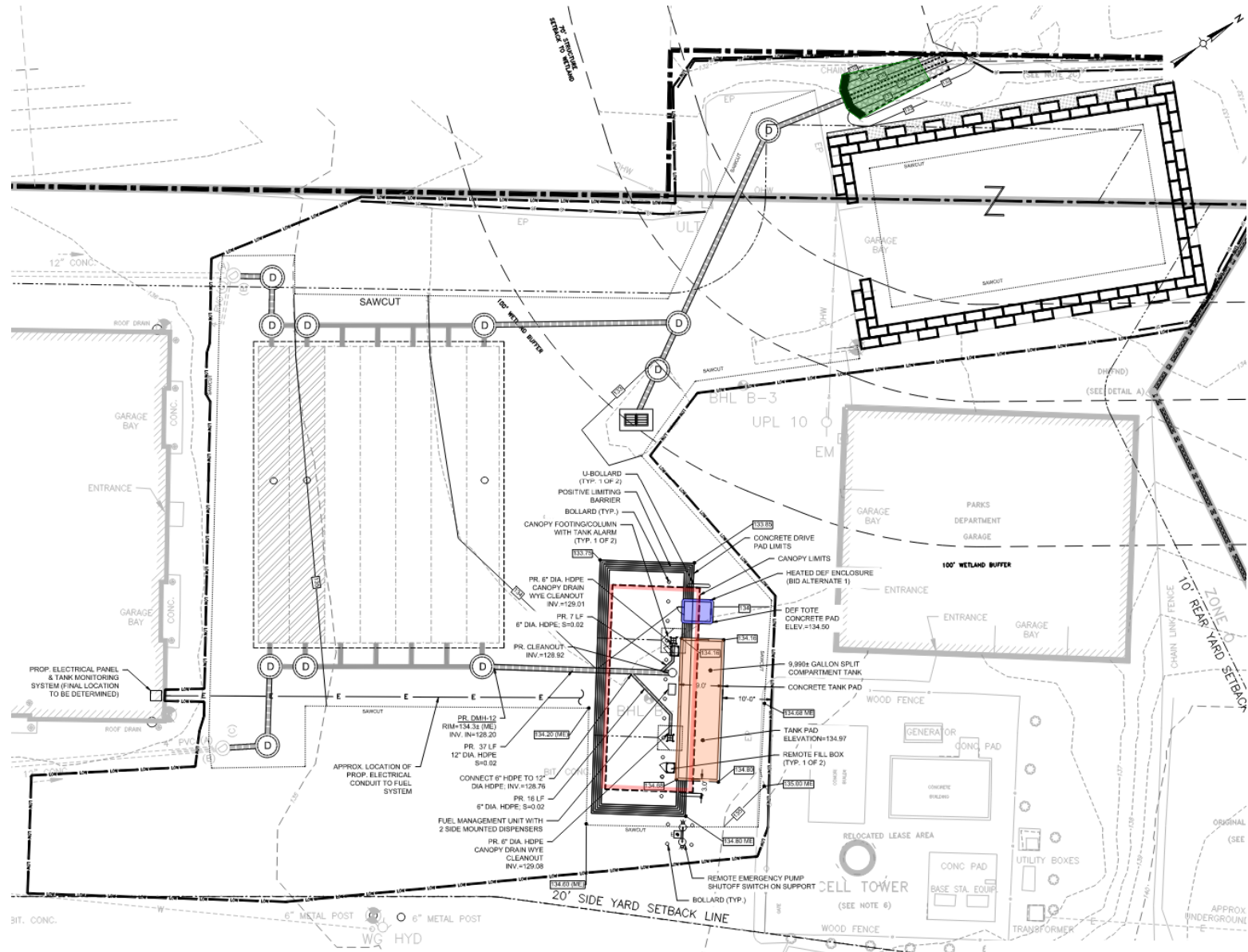




# Dover, MA

## Town Garage Site Improvements

- 9,990± gallon double walled steel split tank (gasoline and diesel fuel)
- Single-side fueling configuration
- Fueling Canopy with storm drainage & recessed lighting
- Concrete fueling pad with bollard protection
- One gasoline/diesel dispenser & fuel management system
- Diesel exhaust fluid tote with heated enclosure and dispenser reel
- Existing fuel system in front of site to be removed after install
- Headwall & riprap apron (requested by Conservation Commission)





- [illegible]

Dover, MA  
**Town Garage Site Improvements**  
**SITING ASSESSMENT**

- Existing Convault tanks installed in 1994; warranty has expired
- Siting options assessed:
  - **1. Replacing fuel system in-place**
    - Current location requires reverse maneuvers (presents safety risk and fuel delivery challenges). This is mentioned in memos from Fire and Police Chiefs.
    - Interruption to on-site fueling operations, added cost associated with temporary fueling solution.
    - Tanks are currently located within AT&T easement and property line structure setback.
  - **2. Front of building**
    - Would block vehicular access to one side of building, require septic system removal, or removal of several parking spaces.
  - **3. Area south of existing fuel tanks**
    - DPW material and equipment storage area. Relocating here would reduce operational efficiency.
    - Area is not paved; adding impervious would exacerbate flooding issues. DPW aims to limit new impervious in accordance with SW BMPs.

Dover, MA  
**Town Garage Site Improvements**  
**SITING ASSESSMENT**

- **3. Area south of existing fuel tanks (continued)**
  - 4% slope → presents pad installation and fueling operation challenges
  - Would require additional geotechnical & environmental exploration
- **4. Rear of site (selected option)**
  - Conforms to zoning and dimensional requirements
  - Already incorporated Conservation Commission feedback to their satisfaction
  - Best option for vehicular access and circulation
  - Rear location keeps critical infrastructure away from public facing location
  - Grades are more forgiving, less steep
  - NFPA requires tanks to be offset 15' from other buildings (20'+ offset is proposed)



Dover, MA  
Town Garage Site Improvements  
**SAFETY MEASURES**

**TANK DESIGN**

UL2085 Rating (Protected Aboveground Tank)

- **Fire Test**
  - 2000-degree furnace to simulated pool fire for 2 hours:
- **Stream Hose Test**
  - Shows tank wont rupture during a fire event when sprayed with water
- **Impacted Test**
  - 12,000 Lbs. object traveling at 10mph
- **Ballistics test**
  - 5 times 100ft away with a .308 caliber rifle. Bullet cannot pierce inner tank.



Dover, MA  
Town Garage Site Improvements  
**SAFETY MEASURES**

## Vapors & Emissions

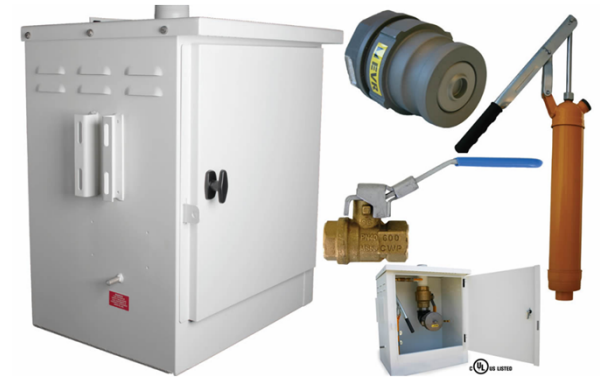
- **Stage I Vapor Recovery System:** returns vapors to fuel delivery truck
- **Certified Pressure/Vacuum Vent Caps:** prevent vapors from escaping tanks, venting allowed only when tank depressurizes
- **Onboard refueling vapor recovery in vehicles:** starting in 1998, vehicles began incorporating this to capture vapor during refueling



Dover, MA  
Town Garage Site Improvements  
**SAFETY MEASURES**

**Additional Safety Measures**

- Continuous electronic leak monitoring system
- Overfill prevention valves
- audible/visual high-level
- In-line leak detection
- 10-gallon remote fill box to contain minor spills
- Camlock poppetted fill port
- Dispenser hoses with shear valves
- Dispensers' emergency shear valves
- Expansion relief valves
- Anti-Siphoning Valve
- A fuel management
- Catch basin mat used during tank fuel deliveries
- Fire extinguishers
- Amenable to add fixed fire suppression





# Thank you.

