

# TOWN OF PLYMOUTH, NEW HAMPSHIRE



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## PLYMOUTH POLICE DEPARTMENT FACILITY CONDITIONS ASSESSMENT

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**AUGUST 8, 2023**

**TTG PROJECT No. 5428**

**The H.L. Turner Group Inc.**

**ARCHITECTS ■ ENGINEERS ■ BUILDING SCIENTISTS**

**TOWN OF PLYMOUTH, NH FACILITIES ASSESSMENTS**

**PLYMOUTH POLICE DEPARTMENT  
334 MAIN STREET  
PLYMOUTH, NH 03264**

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## **1.0 FACILITY ASSESSMENT OVERVIEW & LIMITATIONS**

The Plymouth Police Department Building is a single-story, pre-engineered metal building, located at 334 Main Street in the Town of Plymouth, NH. The building was formerly occupied by the Easter Seals Organization. The Police Department moved from the Plymouth Town Hall to its current facility in the early 1990s. The building's size is approximately 8,616 square feet. The front of the building faces Main Street (east).

According to the Town Assessor's website, the original building was constructed in 1980 and an addition was constructed between 2014-2019. The building is built with a concrete slab-on-grade. The original building had metal siding that has since been removed and the building was refaced with foam insulation, plywood sheathing, and vinyl clapboard siding. The original metal roofing appears to be original to the building. The single-story addition constructed at the back of the building also has vinyl clapboard siding. The roof of the addition continues at the same slope as the original existing building but appears to have been finished with a roll roofing material.

The Plymouth Police Department is comprised of 13 full-time sworn Police Officers making up the Patrol Division and the Detective Division. The station operates 24 hours per day, 7 days per week, 365 days per year. The Plymouth Police Department also runs a 24/7 regional dispatch center for 10 other agencies and handles roughly 50,000 calls for service a year.

**LIMITATIONS:** The H.L. Turner Group Inc. (TTG) has prepared this report for the Town of Plymouth, New Hampshire based on visual observations only and therefore did not involve destructive demolition, scientific testing, or any other tests. The information/data in this report has been provided in general accordance with accepted architectural and engineering consulting practices and TTG makes no warranty, either expressed or implied on the conclusions or cost estimates/opinions of probable costs provided.

## TOWN OF PLYMOUTH, NH FACILITIES ASSESSMENTS

### PLYMOUTH FIRE & RESCUE AND POLICE DEPARTMENT

#### 2.0 EXECUTIVE SUMMARY

##### Fire & Rescue Facilities

The current property and building are inadequate for the current needs of a modern fire and rescue facility. The building site contains less than 1/2 acre and is entirely occupied by the building, pavement, or other infrastructures.

In its' current condition, the existing building requires significant repairs and improvements to correct life safety issues, building code deficiencies, and the necessary replacement or maintenance of numerous items throughout the building.

The following code violations need to be resolved in the Fire & Rescue Facility building as well as the adjacent building containing sleeping quarters and accessory uses for firefighters.

- A fire separation is required between the apparatus bays and any accessory spaces.
- Sleeping quarters require fire and smoke separation construction.
- Sleeping quarters require a primary and a secondary means of egress.
- An eye-washing receptacle adjacent to the apparatus bays is required.
- The hydronic system piping needs to be insulated.
- Mechanical ventilation rates are not currently code compliant.
- There is neither carbon dioxide nor nitrogen dioxide detectors.
- A fire alarm system is required.
- Insufficient emergency egress lighting and exit signs.
- Insufficient quantity of power receptacles and dedicated circuits in the kitchen.
- A convenience receptacle in the dining room is not grounded.
- Bathrooms without windows are required to have mechanical ventilation.
- The buildings are missing emergency egress lighting and exit signs.
- Accessible parking is required to comply with the Americans with Disabilities Act.
- Public entrances, office areas, and restrooms are also required to comply with ADA.

The following operational deficiencies need to be resolved in the Fire & Rescue building.

- A decontamination area with the uniform washing extractor is recommended.
- A separate area for Emergency Medical Services equipment.
- A separate area for storage and recharging self-containing breathing apparatus.
- A separate areas for small repairs, maintenance and a workshop space.
- The quantity of vehicles requiring protective enclosure exceeds what the facility can accommodate.
- There is inadequate work and office space.

The following building items need to be replaced or repaired in the Fire & Rescue building.

- The roof of the main building needs to be replaced.
- The roof insulation needs to be replaced.
- The crack in the exterior masonry wall above one of the apparatus bay doors needs to be repaired.
- The metal siding on the main building needs to be replaced.
- The boiler and temperature control systems need to be replaced.
- The seams in the flue vent for the boiler need to be replaced with fire rated foil tape.
- A majority of the hot water and heating pipes need to be insulated.

The property has very limited capabilities to accommodate building expansions.

The connector between the main fire station building and the adjacent accessory building is being used as an office for the Code Enforcement Officer

### **Police Department Facility**

The building site is inadequate for the current needs of a modern law enforcement facility. The building site contains over 4 acres of land but the majority of the property has a steeply sloped terrain that the current building backs up to. The usable portion of the property is occupied by buildings, pavements, or other infrastructures. There is no room on site for any expansion.

The Plymouth Police Department building is functionally inadequate to serve as a modern law enforcement facility.

In its' current condition, the existing building requires repairs to correct life safety and building code deficiencies and perform the maintenance for numerous items.

The following code violations need to be resolved at the Police Department Facility.

- Accessible parking is required to comply with the Americans with Disabilities Act.
- Door latch mechanisms are required to be operated with a closed fist or loose grip.
- Room signs are not allowed to be installed on door panels.  
(Signs are required to be mounted on wall surfaces adjacent to the latch side of the door).
- Accessible toilets are required to have three compliant grab bars.
- Pipe insulation is required at accessible sinks to protect against contact.
- There is missing emergency egress lighting with battery backup capabilities.
- Visual fire alarm strobe lighting is required in locker rooms, restrooms, and the hallway adjacent to the call center.

The following operational deficiencies need to be resolved at the Police Department Facility.

- There is insufficient on-site parking especially during peak staffing events.
- The roofing on both the original building and the addition is nearing the end of its useful life.
- Some vinyl siding is damaged or has missing fasteners that need to be replaced or corrected.
- The lower portion of the siding along the back of the building has formed moss.
- Adequate drainage at the back of the building is required to mitigate moisture infiltration and structure rot.
- The current staff operations of the Police Department require additional space. (The facility also serves as a Regional Dispatch Center to neighboring communities).
- There is a lack of staff work stations and the building space is currently maximized to its' fullest extent to include the conversion of closets and storage spaces into personnel office space. There is also a lack of adequate police training or a conference area.
- A room directly adjacent to the Sallyport contains active computer and telephone equipment that is susceptible to malfunction due to dust and excessive heat. A stand-alone mini-split mechanical unit has been installed to regulate room temperature and humidity.
- There is a sensitive intoximeter that needs to be stored in a detention cell to mitigate any radio interference that would require recalibration.
- The juvenile detention cell does not maintain the required sight and sound separation from adults.

The following building items need to be replaced or repaired at the Police Department Facility.

- Damaged, loose, worn or stained flooring needs to be replaced.
- Closet areas need finish flooring.
- Flooring transitions between dissimilar floor finishes are required.
- Thresholds are required at intersections of flooring to conceal the exposed concrete floor slab.
- Wall finishes are needed on exposed framing of the walls in the interior of closets.
- Cracked, broken, missing or water-stained ceiling tiles need to be replaced.

### **Conclusion**

The construction of a new Public Safety Building is the most cost-effective option for serving the need for a modern firefighting and police facility. The shared use of common areas used for training, recruitment, locker and shower facilities, will provide the most efficient use of required space in a combined facility. The cost effectiveness of shared utilities, maintenance and operations services will also provide more economic benefits than separate facilities.

The opportunity to expand the services being provided to neighboring communities through a Regional Dispatch Center will result in increased revenue. A new building can also provide the community with spaces for purposes such as voting as an alternative to public school buildings.

Construction of a new Public Safety Facility housing both the Fire and Police Departments is the best long-term solution for the Town of Plymouth.

## **2.0 CIVIL-SITE EVALUATION**

### **OBSERVATIONS**

The site of the Plymouth Police Station is located on the westerly side of US Route 3 (Main Street/Daniel Webster Highway), approximately 1,000 feet (0.2 miles) north of the Route 3/Fairgrounds Road intersection. The site consists of a single parcel of land indicated as tax parcel 208-026 on the Plymouth Assessors Maps, with the principal physical address of 334 Main Street.

The site is occupied by the police station and ancillary improvements, which were originally constructed in 1980, with several additions and remodels completed at later times. The lot is approximately 4.2 acres, 290' of frontage, averages 630' deep and is generally rectangular in configuration. Approximately 200' of frontage on the northerly side of the lot and 1 acre of area has been developed, with the remainder of the parcel being virgin woodlands.

Utilities servicing the property consists of overhead electric, telephone, cable TV, and municipal water and sewer services. Heating fuel is provided to the building via a subsurface propane tank, located behind the fenced-in outdoor Evidence Area.

The front of the site, parking lot, and other areas to the front of the building drain via sheet flow to the highway (US Route 3). A small portion of the parking lot directly in front of the garage door entrance is relatively flat and may be subject to ponding and freezing. There was no observable evidence of rilling and/or washouts in these areas.

The building roof drains to the front and rear of the building from the center ridge. The drainage toward the rear of the building presents issues since the building footprint was created by cutting into the hillside, thereby creating a catchment area, which has no other way to drain other than infiltration. Nevertheless, the soils are very well-drained sands and the potential for localized flooding is minimal. In addition, there is an approximate 3 foot wide strip of asphalt across the back of the building wall which is creating a splash-back effect onto the lower portion of the building wall. This splash-back, coupled with the exterior wall being located only a few inches above the adjacent grade, results in mildew and algae forming on the exterior of the wall. Moss has since formed on the lower portion of the siding and the ensuing moisture is potentially creating a rot problem with the structure.

The parking lot is in good condition, with few cracks but there is not any alligator cracking, rolling, slippage, or tear-out observed.

The lot contains 19 total parking spaces, with one accessible parking space and one adjacent van-accessible cross-hatched aisle. There is insufficient on-site parking especially during peak staffing events.

While the designated accessible space is striped with an international handicap symbol, the accessible parking space and the adjacent accessible aisle do not contain above-ground designated signage per both the Americans with Disabilities Act (ADA) and the NH Barricade Free requirements. Additionally, it appears the pavement in the accessible parking area may be above the maximum 2% grade (¼" per foot) requirement of the ADA.

## **RECOMMENDATIONS**

### **Parking Lot**

The paving adjacent to the accessible spaces needs to be further investigated and verified to ensure the slope complies with the maximum ADA grade requirements.

Install above-ground pole signs placed at both the accessible parking space and the accessible aisle complying the Manual of Uniform Traffic Control Devices (MUTCD) sign designation R7-8 and R7-8a.

Hot-rubber-seal the cracks in the pavement on an annual basis at a minimum or as otherwise periodically needed.

Coating the asphalt with a sealer will extend the life of the pavement and protect it from automotive fluid spills; however, it will also require that all parking striping be replaced, and will limit the use of the parking lot for 1-2 days. Phasing this process will be more conducive daily operations and allow limited use of the parking areas during the sealing process.

### **Drainage**

Remove the asphalt strip behind the building and install a washed crushed stone drip edge, measuring approximately 24 inches wide and 3-to-4 feet deep, with a 4-inch diameter smooth perforated pipe underdrain to carry the water run-off away from the building and daylight at the front of the site.

Pressure wash the rear of the building to remove the mildew and algae.



## **4.0 EXTERIOR SYSTEMS EVALUATION**

### **OBSERVATIONS**

#### **Floor and Foundation**

The floor in the building is a concrete slab-on-grade and the foundation is likely cast-in-place concrete. The thickness of the floor slab, and the size of any reinforcing if any, are unknown.

#### **Building Exterior Walls**

The exterior walls are typical of a pre-engineered metal building, which consist of metal wall girts and an insulated liner. Recently, the exterior walls were renovated which included new vinyl siding, plywood sheathing attached to the metal wall girts, improved insulation, and gypsum board on the inside of the wall girt.

#### **Roof**

The roof framing in the original building is also typical of a pre-engineered metal building and consists of exposed metal roof purlins, steel bents, and an insulation liner. The framing is visible above the suspended ceiling. We were not able to determine the framing of the addition.

The roofing on the original building is a metal roof while the addition consists of an asphalt roll material.

#### **Observed Deficiencies**

The original roof is a metal roof with a spray-on roof covering added at an undetermined date. The existing roof is 33 years old and is at the end of its useful life expectancy.

The roof material on the addition is a peel-and-stick roll roofing. This is a very low-cost roofing material that has a typical life expectancy of 10 years. Assuming the addition was completed around 2016, the roof would have a life expectancy of 3 years.

There are a couple of pieces of vinyl siding that are damaged or have had a fastener fall out. These items should be replaced and/or repaired to prevent any moisture intrusion.

### **RECOMMENDATIONS**

The roofing on both the original building and the addition are nearing the end of their useful life. It is recommended to replace the roofing in the next 3-5 years.

There are a few pieces of the vinyl siding that are damaged or have had fastener failure. These pieces should be replaced / repaired to prevent moisture intrusion into the exterior wall.



Front (East) Elevation.



Side (North) Elevation.



Side (North) and Rear (West) Elevations.



Side (South) Elevation of the Addition.



Rear Elevation.



Side (South) Elevation.



Addition Roofing.



Damaged Siding Adjacent to Front Entry.



Moss Growing and Stained Siding along the Rear of the Building.



Cracked Corner Board.



Pre-Engineered Metal Roof Purlins and Bent.



Pre-Engineered Metal Roof Purlins and Bent.

## **5.0 INTERIOR SYSTEMS EVALUATION**

### **OBSERVATIONS**

#### **Flooring**

The floor in the front entry vestibule and public waiting areas are vinyl composite tiles that are heavily worn. The tiles adjacent to the entry door threshold have loosened from their bond to the concrete floor slab and a number of floor tiles are cracked or missing. The floor baseboard adjacent to the front entry is a vinyl-coved base that is separating from the surface of the gypsum wallboard at the floor near the exterior door.

The interior corridors of the building are vinyl composite tiles that are marginally worn.

Some of the flooring tiles in the offices appear to be of a newer age compared to the interior corridor flooring. There is minimal wear of the flooring evident in these areas.

The flooring in the Records/Parking Administrative Office, Dispatch Coordinator, Deputy Chief's Office, Training Area, and Interview Rooms have a carpeted flooring finish. Some of the carpeted floor finishes appear to be in good condition and some of the carpet is heavily worn. The carpet also appears to have been directly adhered to the concrete floor slab without a carpet pad. The baseboard is a vinyl-coved base that appears to be in good condition.

The carpet floor finish in the exit vestibule leading to the parking area is heavily worn.

The flooring in the dispatch area is a new tile with a new vinyl baseboard that has been recently installed.

The flooring in the kitchenette area adjacent to the dispatch area is a heavily worn flooring tile. The vinyl baseboard appears to be in good condition.

The flooring in the locker areas is a form of sheet goods material that appears to be in good condition.

The tile flooring in the men's restroom is heavily worn and the vinyl baseboard is peeling from the wall surface in some areas. The tile flooring in the accessible public restroom is badly worn and stained.

Some closet areas do not have a permanent floor finish on the concrete floor slab.

There are many instances where there is no transition between different floor finishes, at doorways and wall openings. At some corridor intersections and at some office area openings, the flooring stops on either side of the intersection or wall opening. There is exposed concrete the width of the corridor or opening that appears to be the same thickness as the intersecting



walls. This may be the result of having new openings placed in the wall after the flooring was completed.

## **Walls**

The walls are primarily painted gypsum wallboard that appear to be in good condition. There are some scrapes and marks on the wall finish surfaces, particularly in the public areas, throughout the building.

A former opening in the women's restroom appears to have been infilled and finished with a gypsum wallboard that remains unfinished with exposed wood framing.

There are some closet areas that were built with the walls only extending to the underside of the suspended ceiling system. The interior walls of some of the closets are unfinished.

The concrete masonry wall adjacent to the Armory appears to be separating from the concrete wall at their intersection.

The gypsum wallboard finish in the sallyport is badly worn and the baseboard is missing, particularly adjacent to the overhead vehicle door. There is also evidence of rodent activity within the wall cavity in this area.

## **Ceilings**

The ceilings are primarily comprised of a suspended acoustical tile grid system with recessed light fixtures. The condition of the ceiling is in fair condition. There are a number of cracked, broken, water-stained, and missing tiles in various areas throughout the building.

## **Doors**

The front exterior door assemblies consist of aluminum and glass doors in aluminum frames and appear to be in good condition.

The interior doors are primarily pre-finished wood doors in painted hollow metal frames. The interior doors and frames appear to be in good condition. There is evidence of minimal damage to the face of some of the wood door panels.

There is glazing in some of the interior doors that appear to be in good condition.

There are a few interior closet doors constructed of a plastic composite material. These doors appear to be installed in frames of a similar composite material.

The wood Dutch door at the State Police Office appears damaged where the two door panels join in the middle of the door.

## **Windows**

The windows are solid vinyl units that appear to be in good condition.

### **Observed Program Deficiencies**

#### **Space Needs**

The juvenile detention cell does not maintain the required sight and sound separation from adults.

There is a sensitive intoximeter that needs to be stored in a detention cell to mitigate any radio interference that would require recalibration.

A room directly adjacent to the Sallyport contains active computer and telephone equipment that is susceptible to malfunction due to dust and excessive heat. A stand-alone mini-split mechanical unit has been installed to regulate room temperature and humidity.

The current staff and operations of the Police Department require additional space. There is a lack of staff work stations and the building space is currently maximized to its' fullest extent to include the conversion of closets and storage spaces into personnel office space.

There is a lack of adequate police training or conference areas.

#### **Accessibility**

The accessibility in the public restroom is incomplete. There is insufficient space between the toilet and the sink for a wheelchair. There are missing horizontal grab bars at the back wall and side wall adjacent to the toilet. The mirror is mounted too high above the floor and the door handle is a cylindrical knob.

The interior door hardware consists of cylindrical handles which do not comply with accessibility requirements.

There is a missing vertical grab bar on the side wall of the accessible toilet stall in the women's restroom.

There is missing insulation on the waste pipe for the accessible sink in the women's restroom.

#### **Interior Room Signs**

The interior room signs are primarily mounted high on the face of the door to the room. Signs are required to be installed on the wall surface adjacent to the door handle side of the door and contain raised and braille characters.

## **RECOMMENDATIONS**

### **Flooring**

Replace the finish flooring and baseboard in the front entry vestibule, public waiting areas, restrooms, and other heavily worn areas.

Replace the finish flooring and baseboard in the remainder of the building over the next five years.

Provide new finish flooring in the closet areas.

Replace the heavily worn carpet and baseboard in the exit vestibule leading to the parking area. Replace the remaining carpet in the building over the next five years.

Provide appropriate flooring transitions or thresholds to conceal exposed concrete floor slab at intersections of flooring materials.

### **Walls**

Patch, repair, and refinish damaged gypsum wallboard surfaces throughout the building.

Complete the finishes for the former opening in the women's restroom that has been in-filled.

Provide wall finishes on the exposed framing of the walls in the interior of closets.

Further investigate and correct the separation of the concrete masonry wall at the intersection with the concrete Armory wall.

### **Ceiling**

Replace all cracked, broken, water-stained, and missing tiles in various areas throughout the building. Further investigate the cause of water-stained ceiling tiles to ensure the cause is rectified.

### **Doors**

Replace damaged pre-finished interior wood doors.

## **Observed Program Deficiencies**

### **Accessibility**

Complete the accessibility of the public restroom. Provide horizontal grab bars at the back wall and side wall adjacent to the toilet in the public restroom. Relocate the mirror so the reflective surface is no greater than 40 inches above the floor. Replace the cylindrical door handle with a lever handle.

Provide a vertical grab bar on the side wall of the accessible toilet stall in the women's restroom.

Provide pipe insulation on the waste pipe for the accessible sink in the women's restroom.

Replace the cylindrical door handles with lever handles.

### **Interior Room Signs**

Replace the interior room signs to be mounted no less than 48 inches and no more than 60 inches above the floor on the wall surface adjacent to the door handle side of the door with signs containing raised and braille characters.

**Flooring**



Entry Vestibule Flooring and Baseboard.





Heavily Worn Flooring Tiles in Public Waiting Area.



Heavily Worn Carpet Floor Finish in Exit Vestibule.



Worn and Stained Flooring Tile in Offices.



Patched Flooring Tiles.



Heavily Worn Flooring Tile and Peeling Vinyl Baseboard in Men's Restroom.



Heavily Worn Flooring Tile in Kitchenette.





Exposed Concrete Floor Slab at Missing Flooring Transitions.



Exposed Concrete Floor Slab at Missing Flooring Transitions.



Missing Flooring Transition.



Not Permanent Floor Finish on Concrete Floor Slab in Closet.

## Walls



Unfinished Interior Closet Walls – Wall Framing Exposed.



Unfinished Infilled Opening in Women's Restroom.



Damaged Wall Finish Surfaces Adjacent to Interview Room Door.



Damaged Gypsum Wallboard and Missing Baseboard at Bottom of Wall in Sallyport.



Concrete Masonry Wall Separating from Adjacent Concrete Wall at Armory.

Ceilings



Water-Stained Ceiling Tiles.





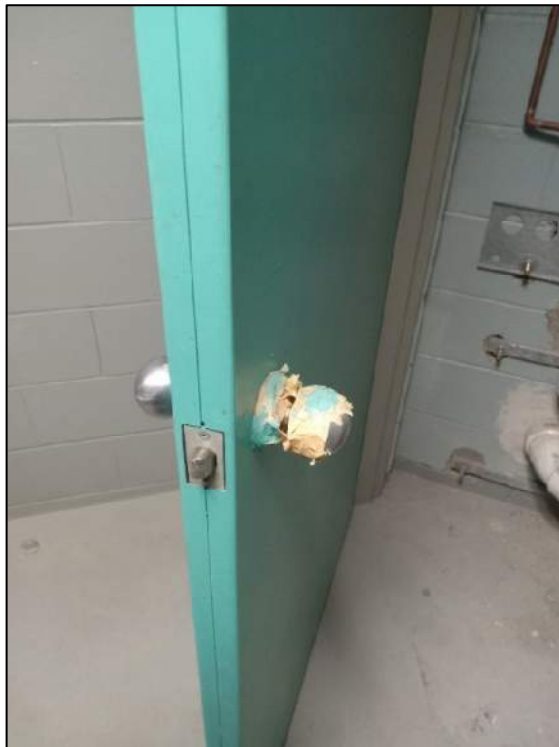
Broken Ceiling Tiles.



## Doors



Damaged Dutch Door at State Police Office.



Damaged Doorknob at Cell Plumbing Access Closet.





Damaged Metal Door Frame at Bottom of Juvenile Cell Door.

**Accessibility**



Missing Vertical Grab Bar at Side Wall of Accessible Toilet Stall in Women's Restroom.



Missing Insulation at Accessible Sink Waste Pipe in Women's Restroom.



Missing Horizontal Grab Bars at Back Wall and Side Wall in Accessible Public Restroom.  
Insufficient Space Between Toilet and Sink for Wheelchair Maneuvering.



Mirror is Mounted too High Above the Floor.

## Interior Room Signs



Misplaced Door Signage Without Accessible Signage.



## **6.0 MECHANICAL & PLUMBING SYSTEMS EVALUATION**

The building is currently heated using a combination of heat pump units and hydronic heaters. The ventilation air system relies on two 80 MBH propane gas-fired forced air furnaces situated in the plenum space. One furnace serves the dispatch room, while the second one is located adjacent to the kitchen in the hallway behind the dispatch room.

The heat pump system consists of eight heads that provide both cooling and heating. Each head is serviced by its own condensing unit located at the rear of the building. Four units are mounted on manufacturer supplied stands, one unit is mounted on sleepers, and two units are mounted on wooden stands. There is a cooling coil in the ductwork that serves the cells and holding area that is serviced by a ground-mounted condensing unit on a concrete pad. Additionally, there is a wall-mounted unit on the side of the building. The system is functioning properly and adequately, meeting the heating and cooling requirements of the spaces.

The hydronic heating system in the cell and holding area is powered by a Burnham boiler, which is effectively meeting the current heating needs of that area.

For the garage area, heating is provided by a ceiling hung Modine Hot Dawg unit heater, which adequately warms the space and has direct venting through the roof.

There are two electric hot water heater tanks installed in the building. One is in the garage area and is indicated to have been installed in 2022. The second is in one of the bathroom groups and appears to have been installed in 2020. The fixtures throughout the building are floor-mounted flush tank water closets and wall-mounted sinks with individual hot and cold controls. It is recommended that these sinks be installed with Lavguards to meet ADA compliance standards.



Existing gas-forced hot air furnace in the plenum space.



Condensing unit for all the interior heat pump units.



Additional condensing units for the office heat pump units on wooden risers.



Modine Hot Dawg unit heater in the garage area.



Hot water heater located in the garage area.





Hot water heater serving the locker room/bathroom spaces.



Boiler located in the cell and holding area.



Bathroom sink requiring Lavguard for ADA compliance.



Service sink located in the garage area.

## **7.0 ELECTRICAL EVALUATION**

### ***Electrical Service***

The electrical service originates from a pole-mounted 1ph transformer and terminates at a service entrance 400A automatic transfer switch with the main disconnect. The transfer switch feeds a 400A, 240/120V, 1ph, 3w main distribution panelboard MDP. MDP feeds multiple subpanels located in the main electric room and in the newer addition. The panelboards are in fair condition but are limited in space for additional breakers.

### ***Lighting & Controls***

The lighting throughout was recently upgraded to LED. The interior lights are controlled by standard manual toggle switches. The exterior building-mounted lights are controlled by fixture-mounted or integral photocells.

### ***Devices & Wiring***

Most of the wiring is concealed in walls and ceilings. There have been no reported issues and the devices are in good condition.

### ***Telecom/Security***

The telephone/data cabling terminates in a floor-mounted network rack in the main electric room. There is a newer card access system and surveillance throughout. Both systems are in good condition.

### ***Emergency***

There is an exterior 30kW 120/240V/1ph natural gas standby generator that backs up the whole service. The generator and transfer switch are in good condition.

The building is missing emergency egress lighting. Although the building is on generator backup, the code requires emergency battery backup for emergency lighting if the generator does not have a separate life safety branch.

### ***Fire Alarm***

The building does have a fire alarm system. The main fire alarm control panel is a Mircom FA-300 Series 12-zoned conventional panel. There is detection throughout the facility; however, there is inadequate notification coverage in some areas.

## **RECOMMENDATIONS**

- The building's main distribution panel should be upgraded for any major renovation or addition.
- Provide occupancy sensor control for areas such as storage rooms, offices, locker rooms, and restrooms.
- Add emergency egress lighting throughout the building consisting of wall-mounted emergency battery units.
- Add fire alarm strobes in locker rooms, restrooms, and the hallway next to the call center.

## **MATRICES**

- Civil-Site Cost Matrix
- Exterior Cost Matrix
- Interior Cost Matrix
- Mechanical & Plumbing Cost Matrix
- Electrical Cost Matrix
- Total Cost Summary Matrix

COMPONENT	OBSERVATION	RECOMMENDATION	REMAINING USEFUL LIFE (Years)				SHORT-TERM (0 to 2 years)	MID-TERM (2 to 7 years)	LONG-TERM (8+ years)
			1-LifeSafety 2-BldgCode 3-Maint						
Handicap Parking Space	Maximum grade may be above the allowable 1/4" per foot requirement of the Americans with Disabilities Act.	Further investigate and verify the slope of paving adjacent to accessible parking areas to ensure the slope complies with the maximum ADA grade requirements	1	0		\$1,000			
Parking Signage	The accessible parking space and the adjacent accessible aisle do not contain above-ground designated signage	Install above-ground pole signs placed at both the accessible parking space and the accessible aisle	2	0		\$800			
Parking Lot Cracks	Some minor cracking of asphalt.	Fill all cracks greater than 0.1 inches (3 mm) with hot rubber crack filler.	3	0		\$2,000			
Seal Parking Lot	Parking lot useful life can be extended with asphalt sealer.	Coat parking lot with asphalt sealer, including restriping all parking spaces and pavement markings.	3	7		\$10,000			
Rear Building Drainage	Potential rot problem created by the asphalt strip acting as a splash pad along the rear of the building with the lack of drainage systems.	Remove the asphalt strip and install a stone drip edge with an underdrain to daylight.	3	0		\$20,000			
Rear Building Algae/Mildew	Mildew and algae have formed on the building wall.	Pressure wash and remove the mildew and algae with an appropriate mildewcide.	3	0		\$2,000			
<b>TOTALS</b>						<b>\$35,800</b>	<b>\$0</b>		

COMPONENT	OBSERVATION	RECOMMENDATION	REMAINING USEFUL LIFE (Years)			SHORT-TERM (0 to 2 years)	MID-TERM (2 to 7 years)	LONG-TERM (8+ years)
			1-LifeSafety 2-BldgCode 3-Maint					
Metal Roofing	The metal roofing has had a spray-on coating but is nearing the end of its life expectancy.	Replace the roofing.	3	3	\$0	\$132,000		
Roll Roofing	The roll roofing is in good to fair condition but is nearing the end of its life expectancy.	Replace the roofing with metal roofing.	3	3	\$0	\$18,000		
Vinyl Siding	There are a few broken/damaged pieces of siding that should be repaired or replaced.	Repair or replace the siding.	3	1	\$2,500			
<b>TOTALS</b>					<b>\$2,500</b>	<b>\$150,000</b>	<b>\$0</b>	

COMPONENT	OBSERVATION	RECOMMENDATION	REMAINING USEFUL LIFE (Years)			SHORT-TERM (0 to 2 years)	MID-TERM (2 to 7 years)	LONG-TERM (8+ years)
			1-LifeSafety	2-BldgCode	3-Maint			
<b>FLOORING</b>	The tile flooring in the Front Entry Vestibule and Public Waiting Areas are heavily worn. Loose, cracked or missing	Replace the finish flooring and baseboard in the Front Entry Vestibule, Public Waiting Areas, Restrooms, and other heavily worn areas	3	0	\$12,000			
	The interior corridors of the building are vinyl composite tiles that are marginally worn and some of the carpet flooring in the Office Areas are heavily worn	Replace the finish flooring and baseboard in the remainder of the building over the next 5 years	3	5	\$0	\$77,400		
	Some Closet Areas do not have a permanent floor finish on the concrete floor slab	Provide new finish flooring in the Closet Areas	3	0	\$9,000			
	The carpet floor finish in the exit vestibule leading to the parking area is heavily worn	Replace the heavily worn carpet and baseboard in the exit vestibule leading to the parking area	3	0	\$6,000			
	There are many instances where there is no transition between different floor finishes, at doorways and wall openings	Provide appropriate flooring transitions or thresholds to conceal exposed concrete floor slab at intersections of flooring materials	3	0	\$14,000			
	There are some scrapes and marks on the wall finish surfaces, particularly in the public areas, throughout the building	Patch, repair and refinish damaged gypsum wallboard surfaces throughout the building	3	0		\$7,000		
	A former opening in the Women's Restroom appears to have been infilled and finished with gypsum wallboard that remains unfinished	Complete the finishes for the former opening in the Women's restroom that has been infilled	3	0	\$3,500			



COMPONENT	OBSERVATION	RECOMMENDATION	REMAINING USEFUL LIFE (Years)			SHORT-TERM (0 to 2 years)	MID-TERM (2 to 7 years)	LONG-TERM (8+ years)
			1-LifeSafety 2-BldgCode 3-Maint					
	There are some Closet Areas that were built with the walls only extending to the underside of the suspended ceiling system. The interior walls are of some of the Closets are unfinished	Provide wall finishes on the walls in the interior of all Closets	2 & 3	0	\$8,500			
	The concrete masonry wall appears to be separating from the adjacent concrete wall of the Armory at the corner intersection	Further investigate and correct the separation of the concrete masonry wall at the intersection with the concrete Armory wall	1 & 3	0	\$12,500			
	The gypsum wallboard finish in the Sallyport is badly worn and the baseboard is missing, particularly adjacent to the overhead vehicle door		3	0	\$9,400			
<b>CEILINGS</b>	There are a number of cracked, broken, water-stained and missing tiles in various areas throughout the building	Replace all cracked, broken, water-stained and missing tiles in various areas throughout the building. Further investigate cause of water-stained ceiling tiles to ensure cause is rectified	3	0	\$5,400			
<b>DOORS</b>	There is evidence of minimal damage to the face of some of the pre-finished wood door panels	Replace damaged pre-finished interior wood doors	3	0	\$4,800			
	The wood dutch door at the State Police Office appears damaged where the two door panels join in the middle of the door	Replace damaged pre-finished interior wood dutch doors	3	1	\$1,800			

COMPONENT	OBSERVATION	RECOMMENDATION	REMAINING USEFUL LIFE (Years)			SHORT-TERM (0 to 2 years)	MID-TERM (2 to 7 years)	LONG-TERM (8+ years)
			1-LifeSafety	2-BldgCode	3-Maint			
<b>PROGRAM DEFICIENCIES</b>	The accessibility in the Public Restroom is incomplete	Complete the accessibility of the Public Restroom	2			\$7,500		
	There is a missing vertical grab bar on the side wall of the accessible toilet stall in the Women's Restroom	Provide a vertical grab bar on the side wall of the accessible toilet stall in the Women's Restroom	2			\$3,200		
	The interior door hardware consists of cylindrical handles which do not comply with accessibility requirements	Replace the cylindrical door handles with lever handles	2			\$10,000		
<b>INTERIOR ROOM SIGNS</b>		Replace the interior room signs to be mounted no less than 48 inches and no more than 60 inches above the floor on the wall surface adjacent to the door handle side of the door with signs containing raised and braille characters	2			\$3,500		
		<b>TOTALS</b>				<b>\$111,100</b>	<b>\$84,400</b>	<b>\$0</b>

COMPONENT	OBSERVATION	RECOMMENDATION	1-LifeSafety 2-BldgCode 3-Maint	REMAINING USEFUL LIFE (Years)	SHORT-TERM (0 to 2 years)	MID-TERM (2 to 7 years)	LONG-TERM (8+ years)
Plumbing Accessories	The plumbing fixtures do not currently meet ADA requirements.	Lavguard and ASSE 1070 listed mixing valves should be installed to meet ADA requirements.	2	0	\$4,000		
Domestic Water Heater	The electric domestic water heater appears to be in good working order.	We recommend replacing the domestic water heater when it fails. Electric water heater life depends greatly on the water chemistry of the location where they serve.	3	7		\$2,250	
Gas-Fired Forced Air Furnace	The furnace adjacent to the kitchen area appears to be in working condition but is at end of life.	We recommend replacing this system upon failure.	3	1	\$30,000		
Gas-Fired Boiler	The boiler and all additional accessories are in working condition and is meeting the needs of the hydronic heating		3	5		\$20,000	
Exhaust Fan	The exhaust fan that serves the cells and holding areas is in good condition.		3	5		\$8,000	
		<b>TOTALS</b>			<b>\$34,000</b>	<b>\$30,250</b>	

COMPONENT	OBSERVATION	RECOMMENDATION	REMAINING USEFUL LIFE (Years)				LONG-TERM (8+ years)
			1-LifeSafety 2-BldgCode 3-Maint	SHORT-TERM (0 to 2 years)	MID-TERM (2 to 7 years)		
Electrical Service & Distribution Equipment	400A, 120/240V/1PH (5) panels manufactured by Square D. Main electric room panels are older and in fair condition. There is a newer Square D panel that serves the addition and is in good condition. There are a few tandem circuit breakers being used which indicates no spare space for future loads.	Upgrade main distribution panel for any major renovation/addition.	2	10	\$50,000		
Lighting & Controls	Lighting recently upgraded to LED. Interior lights controlled by standard manual toggle switches. Exterior building mounted lights controlled by fixture mounted or integral photocells.	Provide occupancy sensor control for areas such as storage rooms, offices, locker rooms and restrooms.	2	5	\$20,000		
Devices & Wiring	Adequate coverage. No issues.	None					
Telecom / Security	Network rack located in main electric room. Good condition. Card access and surveillance system throughout. Good condition.	None					
Emergency	30kW 120/240V/1PH natural gas standby generator. Good condition. Missing emergency egress lighting. Although the building is on generator backup, the code requires emergency battery backup for emergency lighting.	Add emergency egress lighting that consists of wall-mounted emergency battery units.	1	20	\$15,000		

COMPONENT	OBSERVATION	RECOMMENDATION	1-LifeSafety 2-BldgCode 3-Maint	REMAINING USEFUL LIFE (Years)	SHORT-TERM (0 to 2 years)	MID-TERM (2 to 7 years)	LONG-TERM (8+ years)
Fire Alarm	FACP Mircom FA-300 Series 12-zoned panel. Good condition. Detection throughout. Inadequate notification device coverage in some areas.	Add strobes in locker rooms, restrooms, and the hallway next to the call center.	1	10	\$3,000		
		<b>TOTALS</b>			<b>\$38,000</b>	<b>\$50,000</b>	



## **APPENDICES**

- Site Characteristics
- Site Aerial View
- Tax Map Plan
- Property Tax Card Information
- Flood Map
- Soils Map

## SITE CHARACTERISTICS

The site of the Plymouth Fire Station is located on the northerly side of Highland Street, with frontage spanning approximately 100 feet west of the Langdon Street and approximately 250 feet east of the Emerson Street intersections. The site consists of two adjacent lots indicated as tax parcels 108-111 and 108-110 on the Plymouth Assessors Maps and has the principal physical address of 42 Highland Street.

Lot 108-111 is occupied by the primary firehouse building which was constructed in 1968 and is generally rectangular in geometry with a wide frontage-to-depth ratio. The parcel is entirely occupied by buildings, pavements, or other infrastructure (i.e., generator, Underground Storage Tanks (UST), etc.), and is approximately 0.4 acres in size, as indicated by the Town Geographic Information System (GIS), Tax Assessor's cards, and physical observations.

On-site natural resources consist of a woodland area in the rear of lot 110 with the remainder of the site developed. A review of the NH Natural Heritage Bureau (NHB) Datacheck, Report ID NHB23-1780 for Rare, Threatened and Endangered (RTE) species and natural communities, results in a finding of 'No Known Occurrences'; however, 'no known occurrences' does not mean the absence of RTE species.

On-site soils, as indicated by the Natural Resource Conservation Service (NRCS) National Soils Map for Grafton County NH, primarily consist of Tunbridge-Lyman (90) and Waumbek Loamy Sand (59) complexes. Waumbek soils are generally characterized as loamy sands with overburden very cobbly loam sand, moderately well drained, with low runoff potential, water tables and restrictive features greater than 80 inches in depth, and moderately high rates of transmissivity (Ksat=0.2-6 in/hour). Whereas Tunbridge-Lyman is generally fine sandy loam over shallow bedrock, well-drained, with very low runoff potential, water table depths greater than 80 inches, restrictive feature depths between 20 and 40 inches, and very low to high rates of transmissivity (Ksat=0.0-14.0 in/hour).

Based on the visual inspection, well-drained soil characteristics, and a review of the National Wetlands Inventory (NWI) Maps, there is a low potential for jurisdictional wetlands to be present on-site; however, a site-specific evaluation by a NH Certified Wetland Scientist would need to confirm this.

The NH Department of Environmental Services (NHDES) One Stop Data Mapper lists the site as being outside of any environmental resource zones, including Groundwater Management Zones (GMZ), Designated River Buffers, Groundwater Classification Areas (GA1 or GA2), wellhead protection areas, water supply intakes, public water supply protective areas, Class A/outstanding water resources/surface water with impairments watersheds, chloride impaired areas, or NH Shoreland Protection zones.

Lot 108-110 is generally rectangular in shape with a small frontage to depth ratio typically referred to as a 'bowling alley lot'. The parcel is lightly developed with the majority of lot cover being woods, lawns, or landscaping areas. The parcel is approximately 0.5 acres in size, as indicated by the Town Geographic Information System (GIS), Tax Assessor's cards. The GIS map also indicates that an encroachment exists of an outbuilding extending onto lot 110 via tax parcel 108-116 (land n/f of McLane Rentals, LLC II) with a principal physical address of 1 Edmunds Court.



The site is located in Zone 'X' which are zones that have been determined to be outside the 0.2% (500-year) annual flood chance as indicated on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Map Number 33009C0840E, effective February 20, 2008. With the site being approximately 100 feet above the closest flood zone, Baker River, the potential incident of flooding risk is considered minimal.

A review of the NH Department of Environmental Services (NHDES) One Stop Data Mapper lists no known records of the site containing any hazardous material remediations, regulated Aboveground Storage Tanks (AST) or Underground Storage Tanks (UST), hazardous waste generation, asbestos disposal, environmental monitoring, or local potential contamination.

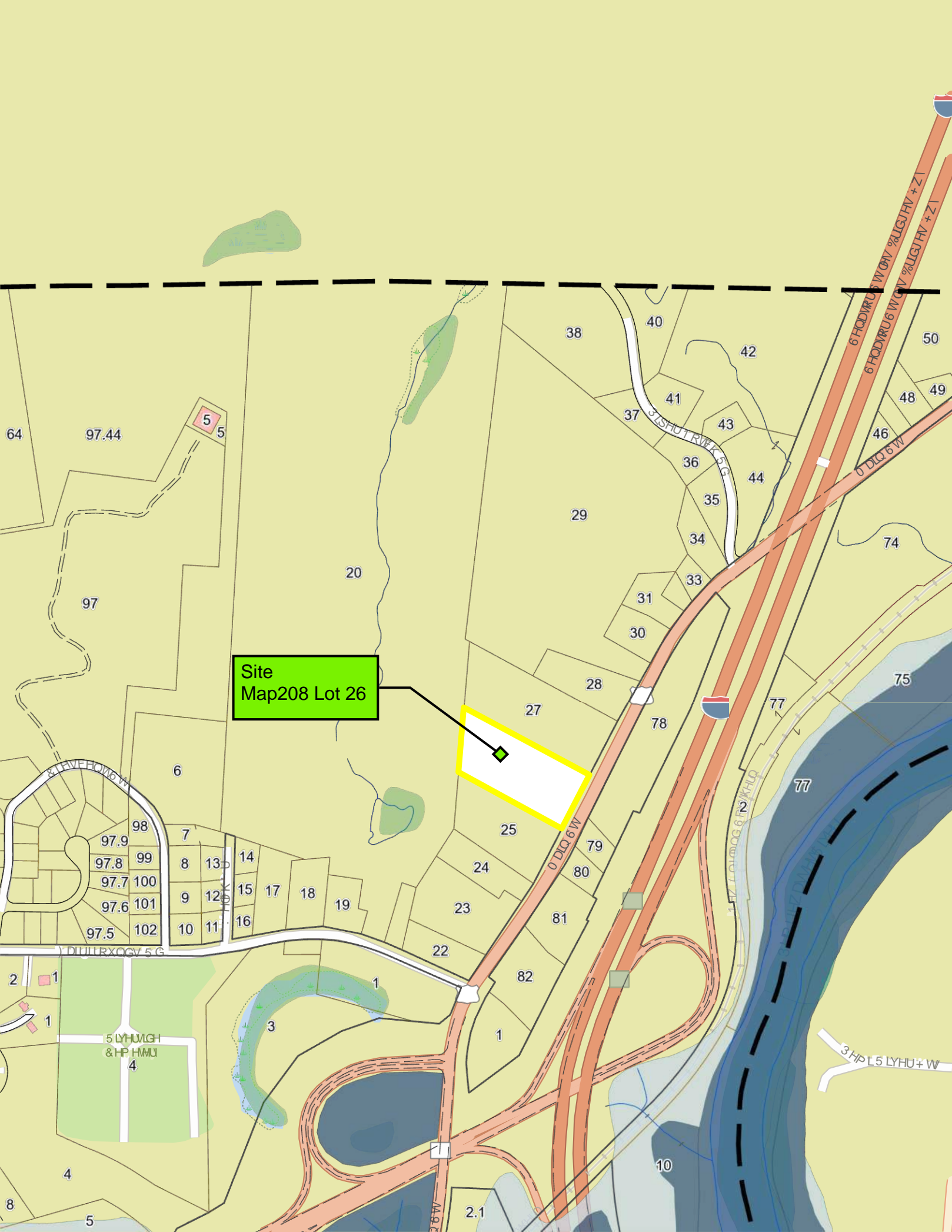
A review of the NHDES PFAS Sampling Map indicates no known records for Poly- and Per-Fluro Alkyl Substances (PFAS) on or within the vicinity of the site; however, only limited sampling has occurred within the local area, and the potential for PFAS still exists.

An aerial photograph showing the Plymouth Police Department and surrounding area. The police department is a large white building with a red 'A' marker on its roof, located in the upper left quadrant. To its right is a larger, multi-story building with a green roof and a parking lot containing several vehicles. A road, Daniel Webster Hwy, runs horizontally across the middle of the image. Below the highway is a large, mostly empty paved area with some scattered vehicles and a large black-roofed building. The bottom of the image shows a highway with a blue and red '93' shield. The entire scene is surrounded by dense green trees.

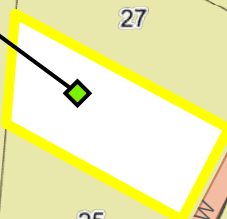
Plymouth Police Department

Daniel Webster Hwy

93



Site  
Map208 Lot 26



# Assessment Field Card

Town of Plymouth, New Hampshire

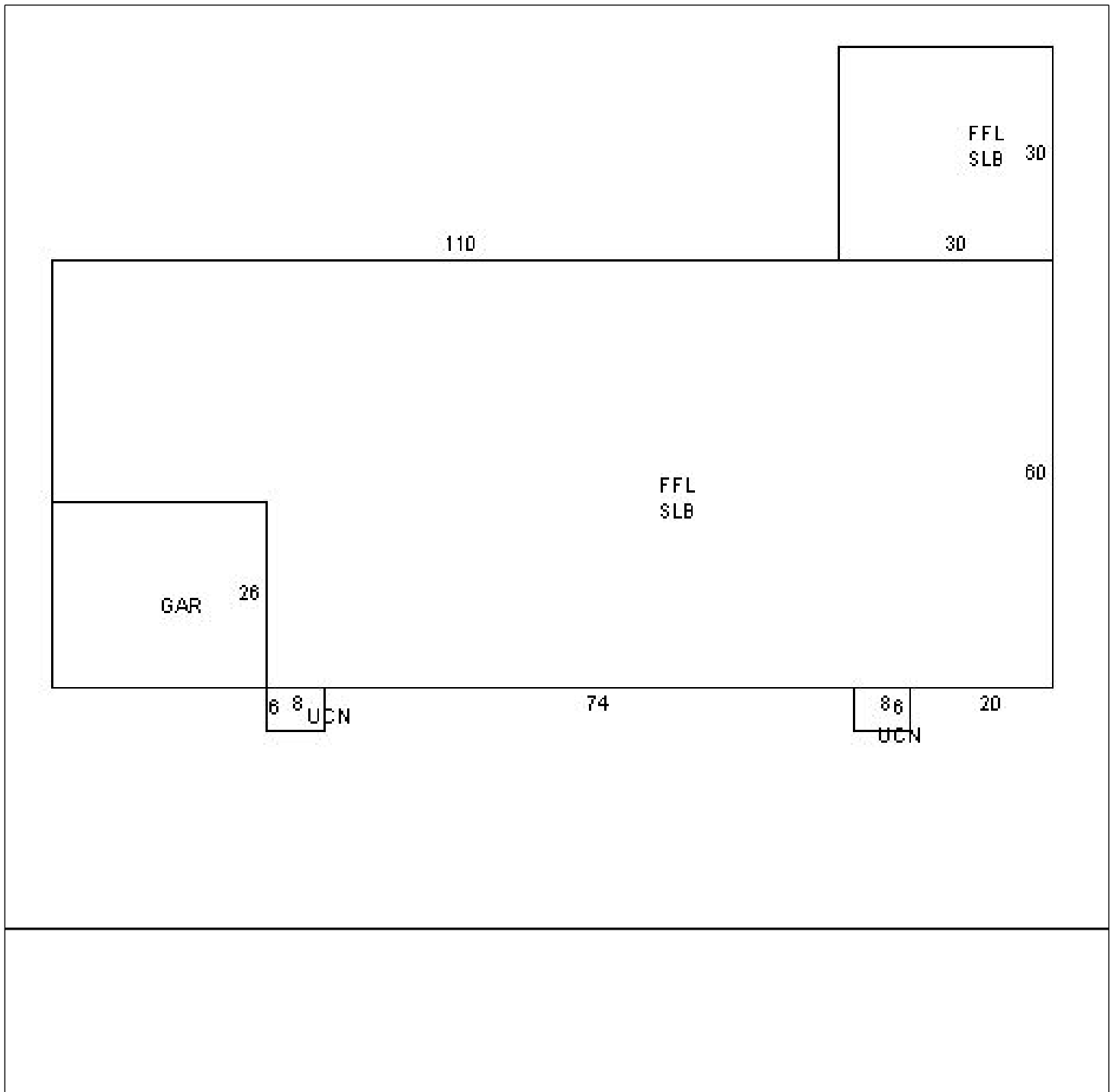


Parcel Information	
	<p><b>Address:</b> 334 MAIN ST  <b>Map-Lot:</b> 209-026-000-000-0000  <b>Patriot Account #:</b> 279  <b>Owner:</b> PLYMOUTH TOWN OF  <b>Co-Owner:</b>  <b>Mailing Address:</b> 6 POST OFFICE SQUARE                        PLYMOUTH, NH 03264</p>
Building Exterior Details	General Information
<p><b>Building Type:</b> OFFICE  <b>Year Built:</b> 1980  <b>Grade:</b> C  <b>Frame Type:</b> STEEL  <b>Living Units:</b> 1  <b>Building Condition:</b> Good  <b>Roof Cover:</b> METAL  <b>Roof Type:</b> FLAT  <b>Exterior Wall Type:</b> CORREG STL  <b>Pool:</b> False</p>	<p><b>Total Acres:</b> 4.18  <b>Land Use Code:</b> 903  <b>Neighborhood Code:</b> 17  <b>Owner Occupied:</b> N  <b>Condo Name:</b>  <b>Condo Unit:</b>  <b>Zone:</b> HC  <b>Utility Code 1:</b> WATE  <b>Utility Code 2:</b> SEWE  <b>Utility Code 3:</b></p>
Building Area	Ownership History
<p><b>Finished Area:</b> 8616 sqft  <b>Basement Area:</b> 0 sqft  <b>Garage Area:</b> 0 sqft  <b>Detached Garage:</b> sqft  <b>Basement Garage:</b> 0 sqft</p>	<p><b>Sale Date:</b> 12:00:00 AM  <b>Sale Price:</b> \$ 0  <b>Nal Description:</b>  <b>Grantor (Seller):</b>  <b>Book/Page:</b></p>
Building Interior	Assessed Value
<p><b>No. Total Rooms:</b> 0  <b>No. Bedrooms:</b> 0  <b>No. Full Baths:</b> 0  <b>No. Half Baths:</b> 4  <b>Bath Rating:</b>  <b>No. Kitchens:</b> 1  <b>Kitchen Rating:</b> AVER  <b>Building Framing:</b> STEEL  <b>Interior Wall Type:</b> DRYWALL  <b>Fireplaces:</b> 0  <b>Solar Hot Water:</b> False  <b>Central Vac:</b> False  <b>Floor Type:</b> LINO/VINYL  <b>Heat Type:</b> FORCED H/A  <b>Heat Fuel:</b> GAS  <b>Percent A/C:</b> 0</p>	<p><b>Assessed Yard Value:</b> \$ 10500  <b>Assessed Land Value:</b> \$ 80600  <b>Assessed Bldg Value:</b> \$628900  <b>Total Assessed Value:</b> \$720000</p> <p><b>Spec. Feat./Yard Items Description (Value)</b>  <b>Item 1:</b> (\$)  <b>Item 2:</b> (\$)  <b>Item 3:</b> (\$)  <b>Item 4:</b> (\$)</p>



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This information is believed to be correct but is subject to change and is not warranted.

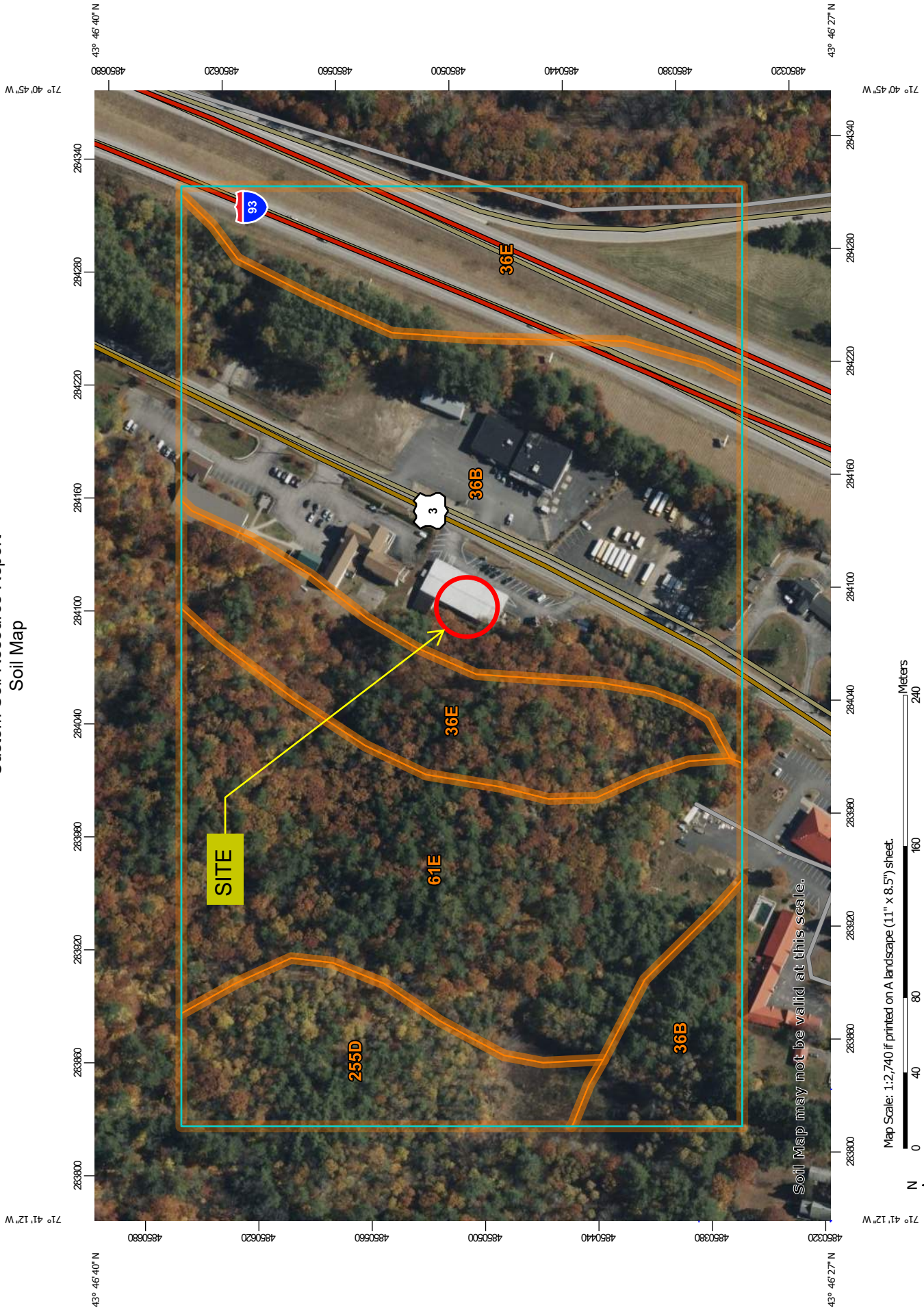


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Custom Soil Resource Report  
Soil Map



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