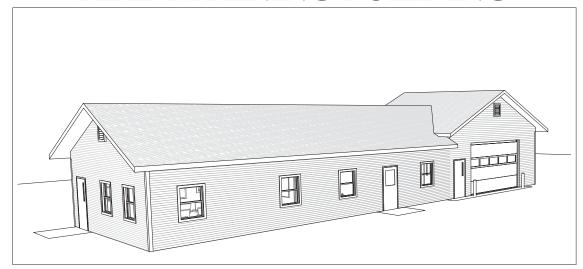
# CITY OF CONCORD FIRE TRAINING BUILDING



## **CONSTRUCTION DOCUMENTS**

1/23/2019

109 OLD TURNPIKE ROAD CONCORD, NH 03301

PROJECT NUMBER: 4808



DRAWING LIST

COVER SHEET

CODE ANALYSIS
CODE REVIEW PLAN
PARTITION TYPES & SPECIFICATION
STRUCTURAL NOTES

DRAWING TITLE

ENLARGED FLOOR PLAN & INTERIOR ELEVATIONS ROOF PLAN & ROOF FRAMING PLAN

TYPICAL WALL SECTION & DETAILS EXTERIOR DOOR & WINDOW DETAILS

SHEET NUMBER

	To an and the second		
	DESIGNED AND ENGINEERED BY:	BUILDING DESIGN CRITERIA:	
	TURNER GROUP  THE H.L. TURNER GROUP Inc.  ABOUTIEST'S - DEBNERER CONSTRUCTION MANAGERS - BUILDING SIGNIFITS 27 LOCKE RAND CONCEION, NEW HAMPBOOK ASSIST FROM AN THE PROPERTY OF THE PROPERTY O	SEE SHEET A02-CODE ANALYSIS	
	STRUCTURAL ENGINEERING THE HL TURNER GROUP INC. T:803.228.1122 F:803.228.1124 AGRIFTCOTURAL THE HL TURNER GROUP INC. MCCHANICAL ENGINEERING SERIO BUILD PLUMBING ENGINEERING DESIGN BUILD ELECTRICAL ENGINEERING DESIGN BUILD	CONSTRUCTED BY:	ARCHITECT OF RECORD:  RICHARD D. PROCTOR HL TURNER GROUP, INC.

#### **Existing Conditions**

The site of the proposed Concord Fire Training Building is located at 109 Old Turnpike Road and the Map/Block/Lot number is 110/6/8/ and is owned by the City of Concord. The site is currently cleared to stumps. The existing chain-link fence divides the site in half. The existing lot is about .14 acres in size and will increase to 1.71 acres with the annexation of 1.57 acres of the 57.45 acre city landfill lot 110/6/3 which is also owned by the City of Concord. The frontage for this site will be roughly 270' along Old Turnpike Road.



Figure 1 Full lot before clearing from above

The main entrance to the site is gated off and currently sits at the front of the property coming from Old Turnpike Road on the left side of the property. The property abuts the city owned transfer station property to the rear and abuts two properties on either side. The left side is divided by a fence and the right side is divided by a driveway.

constructed towards the rear of the parking lot at the west side of the site. A gravel base for a future training structure is going to installed just north of the infiltration basin at the very back of the site. This structure is not part of this project. For site lighting, LED light packs will be attached to the building to illuminate the entry, parking spaces, and garage areas.

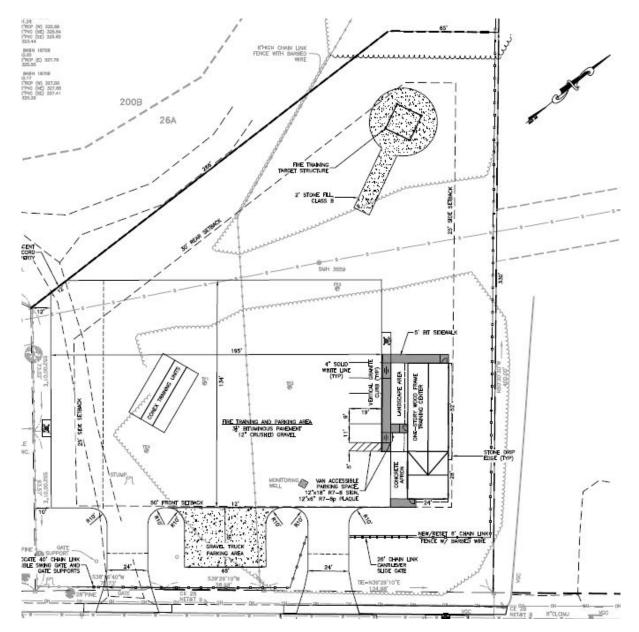


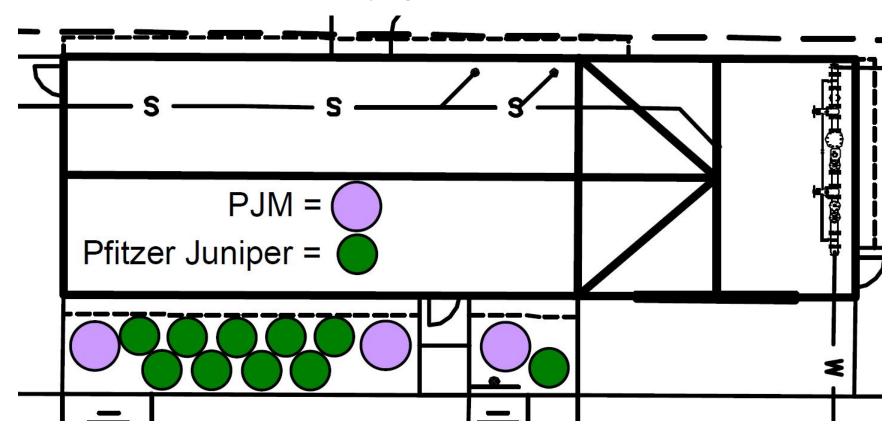
Figure 7 Overview of Site Plan

#### Signage

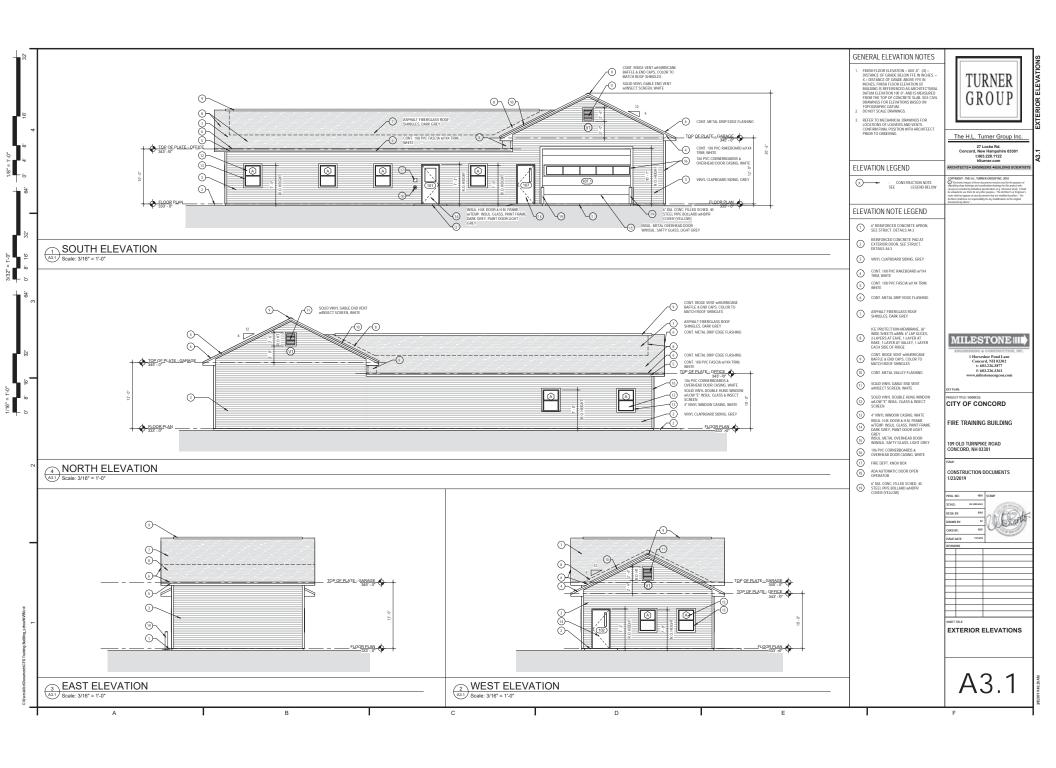
Signage for this project is still undetermined. Exterior building signage will be provided by the City. The only signs currently in the project scope are code required ADA signage. Please see attachment 8 for photos of signage and abutting properties.

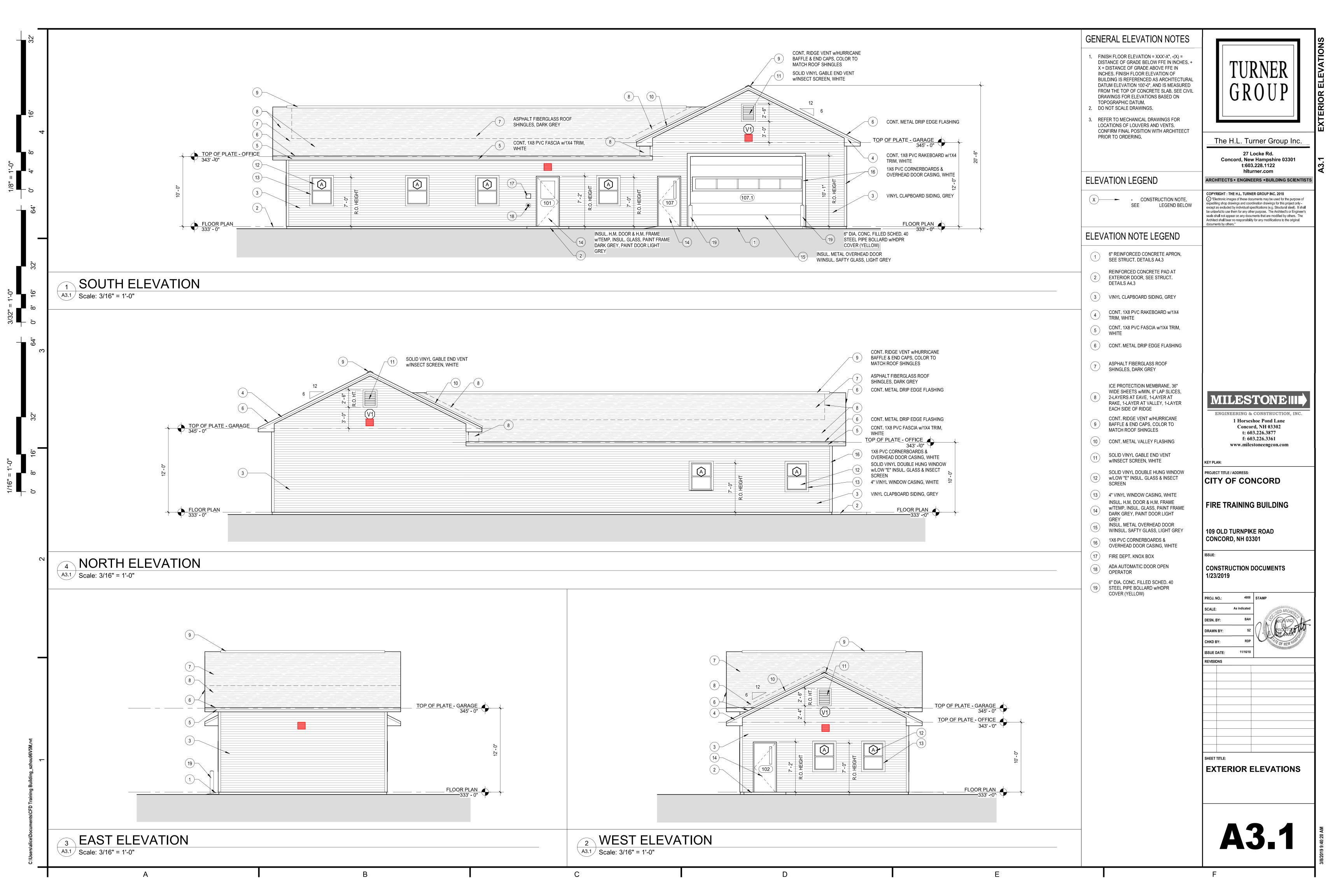


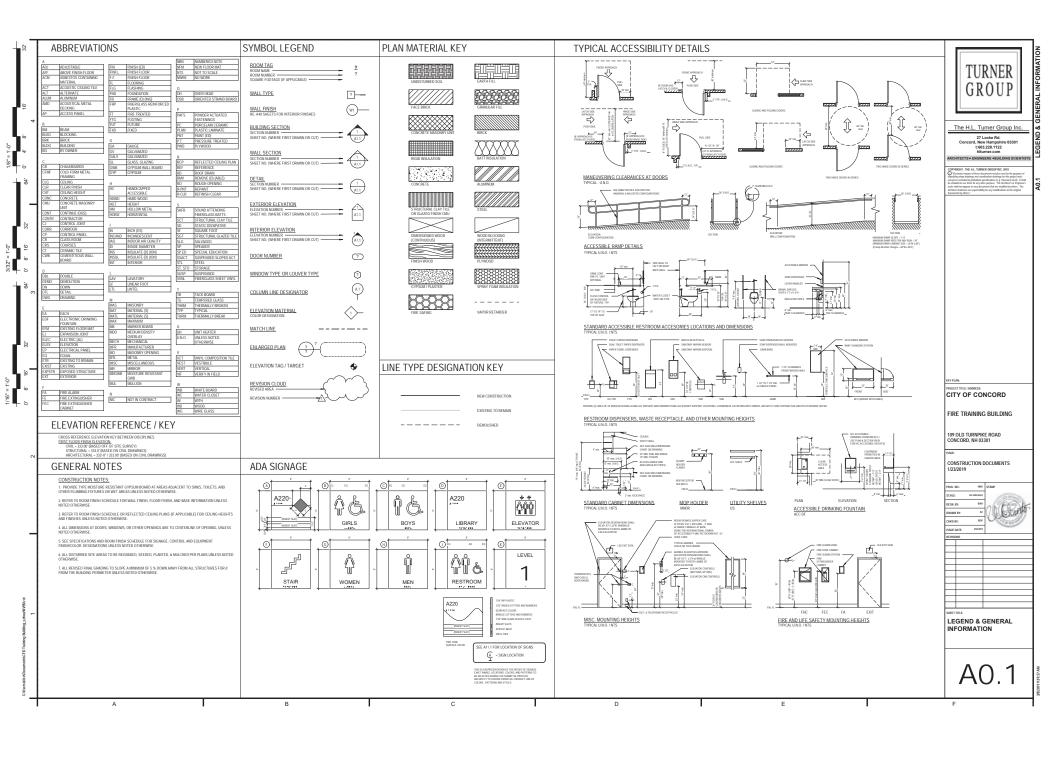
# Landscaping Plan and Schedule



Concord Fire Training Building Planting Schedule							
Common Name Scientific Name Size Quantity							
PJM Rhododendron	Rhododendron	3-6' Tall	3				
Compact Pfitzer Juniper	Juniperus chinensis	2-3' Tall x 4-5' wide	10				







#### DESCRIPTION

The patented Lumark Crosstour™ LED Wall Pack Series of luminaries provides an architectural style with super bright, energy efficient LEDs. The low-profile, rugged die-cast aluminum construction, universal back box, stainless steel hardware along with a sealed and gasketed optical compartment make the Crosstour impervious to contaminants. The Crosstour wall luminaire is ideal for wall/surface, inverted mount for façade/canopy illumination, post/bollard, site lighting, floodlight and low level pathway illumination including stairs. Typical applications include building entrances, multi-use facilities, apartment buildings, institutions, schools, stairways and loading docks test.

Catalog #		Туре
Project		
Comments		Date
Prepared by		

#### SPECIFICATION FEATURES

#### Construction

Slim, low-profile LED design with rugged one-piece, die-cast aluminum hinged removable door and back box. Matching housing styles incorporate both a small and medium design. The small housing is available in 12W, 18W and 26W. The medium housing is available in the 38W model. Patented secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes three half-inch, NPT threaded conduit entry points. The universal back box supports both the small and medium forms and mounts to standard 3-1/2" to 4" round and octagonal, 4" square, single gang and masonry junction boxes. Key hole gasket allows for adaptation to junction box or wall. External fin design extracts heat from the fixture surface. Onepiece silicone gasket seals door and back box. Minimum 5" wide pole for site lighting application. Not recommended for car wash applications.

#### Optical

Silicone sealed optical LED chamber incorporates a custom engineered mirrored anodized reflector providing high-efficiency illumination. Optical assembly includes impact-resistant tempered glass and meets IESNA requirements for full cutoff compliance. Available in seven lumen packages; 5000K, 4000K and 3000K CCT.

#### **Electrical**

LED driver is mounted to the die-cast housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 12W, 18W, 26W and 38W series operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C models available. Crosstour luminaires maintain greater than 89% of initial light output after 72,000 hours of operation. Three half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized

electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz or 347V 60Hz models.

#### Finish

Crosstour is protected with a Super durable TGIC carbon bronze or summit white polyester powder coat paint. Super durable TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

#### Warranty

Five-year warranty.

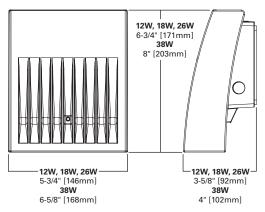


Lumark

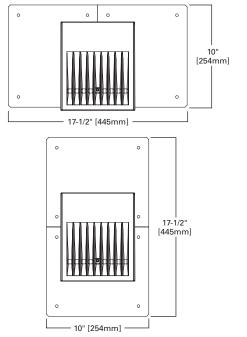
### XTOR CROSSTOUR LED

APPLICATIONS: WALL / SURFACE POST / BOLLARD LOW LEVEL FLOODLIGHT INVERTED SITE LIGHTING

#### DIMENSIONS



#### ESCUTCHEON PLATES







#### CERTIFICATION DATA

UL/cUL Wet Location Listed LM79 / LM80 Compliant ROHS Compliant ADA Compliant NOM Compliant Models IP66 Ingressed Protection Rated Title 24 Compliant DesignLights Consortium® Qualified\*

#### TECHNICAL DATA

40°C Maximum Ambient Temperature External Supply Wiring 90°C Minimum

#### EPA

Effective Projected Area (Sq. Ft.): XTOR1B, XT0R2B, XT0R3B=0.34 XTOR4B=0.45

#### SHIPPING DATA:

Approximate Net Weight: 3.7 – 5.25 lbs. [1.7 – 2.4 kgs.]



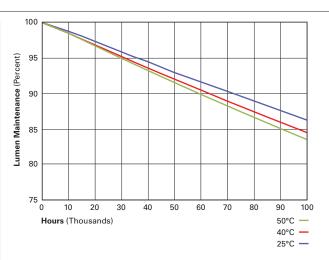
#### POWER AND LUMENS BY FIXTURE MODEL

LED Information	XTOR1B	XTOR1B-W	XTOR1B-Y	XTOR2B	XTOR2B-W	XTOR2B-Y	XTOR3B	XTOR3B-W	XTOR3B-Y	XTOR4B	XTOR4B-W	XTOR4B-Y
Delivered Lumens (Wall Mount)	1,418	1,396	1,327	2,135	2,103	1,997	2,751	2,710	2,575	4,269	4,205	3,995
Delivered Lumens (With Flood Accessory Kit) <sup>1</sup>	1,005	990	940	1,495	1,472	1,399	2,099	2,068	1,965	3,168	3,121	2,965
B.U.G. Rating <sup>2</sup>	B1-U0-G0	B2-U0-G0	B2-U0-G0	B2-U0-G0								
CCT (Kelvin)	5,000	4,000	3,000	5,000	4,000	3,000	5,000	4,000	3,000	5,000	4,000	3,000
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70	70	70	70	70
Power Consumption (Watts)	12W	12W	12W	18W	18W	18W	26W	26W	26W	38W	38W	38W

NOTES: 1 Includes shield and visor. 2 B.U.G. Rating does not apply to floodlighting.

#### **LUMEN MAINTENANCE**

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)						
XTOR1B Model								
25°C	> 90%	255,000						
40°C	> 89%	234,000						
50°C	> 88%	215,000						
XTOR2B Mode	XTOR2B Model							
25°C	> 89%	240,000						
40°C	> 88%	212,000						
50°C	> 87%	196,000						
XTOR3B Model								
25°C	> 89%	240,000						
40°C	> 88%	212,000						
50°C	> 87%	196,000						
XTOR4B Model								
25°C	> 89%	222,000						
40°C	> 87%	198,000						
50°C	> 87%	184,000						



#### **CURRENT DRAW**

Valtana	Model Series						
Voltage	XTOR1B	XTOR2B	XTOR3B	XTOR4B			
120V	0.103A	0.15A	0.22A	0.34A			
208V	0.060A	0.09A	0.13A	0.17A			
240V	0.053A	0.08A	0.11A	0.17A			
277V	0.048A	0.07A	0.10A	0.15A			
347V	0.039A	0.06A	0.082A	0.12A			

Specifications and dimensions subject to change without notice.

#### ORDERING INFORMATION

#### Sample Number: XTOR2B-W-WT-PC1

Series <sup>1</sup>	LED Kelvin Color	Housing Color	Options (Add as Suffix)	Accessories (Order Separately)
XTOR1B=Small Door, 12W XTOR2B=Small Door, 18W XTOR3B=Small Door, 26W XTOR4B=Medium Door, 38W	[Blank]=Bright White (Standard), 5000K W=Neutral White, 4000K Y=Warm White, 3000K	[Blank]=Carbon Bronze (Standard) WT=Summit White BK=Black BZ=Bronze AP=Grey GM=Graphite Metallic DP=Dark Platinum	PC1=Photocontrol 120V <sup>2</sup> PC2=Photocontrol 208-277V <sup>2.3</sup> 347V=347V <sup>4</sup> HA=50°C High Ambient <sup>4</sup>	WG/XTOR=Wire Guard <sup>5</sup> XTORFLD-KNC=Knuckle Floodlight Kit <sup>6</sup> XTORFLD-TRN=Trunnion Floodlight Kit <sup>6</sup> XTORFLD-KNC-WT=Knuckle Floodlight Kit, Summit White <sup>6</sup> XTORFLD-TRN-WT=Trunnion Floodlight Kit, Summit White <sup>6</sup> EWP/XTOR=Escutcheon Wall Plate, Carbon Bronze EWP/XTOR-WT=Escutcheon Wall Plate, Summit White

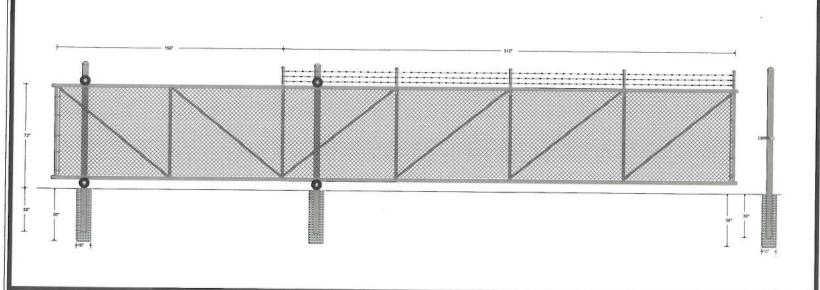
- 1. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.

- 1. Design Lights Consortium Unailine and classified for both DLC Standard and DLC Fremium, refer to www.designingnts.org for details.
  2. Photocontrols are factory installed.
  3. Order PC2 for 347V models.
  4. Thru-branch wiring not available with HA option or with 347V. XTOR3B not available with HA and 347V or 120V combination.
  5. Wire guard for wall/Surface mount. Not for use with floodlight kit accessory.
  6. Floodlight kit accessory supplied with knuckle (KNC) or trunnion (TRN) base, small and large top visors and small and large impact shields.

#### STOCK ORDERING INFORMATION

12W Series	18W Series	26W Series	38W Series
XTOR1B=12W, 5000K, Carbon Bronze	XTOR2B=18W, 5000K, Carbon Bronze	XTOR3B=26W, 5000K, Carbon Bronze	XTOR4B=38W, 5000K, Carbon Bronze
XTOR1B-WT=12W, 5000K, Summit White	XTOR2B-W=18W, 4000K, Carbon Bronze	XTOR3B-W=26W, 4000K, Carbon Bronze	XTOR4B-W=38W, 4000K, Carbon Bronze
XTOR1B-PC1=12W, 5000K, 120V PC, Carbon Bronze	XTOR2B-WT=18W, 5000K, Summit White	XTOR3B-WT=26W, 5000K, Summit White	XTOR4B-WT=38W, 5000K, Summit White
XTOR1B-W=12W, 4000K, Carbon Bronze	XTOR2B-PC1=18W, 5000K, 120V PC, Carbon Bronze	XTOR3B-PC1=26W, 5000K, 120V PC, Carbon Bronze	XTOR4B-PC1=38W, 5000K, 120V PC, Carbon Bronze
XTOR1B-W-PC1=12W, 4000K, 120V PC, Carbon Bronze	XTOR2B-W-PC1=18W, 4000K, 120V PC, Carbon Bronze		XTOR4B-W-PC1=38W, 4000K, 120V PC, Carbon Bronze





FABRIC: 72" 9 GA. GALVANIZED (2" Mesh) CHAIN LINK FABRIC.

BRACING: Terminal posts braced to the nearest line post with 1 5/8" O.D. SWEDGE END CQ-20 PIPE.

GATES: Framework of 2 3/8" DQ-40 PIPE, 3.12 lbs. per foot. Gates braced and trussed as necessary. Same fabric as fence. Barbed wire included on all gates.

GATE POST: 4" O.D. DQ-40 PIPE, 6.56 lbs. per foot. Concrete footing: 10" diameter, 36" depth.

BARBED WIRE: 3 strands of 12 1/2 GA. 4 PT. GALVANIZED BARB WIRE on 45 Deg. PRESSED STEEL BARB WIRE ARM.

FITTINGS: BEVELED BRACE BAND &
CARRIAGE BOLT, PRESSED STEEL
RAIL-END, 45 Deg. PRESSED STEEL
BARB WIRE ARM, PRESSED STEEL CAP,
3/16" X 3/4" TENSION BAR, BEVELED
TENSION BAND & CARRIAGE BOLT.

TIE WIRE: 8 1/4" 9 GA. ALUMINUM TIE WIRE & 6 1/2" 9 GA. ALUMINUM TIE WIRE spaced 15" on center for line posts & 12" on center for rails.

POST FOOTING: HAND MIXED CONCRETE.

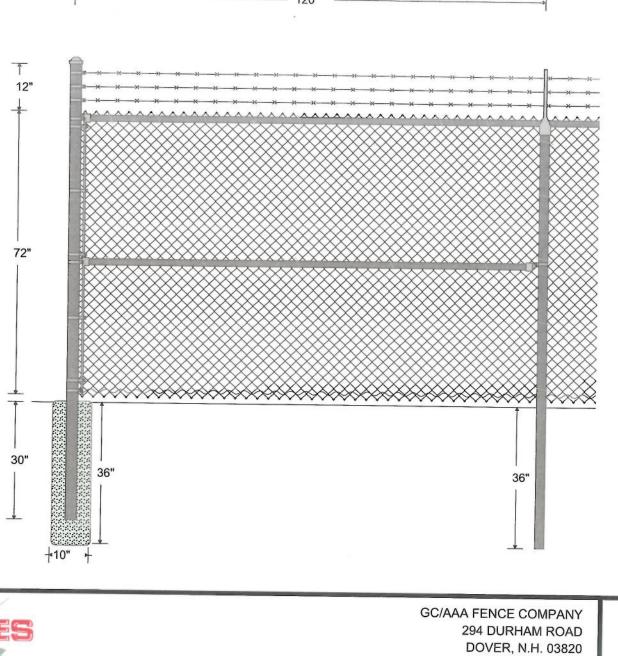


GC/AAA FENCE COMPANY 294 DURHAM ROAD DOVER, N.H. 03820 603-742-0833

26' CANTILEVER GATE, 2 3/8" DQ-40 PIPE FRAME

Drawn: 03/08/2019

File:



FABRIC: 72" 9 GA. GALVANIZED (2" Mesh) CHAIN LINK FABRIC.

TOP RAIL: 1 5/8" O.D. SWEDGE END CQ-20 PIPE, 1.43 lbs. per foot. Top rail 21' in length.

LINE POST: 2 3/8" O.D. DQ-40 PIPE. 3.12 lbs. per foot. Line posts set 10' on center maximum spacing. Concrete footing: 0" diameter, 36" depth.

TERMINAL POST: 2 7/8" O.D. DQ-40 PIPE, 4.47 lbs. per foot. Concrete footing: 10" diameter, 36" depth.

BRACING: Terminal posts braced to the nearest line post with 1 5/8" O.D. SWEDGE END CQ-20 PIPE.

TENSION WIRE: 7 GA. COIL SPRING GALVANIZED TENSION WIRE attached to bottom of fence fabric with 9 GA. ALUMINUM HOG RING spaced 12" on center.

BARBED WIRE: 3 strands of 12 1/2 GA. 4 PT. GALVANIZED BARB WIRE on 45 Deg. PRESSED STEEL BARB WIRE ARM.

FITTINGS: BEVELED BRACE BAND & CARRIAGE BOLT, PRESSED STEEL RAIL-END, 45 Deg. PRESSED STEEL BARB WIRE ARM, PRESSED STEEL CAP. 3/16" X 3/4" TENSION BAR, BEVELED TENSION BAND & CARRIAGE BOLT.

TIE WIRE: 8 1/4" 9 GA. ALUMINUM TIE WIRE & 6 1/2" 9 GA. ALUMINUM TIE WIRE spaced 15" on center for line posts & 12" on center for rails.

POST FOOTING: HAND MIXED CONCRETE.



LINE OF FENCE

603-742-0833

Drawn: 03/08/2019

File:

# **Concord Fire Training Building Narrative**



109 Old Turnpike Road Concord, NH, 03301

**Prepared by Milestone Engineering and Construction** 

**Owner: The City of Concord** 



#### **Existing Conditions**

The site of the proposed Concord Fire Training Building is located at 109 Old Turnpike Road and the Map/Block/Lot number is 110/6/8/ and is owned by the City of Concord. The site is currently cleared to stumps. The existing chain-link fence divides the site in half. The existing lot is about .14 acres in size and will increase to 1.71 acres with the annexation of 1.57 acres of the 57.45 acre city landfill lot 110/6/3 which is also owned by the City of Concord. The frontage for this site will be roughly 270' along Old Turnpike Road.



Figure 1 Full lot before clearing from above

The main entrance to the site is gated off and currently sits at the front of the property coming from Old Turnpike Road on the left side of the property. The property abuts the city owned transfer station property to the rear and abuts two properties on either side. The left side is divided by a fence and the right side is divided by a driveway.



Figure 2 Panoramic image of the existing site from the northeast side of the site facing southwest

Refer to the map and additional pictures at the end of this narrative for more info regarding existing conditions.

#### **Building Overview**

The new Fire Training Building will be a single-story 1800sf wood structure building consisting of a classroom/training space, (2) bathrooms, an office, a main entry area, a mechanical room and a garage. The proposed building is 24' wide and 80' long and 20'-5" tall at the highest point. Civil drawings were designed by the City, structural and architectural drawings were designed by The H.L. Turner Group. Mechanical, electrical, and plumbing drawings will be design build.

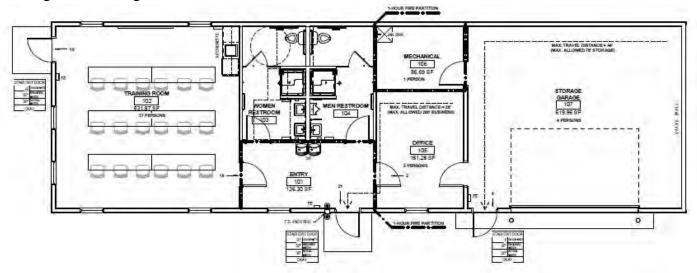


Figure 3 Overview of floorplan

#### Sitework

The new building will sit at the northeast end of the site, oriented southwest. The new parking lot is going to cover just under half of the site to allow for fire department training activities and room for equipment. The parking lot will have 9 parking spaces next to the building with one of them being van accessible. A second driveway will be added on the road side so that there are two entry/exit points ensuring fire trucks can easily maneuver out of the parking lot if called to an emergency during training. There will be a gravel equipment parking area located between the two driveways on the road side. Attachment 6 shows the proposed site plan.

The existing gate will be reused at the existing driveway and a cantilever slide gate will be added at the new entrance. The existing chain link fence in the middle of the site will be removed and replaced so that the new chain link fence will encompass the entire site and connect to existing city owned fencing that goes around the transfer station site. The existing perimeter fence on the south side of the site between properties will remain. The fence style matches the existing city owned fencing surrounding the transfer station.

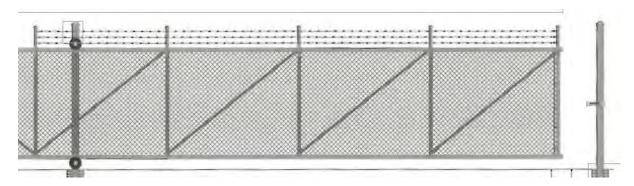


Figure 4 New Sliding Gate

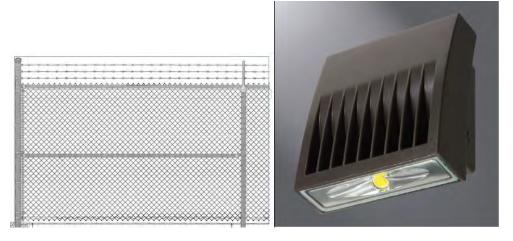


Figure 5 Elevation of Chain Link Fence

Figure 6 Proposed Exterior Lighting

The site is going to be regraded at the new parking lot so that the water flows to the existing swale that runs through the transfer station lot. A new infiltration basin will be

constructed towards the rear of the parking lot at the west side of the site. A gravel base for a future training structure is going to installed just north of the infiltration basin at the very back of the site. This structure is not part of this project. For site lighting, LED light packs will be attached to the building to illuminate the entry, parking spaces, and garage areas.

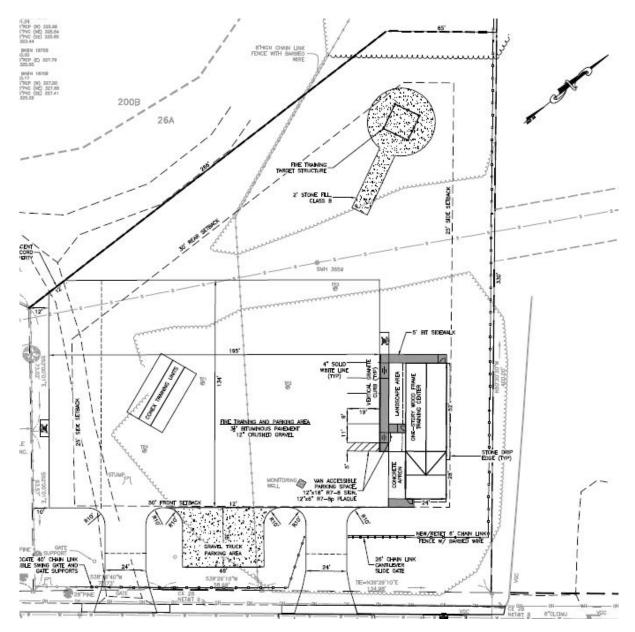


Figure 7 Overview of Site Plan

#### Signage

Signage for this project is still undetermined. Exterior building signage will be provided by the City. The only signs currently in the project scope are code required ADA signage. Please see attachment 8 for photos of signage and abutting properties.

#### **Utilities**

The existing overhead electrical service will be brought underground to the building from an existing utility pole at the east corner of the site. Water will be brought in from Old Turnpike Road and into the building then continue out to two (2) fire hydrants located on the site. Natural gas will also be brought into the building to fuel the heating and cooling equipment. The sewer will be tied into an existing sewer line that runs through the site.

#### **Building Structure/Insulation**

The building foundation will be 4' frost walls with a 4" slab on grade in the main building and a 6" slab on grade in the garage. The building structure will be comprised of wood framed walls and a wood truss roof system. The exterior walls will be insulated with a R-23 dense pack insulation and a 6-mil poly vapor barrier. The attic will be insulated with an R-38 blown-in insulation and a 6-mil poly vapor barrier. Interior walls all have 3" acoustical insulation.

#### Landscaping

Landscaping will be design build. Currently, we have allowed for landscaping at the front of the building. There is also the potential of adding some bushes by the road in front of the fence but that has not been determined yet. See landscape layout below to see proposed landscaping. The plantings consist of 10 Compact Pfitzer Junipers, and 3 PJM Rhododendrons. Compact Pfizter Juniper's generally get to be 2.5-3' in height and 3-6' wide they are a green needled evergreen brush type plant. PJM Rhododendrons are anywhere between 3 and 6 feet tall and can be 3 to 7 feet wide. They have a light purple flower that blooms in early spring. Mulch will be added to the planting area and a stone drip edge runs along the front and rear of the building. Below is what is currently being proposed at the front of the building.

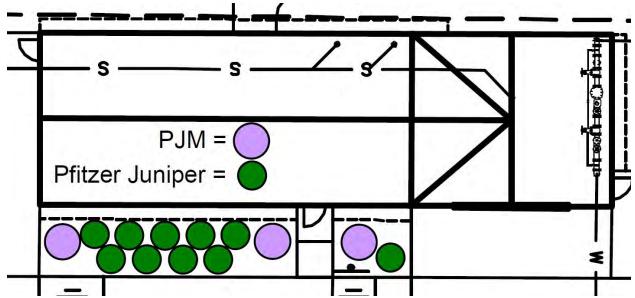


Figure 8 Proposed Landscaping Plan





Figure 9 Compact Pfitzer Juniper

Figure 10 PJM Rhododendron

#### Materials/Finishes

The building will have CertainTeed Monogram vinyl clapboard siding in either a gray to a white color. The soffits will be Ironmax Double 5" vinyl soffit with a continuous insect screen behind it. The three gables end will all have small louvers. The roof will be CertainTeed Landmark Premium architectural asphalt shingles in a black or charcoal color and will be at a 6:12 pitch. The exact colors of the roof and siding still have not been determined at this point.





Figure 11 CertainTeed Monogram



Figure 13 CertainTeed Landmark Premium Shingles

The building will have a total of three (3) exterior doors, one (1) from the main entry, one (1) from the training room and one (1) from the garage. All exterior doors are painted insulated hollow metal with insulated glass. The garage is going to have a 10'x16' insulated overhead door. The building will have eight (8) windows that will be white Paradigm 3800 series double hung windows with a flat casing and Low-e Argon filled glass. Interior doors will be painted hollow metal.

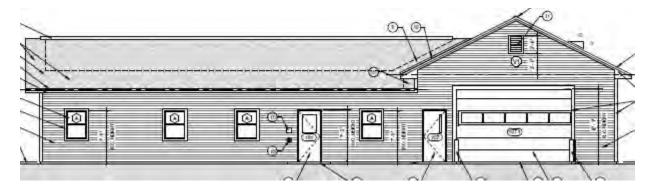


Figure 14 Front exterior elevation from construction drawings

All interior walls are drywall with paint. The bathrooms have FRP panels part way up the wall for additional protection. Paint colors have not been determined at this time. A layer of 5/8" gypsum is being applied across the entire truss line as draft protection. The training room, office, entry and bathrooms will have ACT. Armstrong Cortega 769 2x4 ceiling tiles will be in the main areas and Armstrong Ceramaguard 605 2x4 ceiling tile is in the bathrooms. Gypsum will be the finished surface in the garage and mechanical rooms.





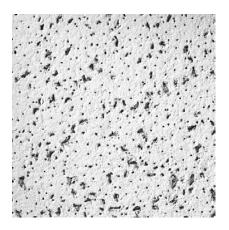


Figure 16 Armstrong Cortega 769

The flooring in the bathrooms and entry is Armstrong Safety Zone 12x12 VCT with a vinyl base. The flooring in the training room, and office is Armstrong Excelon 12x12 VCT with vinyl base. The garage and mechanical room will remain exposed concrete and only have vinyl base around the perimeter. No flooring colors have been selected at this time. (Pictures of flooring do not represent a color selection, it is only meant to show the style).



Figure 17 Armstrong Safety Zone



Figure 18 Armstrong Excelon

The only millwork in the job is at the kitchenette in the training room. The upper and lower cabinets are plastic laminate and the countertop will be solid surface.

### **Additional Existing Site Pictures**





Picture 1 View from east corner of site looking down the road and up the middle





Picture 2 View of existing fence

Picture 3 View of existing gate



Picture 4 Fence separating lots at south end of site



Picture 5 View of are building will be going



Picture 6 Facing road from future training structure area



Picture 7 Back corner of lot

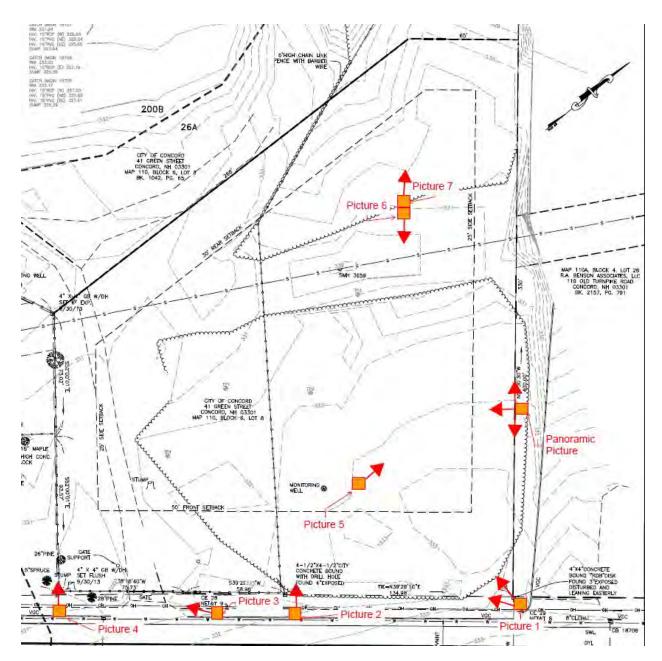


Figure 19 Map showing where each picture was taken on site

### 107 Old Turnpike Road (Left Side Abutter)



Figure 20 Main building at 107 Old Turnpike Road



Figure 21 Looking at the abutting lot from across the street showing front building and back garage area



Figure 22 Looking down Old Turnpike Road with abutting lot on the right-side showing frontage

### 119 Old Turnpike Road Abutting Property Photos (Right Side Abutter)

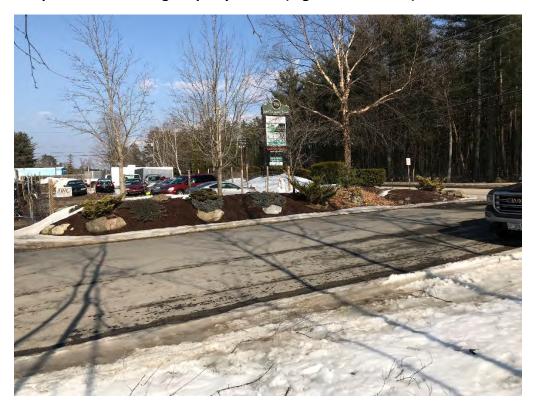


Figure 23 Front of lot abutting site



Figure 24 Photo of building



Figure 25 Rear of lot abutting site



Figure 26 Sign



Figure 27 View of the front of lot looking towards proposed fire training building site