February 8, 2023

Littleton Planning Board
Littleton Town Hall
37 Shattuck Street
PO Box 1305
Littleton, MA 01460

SUBJECT: Special Permit Criteria Narrative
Energy North Group
254, 256 & 260 Ayer Road
Littleton Parcels U45 Lots 7, 7-B, 8-A & 11
Ayer Parcel 30-16

Dear Members of the Planning Board:

Greenman-Pedersen, Inc. (GPI), on behalf of our client, Energy North Group, hereby provides the following Special Permit Criteria in accordance with §173-62 (D) Special Permit Submittals for the re-development of the above referenced parcels.

1. **Complete list of potentially toxic or hazardous material used or stored on the premises.**
   - 23,000 gallons of Gasoline (Regular) – Class IB
   - 7,000 gallons of Gasoline (Super) – Class 1B
   - 15,000 gallons of Diesel – Class II
2. **Description of protection and preventative measures.**
   - See attached "Proposed Fuel System Components & Safety Features" narrative.
3. **Description of potentially toxic or hazardous wastes with storage and disposal method.**
   - Not applicable to this site re-development.
4. **Evidence of DEP approval of waste system**
   - Board of Health approval pending for onsite septic system redesign.
5. **Evidence of qualified professional supervision of underground storage system design and installation.**
   - See attached Petroleum Design Services Qualifications package.
6. **Analysis by qualified engineer.**
   - The new stormwater management system meets or exceeds MassDEP standards for groundwater quality and recharge quantity, designed by a MA licensed professional Engineer.

Please review the above information and should you have any questions, feel free to contact our office at your convenience.

Sincerely,

Chris Tymula, P.E.
Site Engineering Dept Head

cc: Mike Tierney, Energy North Group
Town of Ayer Planning Dept.

Greenman-Pedersen, Inc. 44 Stiles Road, Suite One Salem, NH 03079 p 603-893-0720

PROPOSED FUEL SYSTEM COMPONENTS & SAFTEY FEATURES

To: Energy North Group
From: Chris Tymula, PE
Date: February 8, 2023
Project: Proposed Retail Motor Fuel Outlet Re-Development
254, 256, 260 Ayer Road
Littleton, MA (GPI Project# NEX-2021167)

The following is a technical summary of the proposed fuel system safety features and operational procedures that will be implemented for the above referenced project. The intent of these design enhancements is to maximize safety and minimize any potential petroleum releases to the environmental as a result of the proposed redevelopment.

1. **Fuel Dispensing Area**
   a. Positive Limiting Barriers – The fuel dispensing area will consist of a 6" reinforced concrete mat with spill containment grooves (Positive Limiting Barriers) around each dispenser island. These concrete grooves will contain any minor spillage that might occur at the fuel dispensing islands. This allows any minor spillage to be trapped at the fuel dispensing area for immediate clean up by the store attendant using the on-site spill kit.
   b. Dispenser Hoses – The fuel dispensing hoses on each dispenser contain a breakaway coupling (dry-break connection). In the event that a driver inadvertently leaves the dispensing area with the hose nozzle still connected to the vehicle fill pipe, the dry-break will disconnect the hose from the dispenser. Mechanisms inside the dry-break coupling will prevent a release of fuel product to the environment at the disconnect.
   c. Dispenser Shear Valves – Within each dispenser there is an emergency shear valve on the fuel piping supply line below the dispenser. Should the dispenser become dislodged by a vehicle, the emergency shear valve will close and prevent an uncontrolled release of fuel product to the environment.
   d. Dispenser Sumps – A sump constructed of a fiber reinforced plastic (FRP) is located under each dispenser along with an electronic liquid sensor located at the bottom of the sump. Should fuel product leak from within the dispenser unit, it would be captured by the sump and the electronic sump sensor would activate the central leak detection console located inside of the convenience store.
   e. Fire Suppression System – The fuel dispensing canopy will be equipped with an overhead dry chemical fire suppression system that will be automatically and/or manually activated in the event of a fire.
   f. Emergency Shutoff – The facility will be equipped with an emergency shutoff switch located inside the store at the cashier. This switch allows the attendant to immediately cut all power to the dispensers.

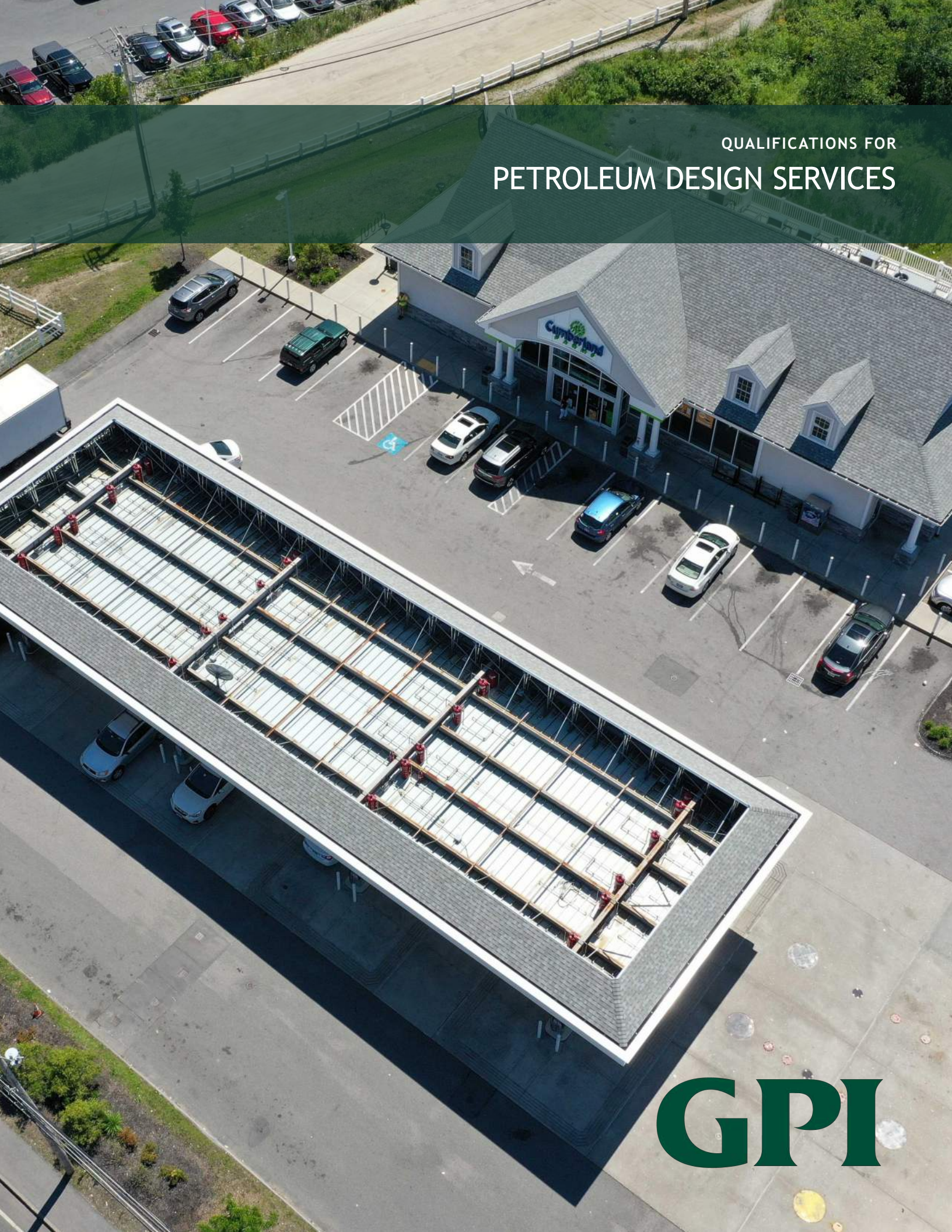
2. **Fuel Storage System**
   a. Leak Detection Console Unit - The fuel storage system will be monitored 24 hours a day, 365 days a year by a state-of-the-art central monitoring system located inside the convenience store. This electronic monitoring system continuously monitors the level of gasoline in each tank and can detect a 0.1-gallon per hour loss of fuel product. In addition, the system monitors all sensors connected to the fuel piping sumps, dispenser sumps, and the double wall (annular) space of each tank.
   b. Double Wall Fiberglass Tanks - The facility will be supplied with double wall fiberglass underground fuel storage tanks. Fiberglass is inherently corrosion proof and the annular space between the two walls is filled with brine (a freeze resistant liquid solution). The level of the brine is monitored continuously with an electronic sensor. Any change in the level of the brine will cause the sensor to activate the central console alarm unit in the convenience store.
   c. Double Wall Fuel Piping - The fuel product piping will consist of double-wall construction. The primary

pipe contains the gasoline or diesel fuel. In the unlikely event of a failure in the primary pipeline, the interstice between the two pipes will allow the fuel product to flow towards a containment sump on the tank. This tank containment sump will have an electronic sensor located at the bottom of the sump. All underground piping is sloped towards a containment sump, so any potential release of fuel product will flow to the containment sump for detection. Activation of a sump sensor creates an audible/visual alarm at the central console unit located in the convenience store.

d. Overfill Prevention - When the underground storage tanks are filled by the fuel tanker, numerous precautions are taken to prevent surface spillage. Prior to filling the tanks, the tanker truck driver will check the contents of the tank with a measuring stick. The driver then checks this measurement against a tank gauge chart to verify that the tank will hold the amount of fuel product that was ordered. The central console unit is also checked electronically to confirm the volume of fuel product in the tank. As an additional factor of safety, there is an overfill shut-off valve located inside of each underground tank. This device is designed to prevent the delivery truck from continuing the transfer of fuel product into the tanks once the product level reaches 95% tank capacity.
e. Fill and Vapor Spill Prevention - In order to prevent minor surface spillage when the fuel tanker delivery hose is removed from the tank connection point on the ground, there is a spill containment manhole proposed on each fill tube and vapor tube which holds a minimum capacity of 5 gallons. In the unlikely event of a spill, the fill containment manhole will contain any fuel product remaining in the delivery hose. Therefore, should the delivery truck driver inadvertently spill any fuel product while disconnecting the delivery hose from the tank fill, it would be contained and removed from the containment manhole.
f. Pressurized Line Leak Detection – The pressure within the product piping will be continually monitored by an in-line leak detector attached directly to the submerged turbine pump (STP) located in each tank. This detector is activated when the dispenser is turned on by the customer. This detector monitors the pressure in each line electronically. If a pressure loss is detected, the system will shut down the dispensers. These product piping detectors are also connected to the console alarm unit located inside of the store.
g. Observation Wells - Two observation wells will be installed at the tank field when the facility is constructed. These wells allow access to the groundwater for future testing of the groundwater quality, if necessary. The groundwater in these two wells can be tested prior to the facility opening in order to set up a "baseline" of groundwater data for future reference purposes.

3. **Emergency Preparedness**
   a. An emergency response procedure will be developed for this facility to supplement local authorities' preparedness in reacting to an emergency situation. This emergency response plan outlines the procedures to be taken by the employees of the facility in the event of an emergency. This response plan will include an Emergency Contact List which provides contact names and phone numbers of response personnel and remediation companies that will be contacted if an emergency occurs. This response plan will be conspicuously posted at the convenience store and employees will be trained in emergency preparedness.
   b. An emergency spill kit will be provided and located in the convenience store for use by the store employees. This kit will include absorbent material (speedy dry/granular cellulose), absorbent pads, absorbent pillows/booms, gloves, safety goggles, and disposal bags.

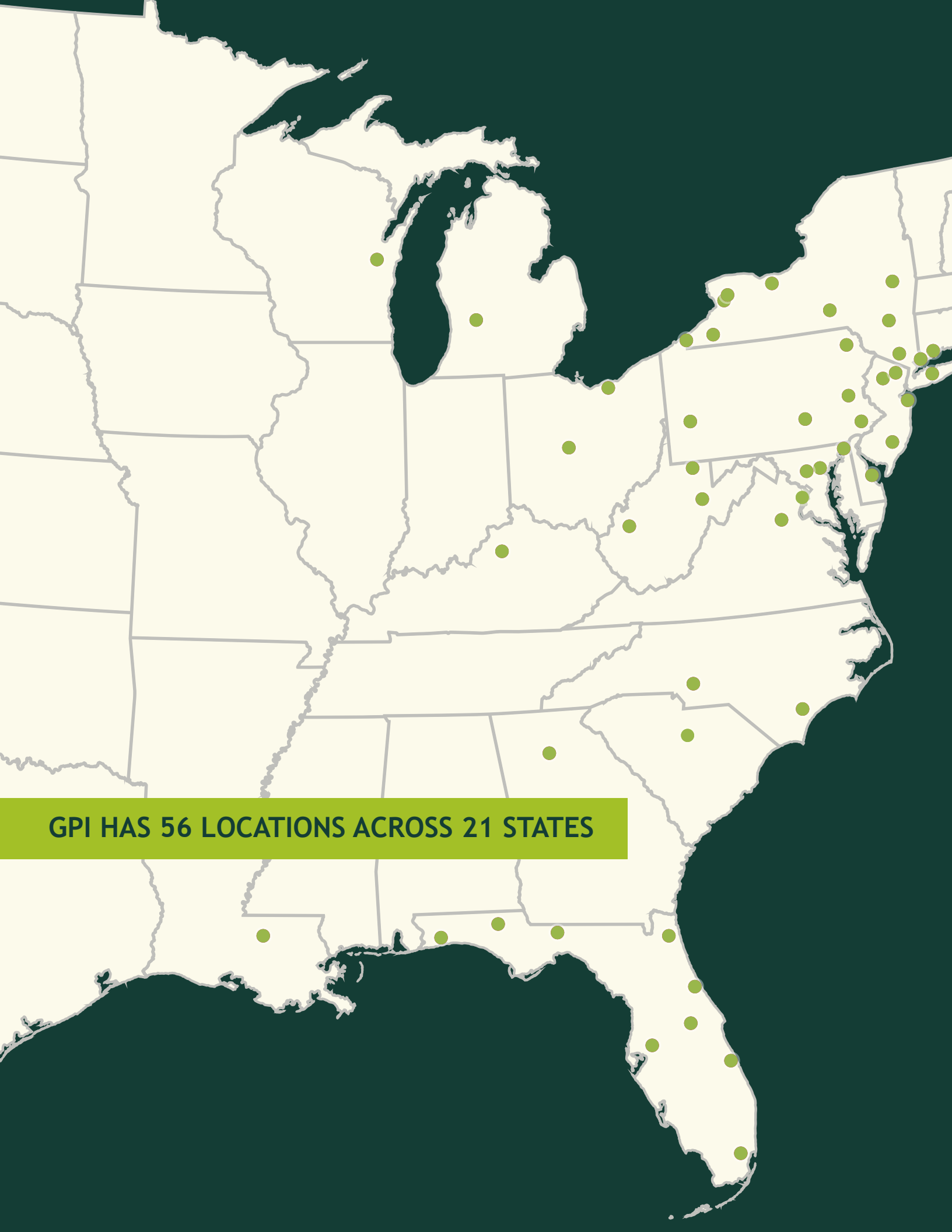
4. **Training** - Federal EPA regulations require that all owners and operators have certified employees operating the fuel facility. There are three categories of operators for each underground tank, known as A, B, or C operators. The A operator is responsible for meeting all regulations at the company level. The B operator must know the equipment and operations of the tank fuel system, including the inspection of these systems on a monthly basis. These inspections include monthly inventory control in accordance with current regulations. The A & B operators are both required to pass a test to become certified. The A and/or B operator is also responsible for training the C operators. The C operator must be present whenever a tank system is in operation. The C operator must also be trained to respond to an emergency.

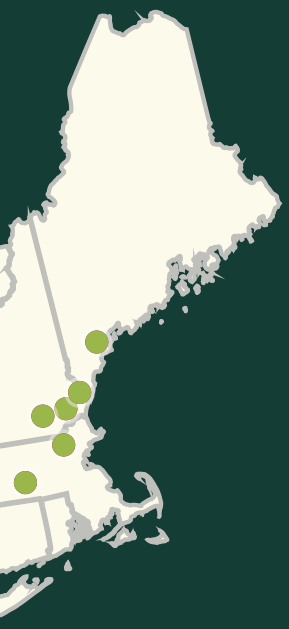


QUALIFICATIONS FOR

PETROLEUM DESIGN SERVICES

GPI


GPI HAS 56 LOCATIONS ACROSS 21 STATES



OUR OFFICE LOCATIONS

CT (1)	MD (3)	OH (2)
DE (1)	MA (2)	PA (6)
FL (9)	MI (1)	SC (1)
GA (1)	NH (3)	VA (2)
KY (1)	NJ (4)	VT (1)
LA (1)	NY (10)	WV (3)
ME (1)	NC (2)	WI (1)

FAST FACTS

Established in 1966

100% Employee Owned

1,500+ Employees

ENR Rank #66 Top Design Firms

GPI

PETROLEUM DESIGN SERVICES

Greenman-Pedersen, Inc (GPI) has been providing engineering, site design and specialty services to the retail motor fuel industry for over 35 years. Our experts devise strategies to streamline a project through the conceptualizing, permitting and development process and understand where, when, and with whom various public involvement tools and techniques should be applied.

GPI has a core team of engineers, surveyors and fuel system specialists with over 50 years of combined design experience. The team has provided survey, design, permitting, traffic studies and construction inspection services to over 60 companies on hundreds of facilities throughout the northeast. These services have expanded to include design and permitting services for Underground Storage Tanks (UST), Aboveground Storage Tanks (AST), and fire suppression plans. GPI is not only expanding our services geographically, but also planning to provide additional services including AST inspectional services, AST asset inventory management, AST corrosion inspections and MEP services.

SURVEY

GPI has emerged as one of the most innovative and progressive firms in quality land surveying, mapping and remote sensing solutions and has been providing survey services to our retail motor fuel clients for numerous years. Our team is comprised of over 150 professionals ranging from registered professional land surveyors and mapping professionals, to licensed pilots and certified (OSHA, TWIC, Rail, CPR) field personnel in over 17 states.

GPI provides field survey services on a routine basis to support in-house design as well as the needs of clients. GPI uses a variety of methods to perform survey that include the most advanced tools in the industry. Methods include traditional/conventional survey (with robotic total station), global positioning system real time kinematic (GPS RTK), terrestrial laser scanning (LiDAR), mobile laser scanning (LiDAR), aerial survey and mapping using fixed winged manned aircraft or an unmanned aircraft system (i.e., drone). The use of the scanning systems has become increasingly popular as it reduces the amount of field time required, improves safety and limits the amount of traffic control. Scanning also allows for the creation of a 3D “point cloud” which can become extremely valuable in creating renderings and simulations to convey designs to stakeholders.

CIVIL/SITE DESIGN

Every site has unique characteristics and infrastructure needs where site planning and development are critical initial steps towards transforming land into a valuable resource — with code-compliant and cost-effective solutions. Our team provides a comprehensive range of civil engineering, land planning, and surveying services to our retail motor fuel clients, incorporating practical sustainable design strategies and value engineering into our projects that benefit our clients and our communities.

We have the experience to manage your project from start to finish, with the integration of site data from the initial collection of survey information through base mapping, design and development of final construction documents, including inspection services. Our project experience goes far beyond a local or regional firm, spanning a multitude of locations across the United States.


TEXACO
Clearance 14'-8"


IRVING

FUEL STORAGE TANK DESIGN

GPI provides complete underground and above ground fuel storage tank (UST/AST) design and inspection services for the petroleum market. Great care is used in making sure that fuel storage tanks, piping and fuel dispensing equipment are properly designed and installed in accordance with each authority having jurisdiction. Our team of specialists includes a lead fuel system designer, a lead fuel system inspector, and a support staff of fuel system specialists.

GPI is aware of the latest UST state regulations and conforms to all applicable laws. In order to stay relevant in the petroleum field and advancing technologies, the GPI team of fuel system specialists continually attends conferences and seminars held by relevant trade associations including the Petroleum Equipment Institute (PEI), the American Petroleum Institute (API), and the National Institute for Storage Tank Management (NISTM). Additionally, the team continually meets with petroleum product manufacturers to share ideas, some of which have been included in their latest product developments.

PERMITTING EXPERTS

GPI understands what it takes to successfully navigate the permitting process. We advise many clients in this regard and have successfully permitted hundreds of retail motor fuel developments throughout the Northeast. With a successful track record of negotiating with federal, state and local permitting authorities, GPI is unparalleled in its ability to expedite land development projects through an increasingly complex network of government regulations and municipal review boards.

TRAFFIC STUDIES

Greenman-Pedersen, Inc. (GPI) has prepared numerous traffic impact and access studies for retail motor fuel/convenience store developments/redevelopments projects. The studies typically include vehicle trip generation and distribution, signalized and unsignalized intersection capacity analyses, sight distance analysis, accident analysis and preparation of a conceptual improvement plans.

GPI also has developed a large database of empirical studies at existing gas station locations to accurately describe the co-branding synergies between the gasoline, convenience store, donut/sub shop, and car wash components associated with many of these sites. This information is necessary to accurately estimate traffic generation, maximum length of drive-through queues, and percentage of pass-by versus new traffic. In addition to the standard components of a traffic study, this information has proven extremely helpful in the permitting of new sites to establish credibility at municipal board hearings and presenting accurate estimates of the project’s impacts.

GPI also routinely completes conceptual improvement plans to mitigate traffic impacts as the result of the development. In most cases, GPI is responsible for the preparation of access permits and construction documents for new or modified site driveways and roadway improvements, as well as traffic signal modifications/re-design.

CONSTRUCTION INSPECTION

GPI often provides construction inspection on development projects to ensure proper compliance with the design plans as well as with all local, state and federal requirements. These inspection services include UST inspections to ensure compliance with approved plans and permits. These UST inspections are curretnly provided all over the East Coast. These services are designed to plan and/or implement improvements that will provide safe, efficient, and effective transportation systems for both short and long-term sustainable growth.

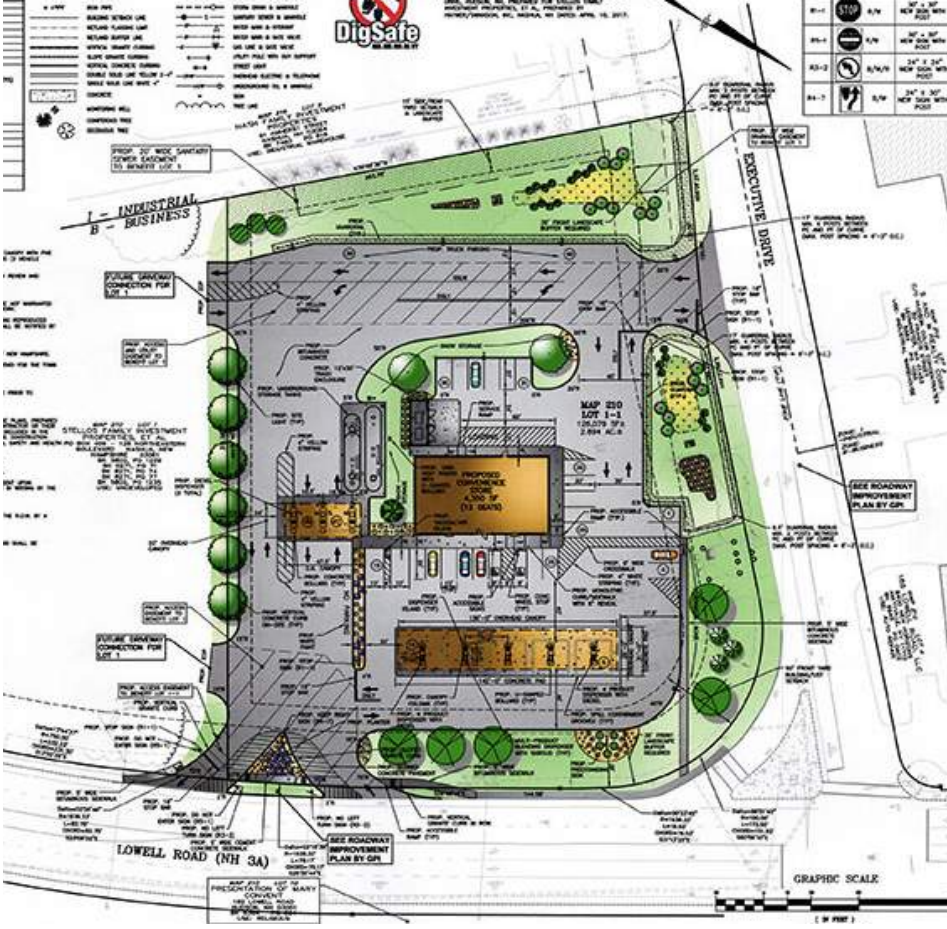
Examples of our recent projects are on the following pages.

OUR CLIENTS INCLUDE

Irving Oil - Hudson, NH

GPI provided site plans to develop this lot in Hudson's business district into a multi-use Irving Oil retail motor fuel outlet. There are five retail fueling islands and three commercial diesel fueling islands, as well as a 4,350-square-foot convenience store. GPI also provided design plans for a underground fuel storage system which consists of two double-wall FRP fuel storage tanks, double-wall fuel lines and a state-of-the-art Veeder Root TLS-450 leak detection system.

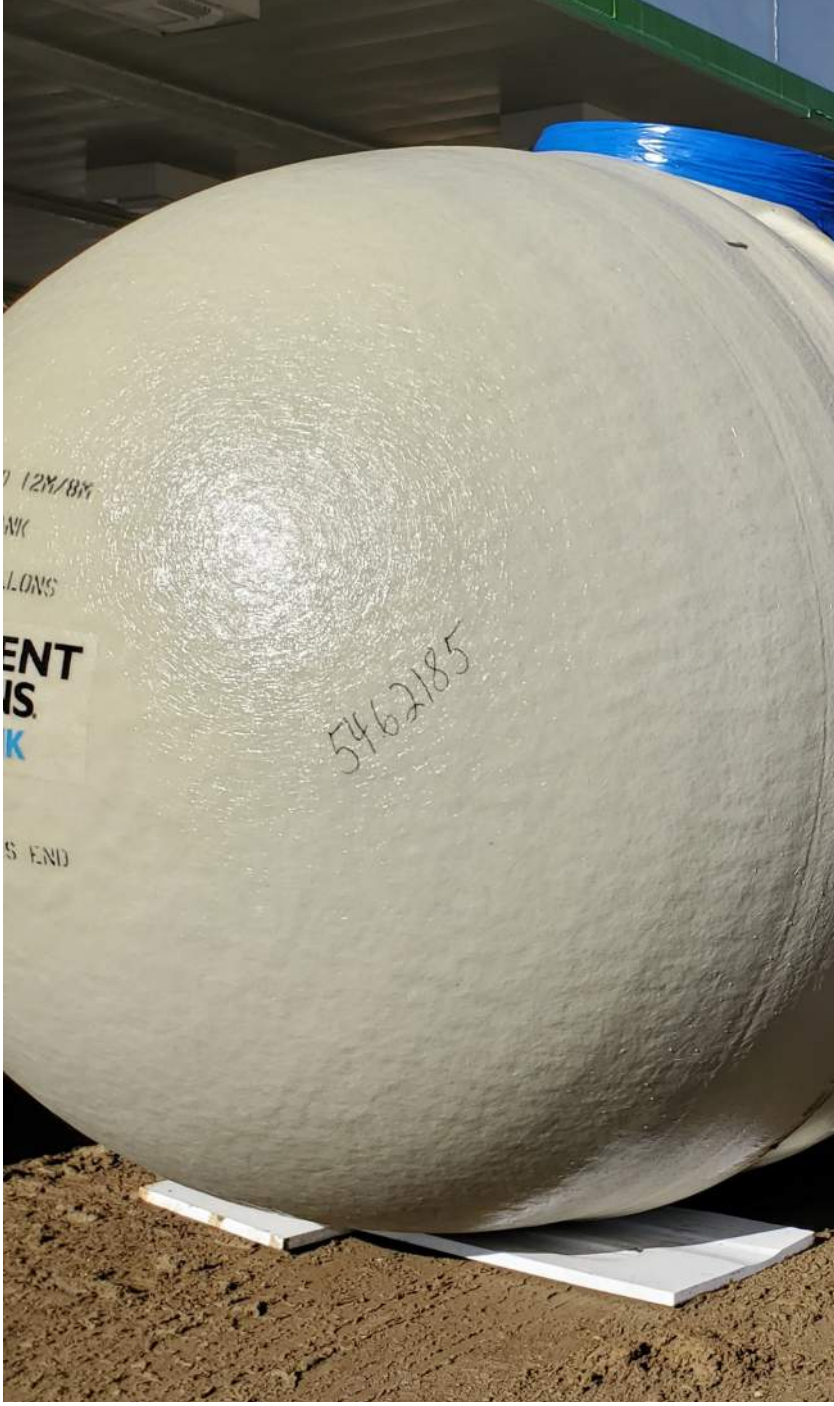
Location: Hudson, NH
Client: Irving Oil Marketing, Inc.
Services Provided:
Site Design, Utilities, Stormwater Management, UST and Fuel System Design, Construction Inspections


DigSafe
INDUSTRIAL
B - BUSINESS
EXECUTIVE DRIVE
LOWELL ROAD (NH 3A)
GRAPHIC SCALE


GPI

Cumberland Farms - Orange, CT

GPI provided professional consultation and surveying services of the existing Cumberland Farms parcel(s) located at 151 Boston Post Road in Orange, Connecticut. GPI performed an existing conditions survey of the parcel(s) under the supervision of the Land Surveyor licensed in the State of Connecticut. Delivered a completed survey on paper and AutoCAD formats, along with copies of all property and utility research, field notes, and computations for review and comment. Once reviewed and revised, a stamped copy of the survey plan was provided to serve as the record copy.



Location: Orange, CT
Client: Cumberland Farms
Services Provided:
Land Survey, UST and Fuel System Design, Construction Inspections

GPI

PetroGas/Applegreen - Barrington, NH

GPI provided design plans and inspectional services for the new underground fueling system of this new-to-industry site. THis environmentally challenging site required NHDES waivers relative to public water supply wells adjacent to the project. Five retail fuel dispensers and three commercial diesel dispensers were supplier with triplewall FRP tanks and doublewall FRP tank sumps. Triplewall FRP fuel piping was designed in conjunction with doublewall dispenser sumps. Multi-compartment tanks were included to allow flexibility for a potential future fuel.

Location: Barrington, NH
Client: PetroGas/Applegreen
Services Provided:
UST and Fuel System Design, Construction Inspections


Mobil
Mobil
Synergy


VOLVO
CONTAINMENT SOLUTIONS
GPI

MOBIL / 7-Eleven - Kittery, ME

GPI provided plans to redevelop this outdated site located in Kittery, Maine. The plans included a larger and more modern convenience store including a new overhead fuel canopy with three fuel dispensing islands. GPI was able to optimize this design and improve traffic flow in and out of this undersized parcel. The underground fueling system was also replaced and two new doubel wall fiberglass fuel storage tanks and state-of-the-art fuel equipment were installed to improve the site's fueling capacity.

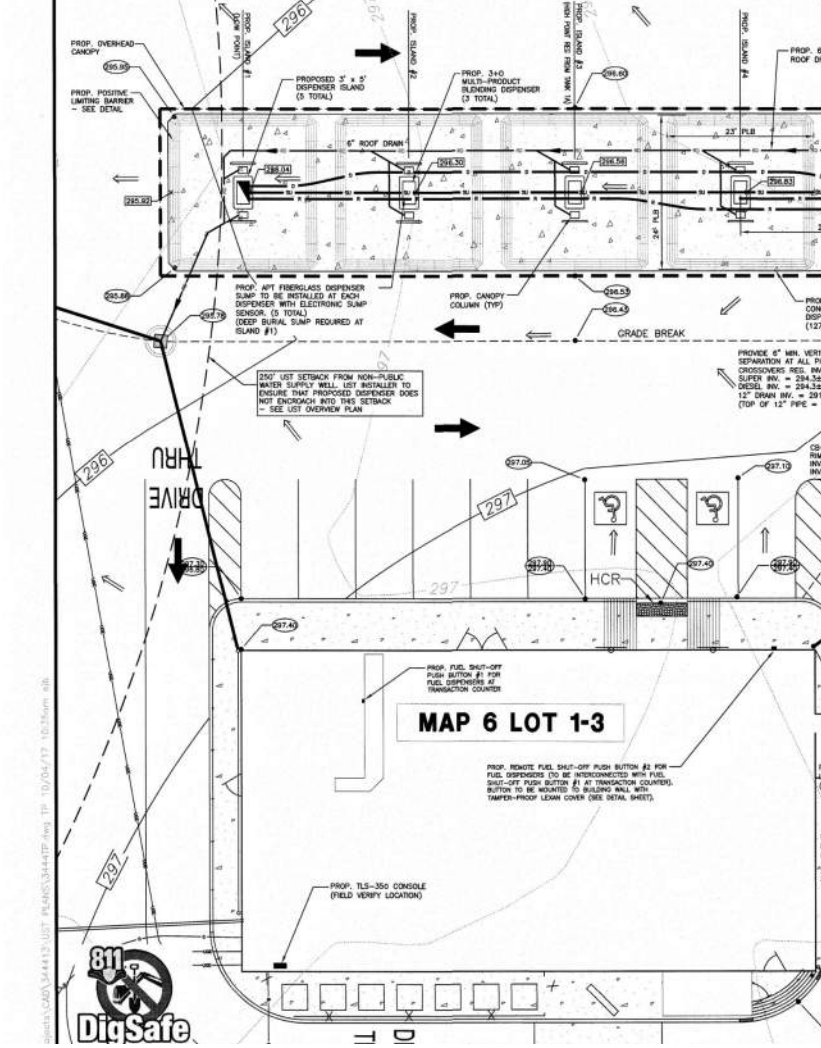
Location: Kittery, ME
Client: PetroGas
Services Provided:
Site Design, Utilities, Stormwater Management, UST and Fuel System Design, Construction Inspections


ELEVEN

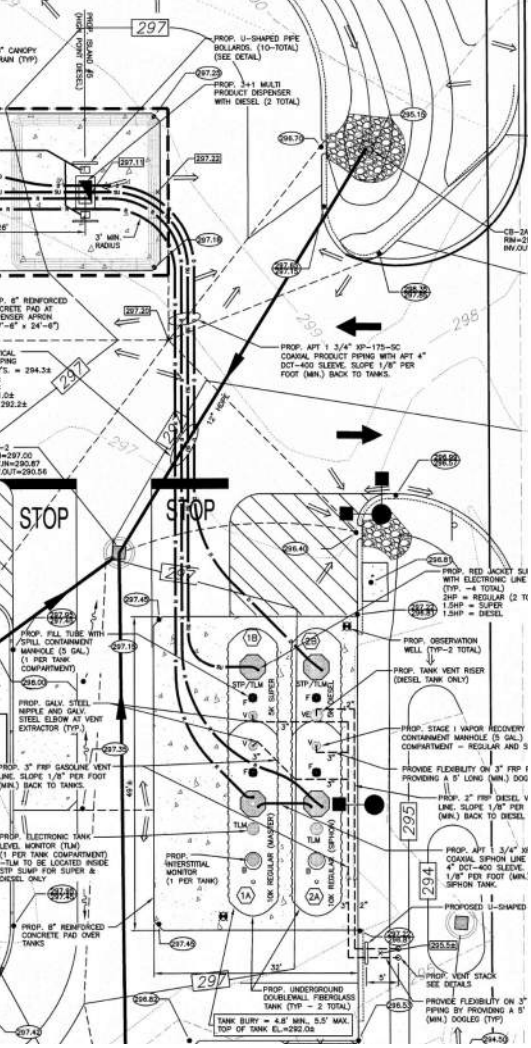

Mobil
GPI

Z-1 XPRESS - Goffstown, NH

GPI provided design plans and inspectional services for the new underground fueling system at this new-to-industry site just outside of Manchester, New Hampshire. This facility features five fuel dispensing islands supplied by two CSI doublewall FRP fuel storage tankis with APT coaxial flex product piping. Shallow bedrock was a challenge for the UST placement and value engineering led to the use of smaller diameter multi-compartmentalized tanks.



Location: Goffstown, NH
Client: Z-1 Xpress
Services Provided:
UST and Fuel System Design, Permitting, & Construction Inspections

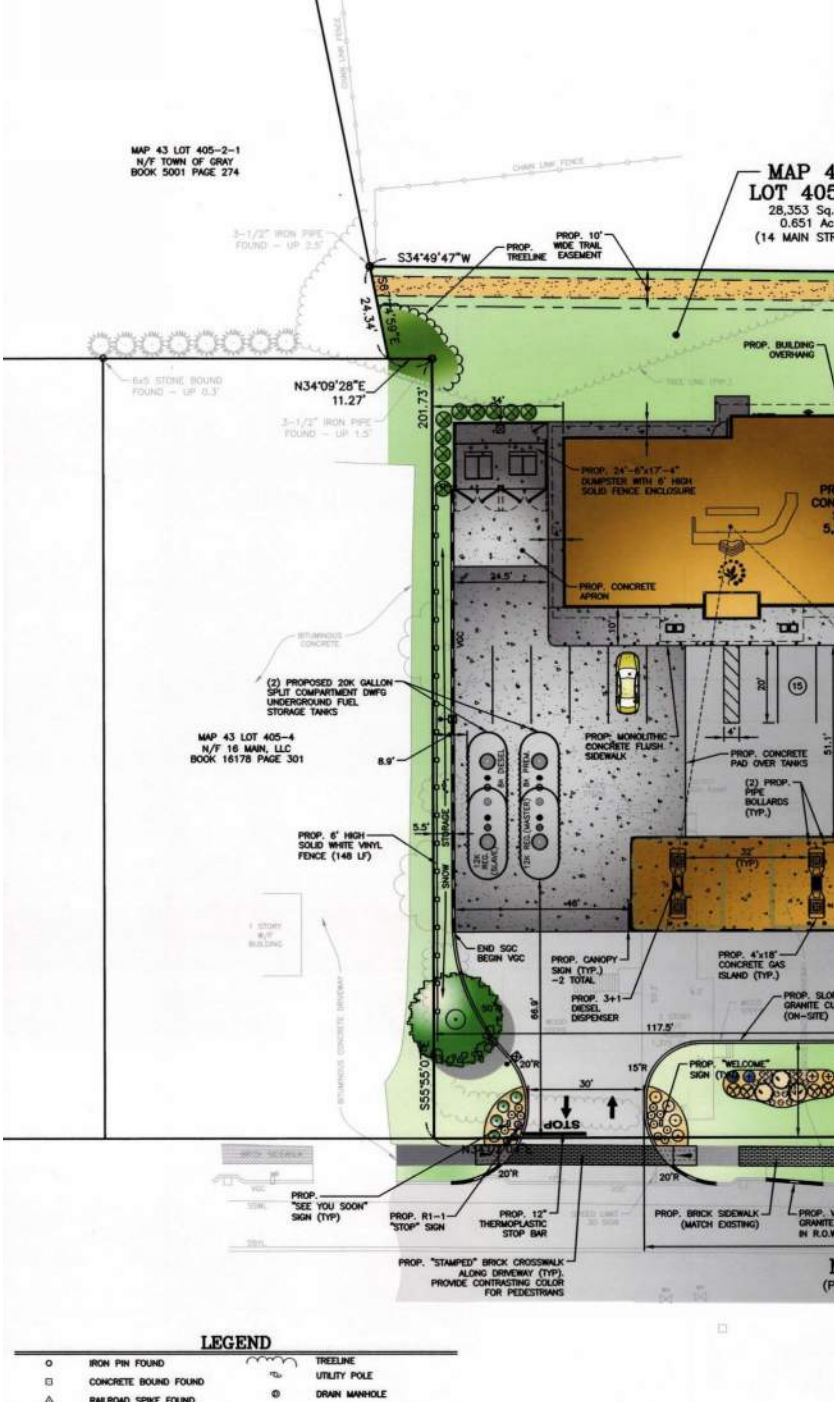

STOP
STOP
PROP. U-SHAPED PIPE BOLLARDS. (10-TOTAL) (SEE DETAIL)
PROP. 3+1 MULTI PRODUCT DISPENSER WITH DIESEL (2 TOTAL)
PROP. APT 1 3/4" XP-175-SC COAXIAL PRODUCT PIPING WITH APT 4" DCT-400 SLEEVE. SLOPE 1/8" PER FOOT (MIN.) BACK TO TANKS.
PROP. OBSERVATION WELL (TYP-2 TOTAL)
PROP. TANK VENT RISER (DIESEL TANK ONLY)
PROP. FILL TUBE WITH SPILL CONTAINMENT MANHOLE (5 GAL.) (1 PER TANK COMPARTMENT)
PROP. GALV. STEEL NIPPLE AND GALV. STEEL ELBOW AT VENT EXTRACTOR (TYP.)
PROP. ELECTRONIC TANK LEVEL MONITOR (TLM) (1 PER TANK COMPARTMENT) -TLM TO BE LOCATED INSIDE STP SUMP FOR SUPER & DIESEL ONLY
PROP. INTERSTITIAL MONITOR (1 PER TANK)
PROP. 8" REINFORCED CONCRETE PAD OVER TANKS
PROP. UNDERGROUND DOUBLEWALL FIBERGLASS TANK (TYP - 2 TOTAL)
TANK BURY = 4.8' MIN., 5.5' MAX. TOP OF TANK EL.=292.06
PROVIDE FLEXIBILITY ON 3" FRP PIPING BY PROVIDING A 5' (MIN.) OOGLEG (TYP.)
PROP. VENT STACK SEE DETAILS
PROPOSED U-SHAPED
PROP. APT 1 3/4" COAXIAL SIPHON LINE 4" DCT-400 SLEEVE. 1/8" PER FOOT (MIN.) SIPHON TANK.
PROP. STAGE I VAPOR RECOVERY CONTAINMENT MANHOLE (5 GAL.) COMPARTMENT = REGULAR AND
PROVIDE FLEXIBILITY ON 3" FRP PROVIDING A 5' LONG (MIN.) DOG
PROP. 2" FRP DIESEL V LINE. SLOPE 1/8" PER (MIN.) BACK TO DIESEL
PROP. RED JACKET SU WITH ELECTRONIC LINE (TYP. -4 TOTAL) 2HP = REGULAR (2 T 1.5HP = SUPER 1.5HP = DIESEL
297
295
294


Xpress
UNLEADED
2.43
2.09
ATM
DRIVE THRU
DUNKIN' DONUTS

GPI

Cumberland Farms - Gray, ME

Cumberland Farms looked to expand and redevelop their existing property in Gray, Maine by building a brand new 5,275-square-foot convenience store and overhead fueling canopy with eight dispensing positions. The existing dwellings were razed and construction has commenced. Plans provided by GPI detailed the new site, which sits adjacent to the old one on Main Street. GPI also supplied the company with plans for the brand new underground fuel storage system in compliance with Maine Department of Environmental Protection.



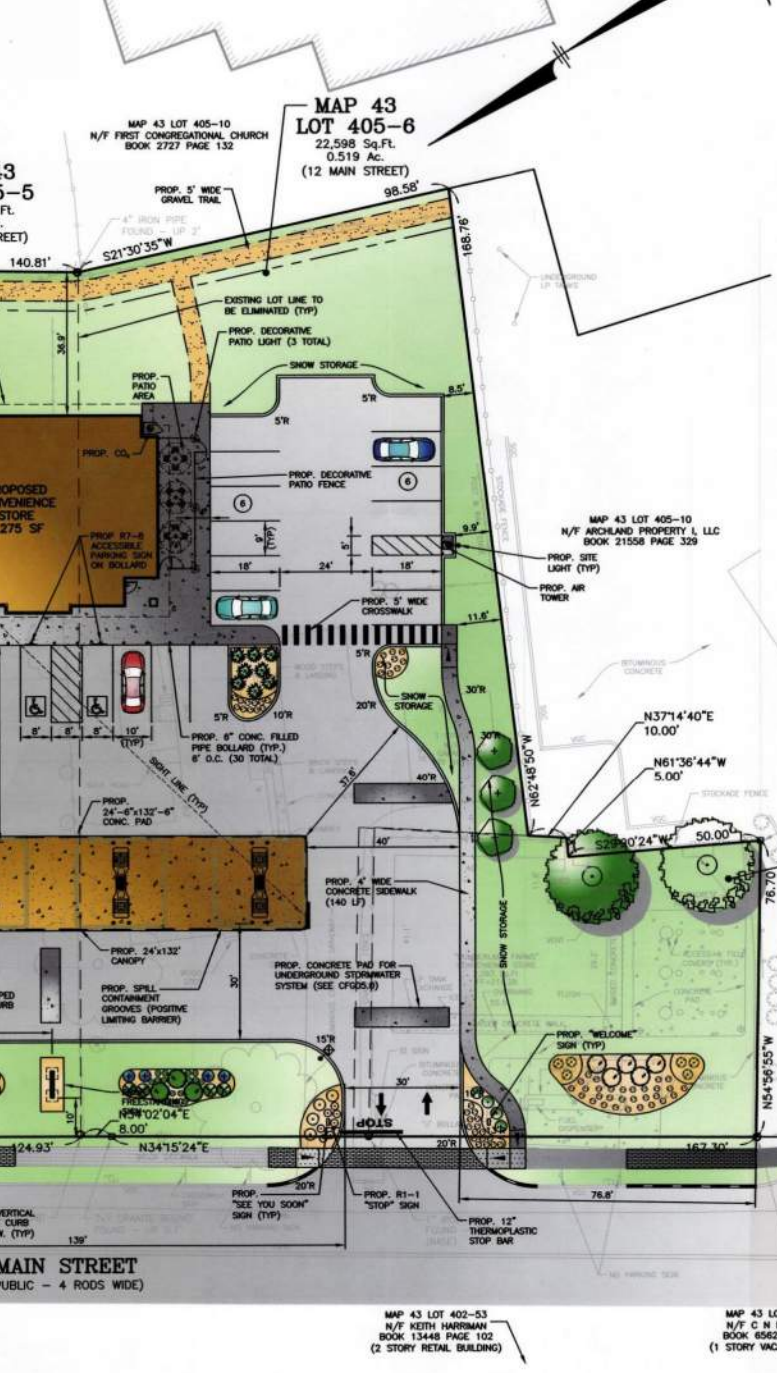
Location: Gray, ME
Client: Cumberland Farms
Services Provided:
Site Design, Utilities, Stormwater Management, UST and Fuel System Design, Construction Inspections

MINIMUM SIDE YARD BUILDING SETBACK	0'	51.5' (CANOPY), 34' (C-STORE)
MINIMUM REAR YARD BUILDING SETBACK	0'	36.9'
MINIMUM FRONT YARD BUFFER	25' (BUILDING SETBACK GREATER THAN 100')	25.1'
MINIMUM SIDE YARD BUFFER	5'	5.5'
MINIMUM REAR YARD BUFFER	5'	38.0'
PARKING SPACE DIMENSIONS	9'x18'	9'x18' & 10'x20'
MINIMUM NUMBER PARKING SPACES	CONVENIENCE STORE: 4 SPACES/1,000 SF GFA + 1 SPACE/EMPLOYEE + 0.25 SPACES/FUEL PUMP 5,260 SF X 4 SP./1,000SF + 4 EMP. X 1 SP./EMP + 0.25 SPACES X 4 FUEL PUMPS = 26 SPACES REQUIRED	27 SPACES
MAXIMUM BUILDING HEIGHT	35'	32'-9"
MAXIMUM LOT COVERAGE-BUILDINGS ONLY	75%	(5,275+3,168)/58,648 SF= 14%
MAXIMUM IMPERVIOUS SURFACE	75%	37,014 SF/58,648 SF = 63.1%
* FREESTANDING SIGN AREA,HEIGHT +SETBACK	24 SF MAX., 5' SETBACK, 12' MAX. HEIGHT	60 SF, 10' SETBACK, 15' HIGH
* WALL SIGN AREA	TOTAL AGGREGATE OF ALL SIGNS IS NOT TO EXCEED 56 SF (2) WALL SIGNS ALLOWED = 24 SF MAX. (2) CANOPY SIGNS ALLOWED = 9% MAX. SF/SIDE	(1) 37.6 SF WALL SIGN FACING MAIN STREET (1) 37.6 SF WALL SIGN FACING SOUTH (2) 11 SF CANOPY SIGNS TOTAL WALL SIGNAGE = 97.2 SF

* SIGNAGE REQUIREMENTS SHOWN FOR INFORMATIONAL PURPOSES ONLY. REVIEW & PERMITTING OF ALL SIGNAGE SHALL COMPLY WITH THE LAND USE CODE AND SHALL BE APPROVED BY THE GRAY CODE OFFICE.

SIGN KEY

SIGN I.D. NUMBER	TEXT/COLOR	QTY.	SIZE/REMARKS
R1-1	STOP R/W	2	30" x 30" NEW SIGN WITH POST
R7-8	ACCESSIBLE PARKING SIGN G/B/W	2	12" x 18" NEW SIGN WITH POST



NOTES:

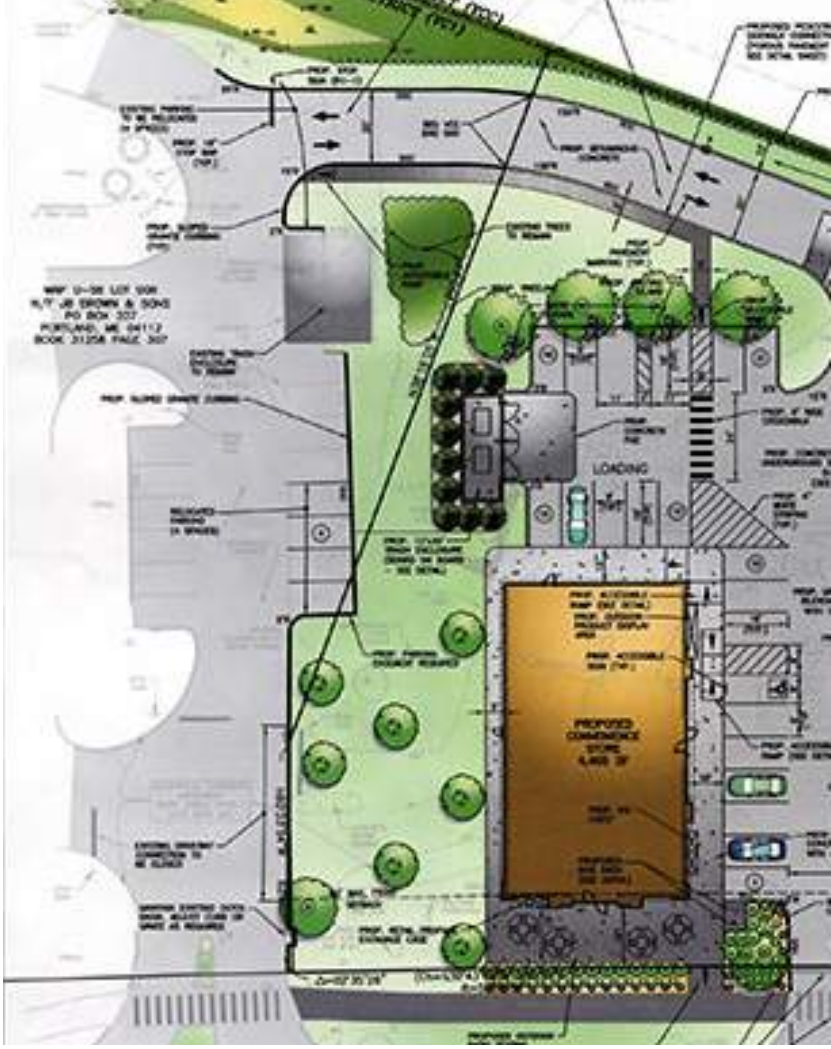
1) THE BOUNDARY INFORMATION SHOWN HEREON FOR MAP CC1 LOT 28 BOUNDARY SURVEY BY THIS OFFICE.
2) ZONING DISTRICT: VILLAGE CENTER PROPER DISTRICT (VCP)
3) LOT AREA = 58,648 Sq.Ft.± (TOTAL FOR 3 COMBINED LOTS) = 1.346 Ac.±
4) EXISTING USE: LOTS 405-5 & 405-6 ARE OCCUPIED BY RESIDENTIA OCCUPIED BY A CUMBERLAND FARMS RETAIL MOTOR FUEL OUTLET W CONVENIENCE STORE, A FUEL DISPENSING AREA WITH 2 DISPENSERS OVERHEAD CANOPY.
   PROPOSED USE: RETAIL MOTOR FUEL OUTLET WHICH INCLUDES A 5,2 FUEL DISPENSING AREA WITH 4 DISPENSERS (8 FUELING POSITIONS)
5) ALL BUILDINGS AND SITE CONSTRUCTION SHALL COMPLY WITH THE R AMERICANS WITH DISABILITIES ACT (ADA) AS PUBLISHED IN THE FEDE DATED JULY 26, 1991, REVISED JULY 23, 2004.
6) THE LOCATIONS OF EXISTING SUBSURFACE UTILITIES SHOWN ON THIS AVAILABLE RECORD DRAWINGS AND ARE NOT WARRANTED TO BE COR VERIFY THE LOCATION OF ALL EXISTING SUBSURFACE UTILITIES PRIOR
7) WRITTEN DIMENSIONS ON THIS PLAN TAKE PRECEDENCE OVER SCALE SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EV PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE THE CONTRACTOR.
8) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 1-88 EXCAVATION.
9) ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATION OF GRAY AND THE STATE OF MAINE.
10) THE SURVEY TRACT IS LOCATED IN FLOOD ZONE 'C', AREAS OF MINI FLOOD INSURANCE RATE MAP FOR THE TOWN OF GRAY, MAINE CUMB COMMUNITY PANEL NUMBER 230048 0015 A, EFFECTIVE DATE: JANU
11) ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND THE STA AS SUPPLIED BY CUMBERLAND FARMS.
12) A SIGN PERMIT SHALL BE OBTAINED PRIOR TO INSTALLATION. SIGNAG USE CODE.
13) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND ME FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY MHF DE EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF TH THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMAN THE SURVEYOR AND/OR ENGINEER AS INCLUDED IN THE PLAN SET SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED CONSTRUCTION CONTRACTOR SHALL PREPARE AND/OR OBTAIN THE A WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND AND/OR LOCAL REGULATIONS.
14) ALL UNDERGROUND STORAGE TANKS, PRODUCT PIPING AND VENT LIN STATE AND E.P.A. REGULATIONS.
15) ALL SNOW SHALL BE STORED IN THE AREA(S) DEPICTED ON THIS PL THE EVENT THAT THE AREA(S) APPROVED FOR SNOW STORAGE BECO REASONABLY REMOVE EXCESS SNOW FROM THE SITE, AND SHALL NO WITHIN PARKING LOTS OR TRAVEL AISLES.
16) ALL WASTE MATERIALS AND RECYCLABLES SHALL BE CONTAINED WITH STORAGE FACILITIES AND SHALL NOT BE OTHERWISE STORED ON PRO
17) EXISTING IMPERVIOUS COVERAGE = 15,063 SF± (25.7%)
    PROPOSED IMPERVIOUS COVERAGE = 37,014 SF± (63.1%)

LOCATIO
(NOT TO S

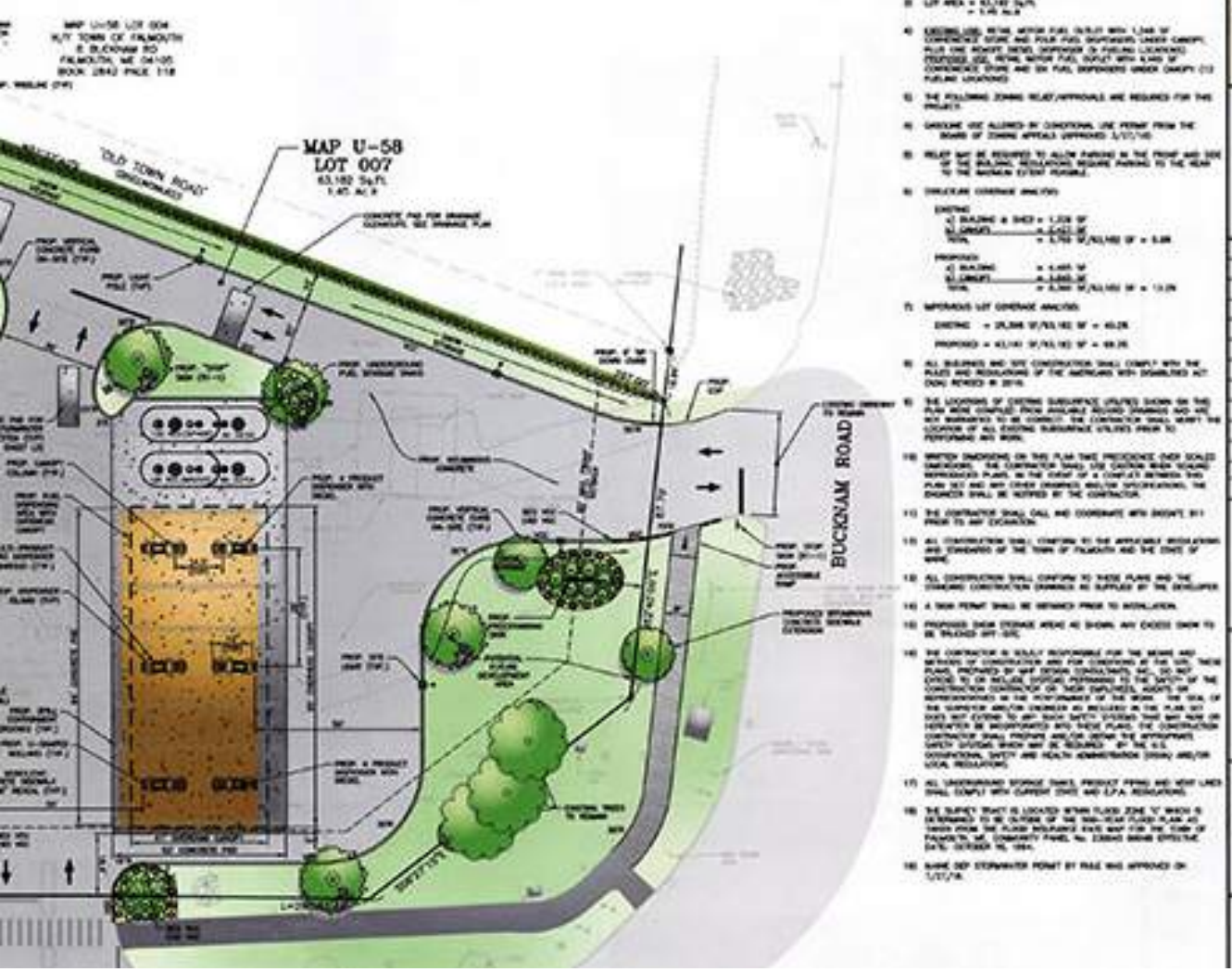
GRAPHIC SCA
(IN FEET)
1 inch = 20 ft.

Irving Oil - Falmouth, ME

GPI provided site plans to redevelop this lot in Falmouth, Maine into a multi-use Irving Oil retail motor fuel outlet. There are six retail fueling islands and a 4,465-square-foot convenience store. GPI also provided design plans for an underground fuel storage system that consists of two double wall FRP fuel storage tanks, double wall fuel lines and a state-of-the-art Veeder Root TLS-450 leak detection system.



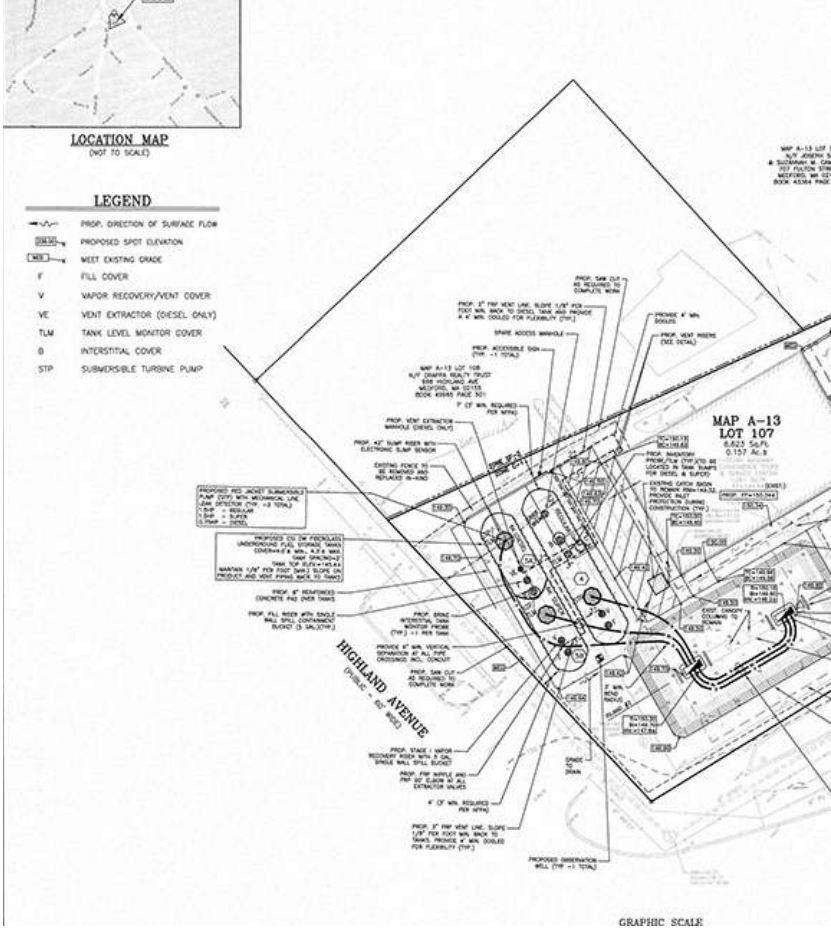
Location: Falmouth, ME
Client: Irving Oil Marketing, Inc.
Services Provided:
Site Design, Utilities, Stormwater Management, UST and Fuel System Design, Construction Inspections


MAP U-58
LOT 007
63,182 Sq.Ft.
1.45 ac.±
BUCKNAM ROAD
LOCATION MAP
REVISIONS
MHF Design Consultants, Inc.
IRVING
1"=20'
5/7/15
IRVING OIL
190 COMMERCE WAY

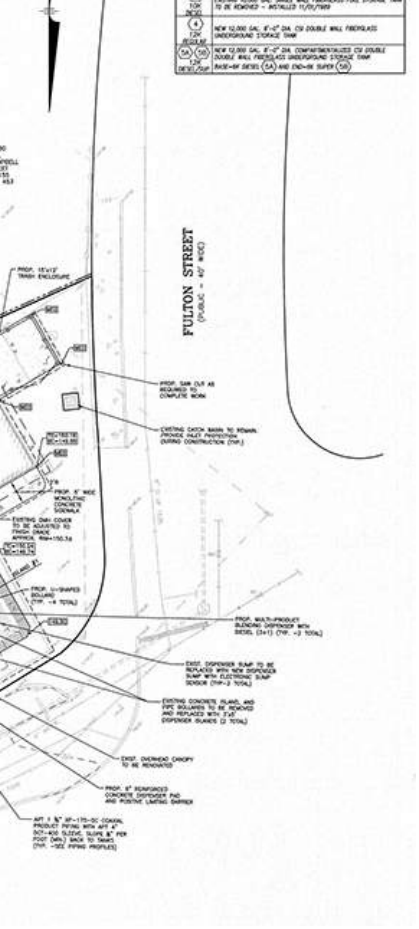

GPI

Mobil Service Station - Medford, MA

GPI provided design plans and inspectional services to upgrade and renovate this service station with bags located at a busy traffic circle in Medford, Massachusetts. The plans included two new underground fuel storage tanks, product piping, and vent piping. Since site circulation on this small site was limited, special consideration was taken in designing and optimizing the layout of the fuel dispensing system. The limited site footprint also required engineers to be mindful of possible utility conflicts. The new UST system consisted of CSI doublewell RFP fuel storage tanks with APT coaxial flex product piping.



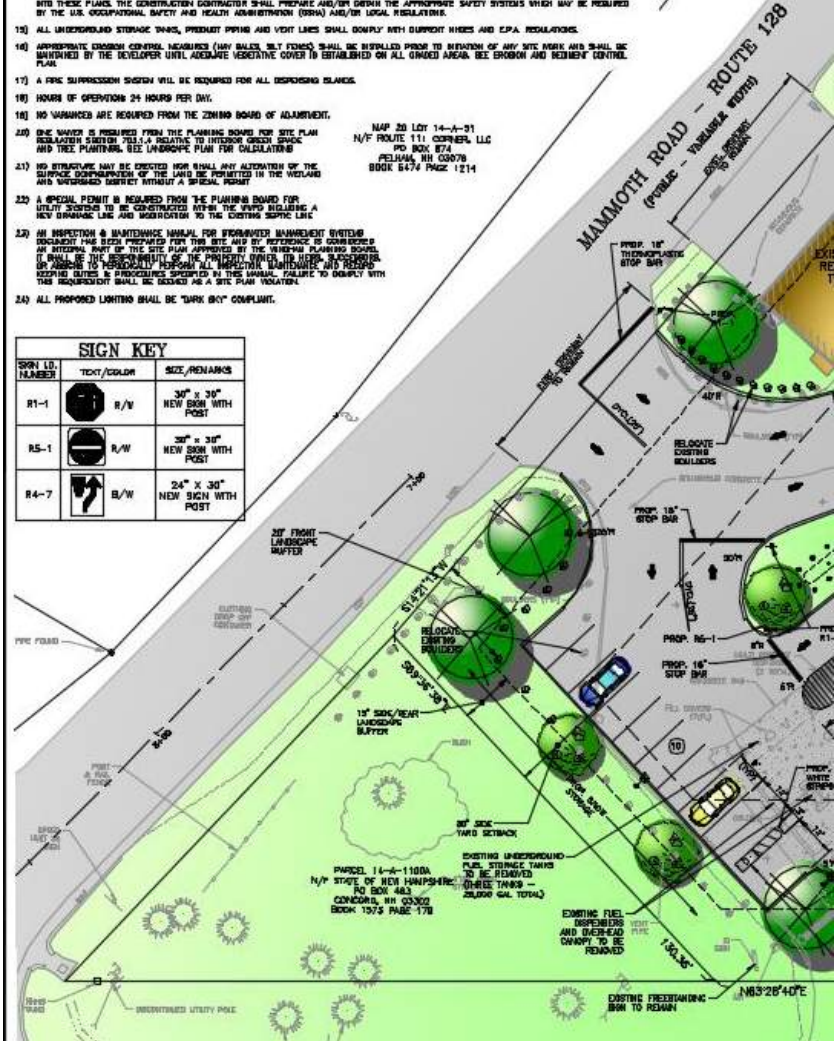
Location: Medford, MA
Client: Mobil
Services Provided:
Site Design, Utilities, Stormwater Management, UST and Fuel System Design, Construction Inspections


FULTON STREET

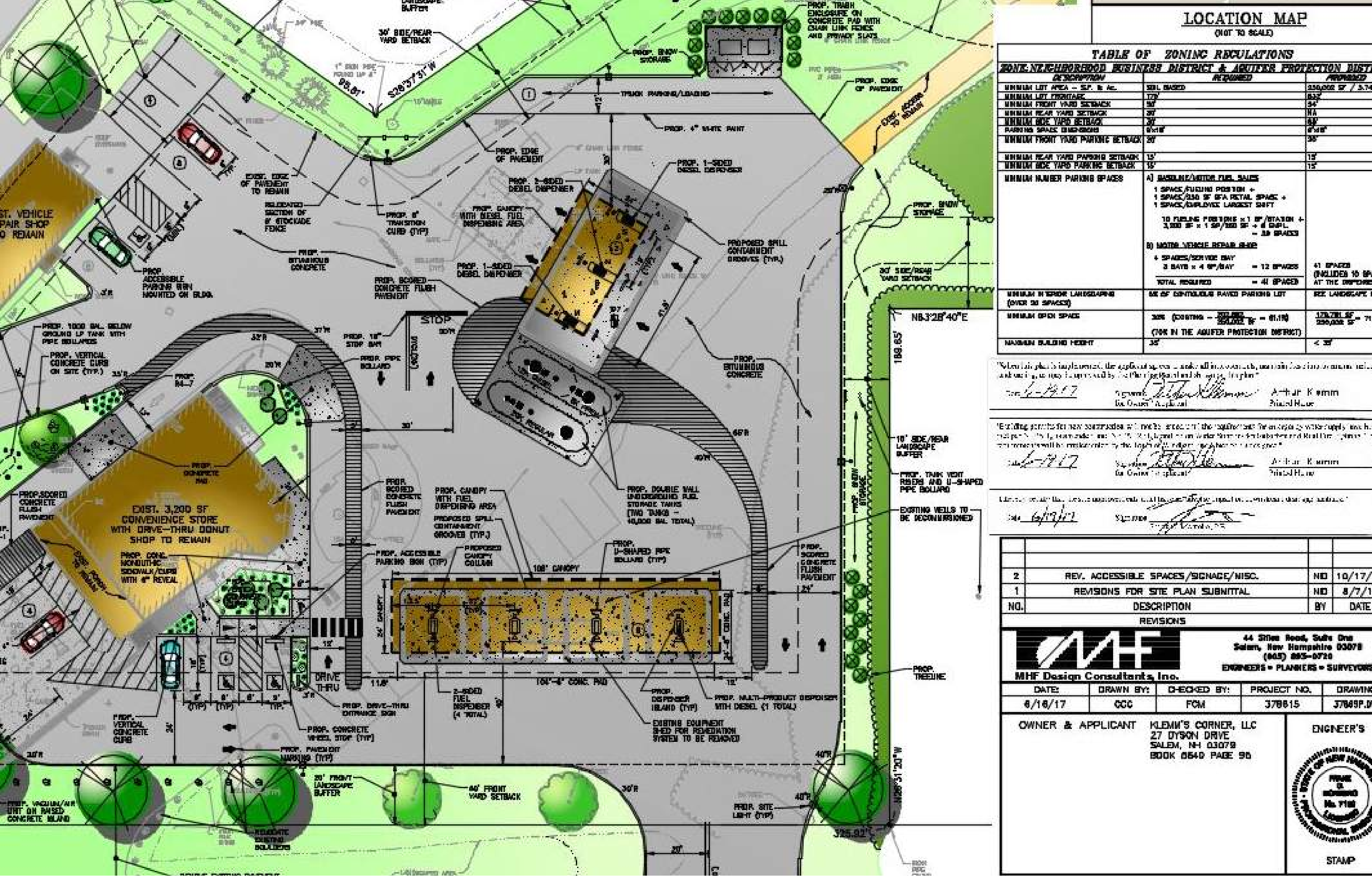

CONTAINMENT
SOLUTIONS
1-877-CSI-TANK
UL C 25178905
6000 GAL COMPT THIS END
7925 LBS WEIGHT
GPI

Klemm's Mobil - Windham, NH

GPI provided plans to upgrade this nearly six-acre lot in Windham, New Hampshire to a Mobil brand facility featuring four retail fuel dispensing islands and a two-lane commercial diesel fueling canopy at the rear. The existing convenience store, along with some other on-site structures, were implemented in the redesign. Careful measures were taken to not disturb the area's public water supply wells. The new underground storage tanks and fuel piping were approved by the State of New Hampshire.



Location: Windham, NH
Client: Mobil
Services Provided:
Site Design, Utilities, Stormwater Management, UST and Fuel System Design, Construction Inspections

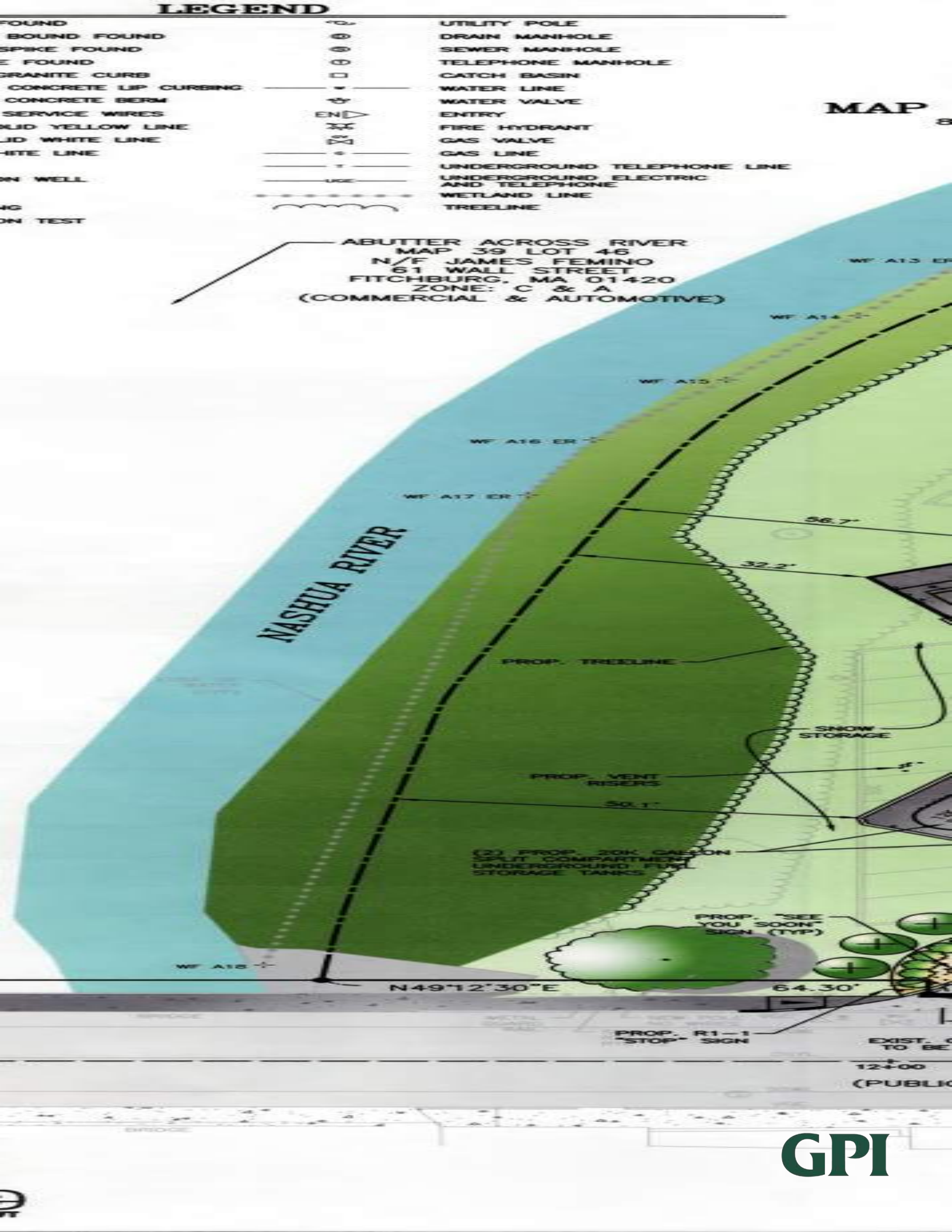

LOCATION MAP
(NOT TO SCALE)
TABLE OF ZONING REGULATIONS
EXIST. 3,200 SF CONVENIENCE STORE WITH DRIVE-THRU DONUT SHOP TO REMAIN
EXST. VEHICLE REPAIR SHOP TO REMAIN
108' CANOPY
STOP
DRIVE THRU
2 REV. ACCESSIBLE SPACES/SIGNAGE/MISC.
1 REVISIONS FOR SITE PLAN SUBMITTAL
NO. DESCRIPTION BY DATE
REVISIONS
MHF Design Consultants, Inc.
44 Stiles Road, Suite One
Salem, New Hampshire 03079
ENGINEERS • PLANNERS • SURVEYORS
DATE: 6/16/17
DRAWN BY: CCC
CHECKED BY: FCM
PROJECT NO. 378615
OWNER & APPLICANT
KLEMM'S CORNER, LLC
27 DYSON DRIVE
SALEM, NH 03079
BOOK 8549 PAGE 96
ENGINEER'S
STAMP


Mobil
Synergy

Cumberland Farms - Fitchburg, MA

GPI provided site development plans, renderings, and underground storage tank (UST) system plans to aid the process of turning this site in Fitchburg, Massachusetts, which was once a McDonald's restaurant, into a brand new 5,275-square-foot convenience store and fuel canopy with four self-serving fuel dispensing islands.

Location: Fitchburg, MA
Client: Cumberland Farms
Services Provided:
Land Survey, Traffic Study, Site Design, Utilities, Stormwater Management, UST and Fuel System Design, Construction Inspections

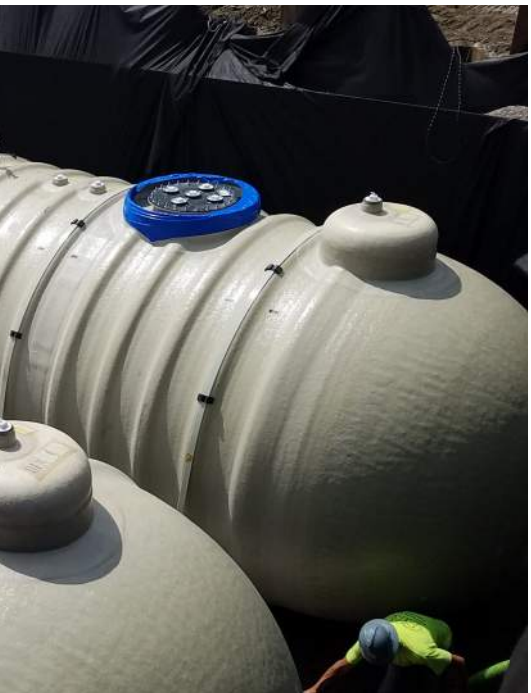

LEGEND
FOUND
BOUND FOUND
SPIKE FOUND
E FOUND
GRANITE CURB
CONCRETE LIP CURBING
CONCRETE BERM
SERVICE WIRES
LID YELLOW LINE
LID WHITE LINE
HITE LINE
ON WELL
NG
ON TEST
UTILITY POLE
DRAIN MANHOLE
SEWER MANHOLE
TELEPHONE MANHOLE
CATCH BASIN
WATER LINE
WATER VALVE
ENTRY
FIRE HYDRANT
GAS VALVE
GAS LINE
UNDERGROUND TELEPHONE LINE
UNDERGROUND ELECTRIC AND TELEPHONE
WETLAND LINE
TREELINE
MAP
ABUTTER ACROSS RIVER
MAP 39 LOT 46
N/F JAMES FEMINO
61 WALL STREET
FITCHBURG, MA 01420
ZONE: C & A
(COMMERCIAL & AUTOMOTIVE)
WF A13 ER
WF A14
WF A15
WF A16 ER
WF A17 ER
NASHUA RIVER
56.7'
32.2'
PROP. TREELINE
SNOW STORAGE
PROP. VENT RISERS
50.1'
(2) PROP. 20K GALLON SPLIT COMPARTMENT UNDERGROUND FUEL STORAGE TANKS
PROP. "SEE YOU SOON" SIGN (TYP)
WF A15
N49°12'30"E
64.30'
PROP. R1-1 "STOP" SIGN
EXIST.
TO BE
12+00
(PUBLIC
GPI

Irving Oil - Bellingham, MA

GPI provided site development plans and engineering for this 1.6-acre site in Bellingham, Massachusetts that includes a 3,600-square-foot convenience store and an overhead canopy with six self-serve fuel dispensing islands.

Location: Bellingham, MA
Client: Irving Oil Marketing, Inc.
Services Provided:
Land Survey, Traffic Study, Site Design, Utilities, Stormwater Management, UST and Fuel System Design, Construction Inspections

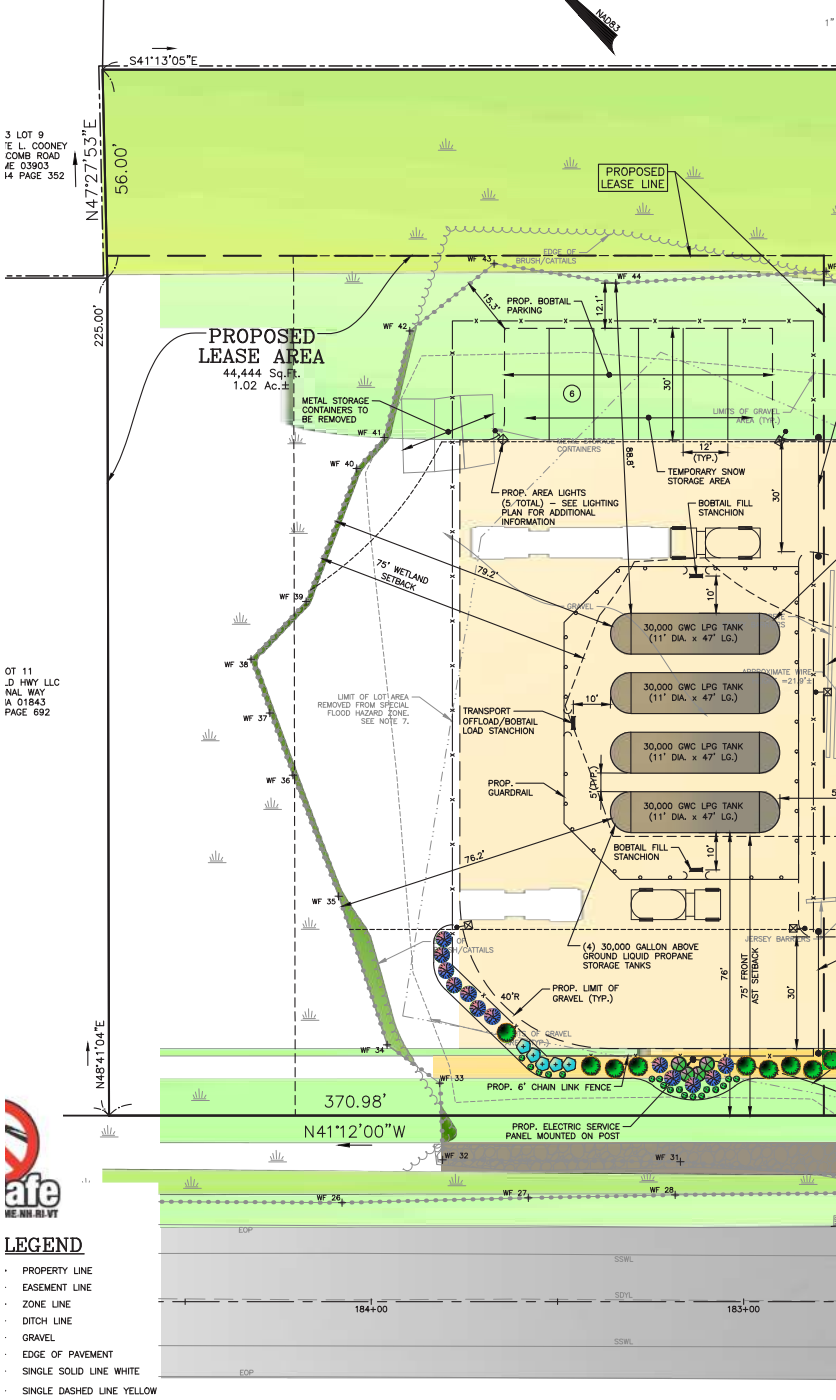

IRVING



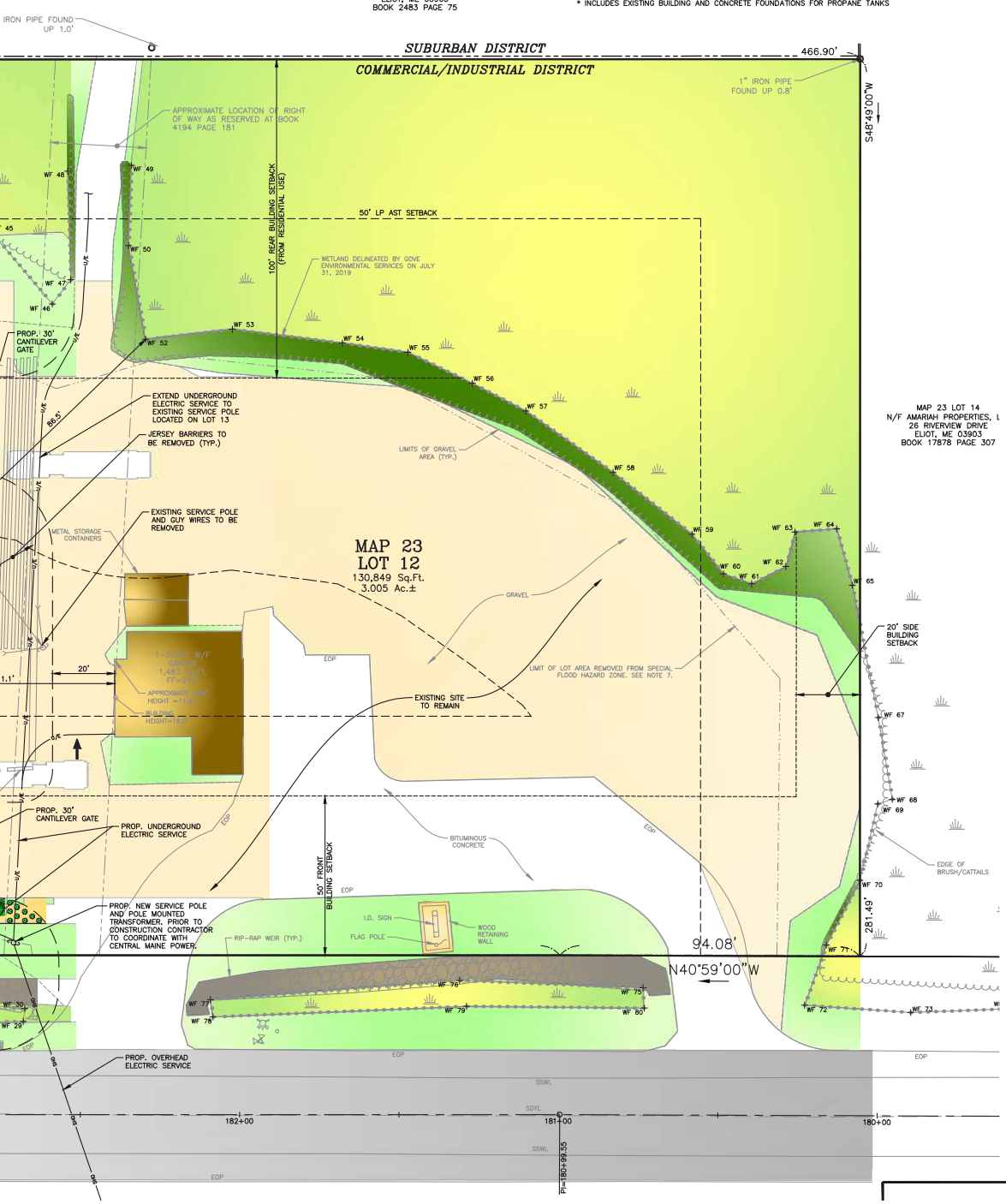

IRVING
GPI

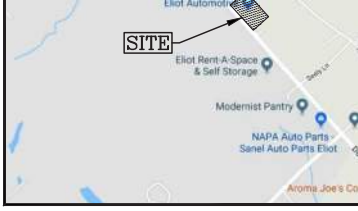
100 Harold Dow Highway - Eliot, ME

GPI is providing preliminary site engineering services for a propane storage facility in 100 Harold L. Dow Highway in Eliot, ME. Work includes conducting land survey and preparing a concept plan.



Location: Eliot, ME
Client: Energy North Group
Services Provided:
Land Survey, Site Design, Utilities, Stormwater Management





LOCATION MAP
(NOT TO SCALE)

NOTES:

1) EXISTING BOUNDARY AND PLANIMETRIC INFORMATION AS SHOWN IS THE RESULT OF AN ON-THE-GROUND FIELD SURVEY PERFORMED BY THIS OFFICE ON NOVEMBER 15, 2018 AND AUGUST 2, 2019.
2) TAX MAP 23 LOT 12
3) ZONING DISTRICT: COMMERCIAL INDUSTRIAL DISTRICT (C/I)
4) LOT AREA = 130,849 Sq.Ft.
   = 3.005 Ac.±
5) EXISTING USE: GARAGE AND BOAT STORAGE
   PROPOSED USE: BULK FUEL STORAGE FACILITY
6) BULK OIL FUEL TANKS ARE PERMITTED USES WITH SITE PLAN APPROVAL FROM THE PLANNIN BOARD. EACH BULK FUEL STORAGE TANK SHALL NOT EXCEED 50,000 GALLONS IN SIZE AND THE USE SHALL BE LIMITED TO LOCAL USE ONLY.
5) ALL BUILDINGS AND SITE CONSTRUCTION SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA) AS REVISED IN 2010.
6) THE LOCATIONS OF EXISTING SUBSURFACE UTILITIES SHOWN ON THIS PLAN WERE COMPILED FROM AVAILABLE RECORD DRAWINGS AND ARE NOT WARRANTED TO BE CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING SUBSURFACE UTILITIES PRIOR TO PERFORMING ANY WORK.
7) WRITTEN DIMENSIONS ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR.
8) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 1-888-344-7233 PRIOR TO ANY EXCAVATION.
9) ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE TOWN OF ELIOT AND THE STATE OF MAINE.
10) THE SURVEY TRACT IS PARTIALLY LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA (100 YEA FLOOD, ZONE A, NO BASE ELEVATION DETERMINED) PER FLOOD INSURANCE RATE MAP NUMBER 2301490010B, WITH AN EFFECTIVE DATE OF JUNE 5, 1989. A PORTION OF THIS PROPERTY WAS REMOVED FROM THE SPECIAL FLOOD HAZARD AREA VIA FEMA CASE # 17-01-2254A DATED AUGUST 25, 2017.
11) ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND THE STANDARD CONSTRUCTION DRAWINGS AS SUPPLIED BY THE DEVELOPER.
12) PROPOSED SNOW STORAGE AREAS AS SHOWN. ANY EXCESS SNOW TO BE TRUCKED OFF-SITE
13) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY GREENMAN-PEDERSEN, INC. (GPI), DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR AND/OR ENGINEER AS INCLUDE IN THE PLAN SET DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE AND/OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
14) AN EMERGENCY KEYBOX WILL BE PROVIDED FOR ON-PREMISES IN A LOCATION THAT IS AGREED UPON BETWEEN THE APPLICANT AND THE POLICE AND FIRE CHIEFS OF THE TOWN O ELIOT. THE PURPOSE OF THE KEYBOX IS TO INSURE ACCESS TO ALL ON-SITE FACILITIES IN THE CASE OF EMERGENCIES.

PLAN REFERENCES:
YORK COUNTY REGISTRY OF DEEDS

1) PLAN BOOK 58 PAGE 36
2) PLAN BOOK 152 PAGE 40
3) PLAN BOOK 181 PAGE 32
4) PLAN BOOK 203 PAGE 25
5) MAINE STATE HIGHWAY COMMISSION RIGHT OF WAY MAP STATE HIGHWAY 100 KITTERY-ELIOT YORK COUNTY FEDERAL AID SECONDARY PROJECT S-0100(5) DATED JANUARY 1956 S.H.C. FILE NO. 16-112 PROVIDED BY MAINE DOT.

NO.	DESCRIPTION	BY	DATE
1	ADD LOT COVERAGE CALCS	CMT	1/21/20

REVISIONS

SITE PLAN

ASSESSORS MAP 23 LOT 12
100 HAROLD L. DOW HIGHWAY – ROUTE 236
ELIOT, ME 03903
PREPARED FOR:
ENERGY NORTH INCORPORATED
2 INDUSTRIAL WAY
LAWRENCE, MA 01843

Greenman-Pedersen, Inc

GPI

Many Talents One firm

Greenman-Pedersen, Inc. 56 Locations in 22 States: CT, DE, FL, GA, IN, KY, LA, MA, MD, ME, MI,NC, NH, NJ, NY, OH, PA, SC,VA,VT, WI WV		www.gpinet.com