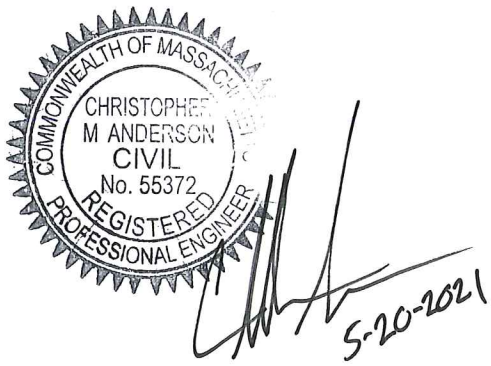
Unified General Permit Application
Level II
for
41 Lake George Street
in
Devens, Massachusetts

May 20, 2021



Prepared for: ***Accumet Engineering, Inc.***
Gregory Sexton, President
123 Oak Hill Road
Westford, Massachusetts 01886

Prepared by: ***Hannigan Engineering, Inc.***
8 Monument Square
Leominster, Massachusetts 01453
(978) 534-1234

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HANNIGAN
ENGINEERING, INC.
8 MONUMENT SQUARE, LEOMINSTER, MA 01453 PHONE: (978) 534-1234 FAX (978) 534-6060 | CIVIL ENGINEERS & LAND SURVEYORS

Peter C. Lowitt
DEVENS ENTERPRISE COMMISSION
33 Andrews Parkway
Devens, Massachusetts 01434

May 20, 2021

RE: Level Two Development Permit
Accumet Engineering, Inc.
41 Lake George Street, Devens, MA

Dear Mr. Lowitt,

On behalf of our client, Accumet Engineering, Inc. (Applicant), Hannigan Engineering, Inc. is submitting an application package for a Level Two Development Permit Application for the development of a new office/industrial building at 41 Lake George Street in Devens, Massachusetts. As the project is for the construciton of a new building and parking area, the provisions of a Level Two Development Permit are applicable. Included with this submittal are the application forms, the Site Development Plans (Site Plans), Building Floor Plans and Elevations, and a Drainage Analysis & Report. The filing fee of $46,000.00 is also included and is based on the anticipated construction cost of 4.0 million dollars.

The site is located on the western side of Lake George Street, just north of the intersection with Jackson Place and is depicted on the Assessor's Map 13 as Parcel 21-6. The lot is approximately 3.11 acres and is currently undeveloped with poritons of the site having previous earthwork, grading, etc. performed in the past. Several piles of fill material exist on site that will be either reused during constrution or removed from the site. Areas subject to protection under the Wetland Protection Act exist in the area and have been delininated by Caron Environmental Services, LLC. These areas are shown on the Existing Condtions Plan including within the Site Plans submitted.

An existing electrical substation is just west of the property an an easement for underground electrical connections to this station exist over the southerly portion of the property. Other exisitng utilities in the area include municipal water and sewer, along with electrical, telecommunications, and gas from various utility providers. The project will utilize these utilities to serve the proposed building and site. Existing drainage systems in the street are available, but are not utilized for mitigation purposes on the project. A new drainage system will be constructed on the property and will address the drainage needs for the project. A single connection point for a portion of the site drainage system will be connected to a manhole that exists on site. The remaining drainage will be routed through the onsite system the existing system for mitigation.

SITE REVIEW

The new building will be approximately 40,000 square feet and is proposed to allow the Applicant to relocate various components of their operations to this new facility. This project will allow the company to manage operations and allow for additional expansion over time. The project consists of a single-story pre-engineered buildIng with associated parking and service areas to the building. Loading areas will be located at the rear of the building for shipping and receiving of materials and finished products.

Vehiclular access will be provided by two new curb openings along Lake George Street to the north and south of the proposed building. The northerly driveway will be utilized as the main drive for truck traffic to enter the site. The southerly driveway will provide access to the site for employees and customers for the site. The site has been laid out to create a loop road around the building to the rear of the property. Truck traffic will enter the northerly drive and be directed towards the rear of the building where the loading areas are located. There are two standard loading doors with dock height access along with a single at grade loading door along the rear of the building. . When the vehicles are leaving the site they will continue south along the loop drive and exit out onto Lake George Street at the southelry entrance. The driveways have been designed with widths and layouts suitable to accommodate a standard WB-67 tractor trailer. The site layout has also been reviewed to confirm the ability for a SU-40 (single unit) to manuever through the site.

Parking for the facility will be primarily provided along the southerly portion of the access drive. A total of 70 parking spaces are required based on the combined usage in the building per the Bylaw. These spaces are shown on the Site Plans including the provisions for three (3) accessible spaces. The majority of the parking will be provided along the length of the southerly access drive which will provide sufficient parking for employees and customers. An secondary area of parking is being provided between the main loop drive and the building which provides additional parking along the rear of the building.

UTILITIES

Under existing conditions, stormwater from the site flows unabated towards one of three low points along the perimeter of the site. Upon the completion of construction, the stormwater relative to the paved areas will be captured by series of deep sump, hooded catchbasins. Roof runoff will be captured by a series of scuppers and directed towards the proposed stormwater management system. The catchbasins will capture the runoff and direct the stormwater through a water quality device to provide Total Suspended Solids (TSS) removal. Upon treatment, the majority of the stormwater will be directed towards a single underground storage system comprised of molded chambers set within a bed of crushed stone to provide mitigation of peak rates of runoff. This system has been designed to utilize infiltration as a means of peak rate mitigation and to provide the applicable recharge of the stormwater. To confirm the condition of the soils within these areas, a series of test pits and soil evaluations were performed throughout the site. Based on these observations, the site is underlaid with a coarse sandy material, which is advantageous to the overall drainage design. In addition, as required by the Bylaw, a percolation test was performed within the general footprint of the drainage system to confirm exfiltration and recharge rates utilized in the design.

In addition to the proposed underground system, a bio-retention area or rain garden is being proposed along the easterly side of the building along Lake George Street. This system will capture and treat small portion of proposed access and parking areas as well as a portion of the proposed building. This system will also utilize infiltration for recharge and mitigation and will also include several plantings to aid in the treatment of the runoff as well as provide additional screening of the building. Reference is made to the Drainage Analysis & Report for a comprehensive review of the proposed stormwater system and its compliance with current Stormwater Management Regulations.

Sewage generated from the building will be transmitted via gravity to the existing infrastructure within Lake George Street. Currently a single connection point is proposed, via a new manhole structure to the existing sewage main. As there will be vehicular access to each of the buildings, floor drain systems will also be incorporated into the project. These flows will be directed to an "MDC Gas Trap" and be connected to the sewer main. Should there be a spill within the building, this trap allows the collection of contaminants to minimize or prevent these flows from entering the sewer system.

Water service connections will be made to the existing water main within Lake George Street. Two separate connections will be provided for the domestic water service and the fire suppression system. At this time, the final size of the fire suppression line has not been determined. The final sizing will be provided with fire suppression system prior to commencement of the building construction.

Electrical and telecommunication service connections will be made via the applicable utility provider including review of final connection points and transformer location. Gas service for the proposed building will be provided by a series of underground propane tanks which will be located along the rear of the building. Additional provisions have been made to have several tanks for the storage of other gases that that are utilized by the Applicant as part of their manufacturing process. These tanks include liquid nitrogen (LNG) and liquid oxygen (LOX), which will be located along the rear of the property, as well as a liquid helium tank located near the at-grade loading door.

SNOW STORAGE

Snow storage will be address with windrow plowing to the parking lot edges and the creation of snow piles along the exterior of the site during typical storm events. Should these storage areas become overburdened, snow removal will be required. The snow removal operations will be required to dispose of the snow in accordance with appropriate regulations.

TRAFFIC REVIEW

Due to overall scale of this project a formal traffic impact has not been performed. Based on the ITE Manuals, this facility (Manufacturing ITE 140) is anticipated to generate a total of 132 trips per day for the intended use. Of this, it is anticipated that the peak hour trips would be approximately 19 trips during the AM peak hour and 25 trips during the PM peak hour.

LANDSCAPING & VIEWSHED OVERLAY DISTRICTS REVIEW

Provisions for appropriate landscaping has been provided for compliance with the regulations. Currently, as the site has been previously cleared, there are not any substantial trees within the core of the property. The outer perimeter of the site is wooded with an established canopy. The majority of the development is within the center of the property which limits the requirement to remove a significant number of trees. Additional provisions have been made to preserve several of the established trees along Lake George Street to maintain the general character of the area.

As part of the general landscaping, additional trees will be installed along Lake George Street to infill the open areas with trees as well as provide screening as part of the Viewshed Overlay District requirements. Additional provisions have been to provide perimeter trees along the southerly parking areas as well as shade trees within the landscaped island between the access drive and the secondary parking areas. The remaining areas disturbed by the proposed construction will be loamed and seeded for permanent stabilization. A full Landscape Plan has been provided as prepared by Princeton Scapes, Inc., to which reference is made for review.

As the project is located within the Viewshed Overlay District, it is subject to additional restrictions relative to the overall design of the site. The Viewshed district is based on the view from Prospect Hill and the Fruitlands Museum. The project "view" has been incorporated into the Site Plans and is generally comes from the southeast of the site. The site has an established woodland area on the southern side of the property. Although some limited clearing of trees is required for construction, the existing vegetation provides a significant screen relative to the at grade construction. The building height is anticipated to be approximately 28 feet and most of the parking will be between the building and the existing tree line. The loading areas are then behind the building, which would be blocked from view.

As required by the Regulations additional deciduous trees will also be planted along the southerly limits to further supplement these areas. Along the easterly limits additional large deciduous trees are proposed to be planted along the length of Lake George Street, to supplement several large trees currently located along the roadway. These landscaping improvements are intended to reduce view impacts of the development, if any.

REUSE PLAN REVIEW

Based on our review of the regulations, it is the opinion of this office that the project meets the intent of the Devens Reuse Plan. The property has been previously disturbed with areas of the site being rendered impervious. Other areas are open gravel or earthen fill areas with the perimeter of the site being woodland. This site is also has been utilized as dumping ground for excess earth materials and it appears that this property has been underutilized.

It is the intent that the Applicant relocate their business to Devens as part of their general expansion. This meets the primary goal *"to provide space to those industries and businesses that develop and require additional space within Devens or that relocate to Devens."* Furthermore, this project incorporates *"high standards for site planning"* as the project takes into account the general *"site characteristics ... topography, existing vegetative cover and tree canopy..."*. The project design has utilized the existing disturbed areas for the proposed development and minimized the disturbance of perimeter areas, including limiting the amount of vegetation removed from the site.

OPEN SPACE AND RECREATION PLAN REVIEW

Based on our review of the regulations, it is the opinion of this office that the project meets the intent of the Devens Open Space and Recreation Plan. As previously noted, the property has been previously disturbed which is underutilized. The project design has utilized the existing disturbed areas for the proposed development and minimized the disturbance of perimeter areas, including limiting the amount of vegetation removed from the site.

Specifically, the project has been designed to meet the two set goals of the Open Space plan by protecting important land and water resources. The proposed plan generally works within the existing grade of the land which limits the amount earth moving activities on the property and protects the steep slope resource areas located on and around the perimeter of the property.

As for the protection of important water resources, the site currently is partially covered with a layer of asphalt pavement with no stormwater features. As part of this project the stormwater management system will capture and detain almost the entirety of the stormwater runoff from the site and directly infiltrate it to the ground. By providing the level of infiltration available to the project, a significant recharge benefit to the groundwater system is obtained. Additionally, the current impervious areas of the site allow surface runoff to enter the surrounding wetland areas with little or no treatment. As such, the project will provide an improvement to the stormwater quality exiting the site.

The site has also been laid out as to limit the work to beyond the 50-foot buffer zone of a nearby bordering vegetated wetland to the north, thus protecting these environmentally sensitive areas. It is further noted that up on the completion of construction the existing woodland on the property is intended to remain intact to maintain general open space on the property. This project is does not intend to provide any recreational facilities as this is project is exclusively an industrial use.

HANNIGAN
ENGINEERING, INC.
8 MONUMENT SQUARE, LEOMINSTER, MA 01453 PHONE: (978) 534-1234 FAX (978) 534-6060 | CIVIL ENGINEERS & LAND SURVEYORS

SUMMARY

Hannigan Engineering, Inc. is providing this information to assist the Devens Enterprise Commission in their review of this project for its anticipated approval. Please find seven copies of the Site Development Plans attached for review along with supporting documentation. We look forward to working with you on this project and would be available to meet and review aspects of the project should questions arise prior to the meeting with the Board.

Please feel free to contact me at this office should you have any questions or concerns.

Sincerely,
HANNIGAN ENGINEERING, INC

Christopher M. Anderson, PE
Project Engineer

William D. Hannigan, PE
President

pc: Gregory Sexton, Accumet Engineering
Glen Houlihan, EGH Advisors
Mike Hodgman, Spectrum Builders

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Application Form

DEVENS ENTERPRISE COMMISSION

DEC NO. _____
DATE: _____
FEE: _____

DEVENS REGIONAL ENTERPRISE ZONE
PERMIT APPLICATION LEVEL 2

ESTIMATED COST OF CONSTRUCTION / IMPROVEMENTS $4,000,000

OWNER Devens Lot 10A, LLC
ADDRESS 80 Erdman Way
TOWN/STATE Leominster, MA 01453
PHONE 978. 490. 6650
FAX _____

Michael Lanney
SIGNATURE

Michael Lanney (Manager)
Type or print name and title

APPLICANT Accumet Engineering, Inc.
ADDRESS 123 Oak Hill Road
TOWN/STATE Westford, MA 01886
PHONE 978-692-6180
FAX _____

SIGNATURE

Gregory Sexton CEO
Type or print name and title

If appropriate, attach a separate sheet with the name(s), address(es), and telephone/fax numbers for the project engineer, attorney, or other "development team" personnel.

SITE / LOCATION / STREET 41 Lake George Street

LOT SIZE / TOTAL PARCEL / ZONING DISTRICT: 3.11Ac, Innovation and Technology Center Dist.

STATEMENT OF PROPOSED WORK OR ACTIVITY: Construction of new 39,375 sf industrial building

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SCOPE OF WORK (pick the actions that best fit your project or application)

- [X] Site Plan
- [X] Wetlands NOI
- [ ] Minor amendment or modification of an approved plan
- [ ] Historic District renovations/addition/alternations
- [ ] Other (Specify) _____
- [ ] Reconsideration
- [ ] Zoning Variance

Explain work to be performed: Construction of new 39,375 sf industrial building with applicable utility and access improvements.

Comments from Notifying Agencies: _____

HANNIGAN ENGINEERING, INC.
CIVIL ENGINEERS & LAND SURVEYORS

8 Monument Square, Leominster, MA 01453

18-May-21

Projec 2984 Accumet Engineering, Inc. Lake George Street, Devens

Cost Estimate	Net Cost
Site Preparation	
Subtotal Demolition	$39,134
Subtotal Tree Clearing	$13,650
Subtotal Earth Prep	$589
Subtotal Earth Prep	$8,005
Total Preparation	*$61,378*
Excavation and Fill	
Subtotal Excavation	$9,154
Subtotal Fill	$43,629
Subtotal Grading	$13,059
Subtotal Erosion Control	$1,195
Total Excavation and Fill	*$67,037*
Utilities	
Subtotal Sewer	$38,110
Subtotal Gas	$2,346
Subtotal Water	$9,984
Subtotal Drainage	$506,420
Total Excavation and Fill	*$556,859*
Pavement	
Subtotal Pavement Site	$180,649
Subtotal Pavement Off Site	$17,975
Subtotal Painting-Parking	$1,903
Subtotal Sidewalk	$14,255
Total Excavation and Fill	*$214,781*
Landscaping	
Subtotal Landscaping	$25,620
Subtotal Retaining Wall	$3,520
Subtotal Fencing	$11,375
Total Excavation and Fill	*$40,515*

TOTAL PROJECT COST:	$	940,572
10% Contingency	$	94,057
Total + Contingency	$	1,034,629
Total Adjusted to City Location	$	1,076,014
TOTAL SITE COST:	$	1,076,014
TOTAL BUILDING COST:	$	2,850,000
TOTAL PROJECT COST:	$	3,926,014

Certified List of Parties in Interest

300 foot Abutters List Report

Devens, MA
April 20, 2021

ASSESSOR OFFICE
RECEIVED: 4/20/21
BY: Ruby Mandy

Subject Property:

Parcel Number:	013.0-0021-0600.0	Mailing Address:	DEVENS LOT 10A LLC
CAMA Number:	013.0-0021-0600.0		80 ERDMAN WAY
Property Address:	41 LAKE GEORGE STREET		LEOMINSTER, MA 01453

Abutters:

Parcel Number:	008.0-0021-0200.0	Mailing Address:	8 JACKSON ROAD LLC
CAMA Number:	008.0-0021-0200.0		28 JUNCTION SQUARE
Property Address:	7 JACKSON ROAD		CONCORD, MA 01742
Parcel Number:	008.0-0021-0400.0	Mailing Address:	MDFA /UNDEV LAND
CAMA Number:	008.0-0021-0400.0		99 HIGH STREET 11TH FLOOR
Property Address:	27 LAKE GEORGE		BOSTON, MA 02110
Parcel Number:	008.0-0021-0401.0	Mailing Address:	MDFA / VACANT
CAMA Number:	008.0-0021-0401.0		800 BOYLSTON STREET SUITE 1570
Property Address:	33 LAKE GEORGE		BOSTON, MA 02199
Parcel Number:	013.0-0021-0500.0	Mailing Address:	ONE JACKSON PLACE, LLC
CAMA Number:	013.0-0021-0500.0		80 ERDMAN WAY
Property Address:	27 JACKSON ROAD		LEOMINSTER, MA 01453
Parcel Number:	013.0-0021-0700.0	Mailing Address:	MDFA / WETLANDS STORM WATER POND
CAMA Number:	013.0-0021-0700.0		99 HIGH STREET 11TH FLOOR
Property Address:	45 LAKE GEORGE STREET		BOSTON, MA 02110
Parcel Number:	013.0-0021-0701.0	Mailing Address:	MDFA / LAKE GEORGE SUB STATION
CAMA Number:	013.0-0021-0701.0		99 HIGH STREET 11TH FLOOR
Property Address:	37 LAKE GEORGE		BOSTON, MA 02110
Parcel Number:	013.0-0021-1000.0	Mailing Address:	KING DEVENS LLC C/O WENDY PIERCE
CAMA Number:	013.0-0021-1000.0		91 HARTWELL AVE
Property Address:	45 JACKSON ROAD		LEXINGTON, MA 02421

Drainage Calculations - Narrative

(See Drainage Analysis & Report prepared by Hannigan Engineering, Inc. dated May 20, 2021 for full calculations.)

1.0 NARRATIVE

1.1 INTRODUCTION

On behalf of our client, Accumet Engineering, Inc. (Applicant), Hannigan Engineering, Inc. has prepared this Drainage Analysis and Report as part of submittal package for a Level Two Development Permit Application for the development of a new office/industrial building at 41 Lake George Street in Devens, Massachusetts. The new building will be approximately 40,000 square feet and is proposed to allow the Applicant to relocate various components of their operations to this new facility. This project will allow the company to manage operations and allow for additional expansion over time. The project consists of a single-story pre-engineered building with associated parking and service areas to the building. Loading areas will be located at the rear of the building for shipping and receiving of materials and finished products.

The purpose of this analysis is to compare the pre-development and post-development site drainage characteristics for this project. In particular, changes in peak rates of runoff generally associated with alterations of land use were studied. These alterations include land being transformed from areas of landscape (grass), woods, and brush to areas of grass, landscape, and impervious areas (rooftops, sidewalks and pavement). The effects of stormwater being re-directed to new areas as a result of the proposed construction and the associated drainage system were reviewed as well. For the purposes of this report, any developed areas which are not impervious will be considered to consist of lawn and landscape areas.

The U.S. Soil Conservation Sevice (SCS) methods were utilized for this analysis in order to establish land use and run-off characteristics in the determination of pre- and post-developement peak rates of runoff. All proposed development areas and subsequent impacts on stormwater runoff relative to this development have been incorporated within this analysis and report.

The drainage from the site currently flows to several low points throughout the property with the majority of the runoff being driected towards an wetland area along the northerly property line of the site. In the area of the proposed development, an increase in impervious areas due the construction of the building and associated parking lots will occure over much of the site. In addition to the proposed buildng and access improvments additional provisions are being made to provide compliance with the Massachusetts Stormwater Reuglations. These measures include the implementation of a stormwater treatement train and several detention faciliites to mitigate the proposed development.

1.2 METHOD OF ANALYSIS

The enclosed hydrologic calculations utilize the runoff estimating techniques developed by the USDA Soil Conservation Service (SCS). The following websites and publications were used in the preparation of this report:

1. "Urban Hydrology for Small Watersheds"[1]
2. "National Engineering Handbook, Hydrology, Section 4" (NEH-4)[2]
3. "Handbook of Hydraulics" 6th ed. - E.F. Brater & H. Williams[3]
4. "Web Soil Survey" - USDA NRCS[4]

Using SCS publications and other texts on surface water hydrology, in conjunction with drainage software *HydroCAD* developed by Applied Microcomputer Systems[5], Hannigan Engineering has calculated peak rates of runoff relative to the subject site for conditions prior to development as well as conditions upon the completion of construction. The drainage software program *HydroCAD* calculates peak rates of runoff similarly to the computer program known as *Computer Programs for Project Formulations-Hydrology, Technical Release Number 20 (TR-20),* developed by SCS. This program and series of programs are the technical standard utilized by engineers, Planning Boards, Conservation Commission, and Municipal Agencies throughout the region and across the country for the evaluation of storm water conditions.

The analysis reviews certain parameters of sub-watersheds surrounding the subject site and how these parameters are affected by various rainfall conditions. These parameters include land cover and use, soil strata and permeability, and variations in slope. These parameters are used to develop rainfall runoff characteristics, which are used to analyze both pre and post development conditions within and surrounding the proposed construction activity. Some of these characteristics include times of concentration (Tc), peak rates of runoff, runoff volume, and the time the peak rate of runoff occurs within the particular storm event.

Times of concentration were computed by using the TR-55 Sheet flow procedure and TR-55 Shallow Concentrated Flow procedure were utilized for the analysis of the individual watersheds. These procedures compute the time of travel of storm waters over segments of the watershed depending upon land conditions, such as surface roughness, channel configuration, slope of land, and flow patterns. The addition of these travel times determines the individual watershed Time of Concentration. This method translates to more accurate Tc's than other more general methods.

1.3 SITE DESCRIPTION

The project site is approximately 3.11-acres located at 41 Lake George Street along the westerly side of the roadway. At this time the site has been previously disturbed and does not contain any standing structures. The majority of the previoulsy distrubed portion of the property has been rendered primarliy impervious with a thin layer of pavement. The remaining aras of the property are primarliy a mix of overgrown brush and woodland around the perimter of the property. It is also noted that the site has been utlized by the Devens Community for the storage earth materials, such as loam and fill, and the property currently has several large piles of these materials intersperesed throughout.

It is the intent of the applicant to construct a new 40,000 square foot building to be utilized as an office and industrial building, to funciton as the propents new company headquarters. Access to the property will be provide via two new access drives along Lake George Street. These drives will extend towards the rear of the propety to create a loop aroud the building. Parking areas for the employees and customers are provided along this loop. These access drives will also provide access to manuevering areas for deliverty vehicles near a loading dock located in the northwestern corner of the building.

For the purpose of the analysis, certain design points are reviewed. The design points are where the pre-development drainage for the subcatchment areas of the watershed over the property are directed. The same design points have been utilized and reviewed for both pre- and post-development runoff conditions. The design points are the basis for the design of the proposed drainage infrastructure and stormwater detention structures depicted on the plans.

The drainage from the site currently flows to several low points throughout the property. Design Point #1 (DP#1) located at a wetland area to the north of the property; Design Point #2 (DP#2) low point in a drainage channel to the south of the property; and Design Point #3 located at a point along the northwesterly property line.

1.4 SOIL CHARACTERISTICS

Soil types for this analysis were based upon review of soils information contained in the SCS publication *Hyrdrologic Soil Group-Worcester County, Massachusetts.* The original mapping has been reestablished via the Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx) as part of the National Cooperative Soil Survey under the Natural Resource Conservation Service and its website This mapping is the basis for the soil type determinations for this analysis.

The soils are classified by number and name by SCS and, subsequently, the Hydrological Soil Group has been designated within the Urban Hydrology for Small Watersheds manual. Soils within the subject watersheds are also hydrologically classified into different soil groups as defined by the Soil Conservation Service

Soil Designation	Name	Hydrological Group
245B/C	Hinckley Loamy Sand	A
254B/C	Merrimac fine Sandy loam	A

1.5 RUNOFF CURVE NUMBERS

The SCS runoff curve numbers used in all watershed modeling contained in this report are based on the Hydrologic Soil Groups and land uses below:

Land Use	Hydrologic Soil Group	Curve #
Grass Cover (good)	A	39
Woods (good)	A	30
Impervious Areas	A	98

1.6 DESIGN CRITERIA

This drainage analysis was developed utilizing a Type III, 24-hour tropical storm as developed by SCS and required for this region. The storm frequencies and the corresponding 24-hour rainfall amounts are as follows:

Storm Frequency (years)	Rainfall (inches)
2	3.00
10	4.50
25	5.30
50	5.90
100	6.50

1.7 THE PROPOSED STORMWATER MANAGMENT SYSTEM

As with any development, changes in land use such as the transformation of woodland areas to lawn, landscape and impervious areas can cause increased peak rates of runoff. These areas on this site consist of driveways and rooftops, as well as alterations in land use from woodland areas to open lawn and landscaped areas. In order to mitigate increases in peak rate of runoff, the site grading has been carefully designed to direct the majority of these land alterations to the storm drainage system. As required by the Local Regulations, the pre-existing condition has been modeled as a grassed field in order to analyze the impact of the proposed development.

The proposed drainage system has been designed to capture stormwater runoff from the proposed building and parking areas to provide the appropiate level of mitigation and treatment of the runoff leaving the property. The majority of the parking and loading areas will be captured via deep-sump catchbasins and direct runoff towards a drainage trunk line located along the westerly side of the building. This trunk line will direct the runoff towards a Hydroworks Hydroguard water quality unit (WQU) to provide removal of Total Suspended Solids (TSS), as required by the Stormwater Management Regulations. For the purposes of this design this treatement device is designed to accommodate the westerly half of the bulding runoff and the entirety of the rear access drives and parking/loading areas. Upon treatment, the runoff will then be directed towards a single underground storage system located along the westerly limit of the project area to provide peak rate mitigation.

The proposed stormwater system utilizes Stormtech MC4500 underground storage system to capture stormwater and provide peak rate mitigation. The system is comprised of a series of molded plastic arch-chambers set within a bed of crushed stone with a manifold to ensure even distrubtion of stormwater within the system. This sytem is designed to capture and infiltrate stormwater runoff from the proposed development areas directly into the subsurfce soils. To confirm the ability of the soils to accommodate the runoff discharge, soil testing was performed. During this testing it was found that the soil was comprised of entirely course sand and gravel and was highly permeable in nature. As such this system has been designed to retain and infiltrate the entire volume of the runoff, up to and including the 100-year storm event.

A biofiltration area (rain garden) will be constructed along the front of the building near Lake George Street. This system will provide additional treatment and mitigation of the runoff from the easterly side of the building as well as a portion of the parking and access areas. Prior to discharge, runoff from the paved access areas will be directed through a water quality unit to provide additional TSS Removal. This feature will utilize infiltration as a means to retain the runoff from the proposed development and will accommodate up to and including the 100-year storm event. Soil testing was also performed within this area and soils were consistent as sands and gravels.

The drainage pipe network on this project was designed utilizing the HydroCAD modeling program and accommodates the 25-year storm event through the on-site pipe network. Subsequent analysis of the 100-year storm event reveals the ability to accommodate this larger event through the on-site piping. The flows to the catchbasins have also been reviewed to ensure single grate configurations are sufficient for the calculated flows. The catch basins will contain a deep sump (48-inch below the level of the outlet pipe), along with a hood to contain the majority of the roadway debris and sediment within the basin itself. The catchbasins will then discharge directly to the proposed drainage trunk line. Stormwater will then be directed through a Hydroworks Hydroguard (HG6) unit to provide additional cleaning and TSS removal prior to discharge to the proposed Stormtech System. With these components, approximately 84 percent TSS removal is achieved.

1.8 CONCLUSION

As stated above, the design points have been established at several low points through out the property. A new drainage system is proposed on the site to mitigate the effects of increases in impervious areas. The results of the analysis are shown below.

Table #1: Peak Rate of Runoff

Design Point		2-yr Storm	10-yr Storm	25-yr Storm	50-yr Storm	100-yr Storm
#1	Pre-	0.58	0.88	1.04	1.17	1.35
	Post-	0.57	0.87	1.03	1.15	1.29
#2	**Pre-**	**0.27**	**0.41**	**0.49**	**0.55**	**0.63**
	Post-	**0.30**	**0.47**	**0.56**	**0.63**	**0.71**
#3	Pre-	0.00	0.01	0.05	0.12	0.20
	Post-	0.00	0.00	0.01	0.02	0.04

All flows are in cubic feet per second.

As outline above, the post-development peak rates are of runoff have been mitigated for all Storm Events, with the exception of DP#2. This design point is located at the drainage channel to the south of the development. The increase in the rate of runoff reaching DP#2 is caused by a small portion of the entrance way to not being captured by the proposed stormwater system. Upon the review the increase in the rate of the flows was found to be *de minimus* as the increase is consistently less than 0.08 c.f.s in all stormevents, as noted in Table#1.

To further validate the *de minimus* condition, a review of volumetric runoff change to DP #2 was performed. Based on this review, it was found that the design point experiences a net decrease in the volumetric flows to this design point in all storm events. To further mitigate this impact, a a tree well is proposed to the south of the entrance to capture and infiltrate the runoff from the portion of the driveway and the abutting roadway system. The data relative to the review is provided within Table#2.

Table #2: Volumetric Runoff

Design Point		2-yr Storm	10-yr Storm	25-yr Storm	50-yr Storm	100-yr Storm
#2	Pre-	0.024	0.041	0.055	0.070	0.089
	Post-	0.018	0.032	0.042	0.053	0.066

All volumes are in acre-feet

A) Attenuation of the 2-, 10-, 25- and 100-year storm events has mitigated increases in peak rates of runoff, or has been justified herein.
B) On-site roadway and pavement areas are directed to standard catch basins with deep sumps for collection of debris and sediments prior to discharge.
C) The development adheres to the provisions of the Massachusetts Stormwater Management program with greater than 80% TSS removal.
D) The Stormwater Operation and Maintenance Plan (OMP) attached, has been prepared to ensure long-term function of the system, as designed

[1]"Urban Hydrology for Small Watersheds (Technical Release Number 55); Engineering Division, United States Dept. of Agriculture ,Soil Conservation Service (Jan. 1975)

[2]"National Engineering Handbook Section 4- Hydrology" ; United States Dept. of Agriculture, Soil Conservation Service (March 1985)

[3]"Handbook of Hydraulics" - 6th ed., E.F. Brater & H. Williams (1976)

[4]"Interim Soil Report for Worcester County – Southern Part" Published by the Southern Worcester County Conservation District, in cooperation with the United States Department of Agriculture, Natural Resources Conservation Service

[5] "HydroCAD" Drainage software developed by Applied Microcomputer, Page Hill Road, Chocorua, NH

Request for Determination of Applicability (RDA)

HANNIGAN
ENGINEERING, INC.
8 MONUMENT SQUARE, LEOMINSTER, MA 01453 PHONE: (978) 534-1234 FAX (978) 534-6060 | CIVIL ENGINEERS & LAND SURVEYORS

Peter C. Lowitt
DEVENS ENTERPRISE COMMISSION
33 Andrews Parkway
Devens, Massachusetts 01434

May 20, 2021

RE: Request for Determination of Applicability.
Accumet Engineering, Inc.
41 Lake George Street, Devens, MA

Dear Mr. Lowitt,

On behalf of our client, Accumet Engineering, Inc. (Applicant), Hannigan Engineering, Inc. is submitting an application for a Request for Determination of Applicabilty concurrent with a Level Two Development Permit Application for the development of a new office/industrial building at 41 Lake George Street in Devens, Massachusetts. This request is relative of work to be perfromed within 100-foot wetland buffer zone of a bordering vegetated wetland (BVW) to the north of the property. It is the intent of the applicant to construct a 39,375 square foot industrial building with applicable parking and access drives to connect with Lake George Street.

The lot does not contain areas jurisdictional under the Wetlands Protection Act, however, the existing drainage infrastructure within Lake George Street directs runoff towards a channel to the north of the locus, this channel contains the aforementioned BVW. A formal delineation of the associated Bordering Vegetated Wetland (BVW) was performed by Caron Environmental in November of 2019, with a noted second area located to the south of the development.

It is the intent of the applicant to install a portion of the access drive for the project along the northerly limit of the property, along with applicable drainage infrastructure to capture the runoff from the proposed development. The majority of the work to be performed will be within 100-foot Buffer but will maintain a 60-foot undisturbed portion of woodland between the limit of work and the resource areas. The majority of the work within this area will be dedicated to the construction and installation of the proposed access drive and maneuvering areas. It is noted that the runoff from these areas is being captured and directed towards the onsite drainage system, with no runoff from these areas being directed towards the wetland. Beyond the limit of pavement, the work associated with this construction will be primarily earthwork to facilitate the access areas. These areas will be loamed and seeded and stabilized with low growing plantings, as necessary.

The drainage infrastructure within this stretch of the project will capture, treat and direct runoff towards a underground storage system which has been designed to accommodate the entirety of the runoff on-site, with no direct discharge proposed to be directed towards the aforementioned wetland. Reference is made to the Drainage Analysis and Report filed as part of the Level II Unified permitting process for the documentation of the compliance with the applicable regulations.

Erosion control measures have been added to the Site Development Plans to provide means of controlling any erosion issues that may occur as part of construction including and not limited to straw-wattles and silt fence.

HANNIGAN
ENGINEERING, INC.
8 MONUMENT SQUARE, LEOMINSTER, MA 01453 PHONE: (978) 534-1234 FAX (978) 534-6060 | CIVIL ENGINEERS & LAND SURVEYORS

As the work proposed within a BVW buffer zone is limited to minimal grading relative to the construction drive along with drainage infrastructure that directs runoff away from the wetland area, Hannigan Engineering, Inc. would request a Negative Determination for the proposed construction. A representative of this office will attend the meeting to review this matter. We look forward to your anticipated cooperation regarding this project.

Sincerely,
HANNIGAN ENGINEERING, INC.

Christopher M. Anderson, PE
Project Engineer

William D. Hannigan, PE
President

pc: Gregory Sexton, Accumet Engineering
Glen Houlihan, EGH Advisors
Mike Hodgman, Spectrum Builders

J:\My Documents\PROJECTS\2900+\2984-Accumet Engineering\Conservation\RDA\2984-RDA Narrative.docx

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

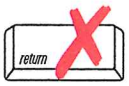
Devens
City/Town

WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. General Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Applicant:

Accumet Engineering, Inc
Name

E-Mail Address

123 Oak Hill Road
Mailing Address

Westford
City/Town

MA
State

01886
Zip Code

Phone Number

Fax Number (if applicable)

2. Representative (if any):

Hannigan Engineering, Inc.
Firm

WIlliam Hannigan
Contact Name

wdhannigan@hanniganengineering.com

8 Monument Square
Mailing Address

Leominster
City/Town

MA
State

01453

978-534-1234
Phone Number

Fax Number (if applicable)

B. Determinations

1. I request the Devens Conservation Commission make the following determination(s). Check any that apply:

☐ a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.

☐ b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.

☒ c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.

☒ d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance** or **bylaw** of:

Devens
Name of Municipality

☐ e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).

C. Project Description

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

41 Lake George Street	Devens
Street Address	City/Town
13/21	6
Assessors Map/Plat Number	Parcel/Lot Number

b. Area Description (use additional paper, if necessary):

(see narrative)

c. Plan and/or Map Reference(s):

Site Development Plan	5/19/2021
Title	Date
Title	Date
Title	Date

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

(see Narrative)

C. Project Description (cont.)

b. Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).

(see Narrative)

3. a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.

☐ Single family house on a lot recorded on or before 8/1/96

☐ Single family house on a lot recorded after 8/1/96

☐ Expansion of an existing structure on a lot recorded after 8/1/96

☐ Project, other than a single-family house or public project, where the applicant owned the lot before 8/7/96

☐ New agriculture or aquaculture project

☐ Public project where funds were appropriated prior to 8/7/96

☐ Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision

☐ Residential subdivision; institutional, industrial, or commercial project

☐ Municipal project

☐ District, county, state, or federal government project

☐ Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.

b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)

WPA Form 1- Request for Determination of Applicability

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Devens
City/Town

D. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission.

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Name and address of the property owner:

Devens Lot 10A, LLC
Name

80 Erdman Way
Mailing Address

Leominster
City/Town

MA
State

01453
Zip Code

Signatures:

I also understand that notification of this Request will be placed in a local newspaper at my expense in accordance with Section 10.05(3)(b)(1) of the Wetlands Protection Act regulations.

Signature of Applicant

5/20/21
Date

Signature of Representative (if any)

5/20/21
Date

Caron Environmental Consulting, LLC

Wetlands • Forestry • Permitting • Habitat Studies

February 17, 2021

Mr. William Hannigan, P.E.
Hannigan Engineering
8 Monument Square
Leominster, MA 01453

Re: Wetland Delineation
Lake George St/Devens
Lot 10 A

Dear Mr. Hannigan:

As requested, we have delineated the wetlands on the above-referenced site. The delineation was conducted on January 31, 2021. The delineation was based on observations of the soils, the plant communities and hydrology. There was 2" of snowcover at the time.

The edges of Bordering Vegetated Wetlands were delineated with blue flagging labeled A1 to A11 and B1 to B14. The wetlands area wooded. The immediately adjacent uplands are wooded, while the remainder of the site is a previously disturbed area.

Species which were observed to be dominant primarily in the wetlands include Green Ash, Late Goldenrod and Sensitive Fern. Several species are common in both the wetlands and uplands including American Elm, Red Maple, Common Buckthorn, Bittersweet, Poison Ivy and Barberry. Species abundant primarily in the uplands include Bigtooth Aspen, Black Cherry, Black Oak, Sugar Maple, Pignut Hickory, White Ash, Russian Olive, White Pine, Little Bluestem and Morrow's Honeysuckle. The attached Delineation Data Forms provide greater detail on the vegetation, soil conditions and hydrological indicators.

The MassGIS Online Viewer does not show any Estimated/Priority Habitat Areas or Certified Vernal Pools on the site.

The delineation was based on features visually apparent and the regulations in place at the time. As you are aware the interpretation of the boundaries of wetlands can vary depending on many factors including the time of year, growth phase of vegetation, groundwater levels, soil conditions, weather, and political factors. As a result, no delineation can be considered definitive until it has been reviewed and verified by all of the relevant approving authorities.

If you have any questions in regards to this matter, please feel free to contact us.

Very truly yours,
CARON ENVIRONMENTAL CONSULTING, LLC
By;

Charles E. Caron

247 Bragg Hill Road • Westminster, MA 01473
978-874-5469 • Email: caronenv@aol.com

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: Hannigan Engineering Prepared by: Caron Environmental Consulting Project location: Lake George St/Devens DEP File #: _____

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other that dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: B7-W Transect Number: B7 Date of Delineation: 01/31/2021

A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
Herbs & Seedlings				
Bittersweet/*Celastrus orbiculatus*	38.0	93	Yes	UPL
Barberry/*Berberis vulgaris*	3.0	7	No	FACU
Shrubs				
Spicebush/*Lindera benzoin*	3.0	100	No	FACW*
Saplings				
American Elm/*Ulmus americana*	20.5	100	Yes	FACW*
Woody Vines				
Bittersweet	20.5	100	Yes	UPL
Trees				
Green Ash/*Fraxinus pennsylvanica*	5.377	93	Yes	FACW*
American Elm	0.403	7	No	FACW*

* Use an asterisk to mark wetland indicator plants

Vegetation conclusion:

Number of dominant wetland indicator plants: 2 **Number of dominant non-wetland indicator plants:** 2

Is the number of dominant wetland indicator plants equal to or greater than the number of dominant non-wetland indicator plants? Yes

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent. MA DEP; 3/95

Section II. Indicators of Hydrology Plot B7-W

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☑ Yes ☐ No

Title/date: Soil Survey of Worcester County, Massachusetts
Northeastern Part

Map number: Online map

Soil type mapped: Merrimac Fine Sandy Loam

Hydric soil inclusions:

Are field observations consistent with soil survey? ☐ Yes ☑ No

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color
A	0"-16"+	10 YR 3/2	Below 10" 2.5 Y 4/5 10 YR 5/2

Remarks:

Other:

Conclusion: Is soil hydric: ☑ Yes ☐ No

Other Indicators of Hydrology: (check all that apply and describe)

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☑ Drainage patterns in BVW:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; Aerial photo; other):
- ☐ Other:

Vegetation and Hydrology Conclusion

	Yes	No
Number of wetland indicator plants >/= number of non-wetland indicator plants	☑	☐
Wetland hydrology present:		
Hydric soil present	☑	☐
Other indicators of hydrology present	☑	☐
Sample location is in a BVW	☑	☐

Submit this form with the Request for Determination of Applicability or Notice of Intent.

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: Hannigan Engineering Prepared by: Caron Environmental Consulting Project location: Lake George St/Devens DEP File #: _____

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other that dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: B7-U Transect Number: B7 Date of Delineation: 01/31/2021

A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
Herbs & Seedlings				
Barberry	38.0	78	Yes	FACU
Bittersweet	10.5	22	Yes	FACU
Shrubs				
Common Buckthorn/*Rhamnus cathartica*	10.5	44	Yes	FAC*
Morrow's Honeysuckle/*Lonicera morrowii*	10.5	44	Yes	FACU
White Pine/*Pinus strobus*	3.0	13	No	FACU
Saplings				
None				
Woody Vines				
Bittersweet	20.5	100	Yes	FACU
Trees				
Bigtooth Aspen/*Populus grandifolia*	4.739	69	Yes	FACU
Paper Birch/*Betula papyrifera*	1.009	15	No	FACU
American Elm	0.403	6	No	FACW*
Red Maple/*Acer rubrum*	0.332	5	No	FAC*
American Basswood/*Tilia americana*	0.196	3	No	FACU
Green Ash	0.196	3	No	FACW*

* Use an asterisk to mark wetland indicator plants

Vegetation conclusion:

Number of dominant wetland indicator plants: 1 **Number of dominant non-wetland indicator plants:** 5

Is the number of dominant wetland indicator plants equal to or greater than the number of dominant non-wetland indicator plants? No

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent. MA DEP; 3/95

Section II. Indicators of Hydrology Plot B7-U

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☑ Yes ☐ No

Title/date: Soil Survey of Worcester county, Massachusetts
Northeastern Part

Map number: Online map

Soil type mapped: Merrimac Fine Sandy Loam

Hydric soil inclusions:

Are field observations consistent with soil survey? ☑ Yes ☐ No

Remarks:

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color
A	0"-5"	10 YR 3/3	None
Bw	5"-24"+	10 YR 4/6	None

Remarks:

Other:

Conclusion: Is soil hydric: ☐ Yes ☑ No

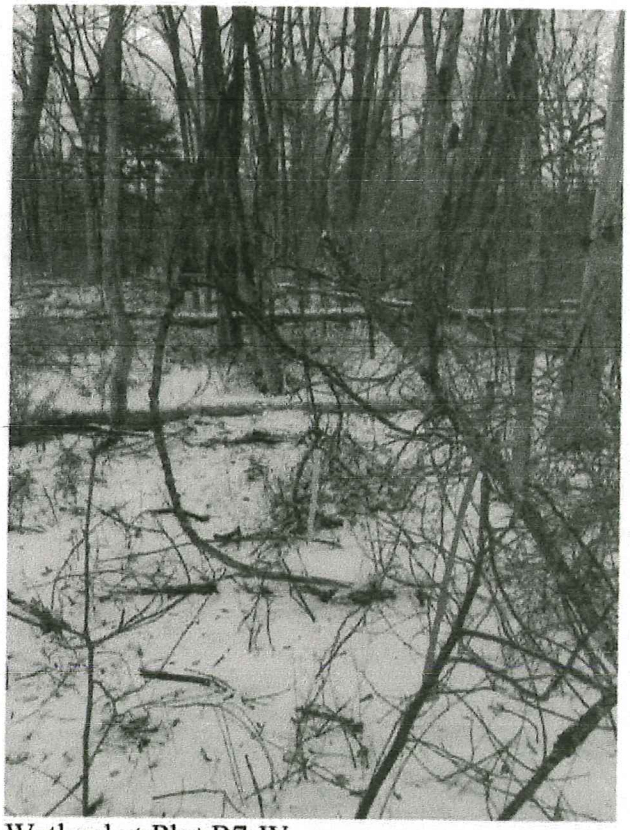
Other Indicators of Hydrology: (check all that apply and describe)

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in BVW:
- ☐ Oxidized rhizospheres:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; Aerial photo; other):
- ☐ Other:

Vegetation and Hydrology Conclusion

	Yes	No
Number of wetland indicator plants >/= number of non-wetland indicator plants	☐	☑
Wetland hydrology present: Hydric soil present	☐	☑
Other indicators of hydrology present	☐	☑
Sample location is in a BVW	☐	☑

Submit this form with the Request for Determination of Applicability or Notice of Intent.



Wetland at Plot B7-W

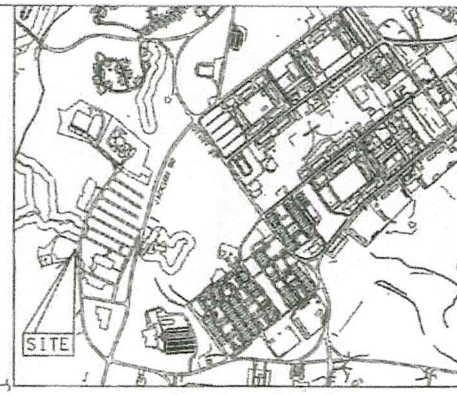
Upland at Plot B7-U

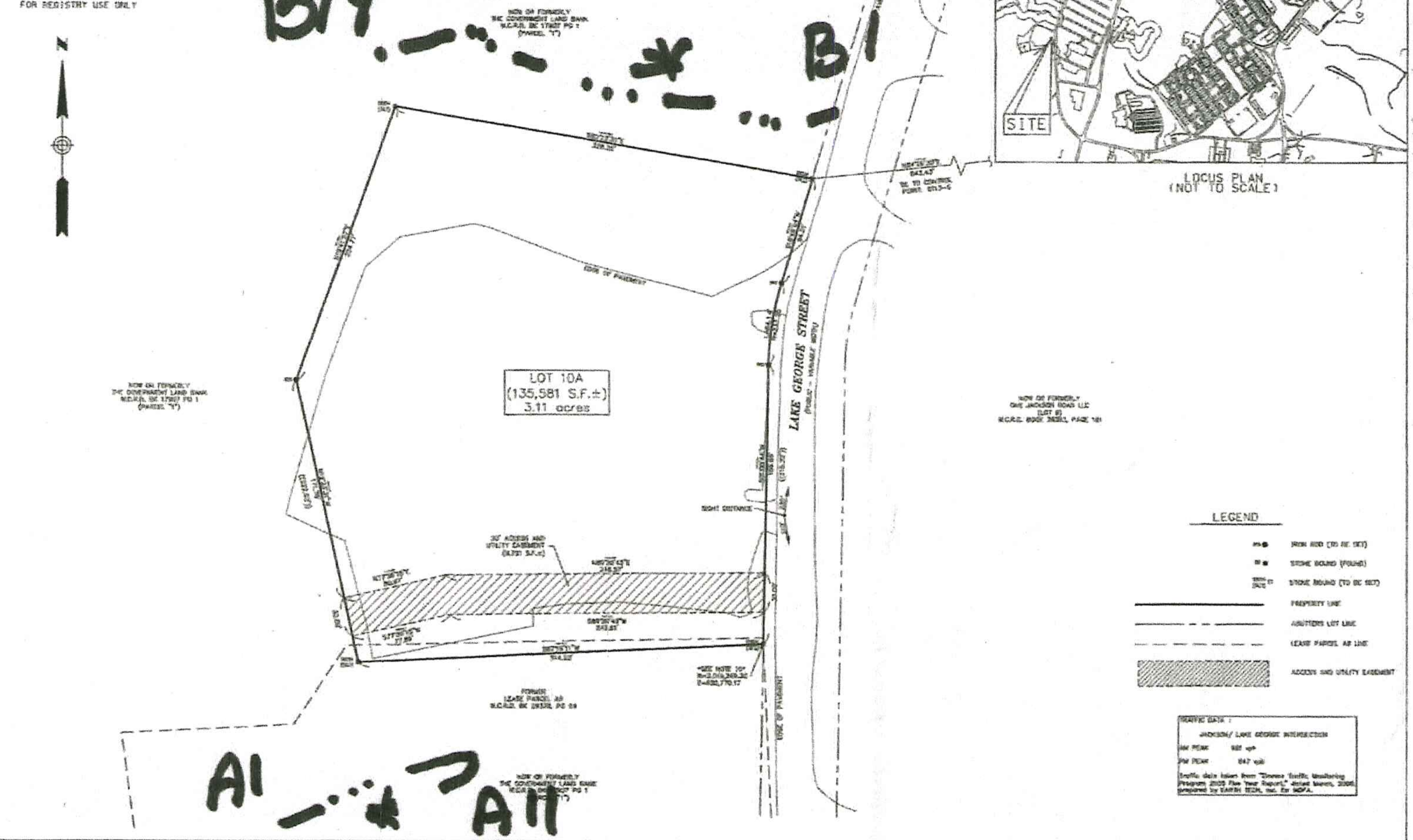
Soil at Plot B7-W

Soil at Plot B7-U

WORCESTER DISTRICT REGISTRY
OF DEEDS-WORCESTER, MA
PLAN BOOK Bk 855 PLAN 125
Received 4/16/08
11 h. 12 m. AM
Sheet 1 of 1
With Doc. #
in BOOK ___ PAGE ___
Fee $75-
ATTEST: [signature] Register

FOR REGISTRY USE ONLY





NOTES:

1.) THIS PLAN WAS PREPARED FROM AN ON-THE-GROUND FIELD SURVEY CONDUCTED BY CHAS. H. SELLS, INC. ON JANUARY 29, 2008.

2.) FRONTAGE FOR PROPOSED LOT IS ON LAKE GEORGE STREET AN ACCEPTED PUBLIC WAY BY THE GOVERNMENT LAND BANK BOARD OF DIRECTORS. NOW KNOWN AS THE MASSACHUSETTS DEVELOPMENT FINANCE AGENCY.

3.) BEARINGS BASED ON 1983 MASS. STATE PLANE COORDINATE SYSTEM & CONTROL SURVEY BY CHAS. H. SELLS, INC. APRIL 2002, LAST REVISED JULY 2007.

4.) ZONING: INNOVATION AND TECHNOLOGY BUSINESS ZONING DISTRICT. LOT IS LOCATED WITHIN THE VIEWSHED OVERLAY DISTRICT.

5.) WATER RESOURCE PROTECTION DISTRICT: WATERSHED.

6.) PROPOSED LOT MEETS OR EXCEEDS THE MINIMUM FRONTAGE REQUIREMENT OF ONE HUNDRED (100') FEET ON A PUBLIC WAY AS STATED IN THE DEVENS BY-LAWS ARTICLE IX, SECTION F.2.

7.) MASSACHUSETTS DEVELOPMENT FINANCE AGENCY IS THE SUCCESSOR IN INTEREST TO THE GOVERNMENT LAND BANK, UNDER CHAP. 289 OF THE ACTS OF 1998. NOTICE OF WHICH WAS RECORDED WITH THE WORCESTER COUNTY REGISTRY OF DEEDS IN BOOK 20805, PAGE 379.

8.) PLAN CONTENTS REFLECT WAIVER GRANTED BY THE LAND USE ADMINISTRATOR WITH REGARDS TO 974 CMR 1.03(c)8 REQUIREMENT OF SHOWING IN ITS ENTIRETY THE ADJACENT PROPERTY OWNED BY THE MASSACHUSETTS DEVELOPMENT FINANCE AGENCY.

9.) PLAN CONTENTS REFLECT WAIVER GRANTED BY THE LAND USE ADMINISTRATOR WITH REGARDS TO 974 CMR 1.03(c)13 & 1.03(c)14 REQUIREMENT OF SHOWING TOPOGRAPHY & SURFACE WATER DRAINAGE.

10.) ALL COORDINATES SHOWN HEREON ARE IN RELATIONSHIP TO THE DEVENS, MA CONTROL NETWORK AND GEOGRAPHIC INFORMATION SYSTEMS (GIS). REFERENCE IS MADE TO THE CONTROL SURVEY AND REPORT ENTITLED, "SURVEY CONTROL REPORT FOR DEVENS, MASSACHUSETTS" PREPARED FOR MASSACHUSETTS DEVELOPMENT FINANCE AGENCY, BY CHAS. H. SELLS, INC DATED APRIL 8, 2002 AND LAST REVISED JULY 11, 2007. ALL COORDINATES ARE ON THE MASSACHUSETTS MAINLAND STATE PLANE SYSTEM (NAD 1983).

11.) THE PROPOSED LOT IS NOT SUBJECT TO ANY INSTITUTIONAL CONTROLS.

12.) THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE PARCEL Y TO CREATE LOT 10A AS SHOWN.

13.) THE PROPOSED LOT MEETS OR EXCEEDS THE MINIMUM LOT SIZE OF TWO ACRES AS STATED IN THE DEVENS BY-LAWS, EXHIBIT B.

14.) PROPERTY IS LOCATED IN THE DEVENS REGIONAL ENTERPRISE ZONE, TOWN OF HARVARD, COUNTY OF WORCESTER, MASSACHUSETTS.

REFERENCES:

1.) PLAN OF LAND CONVEYED TO THE GOVERNMENT LAND BANK BY THE SECRETARY OF THE ARMY, AYER, HARVARD & SHIRLEY, MA. DATED MAY 10, 1996. PREPARED BY HOME SURVEYING ASSOC.
a.) RECORDED IN M.S.D.R.D. PLAN 411 OF 1996
b.) RECORDED IN W.C.R.D. PL. BK. 703 PL. 118

2.) DEED FROM THE UNITED STATES OF AMERICA, ACTING BY AND THROUGH THE DEPARTMENT OF THE ARMY TO MASSDEVELOPMENT FOR LEASE PARCEL A9 DATED MARCH 7, 2006 AND WAS RECORDED WITH THE W.C.R.D. AS BOOK 38814, PAGE 121.

3.) GENERAL PUBLIC WAY DECLARATION PLAN DATED MAY 29, 1996. PREPARED BY HOME SURVEYING, ASSOC. AND RECORDED AT THE MASSDEVELOPMENT ENGINEERING OFFICE LOCATED AT 33 ANDREWS PARKWAY DEVENS, MA.

4.) PLAN ENTITLED "HARVARD (DEVENS), MASSACHUSETTS LEVEL 1 SUBDIVISION LOT #8 JACKSON ROAD", PREPARED BY CHAS. H. SELLS, INC. DATED DECEMBER 20, 2005 RECORDED IN W.C.R.D. PLAN BOOK 845, PAGE 37

NOTE FOR RECORDING:

AS AUTHORIZED BY CHAPTER 498 OF THE ACTS OF 1993, AS AMENDED.

AS LUA/DIRECTOR (OR DESIGNEE OF) THE DEVENS ENTERPRISE COMMISSION, I HEREBY APPROVE THE LEVEL ONE LOTTING PLAN PORTRAYED IN THIS SUBMISSION AT DEVENS.

[signature] 4-10-08
DATE

CERTIFICATION :

TO THE BEST OF MY PROFESSIONAL KNOWLEDGE INFORMATION AND BELIEF

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

[signature] April 9, 2008
DAVID A. WEBBER, P.L.S.
CHAS. H. SELLS, INC.
REG#30757
DATE

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

CHAS. H. SELLS, INC.
CONSULTING ENGINEERS,
SURVEYORS & PHOTOGRAMMETRISTS

155 MAIN DUNSTABLE RD.
SUITES 120 & 125
NASHUA, NH 03060
603-595-7900

REV	DATE	DESCRIPTION	BY
REV. 5	-	-	-
REV. 4	-	-	-
REV. 3	-	-	-
REV. 2	-	-	-
REV. 1	-	-	-

FIELD: ST, JS
OFFICE: DJH
DRAWN BY: JD
CHECKED BY: DJH, DAW
PROJECT #: 01596.047

HARVARD (DEVENS), MASSACHUSETTS

TITLE
LEVEL I SUBDIVISION
LOT 10A LAKE GEORGE STREET

PREPARED FOR: (OWNER) MASSACHUSETTS DEVELOPMENT FINANCE AGENCY 160 FEDERAL ST., 7TH FLOOR BOSTON, MA 02110

PREPARED FOR: (OWNER) MASSACHUSETTS DEVELOPMENT FINANCE AGENCY 160 FEDERAL ST., 7TH FLOOR BOSTON, MA 02110

DATE: 03/31/08 SCALE: 1" = 40' DWG. 01596.047-1.DGN SHEET# 1 OF 1

Recorded Deed & Easement

2008 00041155
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QUITCLAIM DEED

KNOW ALL MEN BY THESE PRESENTS, that the Massachusetts Development Finance Agency (the "Grantor"), a Massachusetts body politic and corporate, established and existing under Chapter 23G of the Massachusetts General Laws, successor in interest to the Government Land Bank under Chapter 289 of the Acts of 1998, notice of which was recorded on October 7, 1998, with the Worcester County Registry of Deeds at Book 20505, Page 279, having its principal place of business located at 160 Federal Street, 7th Floor, Boston, Massachusetts 02110, in consideration of Two Hundred Thirty-Three Thousand Two Hundred Fifty and 00/00 Dollars ($233,250.00), the receipt and sufficiency of which is hereby acknowledged, does hereby grant to Devens Lot 10A LLC, a Massachusetts limited liability company, having a principal place of business located at c/o Plastican, Inc., 25 Tucker Drive, Leominster, Massachusetts 01453 (the "Grantee"), with QUITCLAIM COVENANTS, a certain parcel of land known as Lot 10A, Devens Regional Enterprise Zone, Town of Harvard, County of Worcester, Massachusetts (the "Parcel").

The Parcel is more particularly described in Exhibit A attached hereto and made a part hereof, and is shown on a plan prepared by Chas. H. Sells, Inc. entitled Level I Subdivision Lot 10A Lake George Street dated March 31, 2008 (the "Plan"), which plan is recorded herewith in the Worcester County Registry of Deeds, Plan Book 866, Plan 125.

Said parcel contains 3.11 acres of land, more or less, according to said Plan, to which reference is hereby made for a more complete description of the Parcel.

The Parcel is conveyed subject to and with the benefit of all easements, restrictions, rights and encumbrances of record, in so far as the same are in force and effect and applicable to the Parcel.

The Parcel is conveyed with the following appurtenant rights and easements:

I. APPURTENANTS RIGHTS

A. Rights for Connections to Utility Systems in Private and Public Ways

For the purpose of providing utility services to the Parcel, including, but not limited to, water, sewer, gas, electric, cable television, telecommunication service and the stormwater drainage system (collectively referred to as the "Utility Services"), the Grantor hereby grants to the Grantee the perpetual and non-exclusive right and easement to connect to each of the above-referenced services as said services are now or may in the future be located in private or public ways, now or hereafter serving the Parcel (the "Utility Easements") in such locations as may be reasonably agreed upon by the Grantor and the Grantee.

The rights granted in this Subsection A shall be subject to the compliance by the Grantee with the lawful ordinances, rules, and regulations established by the Grantor and

Lake George St., Harvard

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the Devens Enterprise Commission (the "DEC") for utility connections and services. The Grantee shall, in the utilization of the easement rights hereunder, restore any areas disturbed in connection with any work undertaken in relation to the easements to its condition prior to Grantee's work.

The appurtenant rights granted in this Subsection A shall include a permanent and non-exclusive easement and right of access over such easement areas necessary to use, construct, maintain, repair, and replace any improvements constructed within such areas by the Grantee, such rights to repair and replace any improvements constructed within such areas shall be subject to the prior written notice and approval of the Grantor, which approval shall not be unreasonably withheld; however, no such notice or approval shall be required in the event of an emergency.

II. RESERVATIONS

The Grantee takes the Parcel subject to all matters of record and subject to the following:

A. Access Rights under the Comprehensive Environmental Response, Compensation and Liability Act, as amended (42 U.S.C 9601 et seq.) ("CERCLA")

Pursuant to a deed from the United States, acting by and through the Department of the Army, to the Grantor for a parcel of land located in both Middlesex County and Worcester County dated May 9, 1996, and recorded with the Worcester County Registry of Deeds at Book 17907, Page 1, and with the Middlesex Southern District Registry of Deeds at Book 26317, Page 3 (the "Army Deed"), the United States reserved a right of access to the property conveyed thereby, including the Parcel, in any case in which remedial action or corrective or response actions are found to be necessary under CERCLA or such access as is necessary to carry out a response action or corrective action on adjoining property.

B. Reservation of Rights Under the Federal Facilities Agreement

Pursuant to the terms of the Army Deed, the following provision that was contained therein must be set forth in future deeds to property conveyed to the Grantor by the United States, including the Parcel:

By accepting this Deed, the Grantee acknowledges that the Grantor has provided the Grantee with a copy of the Federal Facilities Agreement (the "FFA") between the United States Department of the Army (the "Army") and the United State Environmental Protection Agency ("EPA") dated May 11, 1991, and the modification thereto, dated March 26, 1996. The Grantor shall provide the Grantee with a copy of any future amendments to the FFA.

1. The Army, EPA, and the Commonwealth of Massachusetts, and their agents, employees, and contractors, shall have access to and over the Parcel as may be necessary for any investigation, response, or corrective action pursuant to CERCLA or the FF A found to be necessary before or after the date of this Deed on the Parcel or on other property comprising the Fort Devens National Priorities List (the "NPL") site. This reservation includes the right to access to and use of, to the extent permitted by law, any available utilities at reasonable cost to the United States.

2. In exercising the rights hereunder, the United States shall give the Grantee or its successors or assigns reasonable notice of actions taken on the Parcel under the FF A and shall, to the extent reasonable, consistent with the FFA, and at no additional cost to the United States, endeavor to minimize the disruption to the Grantee's, its successors', or assigns' use of the Parcel.

3. The Grantee agrees that notwithstanding any other provision of the Deed, the United States assumes no liability to the Grantee, its successors, or assigns, or any other person, should implementation of the FFA interfere with the use of the Parcel. The Grantee and its successors and assigns shall have no claim on account of any such interference against the United States or the Commonwealth of Massachusetts or any officer, agent, employee, or contractor thereof.

4. Prior to the determination by the United States that all remedial action is complete under CERCLA and the FFA for the Fort Devens NPL site, (i) the Grantee, its successors and assigns, shall not undertake activities on the Parcel that would interfere with or impede the completion of the CERCLA clean-up at the Fort Devens NPL site and shall give prior written notice to the Army, EPA, and the Commonwealth of Massachusetts of any construction, alterations, or similar work on the Parcel that may interfere with or impede said clean-up; and (ii) the Grantee shall comply with any institutional controls established or put in place by the Army relating to the Parcel which are required by any record of decision ("ROD") or amendments thereto, related to the Parcel, which ROD was approved by the Army and the EPA and issued by the Army pursuant to CERCLA or the FFA before or after the date of this Deed. Additionally, the Grantee shall ensure that any leasehold it grants in the Parcel or any fee interest conveyance of any portion of the Parcel provides for legally-binding compliance with the institutional controls required by any such ROD.

5. For any portion of the Parcel subject to a response action under CERCLA or the FFA, prior to the conveyance of an interest therein, the Grantee shall include in all conveyance documents provisions for allowing the continued operation of any monitoring wells, treatment facilities, or other response activities undertaken pursuant to CERCLA or the FFA on said portion of the Parcel and shall notify the Grantor, Army, EPA, and the Commonwealth of Massachusetts by certified mail, at least sixty (60) days prior to any such conveyance of an interest in said Parcel, which notice shall include a description of said provisions allowing for the continued operation of any monitoring wells, treatment facilities, or other response activities undertaken pursuant to CERCLA or the FFA.

6. Prior to the determination by the United States that all remedial action under CERCLA and the FFA is complete under CERCLA and the FFA for the Fort Devens NPL site, the Grantee and all subsequent transferees of an interest in any portion of the Parcel will provide copies of the instrument evidencing such transaction to the Grantor, Army, EPA and the Commonwealth of Massachusetts by certified mail, within fourteen (14) days after the effective date of such transaction.

7. The Grantee and all subsequent transferees shall include the provisions of this Section II(B) in all subsequent leases, transfer, or conveyance documents relating to the Parcel or any portion thereof that are entered into prior to a determination by the United States that all remedial action is complete at the Fort Devens NPL site.

C. Environmental Baseline Survey ("EBS") and Finding of Suitability to Transfer ("FOST")

The Grantee has received the technical environmental reports, including the Final Environmental Impact Statement (the "Final EIS"), prepared by the United States Army Corps of Engineers, New England Division dated May 1995, Environmental Baseline Survey for Proposed Lease and/or Transfer Fort Devens Base- Wide (the "Base-Wide FOST"), prepared by Arthur D. Little, Inc, dated March 1996, revised April 1996. The Grantee has inspected the Parcel and accepts the physical condition and current level of environmental hazards on the Parcel and deems the Parcel to be safe for the Grantee's intended use. If, after conveyance of the Parcel to the Grantee, there is an actual or threatened release of a hazardous substance on the Parcel, or in the event that a hazardous substance is discovered on the Parcel after the date of the conveyance, whether or not such substance was set forth in the technical environmental reports, including the Base-Wide FOST, the Grantee or its successors or assigns shall be responsible for such release or newly discovered substance unless the Grantee is able to demonstrate that such release or such newly discovered substance was due to the Army's activities, ownership, use, or occupation of the Parcel, or the activities of the Army's contractors, employees, and/or agents. The Grantee, its successors and assigns, as consideration for the conveyance, agrees to release the Grantor and the Army from any liability or responsibility for any claims arising out of or in any way predicated on release of any hazardous substance on the Parcel occurring after the conveyance, where such substances were placed on the Parcel by the Grantee, or its agents, employees, invitees, or contractors, after the conveyance. This paragraph shall not affect the Army's responsibilities to conduct response actions or corrective actions that are required by applicable laws, rules and regulations, or the Army's indemnification obligations under applicable laws.

D. Seller's Easements

The Grantor hereby reserves and the Grantee takes the Parcel subject to a perpetual and non-exclusive, right and easement over, across, on, under or otherwise to those areas of land lying within the Parcel shown on the Plan as the 30' Access and

Utility Easement, with pedestrian and vehicular access thereto, for the purpose of installing, using, maintaining, repairing, replacing, upgrading and removing any utility lines and for general access to the Lake George Electric Substation.

If any relocation or future development activities at Devens should require the granting of additional easements or agreements in favor of the Grantor, the Grantee shall grant the same to the Grantor for no consideration from Grantor, in a form reasonably satisfactory to both parties, provided such easements do not unreasonably interfere with the Grantee's use of the Parcel, do not lessen the value of the Parcel, are acceptable to all mortgagees of the Parcel and the Grantor provides sufficient security for restoration of the Parcel to its condition prior to any construction on or about the Parcel or alteration of the Parcel due to such easements. In the event the Grantor's future development activities involve relocation of utilities, roadways or other infrastructure on or about the Parcel, Grantee shall not be obligated to pay for any such relocation(s).

Grantee's use of the Parcel and the Parcel itself shall at all times be in compliance with the rules and regulations as determined by the DEC, the Devens Reuse Plan and By-Laws, the Design Guidelines, the sewer cross-connection, and industrial pretreatment enforcement rules and regulations of the Grantor, and other applicable rules and regulations. In the event of passage of an act of permanent governance relative to the Devens Regional Enterprise Zone, the Parcel shall be subject to and at all times shall be in compliance with the then-applicable rules and regulations duly enacted by the duly authorized local governing body.

The reserved rights granted in this Section II shall include a permanent and non-exclusive easement and right of access over such easement areas necessary to use, construct, maintain, repair, and replace any improvements constructed within such areas by the Grantor, such rights to repair and replace any improvements constructed within such areas shall be subject to the prior written notice and approval of the Grantee, which approval shall not be unreasonably withheld; however, no such notice or approval shall be required in the event of an emergency.

III. NOTICE OF ASBESTOS

The Grantee is hereby informed and does acknowledge that friable and non-friable asbestos or asbestos-containing materials ("ACM") may have been found on the Parcel, as described in the Base-Wide FOST.

IV. NOTICE OF UNDERGROUND STORAGE TANKS ("USTS")

The Grantee is hereby informed and does acknowledge that USTs may have been located on the Parcel, as described in the Final EIS and the Base-Wide FOST. The Grantee has further been informed by the Grantor that any such UST that may have been located on the Parcel have been removed from the Parcel and tested at the time of removal and any contamination identified was removed or remediated prior to backfilling.

V. NOTICE OF RADON

Available and relevant radon assessment data pertaining to the Parcel is in the Base-Wide FOST, the receipt of which the Grantee hereby acknowledges.

VI. NOTICE OF UNEXPLODED ORDNANCE ("UXO")

The Grantee is hereby informed and does acknowledge that, due to the former use of the Parcel as a part of an active military installation UXO may exist on the Parcel. Upon due notice, the United States, acting by and through the Department of the Army, has agreed to remove any such remaining UXO discovered on the Parcel, as required under applicable law and regulation, as expeditiously as reasonable and practicable, subject to the availability of funds.

VII. NOTICE OF LEAD-BASED PAINT

The Grantee is hereby informed and does acknowledge that all buildings, if any, that had been located on the Parcel, which were constructed or rehabilitated prior to 1978, were presumed to contain lead-based paint. All prior existing buildings, if any, located on the Parcel have been demolished and removed.

VIII. WETLANDS

The Parcel may contain wetlands which are protected under the federal, state and local laws and regulations, including, but not limited to, Article XII.C. of the Devens By-Laws, dated November 18, 1994. By the acceptance of the delivery of this deed, the Grantee and its successors and assigns shall comply with such laws and shall comply with Article XII.C. of the Devens By-Laws in its form as of May 9, 1996 and as amended thereafter with the written consent of the Massachusetts Department of Environmental Protection. The current form of Article XII.C. of the Devens By-Laws is attached hereto as Exhibit B. The Grantee, its successors and assigns shall include this Wetlands Protection provision in all subsequent lease, transfer, or conveyance documents relating to the Parcel or any portion thereof. The United States or the Commonwealth of Massachusetts shall have the right to enforce this wetlands protection by appropriate legal proceedings and to obtain injunctive and other equitable relief against any violations, including, without limitation, relief requiring restoration of the Parcel to its condition prior to the time of the injury complained of and shall be in addition to, and not in limitation of, any other rights and remedies available to the United States and the Commonwealth of Massachusetts.

IX. DESIGN REVIEW

By the acceptance of this Deed, the Grantee covenants for itself, its successors and assigns to construct its improvements on the Parcel in accordance with the design plans and documents reviewed and approved by Grantor and that any significant future expansion or any material alteration of the exterior portion or design of such buildings or

structures will require the review and approval of the Grantor prior to commencing with such expansion or alteration. Upon approval, the Grantor shall give a notarized certificate to the Grantee (or its successors or assigns) referencing the approved plans which must be filed with the Registry of Deeds prior to the commencement of construction.

X. RECEIPT OF DOCUMENTS

The Grantee acknowledges that it has received a copy of the Army Deed, the Administrative Consent Order and Covenant Not to Sue, ACO-CE-96-3001 (the "ACO"), the Final Environmental Impact Statement, prepared by the United States Army Corps of Engineers, New England Division dated May 1995 (the "Final EIS"), Environmental Baseline Survey for Proposed Lease and/or Transfer Fort Devens Base-Wide, prepared by Arthur D. Little, Inc, dated March 1996, revised April 1996 (the "Based-Wide FOST"), the Federal Facilities Agreement dated April 5, 1991, as amended (the "FFA"). Title is hereby conveyed subject to the applicable provisions of the Army Deed, the Final EIS, the Based-Wide FOST, the FFA, and the ACO.

For Grantor's title, see deed from the United States, acting by and through the Department of the Army dated May 9, 1996, recorded with the Worcester County Registry of Deeds at Book 17907, Page 1, shown on plan titled "Plan of Land Conveyed to the Government Land Bank by the Secretary of the Army, Ayer, Harvard, Shirley, MA," dated May 9, 1996 recorded with the Worcester County Registry of Deeds at Plan Book 703, Plan 112.

The sale of the Parcel does not constitute a sale of all or substantially all of the assets of the Grantor in the Commonwealth of Massachusetts and is made in the ordinary course of business. **No deed stamps are attached hereto as no deed stamps are due and payable in connection with this conveyance.** The rights, reservations, and easements contained herein shall bind and inure to the Grantor's and the Grantee's successors and assigns.

IN WITNESS WHEREOF, the said MASSACHUSETTS DEVELOPMENT FINANCE AGENCY has caused its corporate seal to be hereto affixed and these presents to be signed, acknowledged and delivered in its name and behalf by Richard C.J. Henderson, its duly authorized Executive Vice President for Real Estate as of the 9th day of April, 2008.

GRANTOR

MASSACHUSETTS DEVELOPMENT FINANCE AGENCY

By: _____
Name: Richard C.J. Henderson
Title: Executive Vice President for Real Estate

COMMONWEALTH OF MASSACHUSETTS

Suffolk County, ss.

On this 9 day of April, before me, the undersigned notary public, personally appeared Richard C.J. Henderson, and proved to me through satisfactory evidence of identification, which was ☐ photographic identification with signature issued by a federal or state governmental agency, ☐ oath or affirmation of a credible witness, ☑ personal knowledge of the undersigned, to be the person whose name is signed on the preceding or attached document(s), and acknowledged to me that he signed it voluntarily for its stated purpose, as Executive Vice President for Real Estate of Massachusetts Development Finance Agency.

(*official seal*)

Naomi S. Baruch Notary Public

My commission expires:

NAOMI S. BARUCH
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
December 27, 2013

DEVENS LOT 10A LLC by

ACCEPTANCE: ONE JACKSON PLACE, LLC, by its duly qualified manager, does hereby accept and approve this Quitclaim Deed and agrees to all of the terms and conditions thereof as of the 14 day of April, 2008.

DEVENS LOT 10A LLC
ONE JACKSON PLACE LLC, duly qualified manager
By its Agent, authorized to act with respect to real property

By: Oliver W Stalter
Name: Oliver Stalter
Title: Agent authorized to act with respect to real property

THE COMMONWEALTH OF MASSACHUSETTS

Suffolk County, ss.

On this 14 day of April, before me, the undersigned notary public, personally appeared Oliver W. Stalter, and proved to me through satisfactory evidence of identification, which was ☐ photographic identification with signature issued by a federal or state governmental agency, ☐ oath or affirmation of a credible witness, ☒ personal knowledge of the undersigned, to be the person whose name is signed on the preceding or attached document(s), and acknowledged to me that (s)he signed it voluntarily for its stated purpose, as Manager of Devens Lot 10A LLC, a Massachusetts limited liability company.

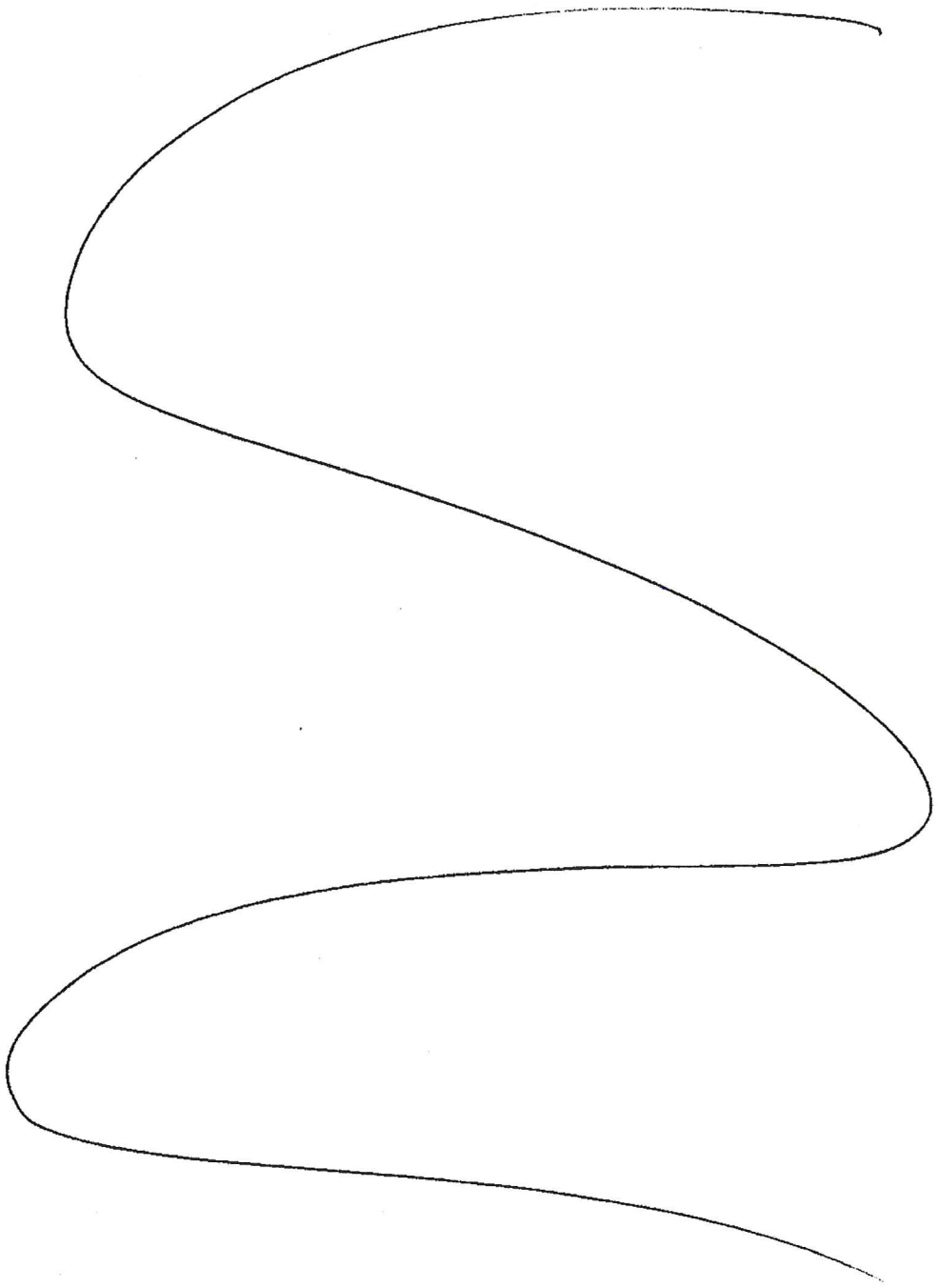
(*official seal*)

Gilbert F. Whittemore

Notary Public Gilbert F. Whittemore
My commission expires: Feb. 12, 2010

EXHIBIT A

LEGAL DESCRIPTION OF PARCEL



Legal Description
Lot #10A

A certain parcel of land located in the Devens Regional Enterprise Zone, in the Town of Harvard, County of Worcester, Massachusetts situated on the westerly sideline of Lake George Street. Said parcel being shown as Lot 10A on a plan entitled "Level 1 Subdivision Lot 10A – Lake George Street", prepared for Massachusetts Development Finance Agency and prepared by Chas H. Sells, Inc. dated March 31, 2008. Said plan to be recorded in the Worcester County Registry of Deeds.

Beginning at a point located on the western sideline of Lake George Street. Said point being the southeastern corner of the parcel described herein, at a point having coordinates of N:3,019,269.30 E:620,770.17; thence,

Along land now or formerly The Government Land Bank, the following four courses:

S 87° 19' 11" W three hundred fourteen and 23/100 feet (314.23') to a point;

N 12° 23'31" W two hundred twenty two and 03/100 feet (222.03') to a point;

N 19° 41' 57" E two hundred twenty four and 77/100 feet (224.77') to a point;

S 80° 23' 35" E three hundred twenty eight and 35/100 feet (328.35') to a point on the western sideline of Lake George Street; thence,

Along the western sideline of Lake George Street the following three courses:

S 16° 46' 04" W eighty four and 21/100 feet (84.21') to a point;

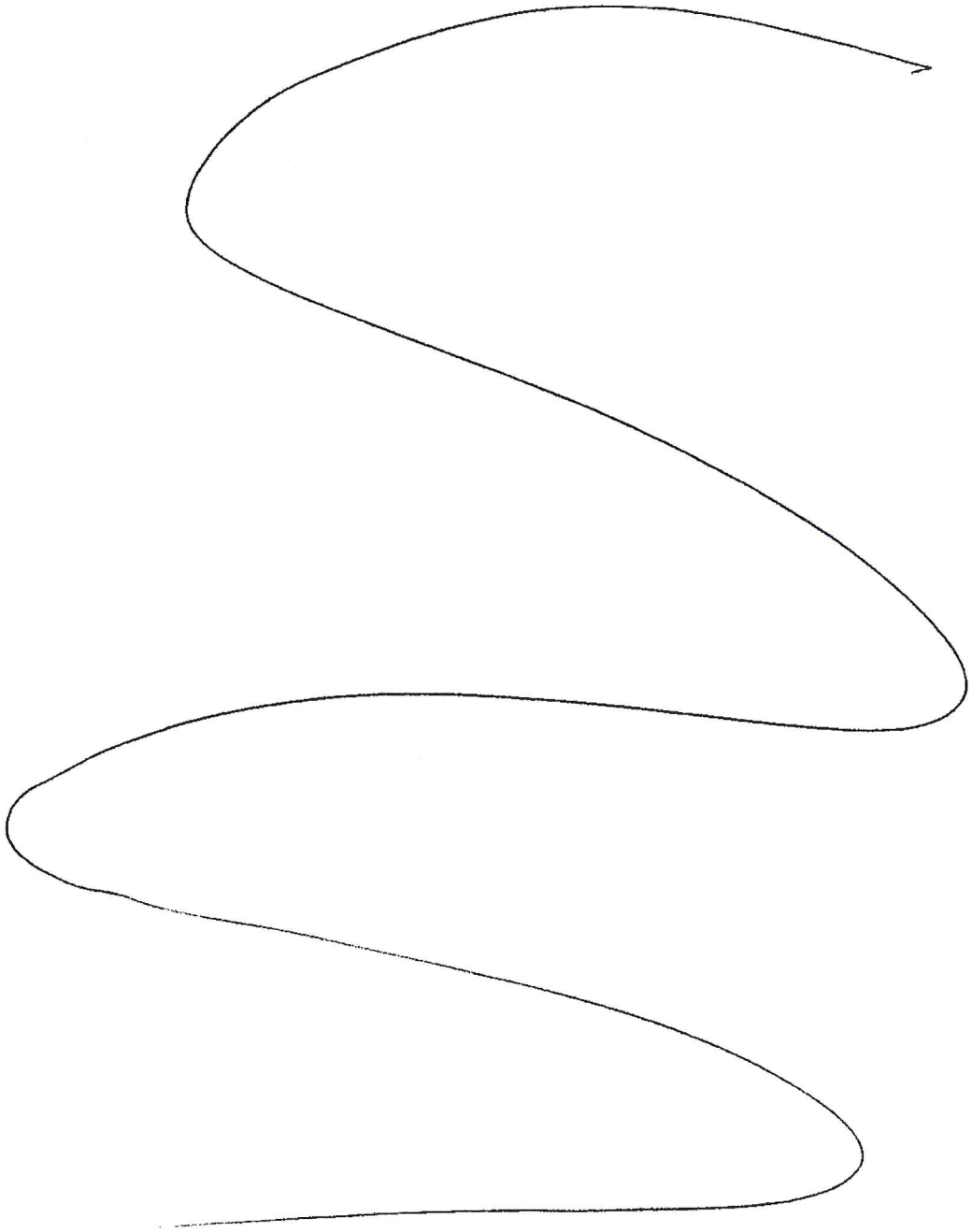
Along a curve to the left having a length of sixty four and 14/100 feet (64.14') and a radius of two hundred and thirty three and 25/100 feet (233.25') to a point;

S 01° 00' 44" W two hundred fifteen and 22/100 feet (215.22') to the point of beginning.

Said lot containing 135,581 S.F. or 3.11 acres of land, more or less.

EXHIBIT B

SECTION XII.C. OF THE DEVENS BY-LAWS



DEVENS

By-Laws

Joint Boards of Selectmen
Town of Ayer
Town of Harvard
Town of Lancaster
Town of Shirley
The Massachusetts Government Land Bank

November 18, 1994

containment system, and the use of pesticides and herbicides contained in the state Pesticide Board Groundwater Protection List (GPL) shall be restricted.

c. Zone II

All Watershed District and Aquifer District provisions apply. In addition, for each development, an approved Pesticide Management Plan shall be required prior to applying any pesticide or herbicide on the GPL.

7. Fertilizers

For projects on sites of one (1) acre or more proposing the use of fertilizers, the amounts and application rates shall be specified by the Commission in the Regulations. Furthermore, the Commission shall request the user to:

a. use fertilizer alternatives where appropriate;

b. test soil annually to determine annual fertilizer needs;

c. use time-release fertilizers;

d. limit application of any type of fertilizer; and

e. establish a monitoring program for fertilizer application to sites that are ten (10) acres or greater.

ARTICLE XII. WETLANDS PROTECTION

A. Objectives

The primary objective of the wetlands protection requirements of the By-Laws is to maintain and enhance the conservation and protection of all natural resources present within Devens.

B. General Provisions

1. The Act requires the Commission to exercise all the powers of a conservation commission relating to the enforcement in Devens of the Wetlands Protection Act, G.L. c. 131, sections 40 and 40 A, and the regulations promulgated thereunder by the Department of Environmental Protection at 310 CMR 10. The Commission

shall administer its powers relating to the protection of wetlands in accordance with the Wetlands Protection Act and regulations issued by the Department of Environmental Protection thereunder. Resource areas protected under the Wetlands Protection Act include freshwater wetlands, rivers, streams, ponds, and lakes.

2. The Commission shall include a wetlands protection section in the Regulations which will provide a detailed description of the procedures required to obtain a wetlands permit, as well as the enforcement powers of the Commission and the Department of Environmental Protection. This section of the Regulations shall be consistent with and based upon 310 CMR 10.

3. The submission by an applicant pursuant to this wetlands protection by-law for a project involving wetlands, and the review of that Notice of Intent, shall be incorporated into the unified permitting procedure for Devens described in the By-Laws, particularly in the permitting procedure, Article III.

C. Specific Provisions

1. Lands within one hundred (100) feet of wetland resources are presumed important to the protection of these resources because activities undertaken in close proximity to wetlands and other resources have a high likelihood of adverse impact upon the wetland or other resource, either immediately, as a consequence of construction, or over time, as a consequence of daily operation or existence of the activities. These adverse impacts from construction and use can include, without limitation, erosion, siltation, loss of groundwater recharge, poor water quality, and loss of wildlife habitat. To protect water quality, groundwater recharge, and wildlife habitat, no alteration of the natural vegetation or substrate may be undertaken within twenty-five (25) feet of the bank of any stream, river, pond, any wetland bordering on these waterbodies, and any vernal pool certified by the Division of Fisheries and Wildlife (collectively "Resource Areas"). Furthermore, no building shall be located within fifty (50) feet of these Resource Areas.

2. Except for the twenty-five (25) foot and fifty (50) foot setbacks referenced in paragraph 1, the Commission may permit development within one hundred (100) feet of a Resource Area upon a demonstration by the applicant that work within the one hundred (100) foot area would

not adversely affect the ability of the wetland to protect surface or groundwaters, public or private water supplies, water quality, wildlife habitat, or fisheries.

3. The twenty-five (25) foot and fifty (50) foot setback requirements described in the preceding paragraph 1 will not apply to the construction of recreational facilities (bikeways, trails, docks, etc,), roads, streets, railsidings, aboveground or underground public utilities and infrastructure, detention basins or drainage structures, measures undertaken for the remediation of contaminated soils or groundwater, or removal of solid waste.

XIII. SIGNS

A. As part of the Regulations, the Commission may develop detailed requirements regulating the erection and maintenance of signs at Devens, which shall include, but not be limited to, the following areas:

1. sign surface area;

2. set-backs for signs;

3. duration of temporary signs;

4. number of freestanding signs;

5. location of signs;

6. height of signs;

7. sign illumination;

8. particular types of signs that are prohibited; and

9. minimum design, construction, and maintenance standards for signs to ensure quality and safety.

Sensitivity shall be shown to the natural and man-made characteristics of the particular district, reflecting the differing requirements in regard to materials, height, illumination, placement on the lot or building, and overall area of signs on the lot.

B. The sign regulations may differentiate between the types of signs permitted within different zoning districts.

Soil Suitability and Analysis

Commonwealth of Massachusetts
City/Town of Devens

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

A. Facility Information

Accumett Engineering, Inc.
Owner Name

41 Lake George Road
Street Address

Map/Lot #

Devens
City

MA
State

Zip Code

B. Site Information

1. (Check one) ☒ New Construction ☐ Upgrade ☐ Repair

2. Soil Survey Available? ☒ Yes ☐ No If yes: NCRS (Source) 245 (Soil Map Unit)

Hinckley LOAMY SAND
Soil Name

NONE
Soil Limitations

SANDY/GRAVELLY GLACIOFLUVIAL DEPOSIT

MORRAINE
Landform

3. Surficial Geological Report Available? ☐ Yes ☐ No If yes:

Year Published/Source

Map Unit

Description of Geologic Map Unit:

4. Flood Rate Insurance Map Within a regulatory floodway? ☐ Yes ☒ No

5. Within a velocity zone? ☐ Yes ☒ No

6. Within a Mapped Wetland Area? ☐ Yes ☒ No If yes, MassGIS Wetland Data Layer:

Wetland Type

7. Current Water Resource Conditions (USGS): MAR 2021 (Month/Day/ Year) Range: ☐ Above Normal ☐ Normal ☒ Below Normal

8. Other references reviewed:

Commonwealth of Massachusetts
City/Town of Devens

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review *(minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 0421-1 (Hole #) | 4/15/2021 (Date) | 8:45 (Time) | CLOUDY (Weather) | (Latitude) | (Longitude:)

1. Land Use: VACANT LOT (e.g., woodland, agricultural field, vacant lot, etc.) | BRUSH/TREE (Vegetation) | NONE (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 0-1 (Slope (%))

Description of Location: _____

2. Soil Parent Material: GLACIOFLUVIAL DEPOSIT | MORRAINE (Landform) | ON SLOPE (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body +100 feet | Drainage Way +100 feet | Wetlands +100 feet | Property Line +100 feet | Drinking Water Well NA feet | Other _____ feet

4. Unsuitable Materials Present: ☒ Yes ☐ No If Yes: ☐ Disturbed Soil ☒ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-2	ASPHALT										
2-8	Bw	LO SAND	10YR 5/6						MASS	FIRM	
8-26	C1	CO SAND	10YR 3/1						SG	LOOSE	
26-216	C2	SAND	10YR 5/1						SG	LOOSE	

Additional Notes:
STRATIFIED SAND AND GRAVEL LAYERS WITHIN C-HORIZON; NO GWO/ESHWT, NO REFUSAL

Commonwealth of Massachusetts
City/Town of Devens

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (*minimum of two holes required at every proposed primary and reserve disposal area*)

Deep Observation Hole Number: 0421-2 (Hole #) 4/15/202 1 9:00 (Time) CLOUD (Weather) _____ (Latitude) _____ (Longitude:)

1. Land Use: VACANT LOT (e.g., woodland, agricultural field, vacant lot, etc.) BRUSH/TREE (Vegetation) NONE (Surface Stones (e.g., cobbles, stones, boulders, etc.)) 0-1 (Slope (%))

Description of Location: _____

2. Soil Parent Material: GLACIOFLUVIAL DEPOSIT MORRAINE (Landform) ON SLOPE (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body +100 feet; Drainage Way +100 feet; Wetlands +100 feet; Property Line +100 feet; Drinking Water Well _____ feet; Other _____ feet

4. Unsuitable Materials Present: ☒ Yes ☐ No If Yes: ☐ Disturbed Soil ☒ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☐ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-2	ASPHALT										
2-28	Bw	10YR 5/6	LO SAND						MASS	FIRM	
28-34	C1	10YR 3/1	CO SAND						SINGLE	LOOSE	
34-198	C2	10YR 5/1	SAND						SINGLE	LOOSE	

Additional Notes:
STRATIFIED SAND AND GRAVEL LAYERS WITHIN C-HORIZON; NO ESHWT/GWO; NO REFUSAL

Commonwealth of Massachusetts
City/Town of Devens

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole #0421-1	Obs. Hole #0421-2
☐ Depth observed standing water in observation hole	_____ inches	_____ inches
☐ Depth weeping from side of observation hole	_____ inches	_____ inches
☐ Depth to soil redoximorphic features (mottles)	_____ inches	_____ inches
☐ Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)	_____ inches	_____ inches

_____ Index Well Number

_____ Reading Date

$S_h = S_c - [S_r \times (OW_c - OW_{max})/OW_r]$

Obs. Hole/Well# _____ S_c _____ S_r _____ OW_c _____ OW_{max} _____ OW_r _____ S_h _____

2. Estimated Depth to High Groundwater: _____ inches

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system?

☒ Yes ☐ No

b. If yes, at what depth was it observed (exclude A and O Horizons)? Upper boundary: 2 inches Lower boundary: 198 inches

c. If no, at what depth was impervious material observed? Upper boundary: _____ inches Lower boundary: _____ inches

Commonwealth of Massachusetts
City/Town of Devens

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of my soil evaluation, as indicated in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Signature of Soil Evaluator

4-15-2021
Date

CHRISTOPHER ANDERSON, SE#14005
Typed or Printed Name of Soil Evaluator / License #

7/1/2022
Expiration Date of License

Name of Approving Authority Witness

Approving Authority

Note: In accordance with 310 CMR 15.018(2) this form must be submitted to the approving authority within 60 days of the date of field testing, and to the designer and the property owner with Percolation Test Form 12.

Field Diagrams: Use this area for field diagrams:

Commonwealth of Massachusetts
City/Town of Devens

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

A. Facility Information

Accumett Engineering, Inc.
Owner Name

41 Lake George Road
Street Address

Map/Lot #

Devens
City

MA
State

Zip Code

B. Site Information

1. (Check one) ☒ New Construction ☐ Upgrade ☐ Repair

2. Soil Survey Available? ☒ Yes ☐ No If yes: NCRS (Source) 245 (Soil Map Unit)

Hinckley LOAMY SAND
Soil Name

NONE
Soil Limitations

SANDY/GRAVELLY GLACIOFLUVIAL DEPOSIT

MORRAINE
Landform

3. Surficial Geological Report Available? ☐ Yes ☐ No If yes:

Year Published/Source

Map Unit

Description of Geologic Map Unit:

4. Flood Rate Insurance Map Within a regulatory floodway? ☐ Yes ☒ No

5. Within a velocity zone? ☐ Yes ☒ No

6. Within a Mapped Wetland Area? ☐ Yes ☒ No If yes, MassGIS Wetland Data Layer:

Wetland Type

7. Current Water Resource Conditions (USGS): MAR 2021 (Month/Day/ Year) Range: ☐ Above Normal ☐ Normal ☒ Below Normal

8. Other references reviewed:

Commonwealth of Massachusetts
City/Town of Devens

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (*minimum of two holes required at every proposed primary and reserve disposal area*)

Deep Observation Hole Number: 0421-3 (Hole #) | 4/15/2021 (Date) | 10:00 (Time) | CLOUDY (Weather) | _____ (Latitude) | _____ (Longitude:)

1. Land Use: VACANT LOT (e.g., woodland, agricultural field, vacant lot, etc.) | BRUSH/TREE (Vegetation) | NONE (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 0-1 (Slope (%))

Description of Location: _____

2. Soil Parent Material: GLACIOFLUVIAL DEPOSIT | MORRAINE (Landform) | ON SLOPE (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body +100 feet | Drainage Way +100 feet | Wetlands +100 feet
Property Line +100 feet | Drinking Water Well NA feet | Other _____ feet

4. Unsuitable Materials Present: ☒ Yes ☐ No If Yes: ☐ Disturbed Soil ☒ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-2	ASPHALT										
2-28	FILL	(SAND)									
28-57	BW	S/G	10YR 4/4						SG	LOOSE	
57-156	C	SAND	10YR 5/1						SG	LOOSE	

Additional Notes:
STRATIFIED SAND AND GRAVEL LAYERS WITHIN C-HORIZON; NO GWO/ESHWT, NO REFUSAL

Commonwealth of Massachusetts
City/Town of Devens

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (*minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 0421-4 (Hole #) 4/15/202 1 10:15 (Time) CLOUD (Weather) _____ (Latitude) _____ (Longitude:)

1. Land Use: VACANT LOT (e.g., woodland, agricultural field, vacant lot, etc.) BRUSH/TREE (Vegetation) NONE (Surface Stones (e.g., cobbles, stones, boulders, etc.)) 0-1 (Slope (%))

Description of Location: _____

2. Soil Parent Material: GLACIOFLUVIAL DEPOSIT MORRAINE (Landform) ON SLOPE (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body +100 feet; Drainage Way +100 feet; Wetlands +100 feet; Property Line +100 feet; Drinking Water Well _____ feet; Other _____ feet

4. Unsuitable Materials Present: ☒ Yes ☐ No If Yes: ☐ Disturbed Soil ☒ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☐ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-2	ASPHALT										
2-28	Bw	10YR 4/4	LO SAND						MASS	FIRM	
28-94	C1	10YR 3/1	CO SAND						SINGLE	LOOSE	
94-128	C2	10YR 5/1	SAND						SINGLE	LOOSE	

Additional Notes:
STRATIFIED SAND AND GRAVEL LAYERS WITHIN C-HORIZON; NO ESHWT/GWO; NO REFUSAL

Commonwealth of Massachusetts
City/Town of Devens

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole #0421-3	Obs. Hole #0421-4
☐ Depth observed standing water in observation hole	_____ inches	_____ inches
☐ Depth weeping from side of observation hole	_____ inches	_____ inches
☐ Depth to soil redoximorphic features (mottles)	_____ inches	_____ inches
☐ Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)	_____ inches	_____ inches

_____ Index Well Number _____ Reading Date

$S_h = S_c - [S_r \times (OW_c - OW_{max})/OW_r]$

Obs. Hole/Well# _____ S_c _____ S_r _____ OW_c _____ OW_{max} _____ OW_r _____ S_h _____

2. Estimated Depth to High Groundwater: _____ inches

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system?

☒ Yes ☐ No

b. If yes, at what depth was it observed (exclude A and O Horizons)?	Upper boundary:	2 inches	Lower boundary:	128 inches
c. If no, at what depth was impervious material observed?	Upper boundary:	_____ inches	Lower boundary:	_____ inches

Commonwealth of Massachusetts
City/Town of Devens

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of my soil evaluation, as indicated in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Signature of Soil Evaluator	Date 4-15-2021
CHRISTOPHER ANDERSON, SE#14005	7/1/2022
Typed or Printed Name of Soil Evaluator / License #	Expiration Date of License
Name of Approving Authority Witness	Approving Authority

Note: In accordance with 310 CMR 15.018(2) this form must be submitted to the approving authority within 60 days of the date of field testing, and to the designer and the property owner with Percolation Test Form 12.

Field Diagrams: Use this area for field diagrams:

Commonwealth of Massachusetts
City/Town of Devens

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

A. Facility Information

Accumett Engineering, Inc.
Owner Name

41 Lake George Road
Street Address

Map/Lot #

Devens
City

MA
State

Zip Code

B. Site Information

1. (Check one) ☒ New Construction ☐ Upgrade ☐ Repair

2. Soil Survey Available? ☒ Yes ☐ No If yes: NCRS (Source) 245 (Soil Map Unit)

Hinckley LOAMY SAND
Soil Name

NONE
Soil Limitations

SANDY/GRAVELLY GLACIOFLUVIAL DEPOSIT
Landform

MORRAINE

3. Surficial Geological Report Available? ☐ Yes ☐ No If yes:
Year Published/Source
Map Unit

Description of Geologic Map Unit:

4. Flood Rate Insurance Map Within a regulatory floodway? ☐ Yes ☒ No

5. Within a velocity zone? ☐ Yes ☒ No

6. Within a Mapped Wetland Area? ☐ Yes ☒ No If yes, MassGIS Wetland Data Layer:
Wetland Type

7. Current Water Resource Conditions (USGS): MAR 2021
Month/Day/ Year
Range: ☐ Above Normal ☐ Normal ☒ Below Normal

8. Other references reviewed:

Commonwealth of Massachusetts
City/Town of Devens

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (*minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 0421-5 (Hole #) | 4/15/2021 (Date) | 11:00 (Time) | CLOUDY (Weather) | _____ (Latitude) | _____ (Longitude:)

1. Land Use: VACANT LOT (e.g., woodland, agricultural field, vacant lot, etc.) | BRUSH/TREE (Vegetation) | NONE (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 0-1 (Slope (%))

Description of Location: _____

2. Soil Parent Material: GLACIOFLUVIAL DEPOSIT | MORRAINE (Landform) | ON SLOPE (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body +100 feet | Drainage Way +100 feet | Wetlands +100 feet
Property Line 30 feet | Drinking Water Well NA feet | Other _____ feet

4. Unsuitable Materials Present: ☒ Yes ☐ No If Yes: ☐ Disturbed Soil ☒ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-24	FILL										
24-58	C1	CO SAND	10YR 3/1						SG	LOOSE	
58-124	C2	S/G	10YR 5/1						SG	LOOSE	

Additional Notes:
STRATIFIED SAND AND GRAVEL LAYERS WITHIN C-HORIZON; NO GWO/ESHWT, NO REFUSAL

Commonwealth of Massachusetts
City/Town of Devens

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (*minimum of two holes required at every proposed primary and reserve disposal area)*

Deep Observation Hole Number: 0421-6 (Hole #) 4/15/202 1 | 11:30 (Time) | CLOUD (Weather) | _____ (Latitude) | _____ (Longitude:)

1. Land Use: VACANT LOT (e.g., woodland, agricultural field, vacant lot, etc.) | BRUSH/TREE (Vegetation) | NONE (Surface Stones (e.g., cobbles, stones, boulders, etc.)) | 0-1 (Slope (%))

Description of Location: _____

2. Soil Parent Material: GLACIOFLUVIAL DEPOSIT | MORRAINE (Landform) | ON SLOPE (Position on Landscape (SU, SH, BS, FS, TS))

3. Distances from: Open Water Body +100 feet | Drainage Way +100 feet | Wetlands +100 feet
Property Line +100 feet | Drinking Water Well _____ feet | Other _____ feet

4. Unsuitable Materials Present: ☒ Yes ☐ No If Yes: ☐ Disturbed Soil ☒ Fill Material ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☐ No If yes: _____ Depth Weeping from Pit _____ Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-2	ASPHALT										
2-8	Bw	10YR 4/4	LO SAND						MASS	FIRM	
8-66	C1	10YR 3/1	CO SAND						SINGLE	LOOSE	
66-122	C2	10YR 5/1	SAND						SINGLE	LOOSE	

Additional Notes:
STRATIFIED SAND AND GRAVEL LAYERS WITHIN C-HORIZON; NO ESHWT/GWO; NO REFUSAL

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole #0421-5	Obs. Hole #0421-6
☐ Depth observed standing water in observation hole	_____ inches	_____ inches
☐ Depth weeping from side of observation hole	_____ inches	_____ inches
☐ Depth to soil redoximorphic features (mottles)	_____ inches	_____ inches
☐ Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)	_____ inches	_____ inches

_____ Index Well Number _____ Reading Date

$S_h = S_c - [S_r \times (OW_c - OW_{max})/OW_r]$

Obs. Hole/Well# _____ S_c _____ S_r _____ OW_c _____ OW_{max} _____ OW_r _____ S_h _____

2. Estimated Depth to High Groundwater: _____ inches

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system?

☒ Yes ☐ No

b. If yes, at what depth was it observed (exclude A and O Horizons)? Upper boundary: 2 inches Lower boundary: 122 inches

c. If no, at what depth was impervious material observed? Upper boundary: _____ inches Lower boundary: _____ inches

Commonwealth of Massachusetts
City/Town of Devens

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of my soil evaluation, as indicated in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Signature of Soil Evaluator	Date 4/15/2021
CHRISTOPHER ANDERSON, SE#14005	7/1/2022
Typed or Printed Name of Soil Evaluator / License #	Expiration Date of License
Name of Approving Authority Witness	Approving Authority

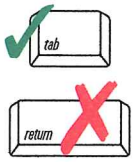
Note: In accordance with 310 CMR 15.018(2) this form must be submitted to the approving authority within 60 days of the date of field testing, and to the designer and the property owner with Percolation Test Form 12.

Field Diagrams: Use this area for field diagrams:

Commonwealth of Massachusetts
City/Town of Devens
Percolation Test
Form 12

Percolation test results must be submitted with the Soil Suitability Assessment for On-site Sewage Disposal. DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with the local Board of Health to determine the form they use.

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Site Information

Accumet Engineering
Owner Name

41 Lake George Road
Street Address or Lot #

Devens | MA | Zip Code
City/Town | State

Contact Person (if different from Owner) | Telephone Number

B. Test Results

	4/15/2021 (Date)	9:36 (Time)	4/15/2021 (Date)	10:40 (Time)
Observation Hole #	0421-A		0421-B	
Depth of Perc	65"		66"	
Start Pre-Soak	9:36		10:40	
End Pre-Soak				
Time at 12"				
Time at 9"				
Time at 6"				
Time (9"-6")	0:00 (Could Not Saturate)		0:00 (Could Not Saturate)	
Rate (Min./Inch)	<2 MPI		<2 MPI	
	Test Passed: ☒ Test Failed: ☐		Test Passed: ☒ Test Failed: ☐	

CHRISTOPHER ANDESON (#14005), HANNIGAN ENGINEERING, INC.
Test Performed By:

Board of Health Witness

Comments:

25 Gallon Applied; Could not saturate. For drainage system components

Industrial Performance Standard

ACCUMET

William Hannigan
Hannigan Engineering Inc
8 Monument Square
Leominster, MA 01453

April 30, 2021

Bill,

Here is our response to the Devens Industrial Performance Standards regarding air quality, electromagnetic interference and noise and vibration.

974 CMR 4.00 INDUSTRIAL PERFORMANCE STANDARDS AND GENERAL REGULATIONS

4.02: Air Quality, Odor and Emissions

Accumet Engineering's processes are not a significant source of poor air quality, odors or emissions. We have no processes that require a Massachusetts Department of Environmental Protection (MADEP) air quality permit nor are any of our emission explicitly regulated.

974 CMR 4.00 INDUSTRIAL PERFORMANCE STANDARDS AND GENERAL REGULATIONS

4.03: Electromagnetic Interference

Accumet Engineering operates a number of YAG and CO2 lasers, and lapping and polishing machinery driven from 60Hz electric motors. We have no equipment operating in the 1400-1720 MHZ frequency range. It is not anticipated that we are a significant source of electromagnetic interference.

974 CMR 4.00 INDUSTRIAL PERFORMANCE STANDARDS AND GENERAL REGULATIONS

4.05 Noise and Vibration

Acuumet Engineering's machinery and equipment are not significant sources of noise and vibration. We provide precision laser machining, lapping and polishing services with tolerances as low as 0.00025". Vibration and mechanical noise would adversely effect our ability to

achieve these tolerances so we have no equipment such as heavy presses or brakes that generate such mechanical noise.

Please let me know if you have any questions.

Regards,

Gregory J. Sexton, President
Accumet Engineering Inc
123 Oak Hill Rd
Westford MA 01886
978 692-6180

Industrial Performance Standards Checklist for Newly Proposed Projects

All projects within the Devens Regional Enterprise Zone (DREZ) must comply with the Devens Enterprise Commission (DEC) Industrial Performance Standards (IPS) under 974 CMR 4.00. This checklist is intended to assist Applicants in determining at the time of submittal, or ideally before submittal, if their project may or may not involve development and/or activities that may impact sound, vibration, air quality, or lighting within the DREZ.

Site layout, building(s) design/orientation, traffic patterns, location of outdoor equipment and numerous other project components can impact sound, vibration, air quality, and lighting within the DREZ. By identifying any potential IPS concerns early on in the review process, Applicants can design their projects to ensure compliance with the IPS at all times and avoid potential future violations of the IPS and costly mitigation after the fact.

Please note, if a project requires an air permit from the Massachusetts Department of Environmental Protection (DEP), the Applicant will need to initiate permitting through the DEP office as well. Even if a project requires a DEP air permit, the proponent still must demonstrate compliance with the DEC IPS.

Please circle the correct answer to each question in this checklist. Please note that by circling "NO", the Applicant is not relieved of demonstrating compliance with the IPS requirements. If "NO" is circled and a potential concern is identified during the review process, it could temporarily suspend the approval process timeline until the concern is adequately addressed. If "YES" is answered, please explain and provide any supporting studies or information to aid the DEC in their evaluation of the project.

Project Name ACCUMET ENGINEERING, INC.

Does the proposed project and associated activities involve any potential increases in sound, vibration, air quality, odor, dust, lighting and/or electromagnetic interference that are covered under the DEC Industrial Performance Standards?

YES	NO
	(NO)

If you answered yes, will the Applicant demonstrate compliance directly or will the project proponent employ an expert to demonstrate compliance? Please provide pertinent contact information of the responsible official:

_____

_____

_____

_____

Industrial Performance Standards Checklist for Newly Proposed Projects cont...

Vibration

Does the proposed project have the ability to increase vibration? YES (NO)

16. Will the increase in vibration exceed 974 CMR 4.05 (4)a?? YES (NO)

Checklist Options to Demonstrate Vibration Compliance

17. Have all of the potential vibration sources been identified? (YES) NO

18. Will spreadsheet calculations of the potential increase in vibration be provided? YES (NO)

19. Will the proponent provide vibration modeling of the proposed project? YES (NO)

20. Does the project propose to collect background vibration data? YES (NO)

21. Is mitigation proposed to reduce the overall vibration profile? YES (NO)

22. Is vibration mitigation to be assumed when the calculations or modeling performed? YES (NO)

23. Is compliance monitoring proposed to demonstrate that the project meets the estimated increases in vibration as proposed? YES (NO)

Industrial Performance Standards Checklist for Newly Proposed Projects cont...

Checklist Options to Demonstrate Air Quality Compliance (cont.)

38. Will the project proponent provide air and/or odor modeling of the proposed project within the DEC or into the neighborhood surrounding the DEC??	YES **NO**
39. Is mitigation proposed to reduce the overall air and/or odor profile?	YES **NO**
40. Is air pollution and/or odor control to be assumed when the calculations or modeling is performed?	YES **NO**
41. Is compliance monitoring proposed to demonstrate that the project meets the estimated increases in air and/or odor as proposed?	YES **NO**

Lighting/Illumination

Does the proposed project have the ability to create additional Illumination?	**YES** NO
42. Will lighting meet the illumination standards set forth in 974 CMR 4.04(3)?	**YES** NO
43. Have all of the potential light sources been identified?	**YES** NO
44. Will spreadsheet calculations of the potential increase in light and how it will not affect the Observatory outlined in 974 CMR 4.04(1) or any external or internal receptors be provided? (SEE PHOTOMETRIC PLAN)	**YES** NO
45. Is mitigation proposed to reduce the overall light profile?	**YES** NO

Electromagnetic Interference

Does the proposed project have the ability to create electromagnetic interference?	YES **NO**
46. Have you identified all your potential electromagnetic sources?	**YES** NO
47. Are you proposing to provide spreadsheet calculations of the potential increase in electromagnetic interference and how it will not affect any internal or external receptors as per 974 CMR 4.03(3)?	YES **NO**
48. Are you proposing any mitigation to reduce your overall electromagnetic profile?	YES **NO**
49. Will your project comply with all the electromagnetic requirements under 974 CMR 4.03?	YES **NO**

Earth Removal Calculations

Cut/Fill Report

Generated: 2021-05-19 15:16:41

By user: canderson

Drawing: J:\DWG\DEVENS\Lake George Street\2984-Accumet Engineering\J:\DWG\DEVENS\Lake George Street\2984-Accumet Engineering\2984-Base.dwg

Volume Summary

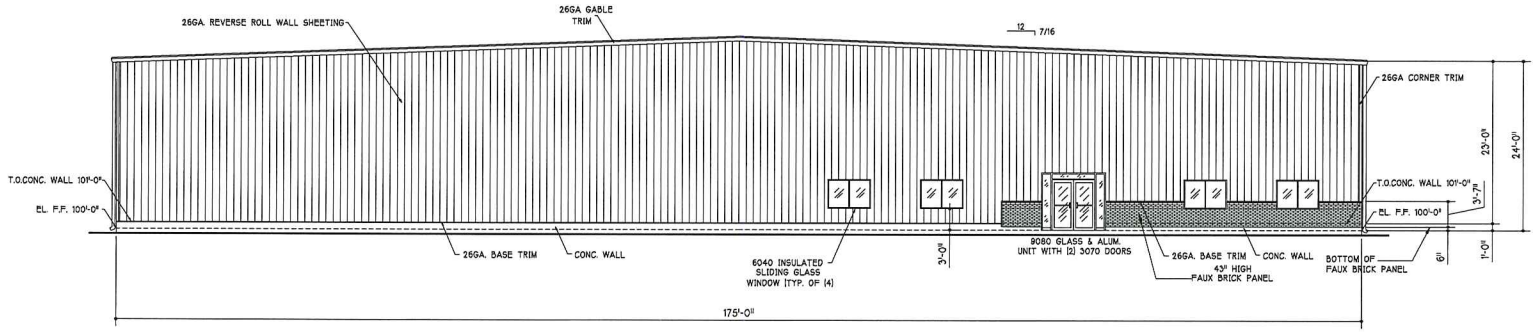
Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
CUTFIL	full	1.2500	1.1500	308260	4180.27*	5413.16*	1232.90*

Totals

	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Total	308260	4180.27*	5413.16*	1232.90*

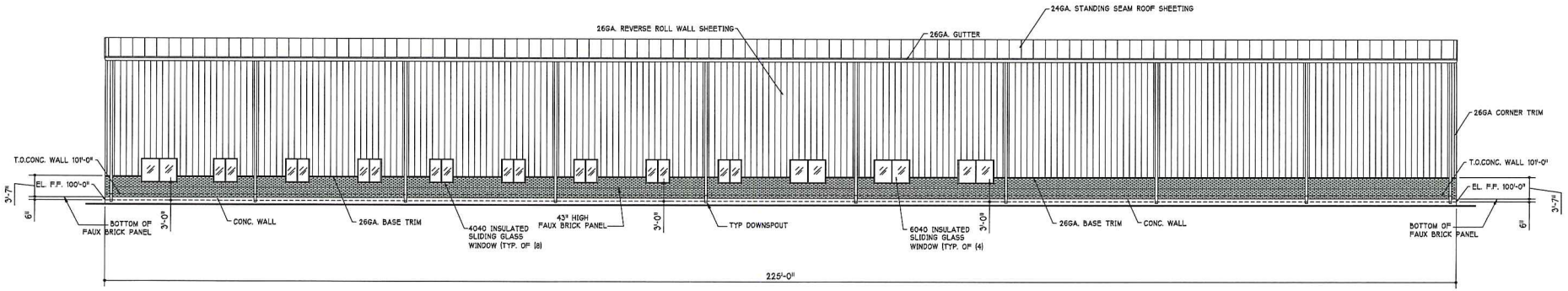
* Value adjusted by cut or fill factor other than 1.0

Building Elevation and Plan



FRONT ELEVATION

1/8" = 1'-0"



RIGHT SIDE ELEVATION

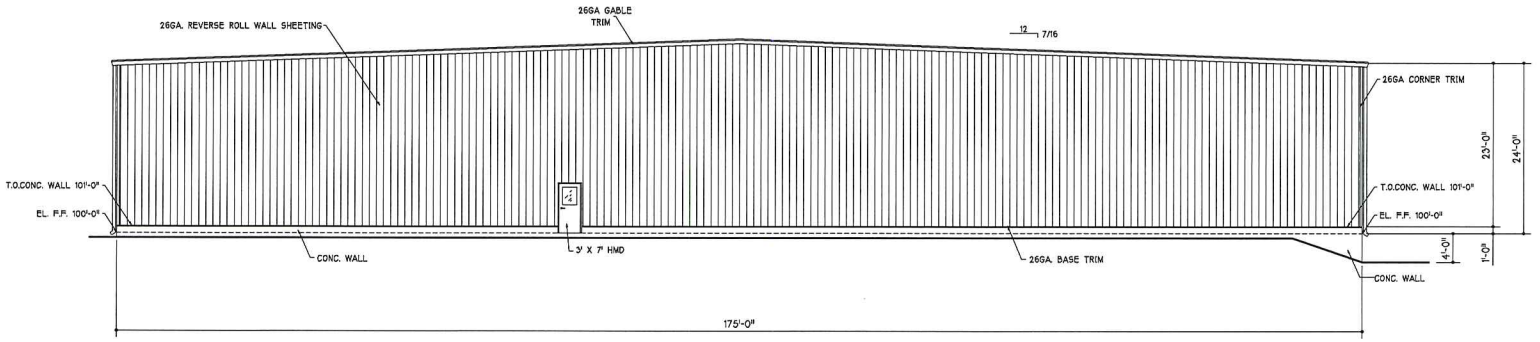
1/8" = 1'-0"

BUILDER TO CONFIRM ALL DIMENSIONS AND FRAMING PRIOR TO CONSTRUCTION AND BE RESPONSIBLE FOR SAME.

PRELIMINARY

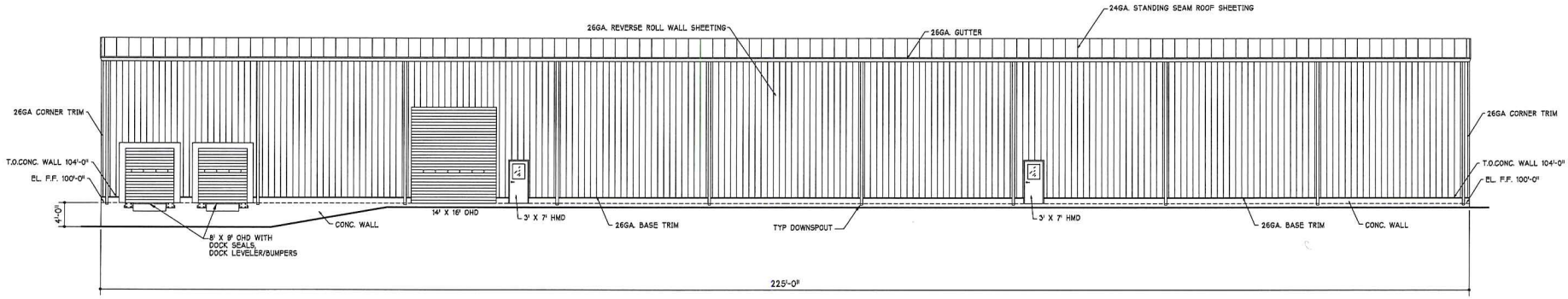
ACCUMET ENGINEERING
41 LAKE GEORGE STREET, HARVARD, MA 01434

DATE: 5-6-2021	REVISED
SCALE: 1/8"=1'-0"	DRAWN BY: PETE+
SPECTRUM BUILDERS **6 PAUL STREET** **AUBURN, MA 01501**	SHEET NO. **A-1**
FRONT & RIGHT SIDE ELEVATIONS	



REAR ELEVATION

1/8" = 1'-0"



LEFT SIDE ELEVATION

1/8" = 1'-0"

BUILDER TO CONFIRM ALL DIMENSIONS AND FRAMING PRIOR TO CONSTRUCTION AND BE RESPONSIBLE FOR SAME.

PRELIMINARY

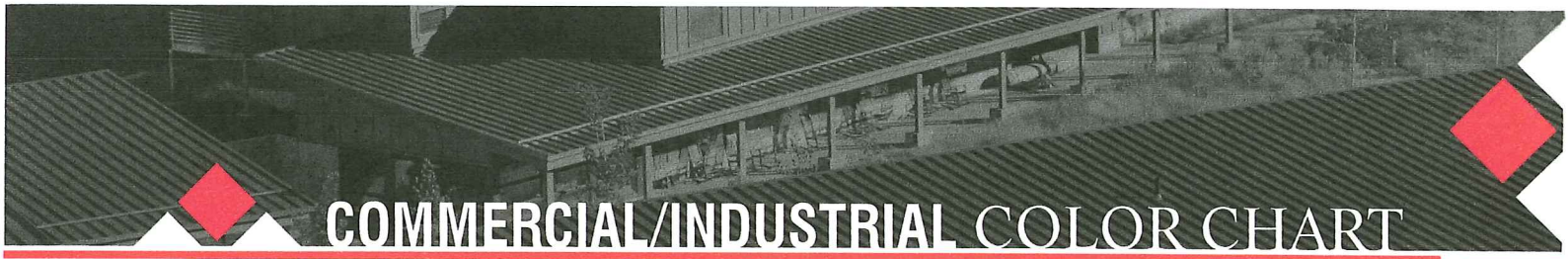
ACCUMET ENGINEERING
41 LAKE GEORGE STREET, HARVARD, MA 01434

DATE: 5-6-2021
SCALE: 1/8"=1'-0"

SPECTRUM BUILDERS
6 PAUL STREET
AUBURN, MA 01501

REVISED
DRAWN BY PETE+
SHEET NO. **A-2**

REAR & LEFT SIDE ELEVATIONS



COMMERCIAL/INDUSTRIAL COLOR CHART

SIGNATURE® 200 Standard Colors

SILICONIZED POLYESTER

Polar White is a Straight Polyester.

26-GAUGE MATERIAL

- Final color selection should be made from actual color chips.
- For the most current information available, visit our website at www.mbci.com.
- See product selection chart for gauge and color availability.
- All products available in smooth or embossed finish.
- Trim available in all colors.
- A 25-year limited paint warranty available for all colors upon written request, please inquire. (Outside the continental United States, please inquire.)
- Signature® is a registered trademark of NCI Group, Inc. KYNAR 500® is a registered trademark of Arkema, Inc. HYLAR 5000® is a registered trademark of Solvay Solexis.

* Also available in 29-gauge

HAWAIIAN BLUE ★ SR .32 SRI 35	CRIMSON RED ★ SR .33 SRI 34	FERN GREEN ★ SR .28 SRI 29	BURNISHED SLATE ★ SR .28 SRI 29
ASH GRAY ★ SR .48 SRI 56	SADDLE TAN ★ SR .48 SRI 56	DESERT SAND ★ SR .42 SRI 48	KOKO BROWN ★ SR .28 SRI 30
CHARCOAL GRAY ★ SR .28 SRI 30	POLAR WHITE* ★ SR .58 SRI 69	RUSTIC RED ★ SR .36 SRI 40	LIGHT STONE ★ SR .50 SRI 58
GALLERY BLUE ★ SR .28 SRI 30			

INTENDED COLOR
ASH-GRAY

SIGNATURE® 300 Standard Colors

KYNAR 500®
HYLAR 5000®
LOW GLOSS

26-GAUGE MATERIAL
PBR, PBU, PBA, PBC, PBD Panels only

* Also available in 24-gauge

MEDIUM BRONZE* ★ SR .33 SRI 36	SNOW WHITE* ★ SR .65 SRI 79	SLATE GRAY ★ SR .37 SRI 41	ALMOND* ★ SR .63 SRI 76
CLASSIC GREEN* ★ SR .28 SRI 30	BROWNSTONE* ★ SR .47 SRI 54	BRITE RED SR .49 SRI 55	HARBOR BLUE ★ SR .28 SRI 30

★ ENERGY STAR Qualified Color

ENERGY STAR PARTNER

COOL ROOF COLORS

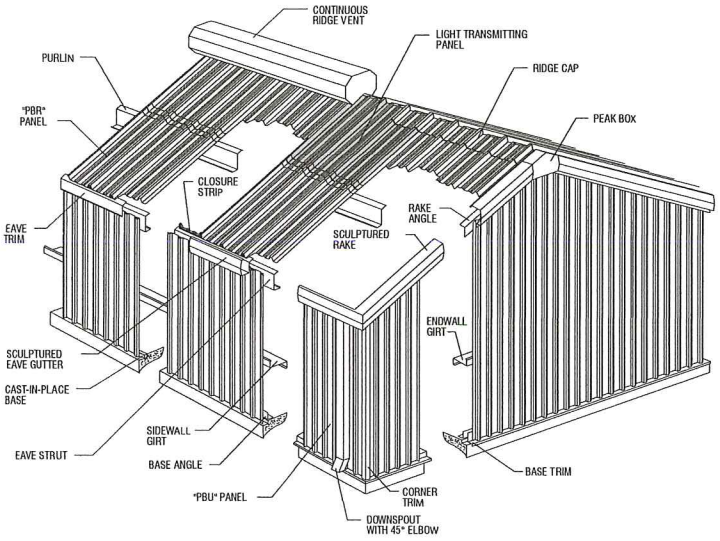
MBCI®
Metal Roof and Wall Systems

Houston, TX 877-713-6224	Dallas, TX 800-653-6224	Memphis, TN 800-206-6224	Richmond, VA 800-729-6224
Adel, GA 888-446-6224	Indianapolis, IN 800-735-6224	Oklahoma City, OK 800-597-6224	Rome, NY 800-559-6224
Atlanta, GA 877-512-6224	Jackson, MS 800-622-4136	Omaha, NE 800-458-6224	Salt Lake City, UT 800-874-2404
Atwater, CA 800-829-9324	Lubbock, TX 800-758-6224	Phoenix, AZ 888-533-6224	San Antonio, TX 800-598-6224

COMMERCIAL/INDUSTRIAL PANEL PROFILES

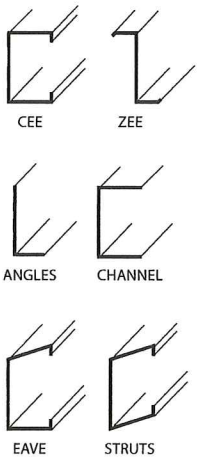
Profile	Panel	29 GAUGE		26 GAUGE		24 GAUGE		22 GAUGE	
		Galvalume Plus®	Sig 200	Galvalume Plus®	Sig 200	Galvalume Plus®	Sig 200	Galvalume Plus®	Sig 200
12" 36" 1¼" "PBR" PANEL	PBR	●	■	●	■	■	■	■	■
6" 36" ¾" "PBU" PANEL	PBU	●	■	●	■	■	■	■	■
2.67" 32" ⅞" "PBC" PANEL	PBC	●	■	●	■	■	■	■	■
2.67" 32" ⅝" "PBD" PANEL	PBD	●	■	●	■	■	■	■	■
7.2" 36" 1½" 7.2 PANEL	7.2	●	■	●	●	●	■	●	■
12" 36" 1⅛" "PBA" PANEL	PBA	●	■	●	■	■	■	■	■

● Available in any quantity ■ May require minimum quantity



AVAILABLE ACCESORIES

- Hat and Channel Sections
- Light Transmitting Panels
- Vent
- Roof Jacks
- Fasteners
- Ridge Caps
- Closures
- Doors
- Windows
- Sealants
- Insulation
- Bracing
- Bolts
- Louvers
- Sliding Door Hardware



What is Solar Reflectivity (SR)?

Solar reflectivity or reflectance (SR) is the ability of a material to reflect solar energy from its surface back into the atmosphere. The SR value is a number from 0 to 1.0. A value of 0 indicates that the material absorbs all solar energy and a value of 1.0 indicates it is all reflected. ENERGY STAR requires SR testing of both new and aged roof products. New products must have an SR value of 0.25 or higher for steep slope (above 2:12) roofing and an SR value of 0.65 or higher for low slope (2:12 or less) roofing. Aged testing takes 3 years to complete, so not all products that meet the initial requirements are qualified. For more information, please go to www.energystar.gov.

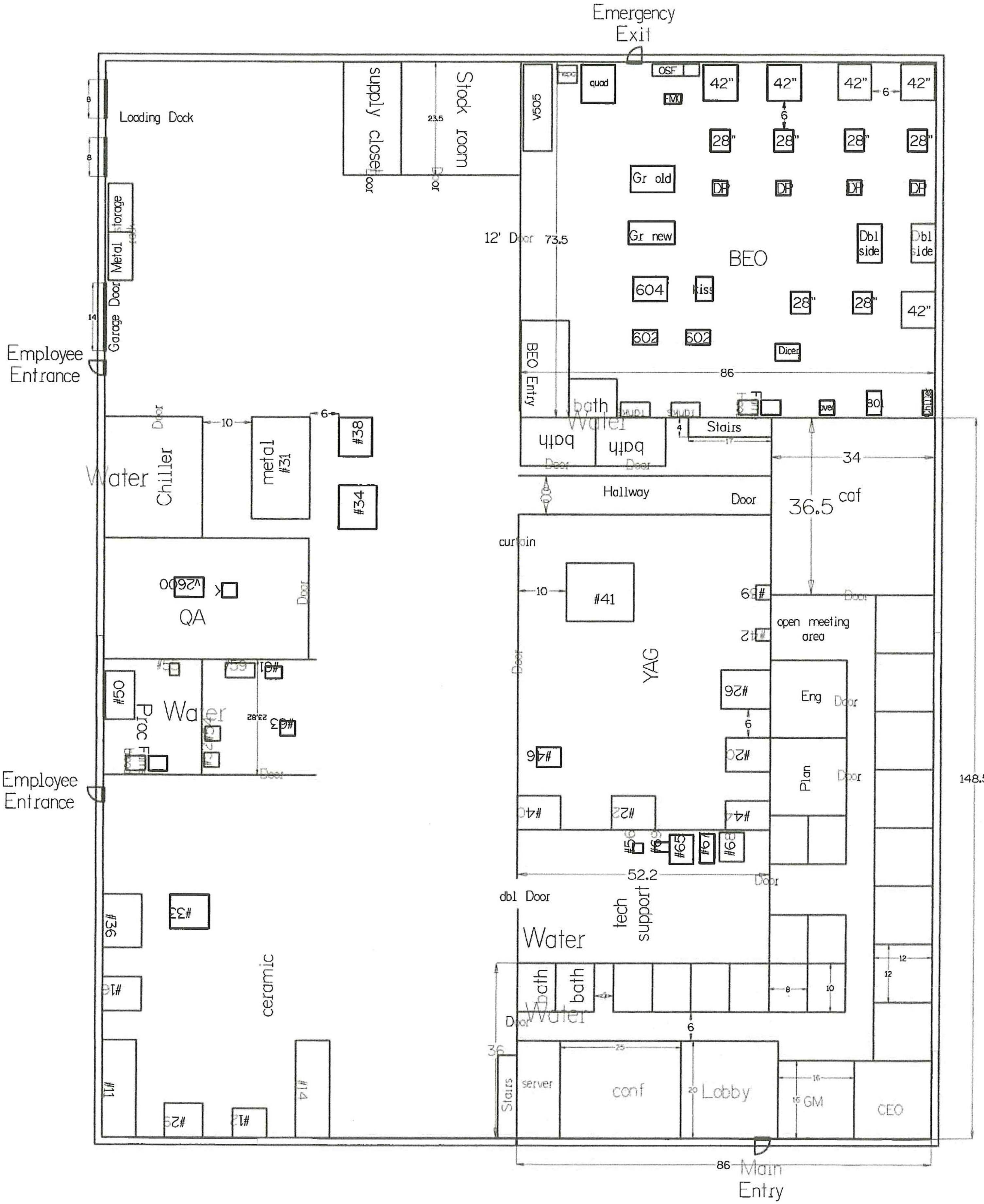
What is Solar Reflectance Index (SRI)?

The SRI is used to determine compliance with LEED requirements and is calculated according to ASTM E 1980 using values for reflectance and emissivity. Emissivity is a material's ability to release absorbed energy. To meet LEED requirements, a roofing material must have an SRI of 29 or higher for steep slope (above 2:12) roofing and an SRI value of 78 or higher for low slope (2:12 or less) roofing. For more information, please go to www.usgbc.org.

SIGNATURE® 200 - SILICONIZED POLYESTER		
	SR #	SRI #
HAWAIIAN BLUE	.32	35
CRIMSON RED	.33	34
FERN GREEN	.28	29
BURNISHED SLATE	.28	29
KOKO BROWN	.28	30
CHARCOAL GRAY	.28	30
ASH GRAY	.48	56
SADDLE TAN	.48	56
DESERT SAND	.42	48
POLAR WHITE	.58	69
RUSTIC RED	.36	40
LIGHT STONE	.50	58
GALLERY BLUE	.28	30

SIGNATURE® 300 - KYNAR 500®/HYLAR 5000®		
	SR #	SRI #
MEDIUM BRONZE	.33	36
SNOW WHITE	.65	79
SLATE GRAY	.37	41
ALMOND	.63	76
CLASSIC GREEN	.28	30
BROWNSTONE	.47	54
BRITE RED	.49	55
HARBOR BLUE	.28	30

MBCI®
Metal Roof and Wall Systems



Emergency Exit
Loading Dock
supply closet
Stock room
V505
quad
OSF
42"
28"
Gr old
Gr new
DP
Dbl side
BEO
604
Kiss
602
Dicer
12' Door
73.5
86
BEO Entry
bath
Water
Stairs
Metal storage
Garage Door
Employee Entrance
Chiller
metal #31
#38
#34
QA
v2600
Proc F
#50
#63
23.82
Hallway
Door
34
36.5 caf
curtain
#41
YAG
open meeting area
Eng
Plan
#26
#20
#46
#40
#22
#44
#65
#67
#68
52.2
dbl Door
tech support
ceramic
#33
#36
#16
#11
#29
#12
#14
Stairs
server
conf
Lobby
GM
CEO
148.5
86 Main Entry

COM*check* Software Version 4.0.6.0

Envelope Compliance Certificate

Project Information

Energy Code:	2015 IECC
Project Title:	Northern Buiilding Systems
Location:	Groton, Massachusetts
Climate Zone:	5a
Project Type:	New Construction

Construction Site:
Devens, MA 01434

Owner/Agent:

Designer/Contractor:

Building Area	Floor Area
1-Warehouse : Nonresidential	39375

Additional Efficiency Package

High efficiency HVAC. Systems that do not meet the performance requirement will be identified in the mechanical requirements checklist report.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof 1: Metal Building, Standing Seam, Liner System with Thermal Blocks (d), [Bldg. Use 1 - Warehouse]	39375	38.0	0.0	0.030	0.035
Floor 1: Slab-On-Grade:Unheated, [Bldg. Use 1 - Warehouse] (c)	800	---	---	0.730	0.540
NORTH					
Exterior Wall 1: Other Metal Building Wall, [Bldg. Use 1 - Warehouse] (b)	19620	---	---	0.052	0.052
Door 1: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Warehouse]	352	---	---	0.570	0.570

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) 'Other' components require supporting documentation for proposed U-factors.
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.
(d) Thermal spacer block with minimum R-3.5 must be installed above the purlin/batt, and the roof deck secured to the purlins.

Project Notes

Only for building shell. Without the complete building envelope. Using current code.

Envelope PASSES: Design 1% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2015 IECC requirements in COM*check* Version 4.0.6.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title _____ Signature _____ Date _____

COM*check* Software Version 4.0.6.0

Inspection Checklist

Energy Code: 2015 IECC

Requirements: 0.0% were addressed directly in the COM*check* software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR1][1]	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.1 [PR10][1]	The vertical fenestration area <= 30 percent of the gross above-grade wall area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.1 [PR11][1]	The skylight area <= 3 percent of the gross roof area.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.2 [PR14][1]	In enclosed spaces > 2,500 ft2 directly under a roof with ceiling heights >15 ft. and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium/exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply: (a) the daylight zone under skylights is >= half the floor area; (b) the skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40; or a minimum skylight effective aperture >= 1 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C303.2 [FO4][2]	Slab edge insulation installed per manufacturer's instructions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2.1 [FO6][1]	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.2.5 [FO3][2]	Slab edge insulation R-value.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Framing / Rough-In Inspection	Complies?	Comments/Assumptions
C303.1.3 [FR12][2]	Fenestration products rated in accordance with NFRC.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.1.3 [FR13][1]	Fenestration products are certified as to performance labels or certificates provided.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.3 [FR10][1]	Vertical fenestration SHGC value.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.4.3, C402.4.3.4 [FR8][1]	Vertical fenestration U-Factor.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.4.4 [FR14][2]	U-factor of opaque doors associated with the building thermal envelope meets requirements.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.5.1.2.1 [FR19][1]	The building envelope contains a continuous air barrier that is sealed in an approved manner and material permeability <= 0.004 dfm/ft2. Air barrier penetrations are sealed in an approved manner.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.2, C402.5.4 [FR18][3]	Factory-built fenestration and doors are labeled as meeting air leakage requirements.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.7 [FR17][3]	Vestibules are installed on all building entrances. Doors have self-closing devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.5.5, C403.2.4.3 [ME3][3]	Stair and elevator shaft vents have motorized dampers that automatically close.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.5, C403.2.4.3 [ME58][3]	Outdoor air and exhaust systems have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Check gravity dampers where allowed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Insulation Inspection	Complies?	Comments/Assumptions
C303.1 [IN3][1]	Roof insulation installed per manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the roof slope is <=3 in 12.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.1 [IN10][2]	Building envelope insulation is labeled with R-value or insulation certificate providing R-value and other relevant data.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2 [IN7][1]	Above-grade wall insulation installed per manufacturer's instructions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C303.2.1 [IN14][2]	Exterior insulation is protected from damage with a protective material. Verification for exposed foundation insulation may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.1.3 [IN19][3]	Non-swinging opaque doors have R-4.75 insulation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.2.1 [IN17][3]	Insulation intended to meet the roof insulation requirements cannot be installed on top of a suspended ceiling. Mark this requirement compliant if insulation is installed accordingly.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.2.3 [IN6][1]	Above-grade wall insulation R-value.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.5 [IN8][2]	Floor insulation R-value.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.2.6 [IN18][3]	Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.4.2.2 [IN2][1]	Roof R-value. For some ceiling systems, verification may need to occur during Framing Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
C402.5.1.1 [IN1][1]	All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C402.5.3 [FI51][3]	Where open combustion air ducts provide combustion air to open combustion fuel burning appliances, the appliances and combustion air opening are located outside the building thermal envelope or enclosed in a room, isolated from inside the thermal envelope. Such rooms are sealed and insulated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.6 [FI37][1]	Weatherseals installed on all loading dock cargo doors.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C402.5.8 [FI26][3]	Recessed luminaires in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

Landscape Plan

LEGEND				
Icon	**Code**	**Name**	**Qty**	**Size**
Shrub planting (in mulch)				
	S1	*Spiraea japonica 'Goldflame'* Goldflame Spirea	15 shrubs	3 Gal.
	S2	*Ilex glabra 'Shamrock'* Inkberry	58 shrubs	3 Gal.
	S3	*Juniperus × pfitzeriana 'Sea Green'* Chinese Juniper	6 shrubs	3 Gal.
Trees				
		Existing trees to remain		
	T1	*Quercus coccinea* Scarlet Oak	16 trees	25 Gal.
	T2	*Gleditsia triacanthos var. inermis 'Shademaster'* Honeylocust Shademaster	7 trees	2"-2.5" Cal.
Rain Garden Planting				
	R1	*Aronia arbutifolia* Red Chokeberry	20 shrubs	3 Gal.
	R2	*Juniperus communis* Common Juniper	20 shrubs	3 Gal.
	R3	*Myrica pensylvanica* Bayberry	20 shrubs	3 Gal.
	R4	*Ilex verticillata* Winterberry	20 shrubs	3 Gal.
	R5	*Hamamelis virginiana* Witch Hazel	20 shrubs	3 Gal.
Hard landscape				
		Mulch	19954 ft²	

PRINT NOTICE
Ensure correct page size is selected. (Refer to file name for page size)
To ensure correct scale, print "ACTUAL SIZE" do NOT select "FIT TO PAGE".

GENERAL NOTES

- All dimensions to be thoroughly checked on site and any or all discrepancies to be reported to the author of this drawing immediately before any work is put to hand.
- All work to be executed by competent persons qualified for the specific trade.
- Storm water management as per engineers design & specification.
- All structural and retaining elements to be designed & specified by engineer.

ACCUMET ENGINEERING - LANDSCAPE DEVELOPMENT PLAN

123 Oak Hill Rd, Westford, MA 01886 | 04-29-2021 | Scale 1/32"=1'-0" 18x24in | Author: ZD | Checked: NVR | Rev: 0 | Issued for submission | Sheet 1 of 4

PRINCETON SCAPES INC.

NO	DATE	REVISION

LEGEND				
Icon	Code	Name	Qty	Size
Shrub planting (in mulch)				
	S1	*Spiraea japonica 'Goldflame'* Goldflame Spirea	15 shrubs	3 Gal.
	S2	*Ilex glabra 'Shamrock'* Inkberry	58 shrubs	3 Gal.
	S3	*Juniperus × pfitzeriana 'Sea Green'* Chinese Juniper	6 shrubs	3 Gal.
Trees				
		Existing trees to remain		
	T1	*Quercus coccinea* Scarlet Oak	16 trees	25 Gal.
	T2	*Gleditsia triacanthos var. inermis 'Shademaster'* Honeylocust Shademaster	7 trees	2"-2.5" Cal.
Rain Garden Planting				
	R1	*Aronia arbutifolia* Red Chokeberry	20 shrubs	3 Gal.
	R2	*Juniperus communis* Common Juniper	20 shrubs	3 Gal.
	R3	*Myrica pensylvanica* Bayberry	20 shrubs	3 Gal.
	R4	*Ilex verticillata* Winterberry	20 shrubs	3 Gal.
	R5	*Hamamelis virginiana* Witch Hazel	20 shrubs	3 Gal.
Hard landscape				
		Mulch	19954 ft²	

PRINT NOTICE
Ensure correct page size is selected. (Refer to file name for page size)
To ensure correct scale, print "ACTUAL SIZE" do NOT select "FIT TO PAGE".

GENERAL NOTES

- All dimensions to be thoroughly checked on site and any or all discrepancies to be reported to the author of this drawing immediately before any work is put to hand.
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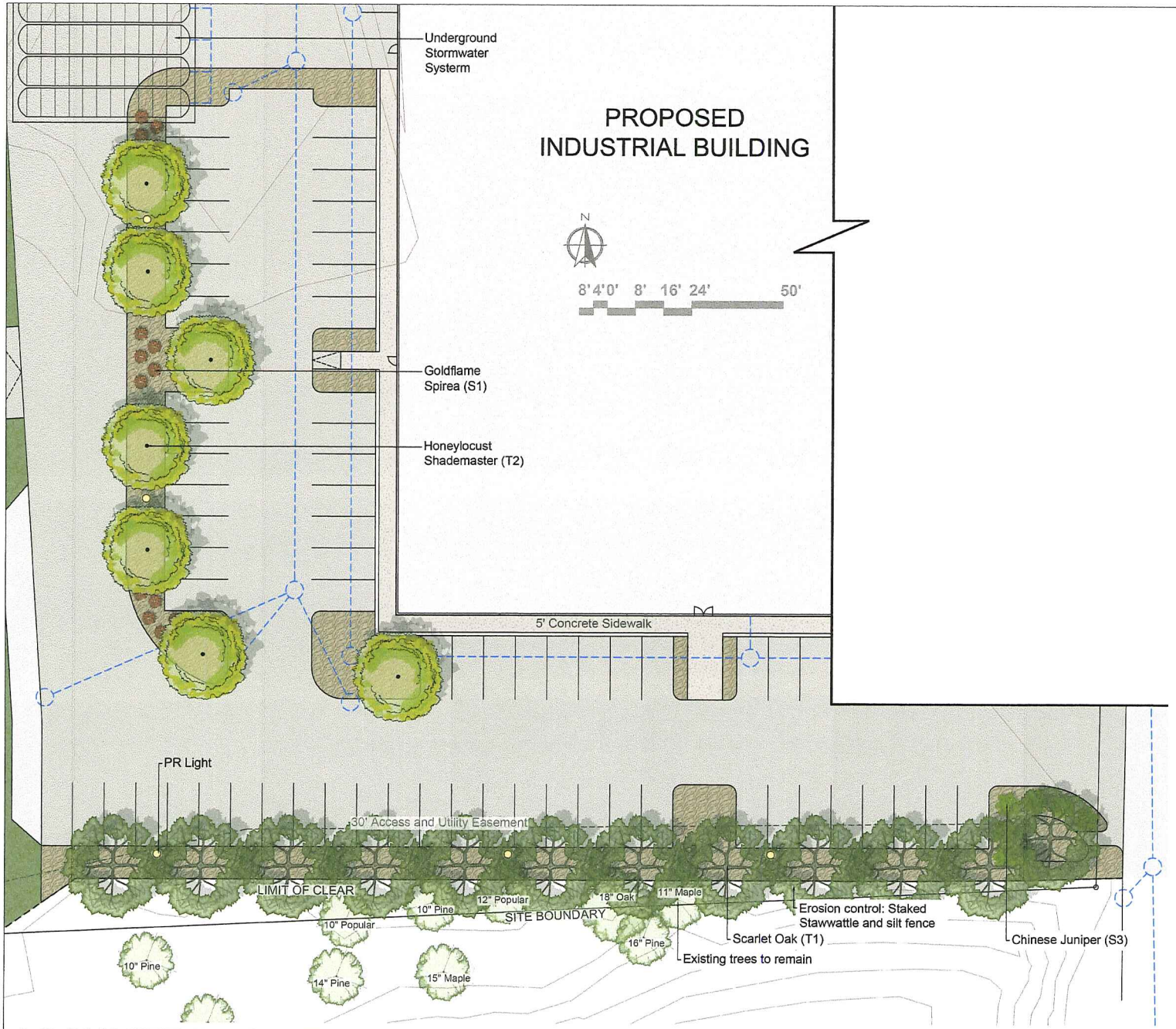
- Storm water management as per engineers design & specification.
- All structural and retaining elements to be designed & specified by engineer.

ACCUMET ENGINEERING - RAIN GARDEN LANDSCAPE

PRINCETON SCAPES INC.

123 Oak Hill Rd, Westford, MA 01886 | 04-29-2021 | Scale 1/20"=1'-0" 18x24in | Author: ZD | Checked: NVR | Rev: 0 | Issued for submission | Sheet 2 of 4

NO	DATE	REVISION



LEGEND				
Icon	**Code**	**Name**	**Qty**	**Size**
Shrub planting (in mulch)				
	S1	*Spiraea japonica 'Goldflame'* Goldflame Spirea	15 shrubs	3 Gal.
	S2	*Ilex glabra 'Shamrock'* Inkberry	58 shrubs	3 Gal.
	S3	*Juniperus × pfitzeriana 'Sea Green'* Chinese Juniper	6 shrubs	3 Gal.
Trees				
		Existing trees to remain		
	T1	*Quercus coccinea* Scarlet Oak	16 trees	25 Gal.
	T2	*Gleditsia triacanthos var. inermis 'Shademaster'* Honeylocust Shademaster	7 trees	2"-2.5" Cal.
Rain Garden Planting				
	R1	*Aronia arbutifolia* Red Chokeberry	20 shrubs	3 Gal.
	R2	*Juniperus communis* Common Juniper	20 shrubs	3 Gal.
	R3	*Myrica pensylvanica* Bayberry	20 shrubs	3 Gal.
	R4	*Ilex verticillata* Winterberry	20 shrubs	3 Gal.
	R5	*Hamamelis virginiana* Witch Hazel	20 shrubs	3 Gal.
Hard landscape				
		Mulch	19954 ft²	

PRINT NOTICE
Ensure correct page size is selected. (Refer to file name for page size)
To ensure correct scale, print "ACTUAL SIZE" do **NOT** select "FIT TO PAGE".

GENERAL NOTES

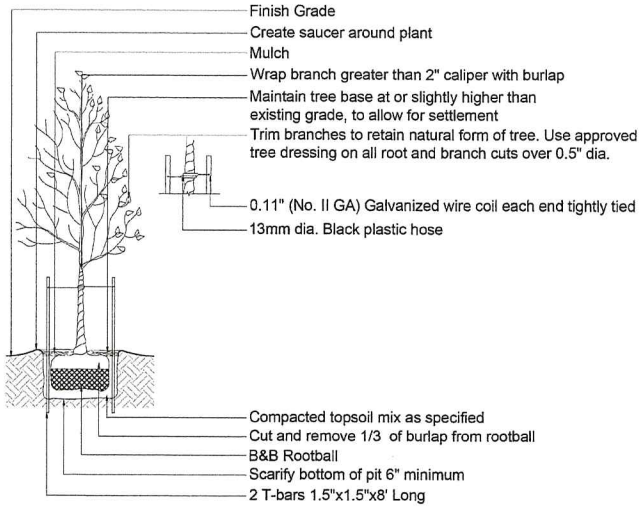
- All dimensions to be thoroughly checked on site and any or all discrepancies to be reported to the author of this drawing immediately before any work is put to hand.
- All work to be executed by competent persons qualified for the specific trade.
- Storm water management as per engineers design & specification.
- All structural and retaining elements to be designed & specified by engineer.

ACCUMET ENGINEERING - PARKING LOT LANDSCAPE

123 Oak Hill Rd, Westford, MA 01886 | 04-29-2021 | Scale 1/20"=1'-0" 18x24in | Author: ZD | Checked: NVR | Rev: 0 | Issued for submission | Sheet 3 of 4

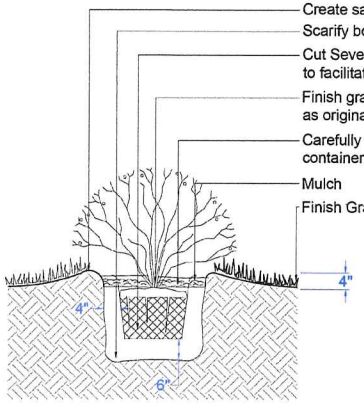
PRINCETON SCAPES INC.

NO	DATE	REVISION



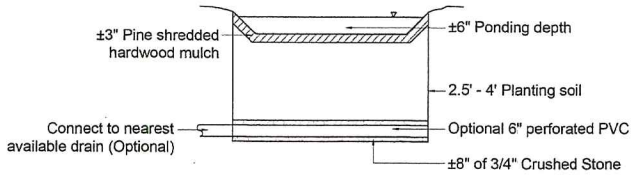
1 Detail: Tree planting detail

Scale: 3/8=1'-0"



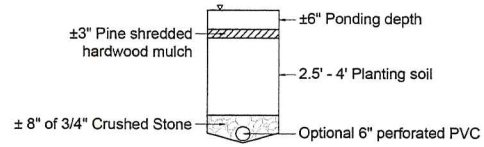
2 Detail: Shrub planting detail

Scale: 3/8=1'-0"



3 Detail: Rain Garden Typical Profile View

NTS



4 Detail: Rain Garden Typical Section

NTS

Planting soil notes:

1. The soil mix shall be a mixture of sand compost and soil as follows: 40% sand, 20-30% topsoil and 30-0% compost.
2. The soil mix must be uniform, free of stones, stumps, roots or similar object larger than 2". clay content shall not exceed 5%.
3. Soil PH should be between 5.5-6.5.
4. Use soils with 1.5% tp 3% organic content and maximum 500-PPM soluble salts.
5. The sand component shall be gravelly sand that meets ASTM D422.
6. The topsoil component shall be a sandy loam, loamy sand or loam texture.
7. The compost component must be processed from yard waste in accordance with mass dep guidelines. The compost shall not contain biosolids.

Rain Garden Maintenance Schedule

Activity	Time of year	Frequency
Inspect and remove trash	Year round	Monthly
Mulch	Spring	Annually
Remove dead vegetation	Fall or spring	Annually
Replace dead vegetation	Spring	Annually
Prune	Spring or fall	Annually
Replace entire media & all vegetation	Late spring /early summer	As Needed

PLANTING PALETTE

PRINT NOTICE
Ensure correct page size is selected. (Refer to file name for page size)
To ensure correct scale, print "ACTUAL SIZE" do NOT select "FIT TO PAGE".

GENERAL NOTES

- All dimensions to be thoroughly checked on site and any or all discrepancies to be reported to the author of this drawing immediately before any work is put to hand.
- All work to be executed by competent persons qualified for the specific trade.
- Storm water management as per engineers design & specification.
- All structural and retaining elements to be designed & specified by engineer.

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ACCUMET ENGINEERING - DETAILS

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