



For Use by Permitting Coordinator:

Date Received: _____

Determination of Completeness: _____

Additional Information Received: _____

Application Withdrawn: _____

**TOWN OF STURBRIDGE
APPLICATION FOR PERMANENT SIGN**

REVISED 2/07/11

Site: 51 Technology Park Road, Sturbridge, MA 01566

Location (Street Number and Street Name)

Section 1. Applicant/Owner/Agent Information:

A. Applicant:

Business Name: Dileo Gas, Inc.

Applicant Name: Paul Dileo

Address: 630 Sunderland Road, Worcester MA 01604

Phone: 508-797-5878

Fax: _____

Email: Paul@dileogas.com

B. Property Owner:

Name: 51 Technology LLC

Address: 55 Wesson Street

North Grafton, MA 01536

Phone: 508-797-5878

Fax: _____

Email: Paul@dileogas.com

C. Agent Information:

Business Name: Grenier Construction Company, Inc.

Agent: Matt Grenier

Address: 787 Hartford Turnpike, Shrewsbury, MA 01545

Phone: 508-846-4280 Fax: _____

Email: GrenierM1@gmail.com

Section 2. Basic Site and Project Information:

A. Assessor's Parcel Identification Numbers: Assessor's Map 637-02215-051

Deed Book 60180 - Page 104

B. Proposed Sign Information:

Please provide a general description of the sign and location of the sign (attach additional sheets if necessary):

Dileo Gas, Inc. sign with tenant spaces. Proposed sign located at front entrance on Technology
Park Road. See enclosed plan with dimensional details.

C. Note any current zoning or general bylaw non conformance associated with the property or the application:

D. Note any special permit or variances granted or denied or in process at this time:

Section 3. Required Application Submittals: The applicant shall submit one original set and six copies of the application and final drawings and one set of materials at the time the application is submitted to the Town Planner. The following information must be submitted with the application for a sign permit for new signs and changes to existing signs: (At its discretion, the DRC may substitute some requirements with a site visit).

- ✓ A Site Plan showing property lines, setback areas, access points, traffic flow and a scaled site plan showing property lines, appropriate front, side, and rear yard setbacks as identified in the Zoning bylaw, pedestrian and vehicular access and existing buildings and significant site objects and features, and the existing and proposed sign locations shall also be shown.
- ✓ A drawing of the proposed structure or sign, including color and type of surface materials, showing front elevations, rear elevations, and side elevations, where there are not adjoining buildings. The drawing should accurately convey the design of the sign including lettering styles, size, and composition. The location, font, and contrasting color of the street number shall be easily read by emergency personnel and patrons/visitors.
- ✓ A description of the materials, colors, and lighting, (if the sign is to be lit), to be used in the modification of an existing sign or construction of a new sign. The presentation of photographs showing the existing signs to be modified would be helpful. Samples of the colors of the proposed sign and materials to be used for the construction of the signs and supports shall also be submitted.
- ✓ Scale drawings of the proposed sign, (whether the modifications of an existing sign, or the provision of a new sign) shall be submitted, including a plan view and an architectural elevation of each side. One architectural elevation will suffice if all sides are identical. All drawings shall include dimensions indicating the length, width, and height of the proposed signage as appropriate to the information conveyed by plan or elevation. Applicants shall review the Town of Sturbridge Zoning Bylaw for detailed information on zoning limitations and requirements relative to their signage situation prior to designing any new proposed signs. The Bylaw may be accessed on line at the following link:
http://www.town.sturbridge.ma.us/Public_Documents/SturbridgeMA_PlanningDocuments/Zoning%20Bylaw%202010?FCItemID=S02B54AC5

- Planting plan, with descriptions of materials. Planting plan identifying the proposed plant material and quantity of each by location on plan; an overall plant list, which at a minimum identifies total quantities of each plant used; botanical and common name for each plant, and size of the plant material at time of installation.
- Photographs of existing signage on the site and the building will aid the DRC in making its decision and are required as a submittal.

Section 4. Required Signatures:

A. Applicant:




Applicant or Authorized Signatory

12/30/19

Date

B. Property Owner: I hereby grant permission for the applicant to apply for and erect the signs as proposed on the above referenced property.



Owner or Authorized Signatory

12/30/19

Date

C. Agent: If someone is representing the applicant or the owner, the applicant must designate such representative below:

Name of Representative:
Matt Grenier - Grenier Construction Co., Inc.

Address of Representative:
787 Hartford Turnpike, Shrewsbury, MA 01545

Phone: 508-846-4280 Fax: 508-842-0800

Email: GrenierM1@gmail.com

Relationship of representative to owner or applicant: General Contractor

Finance Director/Tax Collector: I certify that the taxes are current for the above property (applicant must obtain this signature prior to submission of this application)

Authorized Signatory

Date

Design Review Committee Decision

A. APPLICANT

Name _____

Address _____

Telephone No. _____

B. SIGN DIMENSIONS AND LAYOUT

Overall Dimensions _____ Area _____

Colors _____

Lettering _____

Materials _____

Other _____

C. CONFORMANCE WITH DESIGN STANDARDS

YES NO

Signs with associated architectural details, materials, colors and textures are compatible with the predominant architectural character of the neighborhood, while preserving and enhancing the surrounding area.

Advertising features, including size, location, design, color, texture, lighting and materials, shall not detract from the use and enjoyment of the proposed building and structures and the surrounding properties.

Preservation of historic, traditional or significant uses, structures or architectural elements have been preserved to the greatest extent possible.

D. Summary of Recommendations:

The Design Review Committee has reviewed the above referenced sign application at its meeting held on _____ and the sign(s) as proposed have been:

Approved as proposed

Approved with the following comments or modifications: _____

Denied due to the following: _____

Additional Comments of the Design Review Committee: _____

Authorized Signatory

Date

Zoning Enforcement Officer/Building Inspector Decision:

Approved as proposed

Approved with the following comments or modifications: _____

Denied due to the following: _____

Authorized Signatory

Date

Attach Additional Sheets as Necessary



For Use by Permitting Coordinator:

Date Received: _____

Determination of Completeness: _____

Additional Information Received: _____

Application Withdrawn: _____

TOWN OF STURBRIDGE

ARCHITECTURAL REVIEW APPLICATION DESIGN REVIEW COMMITTEE

REVISED 2/07/11

site: 51 Technology Park Road, Sturbridge, MA 01566

Location (Street Number and Street Name)

Section 1. Applicant/Owner/Agent Information:

A. Applicant:

Business Name:

Dileo Gas, Inc.

Applicant Name:

Paul Dileo

Address: 630 Sunderland Road, Worcester MA 01604

Phone: 508-797-5878

Fax: _____

Email: Paul@dileogas.com

B. Property Owner:

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Address: 630 Sunderland Road, Worcester MA 01604

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Email: GrenierM1@gmail.com

Section 2. Basic Site and Project Information:

A. Assessor's Parcel Identification Numbers: Assessor's Map 637-02215-051

Deed Book 60180 - Page 104

B. Please describe the proposed project:

Construction of Qty. (2) 30,000 Gal. LP underground storage tanks.

Construction of new 10,000 Sq. Ft. office/warehouse building for Dileo Gas & tenant space for lease.

C. Note any special permits or variances granted, denied to this location.

Note any current zoning or general bylaw non-conformance associated with the property or the application.

D. CHECKLIST OF PLANS AND MATERIALS SUBMITTED WITH APPLICATION

The applicant shall submit one original set and six copies of the application and final drawings and one set of materials at the time the application is submitted to the Town Planner. A *copy* of any site plan that is prepared under the Zoning Bylaws Site Plan Review process shall also be submitted. The DRC may waive site plan submittal requirements for specific projects and may substitute a site visit for some or all of the required materials. In the absence of such waiver, the following materials shall be submitted at the time of the application to the DRC:

- ✓ A drawing showing the location, type, size or dimensions of existing structures on the project site, abutting properties and significant site features such as existing trees @ 4 inch caliper and larger, topography, retaining walls, walks, patios, drives, roads, parking, wetlands, and water bodies.
- ✓ Photographs showing the proposed building site and surrounding properties. Photographs should include the existing site features identified in the preceding paragraph as well as the same existing features where they exist in close proximity to the project site but on parcels immediately adjacent to the project site.
- ✓ Design plans for alterations and/or additions shall depict existing structures to be altered and their relationship to adjacent property including dimensions showing the shortest distance between the proposed structure/s and the nearest buildings on adjacent properties.
- ✓ Applicants should note that the objective is to present a complete picture to the DRC. Applicants are required to include Manufacturers' material cut-sheets.

Architectural Drawings shall include:

- ✓ Floor plans of all proposed building levels;
- ✓ Architectural elevations of all exteriors including the dimensioned height of the proposed building above grade at the foundation, window and door locations
- ✓ Descriptions of exterior materials, and colors including roofing, walls, doors, windows, any special features, etc.
- ✓ Facade drawings (elevations) should include all existing and proposed entrances and windows, including those slated to be removed. Elevation drawings should make explicit how the proposed work fits in with the design of the abutting properties (are windows, doors and other fenestrations, etc along the same plane, etc. See pages 10-16 of the Design Review Committee Handbook and Design Guidelines for more information for more information).
- ✓ Information on the style of doors, windows, special features or building elements (porch, balcony, shutters, etc).

Site Plans shall include:

- ✓ Existing buildings and plantings
- ✓ Proposed new structures

- Handicapped access features
- Sidewalks, drives and parking lots shown where they exist on site and identified by type of existing paving material;
- All site objects and fixtures (Including signs and lighting)

Landscape Plans shall include:

- All existing buildings and site features to remain;
- Existing and proposed grading
- Paving materials. Existing pavement to remain along with proposed pavement both indicated by layout and paving materials;
- Planting plan, with descriptions of materials. Planting plan identifying the proposed plant material and quantity of each by location on plan; an overall plant list, which at a minimum identifies total quantities of each plant used; botanical and common name for each plant, and size of the plant material at time of installation.

E. CONFORMANCE WITH DESIGN STANDARDS

Explain how each of the design standards outlined below has been addressed in the proposal. Applicants shall review the ‘Design Review Committee Handbook and Design Guidelines’ when preparing this application. Where specific pages within the Guidelines could be referenced to provide a starting point to applicants completing this form, those have been included. The page numbers are intended as an initial point of reference for applicants and are not meant to denote the only pages that refer to a specific item.

1. Please explain if the height of the structure will be affected by the proposed alteration. If so, please explain how the height of this structure relates to the style and character of your structure and the buildings surrounding your property (For guidance please refer to Page 9-18 of the Design Review Committee Handbook and Design Guidelines)..

Single story building (See enclosed plans identifying dimensions.

**Proposed building design consistent with construction type and appearance
of neighboring buildings in the Industrial Park.**

2. Please explain any changes that are proposed for the windows and doors of the structure. If changes are proposed, please explain how the windows and doors selected for your project will be compatible with the architectural style and character of the surrounding area. (For guidance please refer to Page 9-18 of the Design Review Committee Handbook and Design Guidelines)

New Building Construction: Windows & Doors are of standard design

that are very similar to neighboring buildings in the Industrial Park.

-
-
3. The **relationship** of building masses and shapes to open space between it and adjoining structures shall be compatible; for example the length and width of a proposed structure should replicate the approximate length and width of neighboring buildings (See page 13-14 of the Design Review Committee Handbook and Design Guidelines for more information) please explain how your proposal accomplishes this general guideline.

See attached aite plans. The proposed building is very similar to neighboring buildings.

4. If changes to the roof of your structure are proposed please explain. If changes are proposed, describe how the **roof** design and pitch of the structure will be compatible with the architectural style and character of the surrounding buildings. For example, the roofing material and design should be appropriate for the architectural style of your structure and should be compatible with the buildings surrounding your structure. (See page 13 of the Design Review Committee Handbook and Design Guidelines for more information).

The roof pitch is to be 1:12 The finished roof surface will essentially not be visible from the ground. For Example, if the rood pitch was greater the finished roof would be visable from the ground, i.e. 6:12

5. If changes to the overall scale of the structure are proposed, please explain. If so, describe how the **scale** of the structure shall be compatible with the architectural style and character of the surrounding buildings. (See page 14 of the Design Review Committee Handbook and Design Guidelines for more information).

New construction....proposed building is of very similar construction type to the neighboring buildings in the Industrial Park.

6. The **facade** line, shape and profile shall blend with other structures in the surrounding area with respect to its dominant vertical and horizontal aspects. If façade alterations are proposed, please explain how the alignment will occur at similar intervals as those of neighboring structures. (See page 14-16 of the Design Review Committee Handbook and Design Guidelines for more information, photographs and sketches that explain this concept).

New construction....proposed building is of very similar construction type to the neighboring buildings in the Industrial Park.

7. **Signage for projects are covered within the DRC Sign application and process, however, please explain any existing and proposed signage and how the signage relates to the overall architecture of the project.**

- ✓ **Signs**, with associated architectural details, materials, colors and textures shall be compatible with the predominant architectural character of the neighborhood, while preserving and enhancing the surrounding area.
- **Advertising features**, including size, location, design, color, texture, lighting and materials, shall not detract from the use and enjoyment of the proposed building and structures and the surrounding properties.

Signage is proposed at the front entrance and is very similar to other signage in the Industrial Park.

8. **Preservation** of historic, traditional or significant uses, structures or architectural elements shall be preserved to the greatest extent possible during any project. Please explain the methods employed to preserve such features during the design of this project.

N/A

10. **Landscaping** shall enhance the character and appearance of the surrounding area and parking areas shall be located to the side or rear of buildings when possible. Please describe, in detail, the landscaping that is proposed for your project. (The Design Review Committee Handbook and Design Guidelines provide good information on landscaping for specific applications. The Zoning Bylaw, Chapter 25 also contains detailed information on landscaping and buffering requirements. Applicants shall review both documents prior to completing this application.)

See enclosed: "Landscape & Lighting Plan" Prepared By: J.M. Grenier Associates


11. **Lighting** shall be used to enhance appearance of the property, provide for safety and security of the property, and of those visiting the property. Lighting shall be shielded so that it does not cause surrounding properties and roadways to be illuminated and in all cases Dark Skies Compliant lighting is encouraged. Please describe the lighting that is proposed as part of your project (Please see Page 20-22 in the Design Review Committee Handbook and Design Guidelines for more information on lighting selection).

See enclosed: "Landscape & Lighting Plan" Prepared By: J.M. Grenier Associates

* Please note: Photographs of existing site and the building can aid the DRC in making its decision.

Section F. Required Signatures:

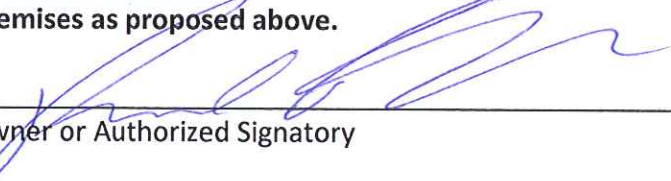
A. Applicant:



Applicant or Authorized Signatory

12-26-2019
Date

B. Property Owner: I hereby grant permission for the applicant to apply for and make the changes to the premises as proposed above.



Owner or Authorized Signatory

12-26-2019
Date

C. Agent: If someone is representing the applicant or the owner, the applicant must designate such representative below:

Name of Representative: Matt Grenier - Grenier Construction Company, Inc.

Address of Representative: 787 Hartford Turnpike, Shrewsbury, MA 01545

Phone: 508-846-4280 Fax: 508-842-0800

Email: GrenierM1@gmail.com

Relationship of representative to owner or applicant: General Contractor

Finance Director/Tax Collector: I certify that the taxes are current for the above property (applicant must obtain this signature prior to submission of this application)

Authorized Signatory

Date

Design Review Committee Decision:

Summary of Recommendations:

The Design Review Committee has reviewed the above referenced architectural application at its meeting held on _____ .

The Design Review Committee found that the following with respect to conformance with the Design Guidelines:

C. CONFORMANCE WITH DESIGN GUIDELINES

YES NO

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Height |
| <input type="checkbox"/> | <input type="checkbox"/> | Relation of building masses and spaces |
| <input type="checkbox"/> | <input type="checkbox"/> | Proportion of windows and doors |
| <input type="checkbox"/> | <input type="checkbox"/> | Roof shape |
| <input type="checkbox"/> | <input type="checkbox"/> | Scale |
| <input type="checkbox"/> | <input type="checkbox"/> | Facade line, shape and profile |
| <input type="checkbox"/> | <input type="checkbox"/> | Architectural detail |
| <input type="checkbox"/> | <input type="checkbox"/> | Advertising features |
| <input type="checkbox"/> | <input type="checkbox"/> | Heritage |
| <input type="checkbox"/> | <input type="checkbox"/> | Landscape |
| <input type="checkbox"/> | <input type="checkbox"/> | Historic Features |
| <input type="checkbox"/> | <input type="checkbox"/> | Lighting |

D. SUMMARY OF RECOMMENDATIONS

Based upon the above findings the application is:

- Approved as proposed
- Approved with the following comments or modifications: _____
- _____

Denied due to the following: _____

Additional Comments of the Design Review Committee: _____

Authorized Signatory

Date

Zoning Enforcement Officer/Building Inspector Decision:

Approved as proposed

Approved with the following comments or modifications: _____

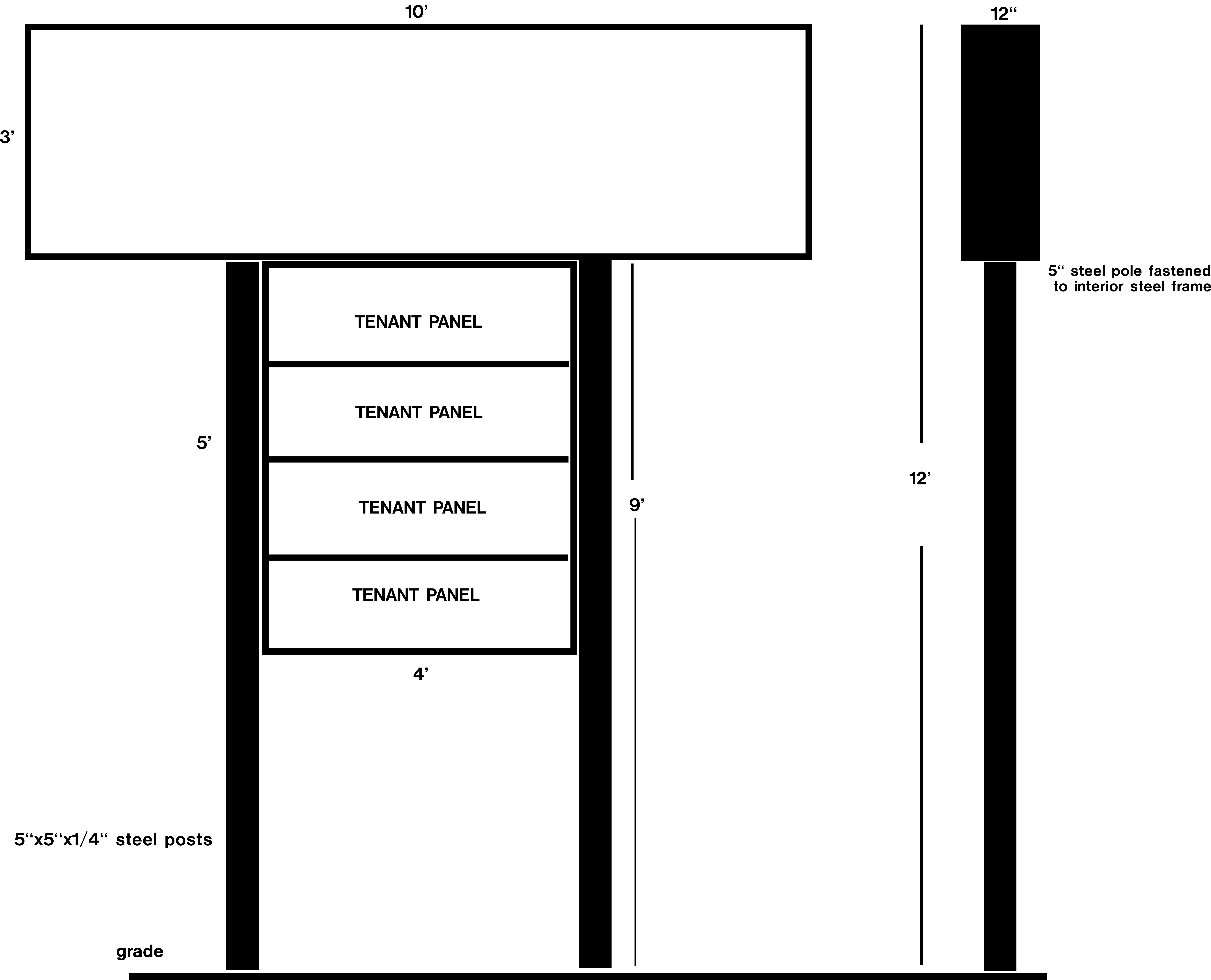
Denied due to the following: _____

Authorized Signatory

Date

Attach Additional Sheets as Necessary

(1) 3'x10' - (1) 4'x5' Two sided exterior directory sign. Aluminum cabinets with steel angle iron welded framework. Diabond faces (white) with vinyl graphics copy. Signs mounted to 5"x5"x1/4" steel posts (black), set into concrete footing 4' below grade.



AVP

Wall System



Description

The Architectural "AVP" panel for side walls produces a decorative smooth shadow line, creating a distinctive architectural effect with semi-concealed fasteners. Ribs are 1 1/8" deep and major corrugations are spaced 12" on center. The net coverage of the panel is 3'-0".

Gauge

26 gauge (standard)
24 gauge

Length

Maximum recommended 40'
Longer lengths available on special order

Dimensions

36" wide by 1 1/8" deep

Finish

Galvalume Plus®
Signature® 200 Colors
Signature® 300 Colors

Fasteners

Standard coated, CAD plated or zinc-aluminum
cast head fastener

Usage

Wall panel, liner panel and façade panel face

Limitations

Installation may be difficult with very
thick insulation



Attributes

1. Semi-concealed fastener panel
2. Continuous eave to sill until exceeds 40'-0" length
3. Striations
4. Optional embossed texture
5. Signature® 200 and Signature® 300 Color option
6. UL® "Class A" fire rating

Advantages

1. Attractive architectural application
2. Eliminating end laps improves appearance and enhances ease of installation
3. Reduces the potential for oil canning
4. Reduces glare and the potential for oil canning
5. Premium paint finishes with 25-year warranty
6. AVP carries a UL® "Class A" fire rating

AVP - Section Properties

PANEL GAUGE	Fy (KSI)	WEIGHT (PSF)	NEGATIVE BENDING			POSITIVE BENDING		
			Ixe (IN.4/FT.)	Sxe (IN.3/FT.)	Maxo (KIP-IN.)	Ixe (IN.4/FT.)	Sxe (IN.3/FT.)	Maxo (KIP-IN.)
26	60*	0.94	0.0262	0.0424	1.5240	0.0247	0.0437	1.5690
24	50	1.14	0.0326	0.0528	1.5810	0.0336	0.0553	1.6560

* Fy is 80-ksi reduced to 60-ksi in accordance with the 2001 edition of the *North American Specification of Cold-Formed Steel Structural Members* - A2.3.2.

Allowable Uniform Loads In Pounds Per Square Foot

26 Gauge (Fy = 60 Ksi)

SPAN TYPE	LOAD TYPE	SUPPORT SPACING						
		3.0	4.0	5.0	6.0	7.0	8.0	9.0
SINGLE	WIND SUCTION	112.91	63.51	40.65	28.23	20.74	15.88	12.55
	WIND PRESSURE	116.22	65.37	41.84	29.05	21.35	16.34	12.71
2-SPAN	WIND SUCTION	110.26	63.42	41.03	28.66	21.13	16.22	12.83
	WIND PRESSURE	77.50	58.12	39.90	27.86	20.54	15.76	12.47
3-SPAN	WIND SUCTION	134.89	78.27	50.86	35.61	26.30	20.20	16.00
	WIND PRESSURE	88.06	66.05	49.48	34.64	25.57	19.64	15.55
4-SPAN	WIND SUCTION	126.85	73.38	47.61	33.31	24.58	18.88	14.95
	WIND PRESSURE	84.76	63.57	46.31	32.39	23.90	18.35	14.53

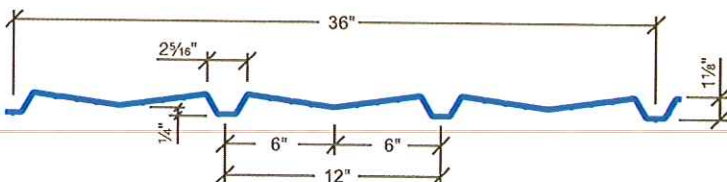
24 Gauge (Fy = 50 Ksi)

SPAN TYPE	LOAD TYPE	SUPPORT SPACING						
		3.0	4.0	5.0	6.0	7.0	8.0	9.0
SINGLE	WIND SUCTION	117.14	65.89	42.17	29.28	21.51	16.47	13.02
	WIND PRESSURE	122.64	68.98	44.15	30.66	22.53	17.25	13.63
2-SPAN	WIND SUCTION	117.44	67.29	43.45	30.32	22.34	17.14	13.56
	WIND PRESSURE	96.36	64.41	41.56	28.99	21.35	16.38	12.96
3-SPAN	WIND SUCTION	144.19	83.23	53.94	37.71	27.83	21.36	16.91
	WIND PRESSURE	109.50	79.74	51.62	36.07	26.60	20.42	16.16
4-SPAN	WIND SUCTION	135.42	77.97	50.46	35.26	26.00	19.96	15.80
	WIND PRESSURE	105.39	74.67	48.28	33.72	24.86	19.08	15.10

The engineering data contained herein is for the expressed use of customers and design professionals. Along with this data, it is recommended that the design professional have a copy of the most current version of the *North American Specification of Cold-Formed Steel Structural Members* published by the American Iron and Steel Institute to facilitate design. This specification contains the design criteria for cold-formed steel components. Along with the specification, the designer should reference the most current building code applicable to the project jobsite in order to determine environmental loads. If further information or guidance regarding cold-formed design practices is desired, please contact the manufacturer.

EFFECTIVE JUNE 3, 2013
SUBJECT TO CHANGE WITHOUT NOTICE

Galvalume Plus® is a registered trademark of BIEC International, Inc.
Signature® is a registered trademark of the NCI Group, Inc.



Properties Notes:

1. All calculations for the properties of AVP panels are calculated in accordance with the 2012 edition of the *North American Specification of Cold-Formed Steel Structural Members*.
2. **Ixe** is for deflection determination.
3. **Sxe** is for bending.
4. **Maxo** is allowable bending moment.
5. All values are for one foot of panel width.

Allowable Uniform Loads Notes:

1. Strength calculations based on the 2007 AISI Standard *North American Specification of Cold-Formed Steel Structural Members*, with 2009 and 2010 supplements.
2. Allowable loads are applicable for uniform loading and spans without overhangs.
3. Wind Pressure load capacities are for those loads that push the panel against its supports. The applicable limit states are flexure, shear, combined shear and flexure, web crippling at end and interior supports, and a deflection limit of L/60 under 10-year wind loading.
4. Wind Suction load capacities are for those loads that pull the panel away from its supports. The applicable limit states are flexure, shear, combined shear and flexure, and a deflection limit of L/60 under 10-year wind loading.
5. Panel pullover and screw pullout capacity must be checked separately using the screws employed for each particular application when utilizing this load chart.

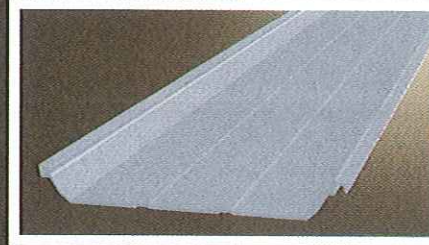

AN NCI COMPANY

8600 South I-35, Oklahoma City, OK 73149
star.marketing@starbuildings.net

www.StarBuildings.com

Double-Lok[®]

Standing Seam Roof System



Description

Double-Lok[®] is a metal standing seam roofing product attached to sub-framing using a variety of concealed, interlocking clips that provide for minimum panel penetrations. Double-Lok[®] panels can be used on new construction as well as retrofit on existing structures. This panel design provides a high degree of weathertightness and has been tested by independent laboratories in accordance with ASTM E283 and E331 (for air infiltration, water penetration, and wind uplift).

Gauge

24 gauge (standard)
22 gauge

Length

50' maximum is standard but longer lengths available by special request

Dimensions

24" wide by 3" high

Finish

Galvalume Plus[®]
Signature[®] 200 Colors
Signature[®] 300 Colors

Usage

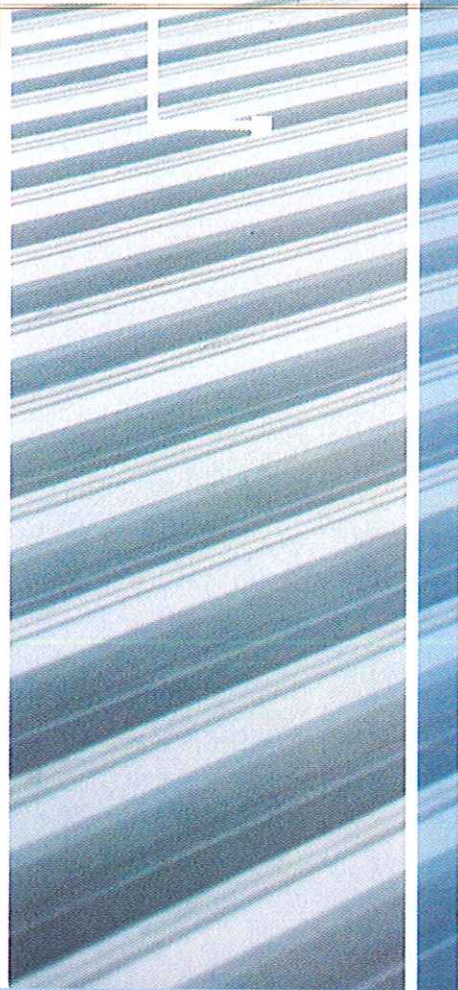
New and retrofit applications

Limitations

Recommended for roof slopes of ¼:12 or greater. Fixed clip recommended only for double slope buildings 200' wide or less and single slope buildings 100' wide or less. (May vary upon extreme weather conditions.) Oil-canning is not a reason for rejection.

Fasteners

Concealed fastening system. The clips are available as floating or fixed. Two different clip heights are available to allow for thermal blocks.



Attributes

1. Panel penetration is eliminated over the entire building envelope other than at the end laps and panel ends which are connected by a compression joint
2. Factory notched at both ends with pre-punched holes
3. End laps feature a 16 gauge backup plate with pre-punched holes
4. Fewer exposed fasteners (by 80%) than traditional side lap panels
5. Air infiltration and water penetration tests under IAS E283 and E331 methods performed on side lap panels
6. Signature[®] 300 paint system
7. Tall or short clips
8. Panel side laps feature a factory applied sealant
9. UL[®] 90 and FM rated
10. Optional product and weathertightness warranties

Advantages

1. Assures a weathertight building envelope
2. Maximizes field installation efficiency with installation allowed from either end of building or on both sides simultaneously
3. Allows solid connection at end laps plus proper fastener spacing; Pre-punched holes facilitate installation and assure proper panel placement
4. Maximizes weathertightness
5. Assures specifiers of minimal air infiltration and water penetration
6. 25-year finish warranty
7. Maximizes insulation systems options including 1" thermal spacers at the purlins
8. Facilitates weathertight construction and ease of installation
9. Lowers insurance costs
10. Adds to customer confidence

Double-Lok®

Standing Seam Roof System

Double-Lok® - Section Properties

PANEL GAUGE	Fy (KSI)	WEIGHT (PSF)	NEGATIVE BENDING			POSITIVE BENDING		
			Ixe (IN.4/FT.)	Sxe (IN.3/FT.)	Maxo (KIP-IN.)	Ixe (IN.4/FT.)	Sxe (IN.3/FT.)	Maxo (KIP-IN.)
24	50	1.23	0.1507	0.0989	2.9619	0.3224	0.1307	3.9132
22	50	1.56	0.2059	0.1394	4.1747	0.4205	0.1708	5.112

Allowable Uniform Loads In Pounds Per Square Foot

24 Gauge (Fy = 50 Ksi)

SPAN TYPE	LOAD TYPE	SPAN IN FEET						
		2.5	3.0	3.5	4.0	4.5	5.0	5.5
SINGLE	LIVE	204.0	170.0	145.7	127.5	113.3	102.0	86.2
2-SPAN	LIVE	204.0	170.0	145.7	123.4	97.5	79.0	65.3
3-SPAN	LIVE	204.0	170.0	145.7	127.5	113.3	98.7	81.6
4-SPAN	LIVE	204.0	170.0	145.7	127.5	113.3	92.2	76.2

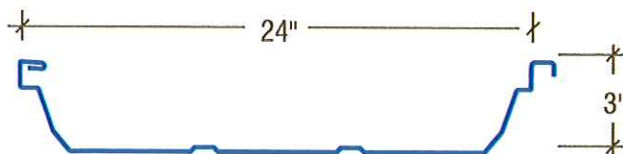
22 Gauge (Fy = 50 Ksi)

SPAN TYPE	LOAD TYPE	SPAN IN FEET						
		2.5	3.0	3.5	4.0	4.5	5.0	5.5
SINGLE	LIVE	296.9	247.5	212.1	185.6	165.0	136.3	112.7
2-SPAN	LIVE	296.9	247.5	212.1	173.9	137.4	111.3	92.0
3-SPAN	LIVE	296.9	247.5	212.1	185.6	165.0	139.1	115.0
4-SPAN	LIVE	296.9	247.5	212.1	185.6	160.4	129.9	107.4

The engineering data contained herein is for the expressed use of customers and design professionals. Along with this data, it is recommended that the design professional have a copy of the most current version of the *North American Specification for the Design of Cold-Formed Steel Structural Members* published by the American Iron and Steel Institute to facilitate design. This specification contains the design criteria for cold-formed steel components. Along with the specification, the designer should reference the most current building code applicable to the project jobsite in order to determine environmental loads. If further information or guidance regarding cold-formed design practices is desired, please contact the manufacturer.

EFFECTIVE NOVEMBER 3, 2004
SUBJECT TO CHANGE WITHOUT NOTICE

Double-Lok® is a registered trademark of the NCI Group.
Galvalume Plus® is a registered trademark of BIEC International, Inc.
Signature® is a registered trademark of the NCI Group.



Properties Notes:

1. All calculations for the properties of Double-Lok® panels are calculated in accordance with the 2001 edition of the *North American Specification For Design Of Cold-Formed Steel Structural Members*.
2. Ixe is for deflection determination.
3. Sxe is for bending.
4. Maxo is allowable bending moment.
5. All values are for one foot of panel width.

Allowable Uniform Loads Notes:

1. Allowable loads are based on uniform span lengths and Fy = 50 ksi.
2. LIVE LOAD is limited by bending, shear, combined shear and bending.
3. Allowable loads consider a maximum deflection ratio of L/180.
4. The weight of the panel has not been deducted from the allowable loads.
5. **THE ALLOWABLE UNIFORM LOADS ARE NOT FOR USE WHEN DESIGNING PANELS TO RESIST WIND UPLIFT.**
6. Please contact manufacturer or manufacturer's website for most current allowable wind uplift loads.
7. The use of any field seaming equipment or accessories including but not limited to clips, fasteners, and support plates (eave, backup, rake, etc.) other than those provided by the manufacturer may damage the panels, void all warranties and will void all data.



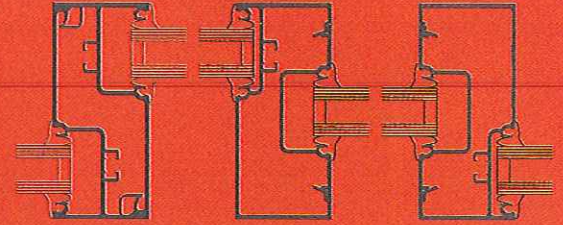
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PRODUCT GREEN GUIDE

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RATING SYSTEMS

LEED v4 BD+C: New Construction

- EA: Optimize Energy Performance
- EA: Renewable Energy Production
- MR: Environmental Product Declarations
- MR: Sourcing of Raw Materials
- MR: Material Ingredients
- MR: Source Reduction - Lead, Cadmium, and Copper
- MR: Construction and Demolition Waste Management
- EQ: Thermal Comfort
- EQ: Daylight
- EQ: Quality Views
- EQ: Acoustic Performance

Living Building Challenge 3.1

- | | |
|--|--|
| <input type="radio"/> IMP 06: Net Positive Energy | <input type="radio"/> IMP 12: Responsible Industry |
| <input type="radio"/> IMP 07: Civilized Environment | <input checked="" type="radio"/> IMP 13: Living Economy Sourcing |
| <input checked="" type="radio"/> IMP 08: Healthy Interior | <input checked="" type="radio"/> IMP 14: Net Positive Waste |
| <input checked="" type="radio"/> IMP 09: Biophilic Environment | <input type="radio"/> IMP 16: Universal Access |
| <input checked="" type="radio"/> IMP 10: Red List | |

WELL Building Standard

- | | |
|--|--|
| <input checked="" type="radio"/> 01: Air Quality Standards | <input checked="" type="radio"/> 28: Cleanable Environment |
| <input type="radio"/> 03: Ventilation Effectiveness | <input checked="" type="radio"/> 54: Circadian Lighting |
| <input checked="" type="radio"/> 04: VOC Reduction | <input type="radio"/> 56: Solar Glare Control |
| <input type="radio"/> 08: Healthy Entrance | <input checked="" type="radio"/> 61: Right to Light |
| <input checked="" type="radio"/> 11: Fundamental Material Safety | <input checked="" type="radio"/> 62: Daylight Modeling |
| <input checked="" type="radio"/> 12: Moisture Mgmt | <input checked="" type="radio"/> 63: Daylight Fenestration |
| <input checked="" type="radio"/> 14: Air Filtration Mgmt | <input type="radio"/> 72: Accessible Design |
| <input type="radio"/> 15: Increased Ventilation | <input checked="" type="radio"/> 74: Exterior Noise Intrusion |
| <input type="radio"/> 19: Operable Windows | <input type="radio"/> 76: Thermal Comfort |
| <input checked="" type="radio"/> 25: Toxic Material Reduction | <input checked="" type="radio"/> 97: Material Transparency |
| <input type="radio"/> 26: Enhanced Material Safety | <input checked="" type="radio"/> 98: Organizational Transparency |

FEATURES

- 2" (50.8mm) sightline
- 4-1/2" (114.3mm) depth
- Infill options up to 1-1/8" (28.6)
- Non thermal performance
- Center, back, front, multi-plane glazed options
- Structural silicone glazed (SSG) options
- Flush glazed from either the inside or outside
- Screw Spline, Shear Block, Stick or Type-B fabrication
- Single-span
- Storefront, Ribbon Window or Punched Openings
- Standard anodized finishes only

DOCUMENTS



Environmental Product Declaration

Document no. 47868332121.104.1
Product-specific Type III EPD

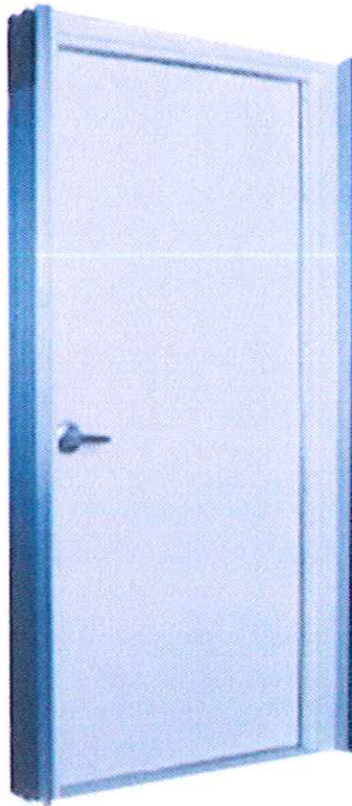


Material Transparency Summary

Document no. MTSC020EN
Manufacturer Material Ingredient Inventory

Walk Doors

Walk Doors have a galvanized 16-Gauge frame with an 18 Gauge smooth door leaf



592/599

THERMACORE[®] DOOR SYSTEMS



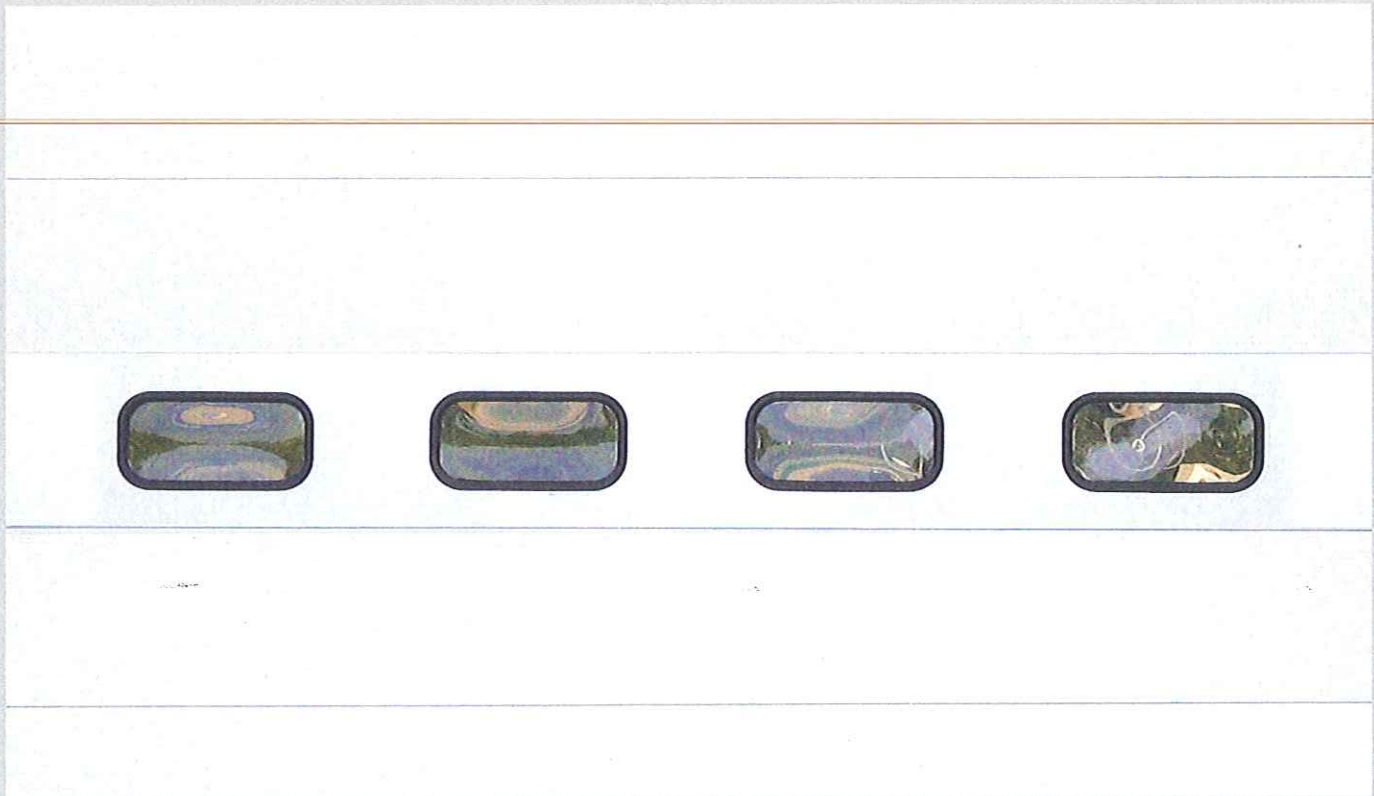
INSULATED SECTIONAL DOORS



THE BEST TECHNOLOGY.
HIGH THERMAL EFFICIENCY.
DURABLE.



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Standard features at a glance

Thermal efficiency

R-value*	17.50 (3.09 K m ² /W)
U-value	.057 (.324 W/K m ²)
Thermal break	PVC
Air infiltration	at 15 mph (24 kmph): .08 cfm/ft ² (1.46 m ³ /hr/m ²)

Construction

Panel thickness	2" (51 mm)
Max height	32'1" (9779 mm)
Max width	40'2" (12243 mm)
Exterior steel	.015" (.38 mm)
Exterior surface	Model 592: Ribbed, textured Model 599: Flush, textured
Standard springs	10,000 cycle
STC rating	Class 26

Color options

Interior colors	White
Exterior colors	Model 592: White, Tan, Gray, Brown, Model 599: White

Limited warranty

10-year delamination
1-year door
3-year/20,000 cycle door and operator system (material and workmanship)

Options

- Thermal glazing
- Wind load options
- Four-section pass door
- High-usage components
- 592 only: Trinar finish option available in white, brown, and beige (20-year limited warranty)
- Electric operator
- Chain hoist
- Posi-Tension® drums
- Stop bottom fixture
- Bottom sensing edge
- Header and jamb seal
- Aluminum sash section available to 24'2" (7366 mm) wide
- Exhaust ports

*R-value: R-value is a measure of thermal efficiency. The higher the R-value the greater the insulating properties of the door. Overhead Door Corporation uses a calculated door section R-value for our insulated doors.

Cover image: Model 592, Aluminum Sash Section with DSB Glazing windows, custom paint finish

Image above: Model 599, Double Thermal Acrylic windows, white paint finish



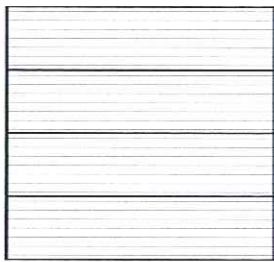
The most thermally efficient door system

With a 17.50 R-value (3.09 W/Msq) and .057 U-value (.324 Msq/W), the Thermacore® Models 592/599 are the energy-efficient door of choice for commercial use. The 592/599 also incorporate a thermal break and joint seal to prevent thermal transfer between exterior and interior door panel skins. The door is designed for the most demanding situations, including high-cycle, wind load and thermal applications. Built with the best technology in the business.

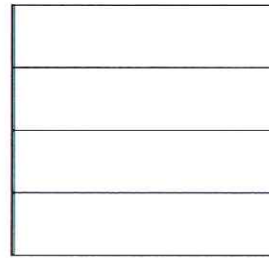


Model 592, Double Thermal Acrylic windows, White paint finish, pass door

Panel options



Model 592
Ribbed, textured panel



Model 599
Flush, textured panel

Color options

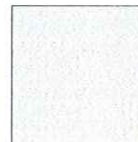
Model 592



White Industrial Brown Gray Tan

Optional: Trinar White, Trinar Beige and Trinar Brown.

Model 599



White

Actual colors may vary slightly from these shown due to fluctuations in staining or the printing process. Ask your Overhead Door™ Distributor for color samples.

Glazing options



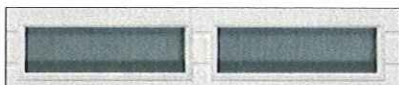
Double Thermal Acrylic (25" w by 12" h)



Aluminum Sash Section with DSB glazing

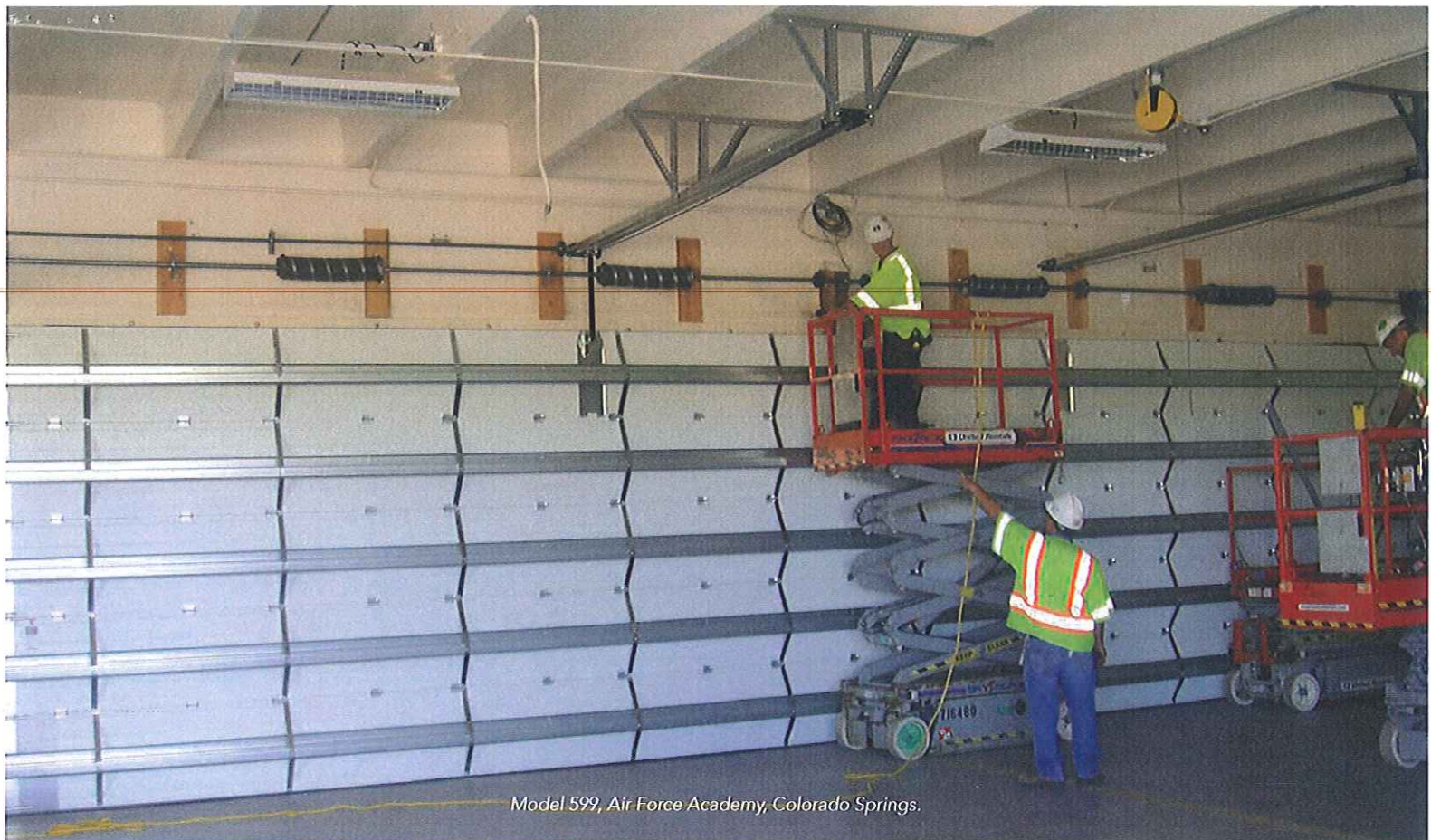


Insulated DSB (24" w by 7" h)



Clear Long* (44" w by 15" h)

*Not available on doors wider than 20'2".



Model 599, Air Force Academy, Colorado Springs.



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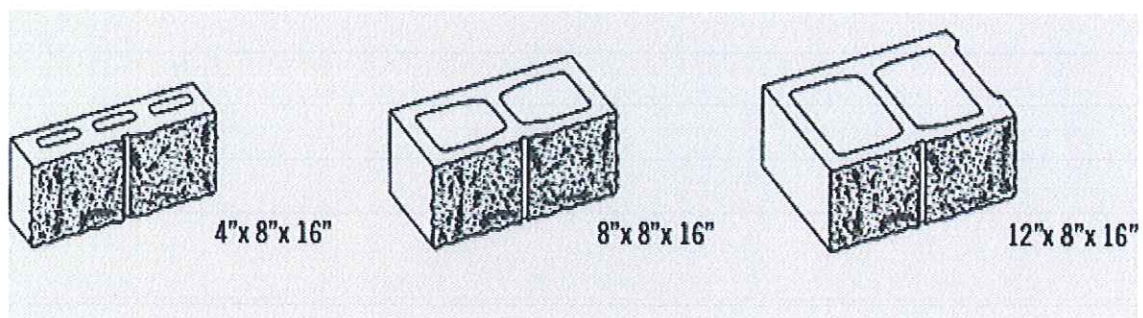
Overhead Door Corporation pioneered the upward-acting door industry, inventing the first upward-acting door in 1921 and the first electric door operator in 1926. Today, we continue to be the industry leader through the strength of our product innovation, superior craftsmanship and outstanding customer support, underscoring a legacy of quality, expertise and integrity. That's why design and construction professionals specify Overhead Door™ products more often than any other brand. Our family of over 400 Overhead Door™ Distributors across the U.S. and Canada not only share our name and logo, but also our commitment to excellence.



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Architectural CMU – Split Face



SECTION 042200

CONCRETE UNIT MASONRY

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
1. Standard concrete masonry units.
 2. Architectural concrete masonry units of the following types:
 - a. Ground face.
 - b. Polished face.
 - c. Weathered polished.
 - d. Split face.
 - e. Smooth face.
 - f. Fluted.
 - g. Prism.
 - h. Acoustical.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. USGBC LEED Submittals:
1. Recycled Content, Product Certificates for Credit MR 4: Indicating percentages by weight of postconsumer and preconsumer recycled content for products having recycled content. Include statement indicating costs for each product having recycled content.
 2. USGBC LEED Submittals, Regional Materials, Product Certificates for Credit MR 5: For materials which may contribute to this credit, Indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.
- C. Samples for Verification: Submit the following:
1. Four representative samples of the masonry units showing the range of color, texture, dimension and any scoring, similar treatment.
 2. Pigmented mortar. Make Samples using same sand and mortar ingredients to be used on Project. Label Samples to indicate types and amounts of pigments used.
 3. Weep holes/vents.
 4. Accessories embedded in masonry.

1.3 QUALITY ASSURANCE

- A. Source Limitations for Masonry Units: Obtain all concrete masonry units through one source from a single manufacturer for each product required.

- B. Fire-Resistance Ratings: Where indicated, provide materials and construction identical to those of assemblies with fire-resistance ratings determined per ASTM E 119 by a testing and inspecting agency, by equivalent concrete masonry thickness, or by other means, as acceptable to authorities having jurisdiction.
- C. Sample Panels: Build sample panels to verify selections made under sample submittals and to demonstrate aesthetic effects. Comply with requirements in Division 01 for mockups.
 - 1. Build sample panels for typical exterior and interior walls in sizes approximately 72 inches long by 48 inches high by full thickness.
 - 2. Where masonry is to match existing, erect panels adjacent and parallel to existing surface.
 - 3. Clean one-half of exposed faces of panels with masonry cleaner indicated.
 - 4. Protect approved sample panels from the elements with weather-resistant membrane.
 - 5. Sample panels shall remain in place until removal is authorized by Owner or Architect.
 - 6. Approval of sample panels is for quality, color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; aesthetic qualities of workmanship; clean down; and other material and construction qualities specifically approved by Architect in writing.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver concrete masonry units to the job site on manufacturer's standard pallets. Deliver ground face, polished and weathered polished units with heat shrink plastic covering and with non-staining protection cushion between faces.
- B. Store masonry units on elevated platforms in a dry location. Do not double stack. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied daily. If units become wet, do not install until they are dry.

1.5 PROJECT CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
 - 1. Extend cover a minimum of 24 inches down both sides and hold cover securely in place.
 - 2. Where 1 wythe of multiwythe masonry walls is completed in advance of other wythes, secure cover a minimum of 24 inches down face next to unconstructed wythe and hold cover in place.
- B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
 - 1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
 - 2. Protect sills, ledges, and projections from mortar droppings.
 - 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
 - 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.

- C. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
 - 1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until masonry has dried, but not less than 7 days after completing cleaning.
- D. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 STANDARD CONCRETE MASONRY UNITS

A. Standard Concrete Masonry Units:

- 1. Manufacturer: A. Jandris & Sons, 202 High Street, Gardner, MA 01440. Tel. 978-632-0089. Fax: 978-632-6065. www.ajandris.com
- 2. Shapes and Sizes: As indicated on the Drawings, selected from manufacturer's standard and custom shapes and sizes.
- 3. Sustainable Design: Normal weight units with 40% recycled SCM's (supplementary cementitious materials), medium weight units with 40% recycled SCM's and up to 20% recycled post-industrial aggregate replacement, light weight units with 40% recycled SCM's and up to 50% recycled post-industrial aggregate replacement.
- 4. Integral Water Repellent Coating For Exterior Units Exposed to the Weather: Rheopel by BASF Construction Chemicals.
- 5. Integral Insulation at Single Wythe Exterior Walls: Manufacturer's standard Korfil or Icon inserts.

B. Manufacturing Requirements:

- 1. Type: Normal Weight, Medium Weight and Light Weight as required.
- 2. Hollow and Solid Load-Bearing Units: ASTM C 90.
- 3. Normal Weight Aggregates: ASTM C 33.
- 4. Light Weight Aggregates: ASTM C 331.
- 5. Portland Cements: ASTM C 150.
- 6. Compressive Strength: ASTM C140, 1900 minimum on the net area.

2.2 ARCHITECTURAL CONCRETE MASONRY UNITS

A. Ground Face Concrete Masonry Units:

- 1. Manufacturer: A. Jandris & Sons, 202 High Street, Gardner, MA 01440. Tel. 978-632-0089. Fax: 978-632-6065. www.ajandris.com
- 2. Type and Color: As selected by Architect from manufacturer's full range of types and colors.
- 3. Type and Color: 500 Series, colors as selected by Architect.
- 4. Type and Color: 2500 Series, colors as selected by Architect.
- 5. Type and Color: 9300 Series, colors as selected by Architect.
- 6. Type and Color: Plymouth Series, colors as selected by Architect.

7. Shapes and Sizes: As indicated on the Drawings, selected from manufacturer's standard and custom shapes and sizes.
8. Sustainable Design: Sustainablock with recycled content, percentage as standard with manufacturer.
9. Integral Water Repellent For Exterior Units Exposed to the Weather: Manufacturer's standard product.
10. Integral Insulation at Single Wythe Exterior Walls: Manufacturer's standard Korfil or Icon inserts.
11. Factory Coating: Manufacturer's standard protective coating.

B. Polished Series Concrete Masonry Units:

1. Manufacturer: A. Jandris & Sons, 202 High Street, Gardner, MA 01440. Tel. 978-632-0089. Fax: 978-632-6065. www.ajandris.com
2. Type and Color: As selected by Architect from manufacturer's full range of types and colors.
3. Shapes and Sizes: As indicated on the Drawings, selected from manufacturer's standard and custom shapes and sizes.
4. Sustainable Design: Sustainablock with recycled content, percentage as standard with manufacturer.
5. Integral Water Repellent For Exterior Units Exposed to the Weather: Manufacturer's standard product.
6. Integral Insulation at Single Wythe Exterior Walls: Manufacturer's standard Korfil or Icon inserts.

C. Weathered Polished Series Concrete Masonry Units:

1. Manufacturer: A. Jandris & Sons, 202 High Street, Gardner, MA 01440. Tel. 978-632-0089. Fax: 978-632-6065. www.ajandris.com
2. Type and Color: As selected by Architect from manufacturer's full range of types and colors.
3. Shapes and Sizes: As indicated on the Drawings, selected from manufacturer's standard and custom shapes and sizes.
4. Sustainable Design: Sustainablock with recycled content, percentage as standard with manufacturer.
5. Integral Water Repellent For Exterior Units Exposed to the Weather: Manufacturer's standard product.
6. Integral Insulation at Single Wythe Exterior Walls: Manufacturer's standard Korfil or Icon inserts.

D. Split Face Concrete Masonry Units:

1. Manufacturer: A. Jandris & Sons, 202 High Street, Gardner, MA 01440. Tel. 978-632-0089. Fax: 978-632-6065. www.ajandris.com
2. Face: As selected by Architect from manufacturer's full range of types.
3. Face: Standard split face.
4. Face: Single-score split face.
5. Face: Seven groove eight rib split face.
6. Face: Three groove four rib split face.
7. Face: One groove two rib split face.
8. Face: Four rib split face.
9. Color: As selected by Architect from manufacturer's full range of colors.
10. Color: LT Series, colors as selected by Architect.
11. Color: DK Series, colors as selected by Architect.
12. Color: W Series, colors as selected by Architect.

13. Color: B Series, colors as selected by Architect.
14. Shapes and Sizes: As indicated on the Drawings, selected from manufacturer's standard and custom shapes and sizes.
15. Sustainable Design: Sustainablock with recycled content, percentage as standard with manufacturer.
16. Integral Water Repellent For Exterior Units Exposed to the Weather: Manufacturer's standard product.
17. Integral Insulation at Single Wythe Exterior Walls: Manufacturer's standard Korfil or Icon inserts.

E. Smooth Face Concrete Masonry Units:

1. Manufacturer: A. Jandris & Sons, 202 High Street, Gardner, MA 01440. Tel. 978-632-0089. Fax: 978-632-6065. www.ajandris.com
2. Face: As selected by Architect from manufacturer's full range of types.
3. Face: Smooth face.
4. Face: Smooth face center score.
5. Color: As selected by Architect from manufacturer's full range of colors.
6. Color: LT Series, colors as selected by Architect.
7. Color: DK Series, colors as selected by Architect.
8. Color: W Series, colors as selected by Architect.
9. Shapes and Sizes: As indicated on the Drawings, selected from manufacturer's standard and custom shapes and sizes.
10. Sustainable Design: Sustainablock with recycled content, percentage as standard with manufacturer.
11. Integral Water Repellent For Exterior Units Exposed to the Weather: Manufacturer's standard product.
12. Integral Insulation at Single Wythe Exterior Walls: Manufacturer's standard Korfil or Icon inserts.

F. Fluted Concrete Masonry Units:

1. Manufacturer: A. Jandris & Sons, 202 High Street, Gardner, MA 01440. Tel. 978-632-0089. Fax: 978-632-6065. www.ajandris.com
2. Face: Rounded fluted face.
3. Color: As selected by Architect from manufacturer's full range of colors.
4. Shapes and Sizes: As indicated on the Drawings, selected from manufacturer's standard and custom shapes and sizes.
5. Sustainable Design: Sustainablock with recycled content, percentage as standard with manufacturer.
6. Integral Water Repellent-Coating For Exterior Units Exposed to the Weather: Rheopel by BASF Construction Chemicals.
7. Integral Insulation at Single Wythe Exterior Walls: Manufacturer's standard Korfil or Icon inserts.

G. Prism Concrete Masonry Units:

1. Manufacturer: A. Jandris & Sons, 202 High Street, Gardner, MA 01440. Tel. 978-632-0089. Fax: 978-632-6065. www.ajandris.com
2. Face: Prism face face.
3. Color: As selected by Architect from manufacturer's full range of colors.
4. Shapes and Sizes: As indicated on the Drawings, selected from manufacturer's standard and custom shapes and sizes.
5. Sustainable Design: Sustainablock with recycled content, percentage as standard with manufacturer.

6. Integral Water Repellent Coating For Exterior Units Exposed to the Weather: Rheopel by BASF Construction Chemicals.
7. Integral Insulation at Single Wythe Exterior Walls: Manufacturer's standard Korfil or Icon inserts.

H. Acoustical Concrete Masonry Units:

1. Manufacturer: A. Jandris & Sons, 202 High Street, Gardner, MA 01440. Tel. 978-632-0089. Fax: 978-632-6065. www.ajandris.com
2. Type: Soundblox.
3. Type: Soundcells.
4. Shapes and Sizes: As indicated on the Drawings, selected from manufacturer's standard and custom shapes and sizes.
5. Sustainable Design: Sustainablock with recycled content, percentage as standard with manufacturer.

I. Manufacturing Requirements:

1. Type: Normal Weight, Medium Weight and Light Weight as required by mix design/color choice.
2. Hollow and Solid Load-Bearing Units: ASTM C 90.
3. Normal Weight Aggregates: ASTM C 33.
4. Light Weight Aggregates: ASTM C 331.
5. Portland Cements: ASTM C 150.
6. Compressive Strength: ASTM C140, 3500 psi minimum on the net area.

PART 3 - EXECUTION

3.1 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

3.2 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.
 2. Verify that foundations are within tolerances specified.
- B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.3 INSTALLATION

- A. Comply with PCA Recommended Practices for Laying Concrete Block, NCMA TEK Bulletins and with the following requirements.

- B. Thickness: Build cavity and composite walls and other masonry construction to full thickness shown. Build single-wythe walls to actual widths of masonry units, using units of widths indicated.
- C. Build chases and recesses to accommodate items specified in this and other Sections.
- D. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match the construction immediately adjacent to opening.
- E. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed. Do not use units cut to less than one-half size.
- F. Do not install concrete masonry units with more than 5 percent damage to the face.
- G. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.
- H. Matching Existing Masonry: Match coursing, bonding, color, and texture of existing masonry.
- I. Comply with construction tolerances in ACI 530.1/ASCE 6/TMS 602 and with the following:
 - 1. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
 - 2. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet, or 1/2 inch maximum.
 - 3. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
 - 4. For exposed bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch. Do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.
 - 5. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch. Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch.
 - 6. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch except due to warpage of masonry units within tolerances specified for warpage of units.

3.4 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in bond pattern indicated on Drawings; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs. Prior to installation review bond pattern with Architect.

- C. Stopping and Resuming Work: Stop work by racking back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar and remove loose masonry units and mortar.
- D. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- E. Fill space between steel frames and masonry solidly with mortar, unless otherwise indicated.
- F. Fill cores in hollow concrete masonry units with grout 24 inches under bearing plates, beams, lintels, posts, and similar items, unless otherwise indicated.
- G. Build non-load-bearing interior partitions full height of story to underside of solid floor or roof structure above, unless otherwise indicated.
 - 1. Install compressible filler in joint between top of partition and underside of structure above.
 - 2. Fasten partition top anchors to structure above and build into top of partition. Grout cells of CMUs solidly around plastic tubes of anchors and push tubes down into grout to provide 1/2-inch clearance between end of anchor rod and end of tube. Space anchors 48 inches o.c., unless otherwise indicated.
 - 3. Wedge non-load-bearing partitions against structure above with small pieces of tile, slate, or metal. Fill joint with mortar after dead-load deflection of structure above approaches final position.
 - 4. At fire-rated partitions, treat joint between top of partition and underside of structure above to comply with Section 078440 – FIRE-RESISTIVE JOINT SYSTEMS.

3.5 MASONRY JOINT REINFORCEMENT

- A. Install Joint reinforcement in accordance with NCMA TEK 12-2, *Joint Reinforcement for Concrete Masonry*.
- B. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches. Space reinforcement not more than 16 inches o.c.
- C. Interrupt joint reinforcement at control and expansion joints, unless otherwise indicated.
- D. Provide continuity at wall intersections by using prefabricated T-shaped units.
- E. Provide continuity at corners by using prefabricated L-shaped units.

3.6 CONTROL AND EXPANSION JOINTS

- A. Install control joints in accordance with NCMA TEK 10-2, *Control Joints for Concrete Masonry Walls*, NCMA TEK 10-3, *Control Joints For Concrete Masonry Walls - Alternative Engineered Method*, and NCMA TEK 10-4, *Crack Control For Concrete Brick and other Concrete Masonry Veneers*.
- B. General: Install control and expansion joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.
- C. Form control joints in concrete masonry using one of the following methods:

1. Fit bond-breaker strips into hollow contour in ends of concrete masonry units on one side of control joint. Fill resultant core with grout and rake out joints in exposed faces for application of sealant.
2. Install preformed control-joint gaskets designed to fit standard sash block.
3. Install interlocking units designed for control joints. Install bond-breaker strips at joint. Keep head joints free and clear of mortar or rake out joint for application of sealant.
4. Install temporary foam-plastic filler in head joints and remove filler when unit masonry is complete for application of sealant.

3.7 FLASHING, WEEP HOLES, CAVITY DRAINAGE, AND VENTS

- A. Install Flashing in accordance with NCMA TEK 19-04, *Flashing Strategies for Concrete Masonry Walls*, and NCMA TEK 19-05, *Flashing Details for Concrete Masonry Walls*.
- B. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated.
- C. Install flashing as follows, unless otherwise indicated:
 1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
 2. At multiwythe masonry walls, including cavity walls, extend flashing through outer wythe, turned up a minimum of 8 inches, and 1-1/2 inches into the inner wythe. Form 1/4-inch hook in edge of flashing embedded in inner wythe.
 3. At masonry-veneer walls, extend flashing through veneer, across air space behind veneer, and up face of sheathing at least 8 inches; with upper edge covered with elastomeric membrane, lapping at least 4 inches.
 4. At lintels and shelf angles, extend flashing a minimum of 6 inches into masonry at each end. At heads and sills, extend flashing 6 inches at ends and turn up not less than 2 inches to form end dams.
 5. Install air barrier transition strips to seal embedded flashings in masonry to air barrier membrane in accordance with Section 072700 – AIR BARRIERS.
- D. Install reglets and nailers for flashing and other related construction where they are shown to be built into masonry.
- E. Install metal drip edge plate in accordance with architectural details and manufacturer's requirements.
- F. Install weep holes in head joints in exterior wythes of first course of masonry immediately above embedded flashing and as follows:
 1. Use specified weep/vent products to form weep holes.
 2. Space weep holes 24 inches o.c., unless otherwise indicated.
- G. Place cavity drainage material in cavities to comply with configuration requirements for cavity drainage material in Part 2 "Miscellaneous Masonry Accessories" Article.
- H. Install vents in head joints in exterior wythes at spacing indicated.

3.8 CLEANING

- A. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- B. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 - 2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
 - 3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
 - 4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
 - 5. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A, *Removal of Stains from Concrete Masonry*, applicable to type of stain on exposed surfaces, and NCMA TEK 8-04: *Cleaning Concrete Masonry*.

3.9 MASONRY WASTE DISPOSAL

- A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.
- B. Masonry Waste: Remove masonry waste and legally dispose of off the Site.

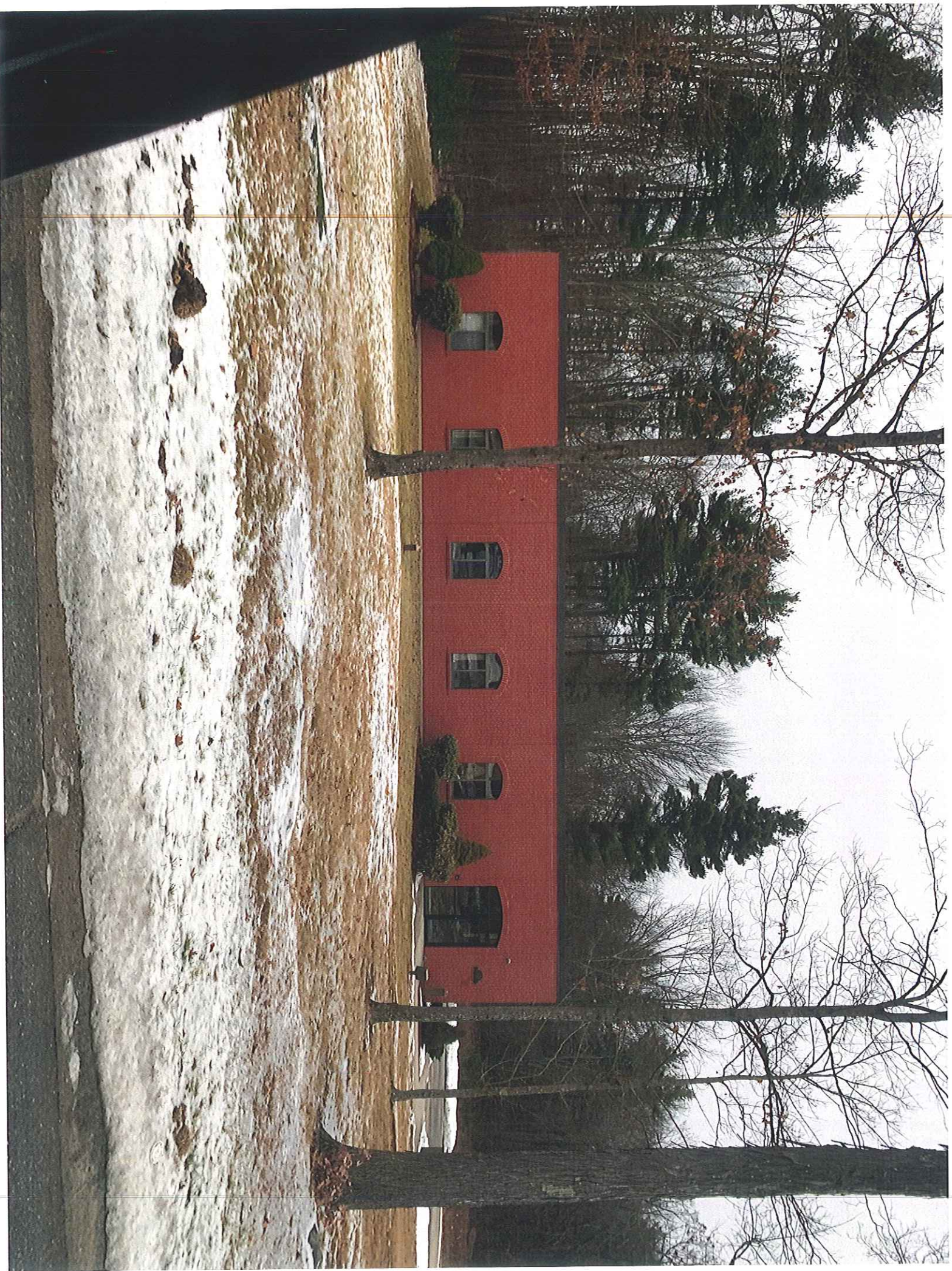
END OF SECTION

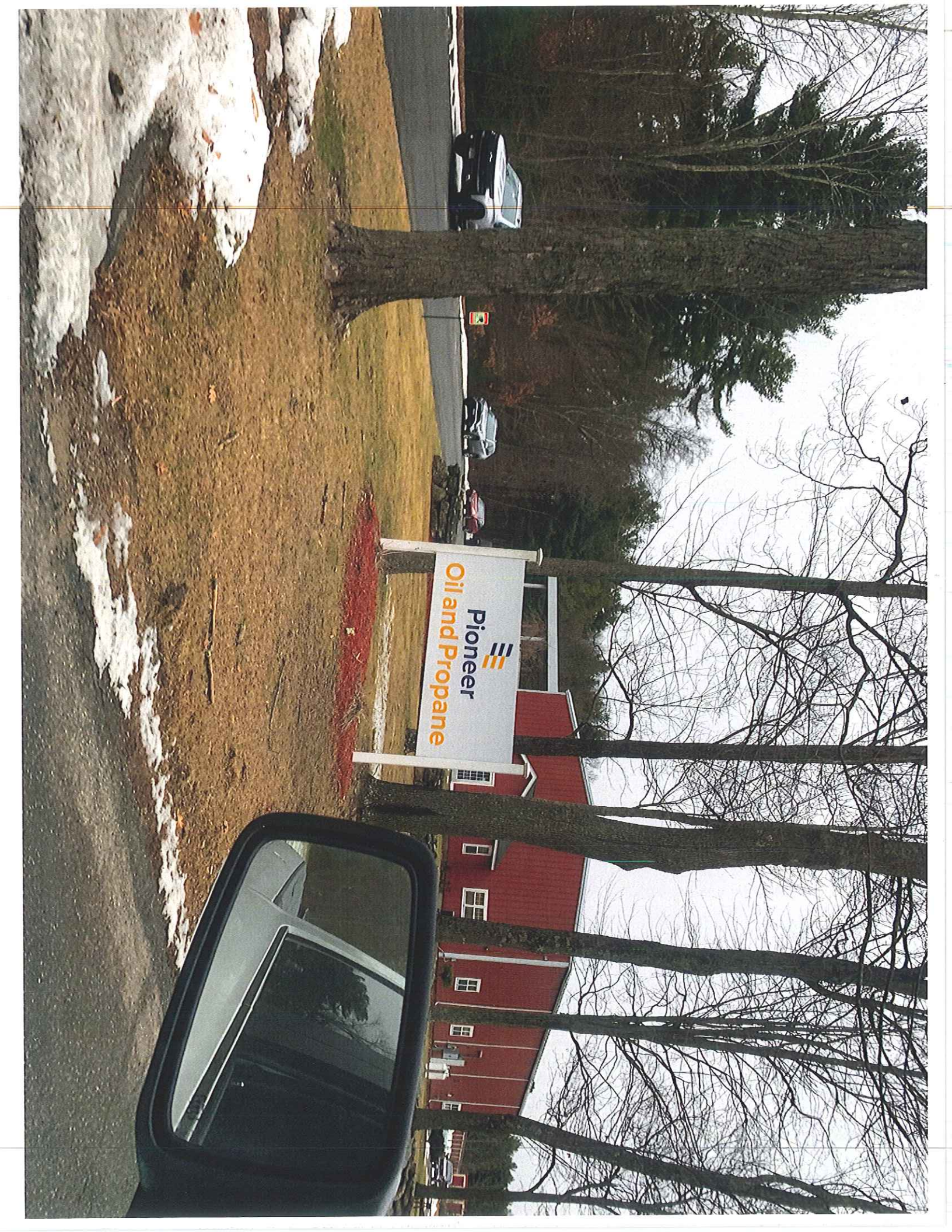
REV 3/14











Pioneer
Oil and Propane



Optim
A Juno Company
LLC
www.optim-llc.com



TECHNOLOGY PARK RD

STURBRIDGE
Technology Park

OPTIM INCORPORATED ▶

CUBESMART self storage ▶

PEGASUS GLASSWORKS, INC. ▶

LOAD CONTROLS ▶

PIONEER OIL ▶

◀ Venture
COMMUNITY SERVICES INC

▲ STURBRIDGE METALLURGICAL SERVICES, INC.

▲ NOVA SCIENTIFIC, INC.



NO PARKING
ANYTIME

NO PARKING
ANYTIME

NO PARKING
ANYTIME

NO PARKING
ANYTIME

NO PARKING
ANYTIME





MAIN ENTRANCE
Venture
SOLUTIONS BY INTERMED







CUBESMART
self storage

800-800-1717





COMMUNITY DAY SERVICES



Venture
COMMUNITY SERVICES
Partnership to empowerment.



F.W. WEBB
COMPANY









SITE DEVELOPMENT PLAN

FOR

51 TECHNOLOGY PARK ROAD

STURBRIDGE, MASSACHUSETTS 01566

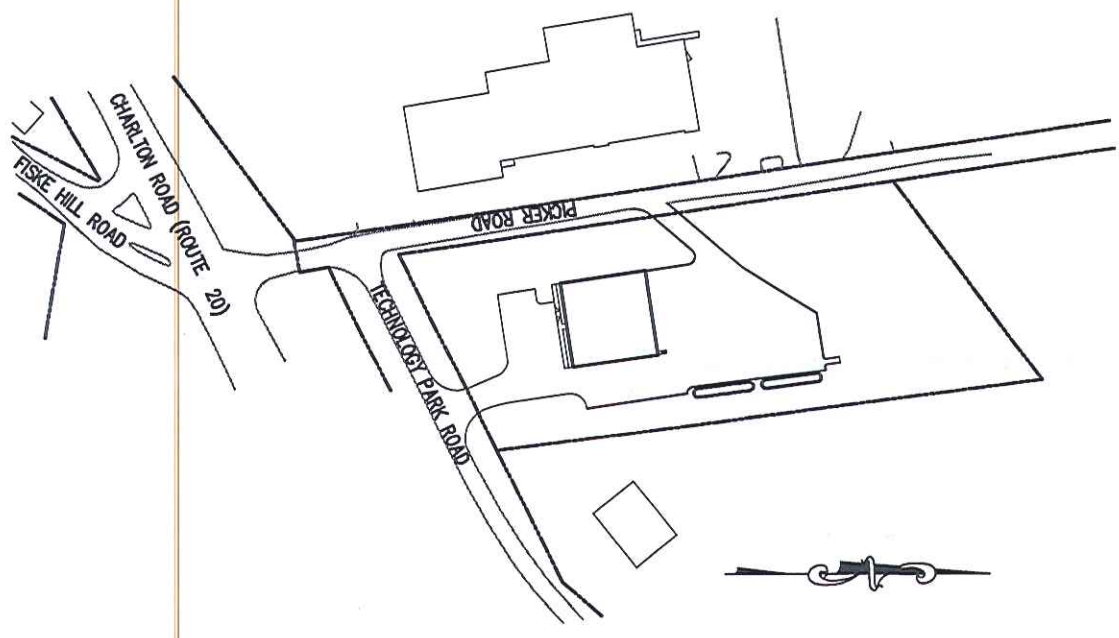
RECORD APPLICANT:
 DILEO GAS
 630 SUNDERLAND ROAD
 WORCESTER, MA 01604

RECORD OWNER:
 51 TECHNOLOGY, LLC
 55 WESSON STREET
 GRAFTON, MA 01536

LAND PLANNERS—CIVIL ENGINEERS:
 J.M. GRENIER ASSOCIATES INC.
 787 HARTFORD TURNPIKE
 SHREWSBURY, MA 01545

LAND SURVEYORS:
 PARA LAND SURVEYING INC.
 349 ASHLAND AVENUE
 SOUTHBRIDGE, MA 01550

ZONING DISTRICT: INDUSTRIAL PARK (IP)



LOCUS:
 SCALE: 1"=100'

INDEX	DESCRIPTION	SHEET NUMBER
	COVER	1 OF 9
	EXISTING CONDITIONS PLAN	2 OF 9
	LAYOUT PLAN	3 OF 9
	GRADING AND DRAINAGE PLAN	4 OF 9
	UTILITY PLAN	5 OF 9
	LANDSCAPE & LIGHTING PLAN	6 OF 9
	EROSION & SEDIMENTATION CONTROL PLAN	7 OF 9
	DETAIL PLAN	8 OF 9
	DETAIL PLAN	9 OF 9



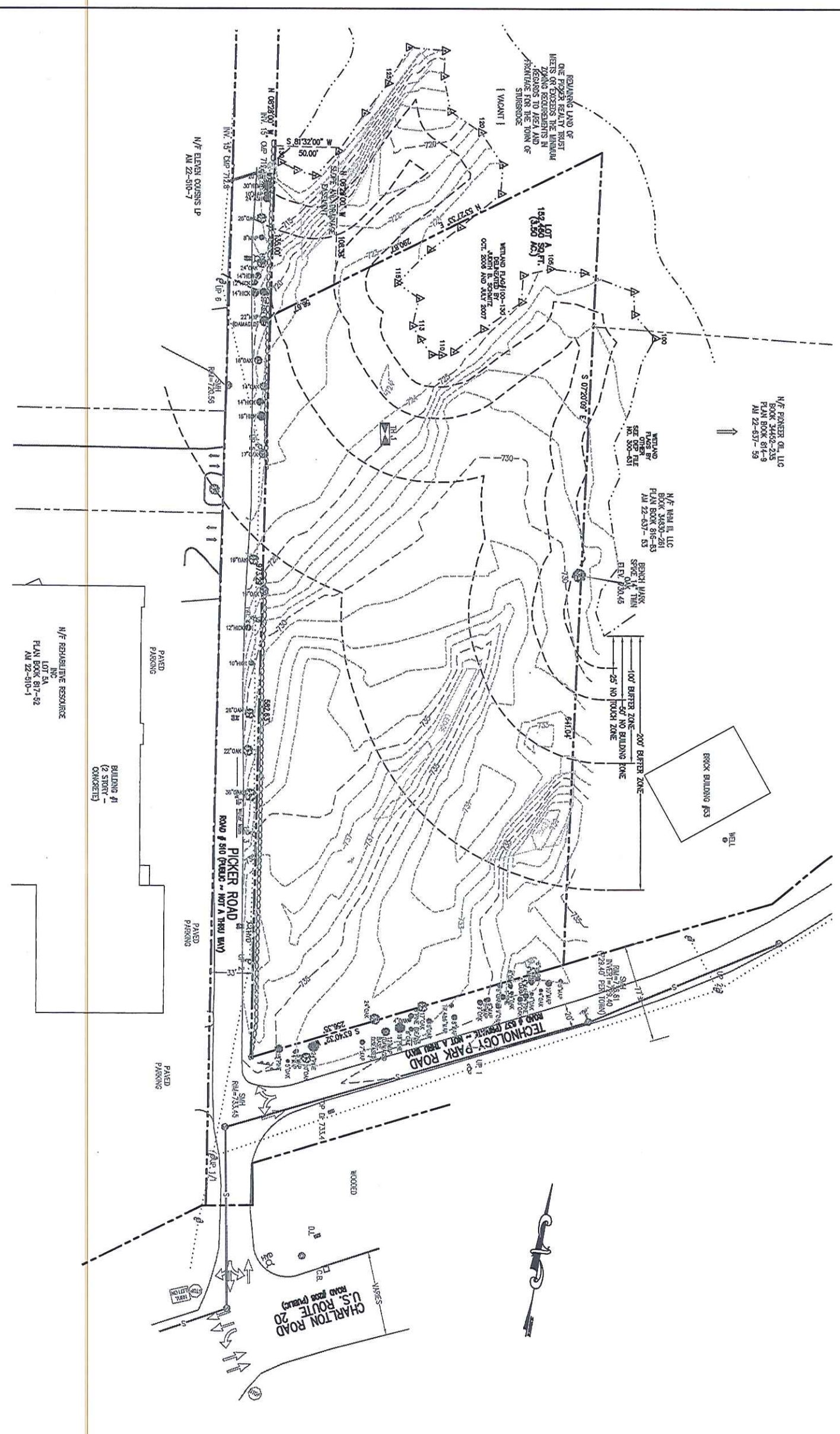
10/8/19

REV. NO.	DATE	REVISION
1	10/8/19	TOWN COMMENTS / LOCUS ENGINEERING COMMENTS

SCALE: AS SHOWN DATE: SEPTEMBER 5, 2019

SHEET NO.: COVER SHEET PROJECT NO.: G-565

SHEET 1 OF 9



TEST HOLE DATA

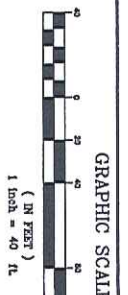
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0-4'	A	SL	
4-24'	B	SL	
24-48'	C	SL	

ESW# 030' (ELEV. 722.0)

LEGEND:

- EXISTING PROPERTY LINE
- EXISTING EASEMENT LINE
- - - - - EXISTING CONTOUR - HIGH
- - - - - EXISTING CONTOUR - LOW
- EXISTING EDGE PAVEMENT
- EXISTING CURB
- EDGE VEGETATED WETLAND
- WETLAND BUFFER
- EXISTING SEWER LINE
- EXISTING WATER LINE
- EXISTING OVERHEAD WIRES

- NOTES:**
1. REFERENCE TOWN OF STURBRIDGE ASSESSORS MAP 22 PARCEL 51.
 2. EXISTING CONDITIONS PROPERTY SURVEY PERFORMED BY PAUL LAND SURVEYING INC. 349 ASHLAND AVENUE SOUTHBRIDGE, MA 01545.
 3. WETLANDS DELINEATION WAS PERFORMED BY ADORN B. SPANITZ IN OCTOBER 2008 AND JULY 2007.
 4. REFERENCE DEED BOOK 60180 PAGE 104.
 5. REFERENCE PLAN BOOK 538 PLAN 7.
 6. REFERENCE DEP FILE #200-771 FOR ORDER OF CONDITIONS RECORDED IN WORCESTER REGISTER OF DEEDS BOOK 59383 PAGE 5.
 7. SITE IS NOT IN A FLOOD PLAIN AS SHOWN ON FIRM MAP PARCELS 250270718E FOR THE TOWN OF STURBRIDGE MASSACHUSETTS, WORCESTER COUNTY, DATED JULY 4, 2011.
 8. DRAIN IS HAND 8X.



REV. NO.	DATE	COMMENTS / LOCUS ENGINEERING COMMENTS	REVISION
1	10/8/19	TOWN COMMENTS / LOCUS ENGINEERING COMMENTS	

TITLE:
SITE DEVELOPMENT PLAN
 FOR
51 TECHNOLOGY PARK ROAD
STURBRIDGE, MASSACHUSETTS 01566

PREPARED FOR:
DILEO GAS
 630 SUNDRLAND ROAD
 WORCESTER, MASSACHUSETTS 01604

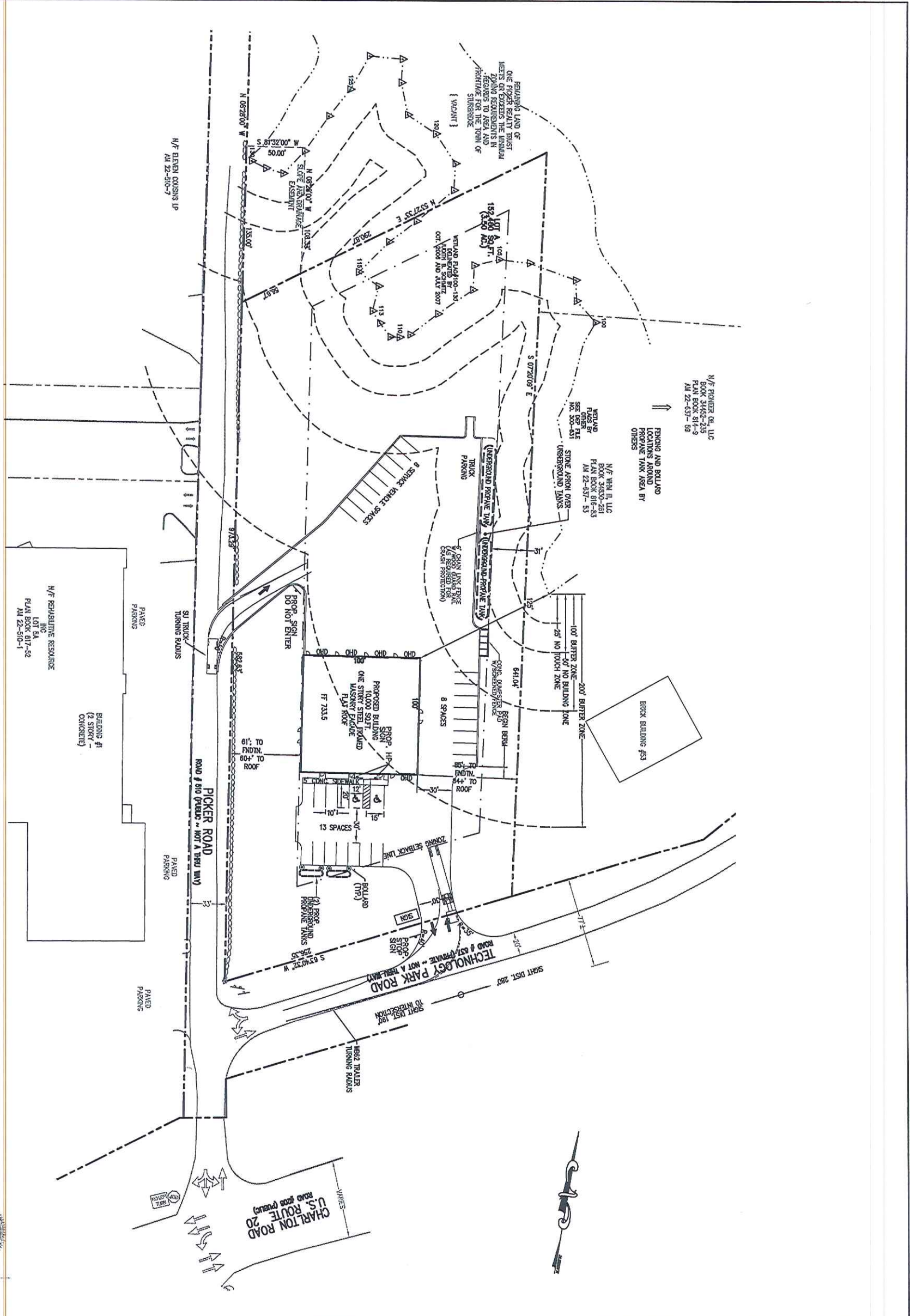
PREPARED BY:
J.M. GREINER ASSOCIATES INC.
 787 HARTFORD TURNPIKE 01545
 SHREWSBURY, MASSACHUSETTS
 TEL NO. (508) 845-2500 FAX NO. (508) 842-0900

SCALE:
 1" = 40'

DATE:
 SEPTEMBER 5, 2019

EXISTING CONDITIONS

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ON THIS PLAN ARE APPROXIMATE ONLY. THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES MAY NOT BE SHOWN HEREON. CONSULT DIG SAFE (1-888-344-7233) AND LOCAL AUTHORITIES PRIOR TO CONSTRUCTION.



LEGEND:

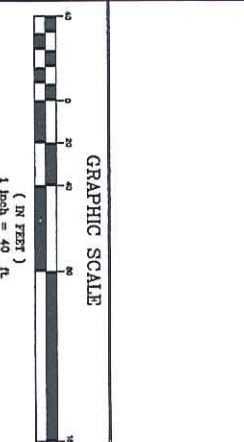
- Existing Property Line
- Existing Easement Line
- - - - - Existing Contour - High
- - - - - Existing Contour - Low
- - - - - Proposed Contour - High
- - - - - Proposed Contour - Low
- Existing Edge Pavement
- Existing Curb
- Proposed Edge of Pavement
- Proposed Edge of Pavement
- Proposed Edge of Pavement
- Edge Vegetated Wetland
- Wetland Buffer
- Proposed Drain Line
- Existing Sewer Line
- Proposed Sewer Line
- Existing Water Line
- Proposed Water Line
- Existing Overhead Wires
- Existing Underground Electric
- Proposed Underground Electric
- Proposed Tree Line
- Proposed Erosion Control

ZONING SUMMARY:

REQUIRED	PROVIDED	
MIN. LOT AREA	2.00 AC	3.50 AC
MIN. FRONTAGE	300'	582.63'
MIN. STREET SETBACK	60'	60'
MIN. OTHER SETBACK	30'	84'
MAX. BUILDING HEIGHT	33 1/2 STORES	1 STORY
MAX. LOT COVERAGE	33%	6.6%
MAX. IMPERVIOUS SURFACE	70%	36.6%
MIN. HABITABLE FLOOR AREA	750 SQ.FT.	10,000 SQ.FT.

PARKING SPACE REQUIREMENTS:

USE	REQUIRED	PROVIDED
INDUSTRIAL - 1/2 EMPLOYEES x 20 =	10	21



REV. NO.	DATE	REVISION
1	10/8/19	TOWN COMMENTS / ACQUIRE ENGINEERING COMMENTS

TITLE:
 SITE DEVELOPMENT PLAN
 FOR
 51 TECHNOLOGY PARK ROAD
 STURBRIDGE, MASSACHUSETTS 01586

PREPARED FOR:
 DILEO GAS
 630 SUDBURY ROAD
 WORCESTER, MASSACHUSETTS 01604

PREPARED BY:
 J.M. GRENIER ASSOCIATES INC.
 787 HARTFORD TURNPIKE 01545
 SHREWSBURY, MASSACHUSETTS
 TEL NO.: (508) 845-2500 FAX NO.: (508) 842-0800

SCALE:
 1" = 40'

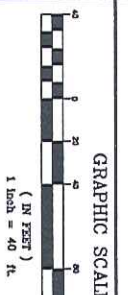
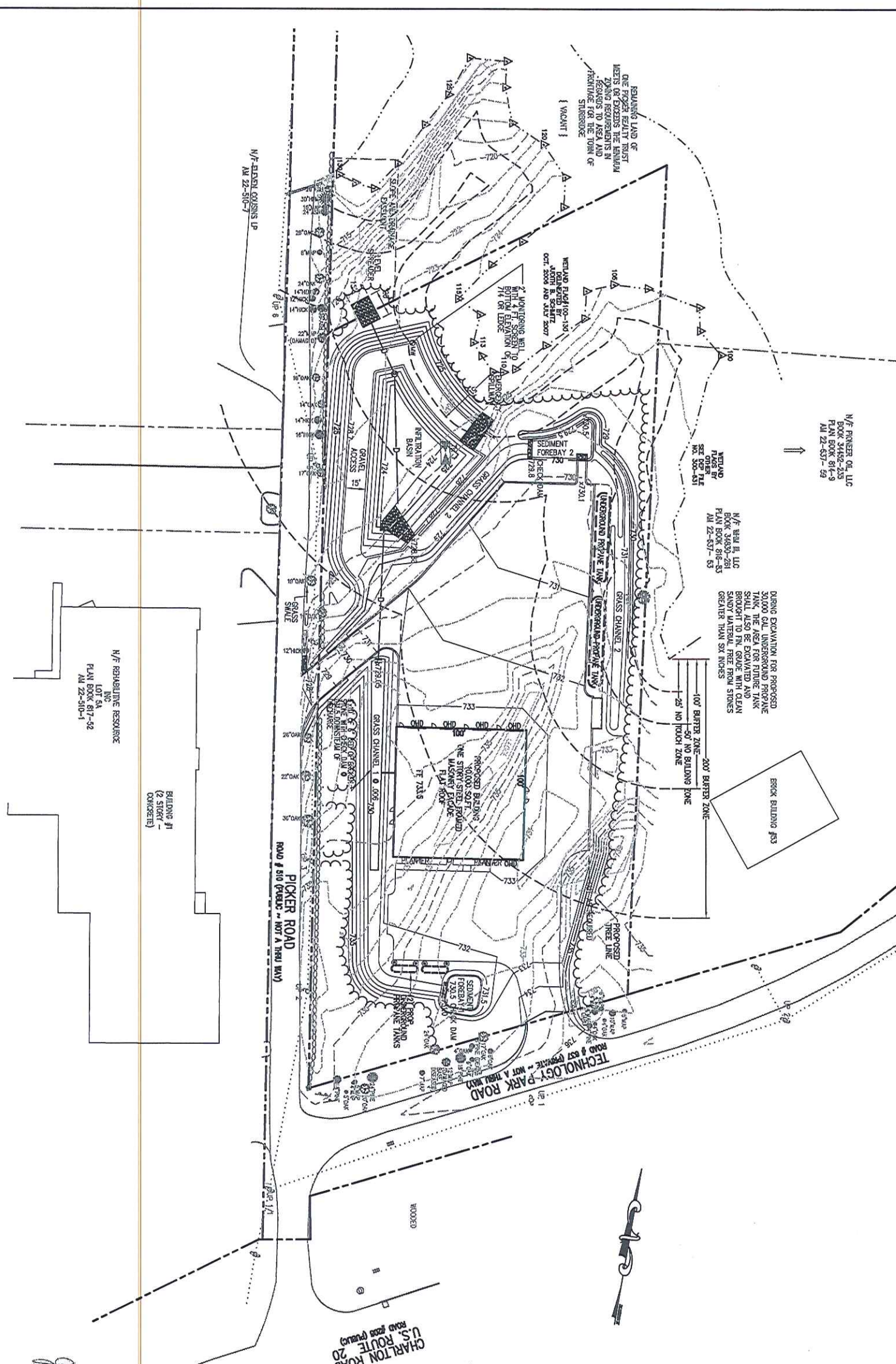
DATE:
 SEPTEMBER 5, 2019

LAYOUT PLAN

SHEET NO.: SHEET 3 OF 9
PROJECT NO.: G-565



- LEGEND:**
- EXISTING PROPERTY LINE
 - EXISTING EASEMENT LINE
 - EXISTING CONTOUR - HIGH
 - EXISTING CONTOUR - LOW
 - PROPOSED CONTOUR - HIGH
 - PROPOSED CONTOUR - LOW
 - EXISTING EDGE PAVEMENT
 - EXISTING CURB
 - PROPOSED EDGE OF PAVEMENT
 - PROPOSED CURB
 - EDGE VEGETATED WETLAND
 - WETLAND BUFFER
 - PROPOSED DRAIN LINE
 - EXISTING SEWER LINE
 - PROPOSED SEWER LINE
 - EXISTING WATER LINE
 - PROPOSED WATER LINE
 - EXISTING OVERHEAD WIRES
 - PROPOSED UNDERGROUND ELECTRIC
 - PROPOSED TREE LINE
 - PROPOSED EROSION CONTROL



REV. NO.	DATE	REVISION
1	10/8/19	TOWN COMMENTS / UCLURE ENGINEERING COMMENTS

TITLE

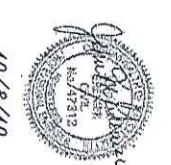
SITE DEVELOPMENT PLAN
FOR
51 TECHNOLOGY PARK ROAD
STURBRIDGE, MASSACHUSETTS 01568

PREPARED FOR:
DILEO GAS
630 SUNDERLAND ROAD
WORCESTER, MASSACHUSETTS 01604

PREPARED BY:
J.M. GREINER ASSOCIATES INC.
787 HARTFORD TURNPIKE 01545
SHREWSBURY, MASSACHUSETTS
TEL NO: (508) 845-2500 FAX NO: (508) 842-0900
DATE: SEPTEMBER 5, 2019

GRADING AND DRAINAGE PLAN

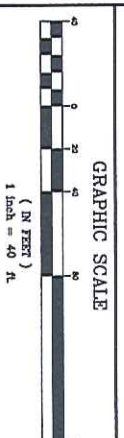
SHEET NO: **4 OF 9** PROJECT NO: **G-565**



10/8/19

- LEGEND:**
- EXISTING PROPERTY LINE
 - EXISTING EASEMENT LINE
 - EXISTING CONTOUR - HIGH
 - EXISTING CONTOUR - LOW
 - PROPOSED CONTOUR - HIGH
 - PROPOSED CONTOUR - LOW
 - EXISTING EDGE PAVEMENT
 - EXISTING CURB
 - PROPOSED EDGE OF PAVEMENT
 - PROPOSED CURB
 - EDGE VEGETATED WETLAND
 - WETLAND BUFFER
 - PROPOSED DRAIN LINE
 - EXISTING SEWER LINE
 - PROPOSED SEWER LINE
 - EXISTING WATER LINE
 - PROPOSED WATER LINE
 - EXISTING OVERHEAD WIRE
 - PROPOSED UNDERGROUND ELECTRIC
 - PROPOSED TREE LINE
 - PROPOSED EROSION CONTROL

- NOTES:**
1. SEE ARCHITECTURAL PLANS FOR LOCATION OF DOWNSPOUTS FOR ROOF DRAIN LEADERS
 2. ALL TRENCHES WITHIN TECHNOLOGY PARK ROAD AND PICKER ROAD SHALL BE BACKFILLED AS REQUIRED BY THE TOWN OF STURBRIDGE.
 3. WATER LINES SHALL HAVE A MINIMUM COVER OF 5 FEET.
 4. INFORMATION ABOUT EXISTING EXISTING SPOKE LINES IS FROM RECORD PLANS AND SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
 5. ALL FINAL DESIGN PLANS OF PROPOSED TRENCHES, BUILDING AND SPRINKLER WATER SHALL BE SUBMITTED TO THE DEPARTMENT FOR REVIEW.
 6. CONTRACTOR SHALL CONTACT DOW SAFE AT 1-888-344-7233 72 HOURS PRIOR TO COMMENCING ANY DOWNTOWN.
 7. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND CONDITIONS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
 8. ELECTRIC, CABLE AND TELEPHONE LOCATIONS ARE TO BE REVEALED AND/OR DELETED BY RESPECTIVE UTILTY COMPANIES.



REV. NO.	DATE	REVISION
1	10/8/19	TOWN COMMENTS / ACQUIRE ENGINEERING COMMENTS

TITLE:
SITE DEVELOPMENT PLAN
 FOR
51 TECHNOLOGY PARK ROAD
STURBRIDGE, MASSACHUSETTS 01566

PREPARED FOR:
DILEO GAS
630 SUNDERLAND ROAD
WORCESTER, MASSACHUSETTS 01604

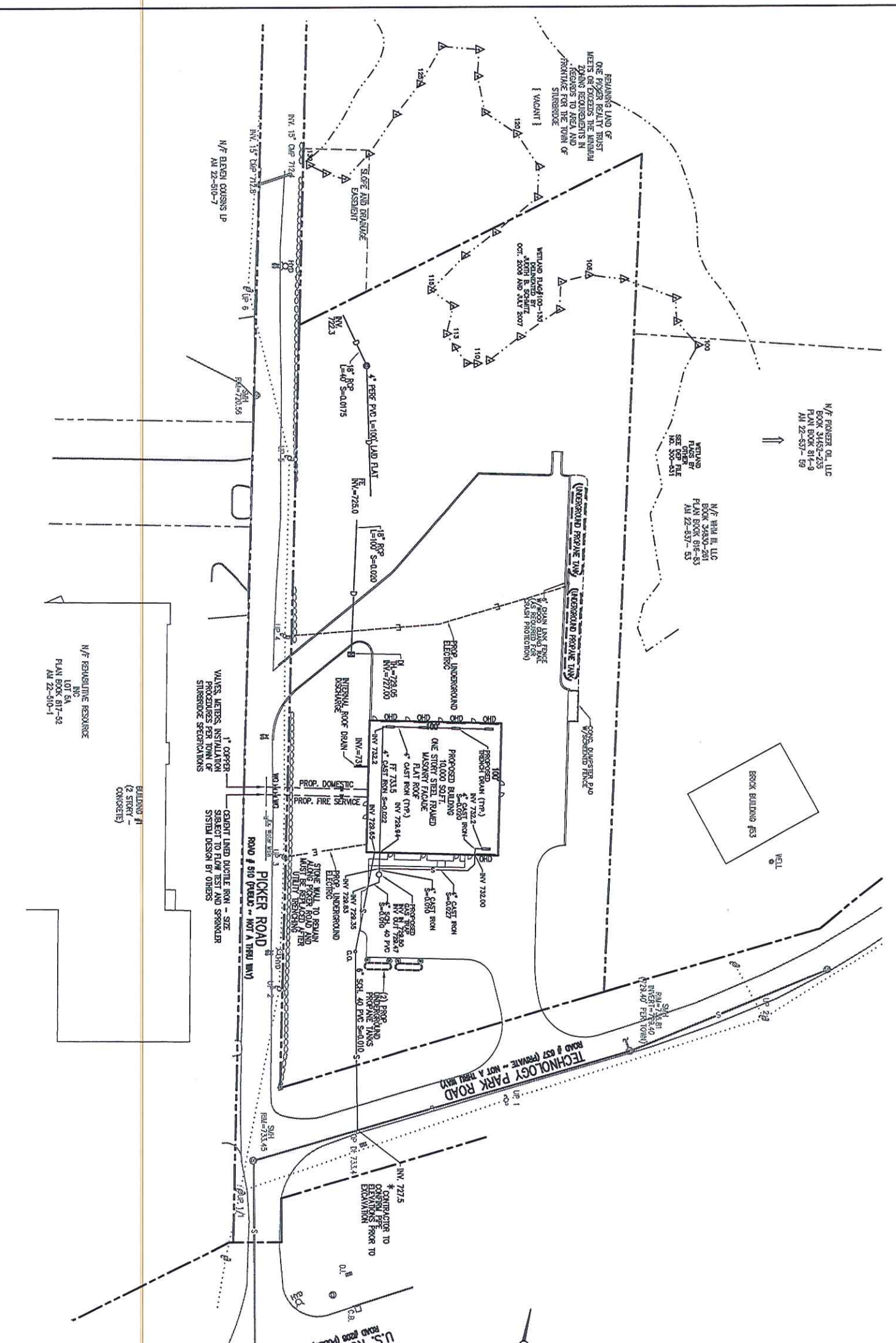
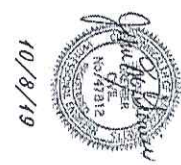
PREPARED BY:
J.M. GRENIER ASSOCIATES INC.
787 HARTFORD TURNPIKE
SHREWSBURY, MASSACHUSETTS 01545
 TEL NO.: (508) 845-2500 FAX NO.: (508) 842-0800

SCALE:
1" = 40'

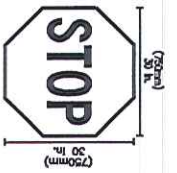
DATE:
SEPTEMBER 5, 2019

UTILITY PLAN

SHEET NO.: SHEET 5 OF 9
PROJECT NO.: G-565

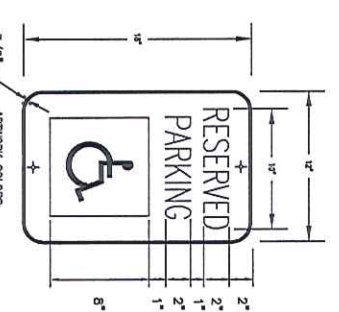


THE LOCATION OF EXISTING UNDERGROUND UTILITIES ON THIS PLAN ARE APPROXIMATE ONLY. THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHALL BE SHOWN HEREIN IN ACCORDANCE WITH THE TOWN OF STURBRIDGE LOCAL ORDINANCES PRIOR TO CONSTRUCTION.

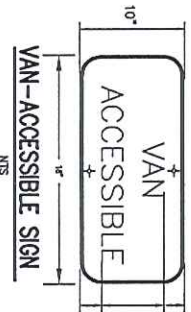


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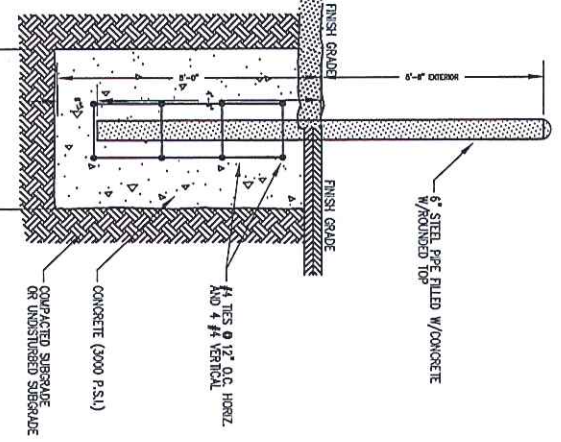
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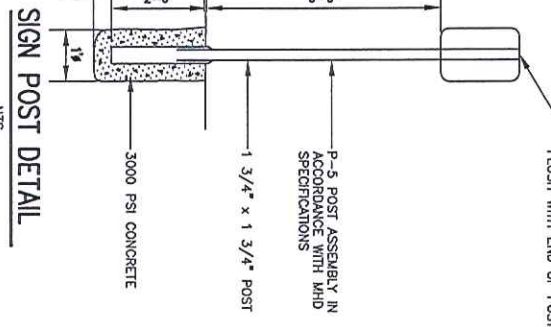
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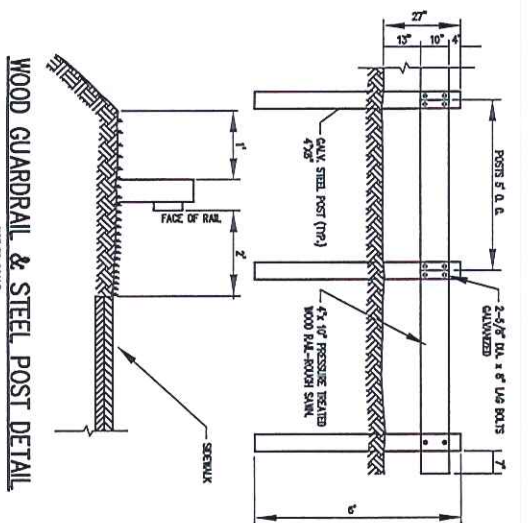
VAN-ACCESSIBLE SIGN
NOT TO SCALE



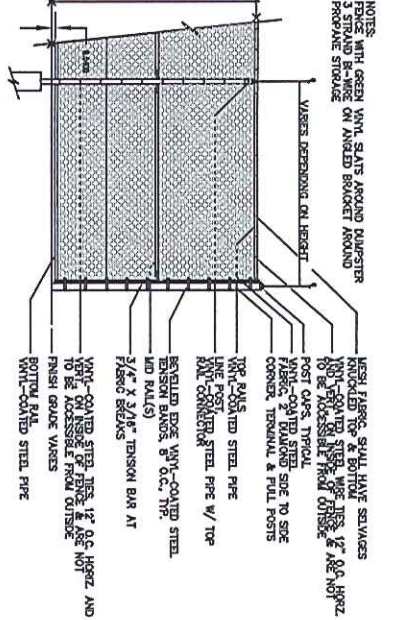
STEEL BOLLARD DETAIL
NOT TO SCALE



SIGN POST DETAIL
NOT TO SCALE



WOOD GUARDRAIL & STEEL POST DETAIL
NOT TO SCALE



CHAIN LINK FENCE DETAIL
NOT TO SCALE

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL REPORT TO THE OWNER AND ENGINEER ANY UNDESIRABLE CONDITIONS EXISTING AT THE TIME OF CONSTRUCTION. SUCH WORK SHALL BE STOPPED IMMEDIATELY UNTIL THE CONDITIONS ARE CORRECTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF CORRECTING SUCH CONDITIONS.
2. THE CONTRACTOR SHALL NOTIFY THE RELEVANT TOWN DEPARTMENTS AT LEAST 48 HOURS IN ADVANCE OF ANY REQUIRED INSPECTIONS.
3. IN ORDER TO PROTECT THE PUBLIC SAFETY DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING ADEQUATE SAFETY DEVICES AND PASSING, WARNING LIGHTS, BARRICADES, AND POLICE DETAILS.
4. THE CONTRACTOR SHALL REGULARLY INSPECT THE PROGRESS OF THE PROJECT TO CLEAN UP AND REMOVE LOOSE CONSTRUCTION.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTITUTE EROSION CONTROL MEASURES ON ALL NECESSARY EXPOSED AREAS. SUCH MEASURES SHALL INCLUDE THE INSTALLATION OF CUTS AND FILLS, MULCHING, AND PLANTING OF DISTURBED AREAS AS SOON AS PRACTICABLE.
6. AT THE END OF CONSTRUCTION THE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND SURPLUS MATERIALS FROM THE SITE. A THOROUGH INSPECTION OF THE WORK PERIMETER IS TO BE MADE AND ALL DISCARDED MATERIALS, BLOWN OR WATER CARRIED DEBRIS, SHALL BE COLLECTED AND REMOVED.
7. AT THE END OF CONSTRUCTION, AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE CONTRACTOR SHALL CLEAN THE SURFACES OF ALL CATCH BASINS AND THE INTERIORS OF ALL DRAINS.
8. THE CONTRACTOR IS TO VERIFY THE LOCATION, SIZE, AND DEPTH OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING OR EXCAVING THEM. IF THE EXISTING WORK PRESS A CONFLICT NOTED PRIOR TO THE CONTRACTOR CONTINUING, REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS, DOOR LOCATIONS, AND ENTRY DETAILS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES PRIOR TO TAPPING INTO, CROSSING OR EXCAVING THEM. IF THE EXISTING WORK PRESS A CONFLICT NOTED PRIOR TO THE CONTRACTOR CONTINUING, REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS, DOOR LOCATIONS, AND ENTRY DETAILS.
10. NO LEDGE, BOLLARDS, OR OTHER UNYIELDING MATERIALS ARE TO BE LEFT WITHIN 6' OF THE UTILITY SERVICES IN THE TRENCH, NOR ARE THEY TO BE USED FOR BARGEYLL FOR THE FIRST 12' ABOVE THE SERVICES.
11. STANDARD PAVEMENT AREAS SHALL HAVE 18 INCHES OF GOOD, CLEAN BANK-RUN GRAVEL, CONFORMING TO MDPW M1.03.1, WITH NO STONES LARGER THAN 3" IN DIAMETER AND SHALL BE PLACED AND ROLLED WITH AN 8" ROLLER. THE FINISH SURFACES SHALL BE 4" DIAMETER OR LARGER SHALL BE REMOVED FROM THE SUB-BASE PRIOR TO PLACING BASE MATERIAL.
12. STANDARD PAVEMENT AREAS SHALL BE PAVED TO A THICKNESS OF 4" LEAST AFTER COMPACTION, WITH A 2 1/2" ENDS COURSE AND 1 1/2" TOP COURSE OF CLASS 1 BITUMINOUS CONCRETE PAVEMENT, TYPE I-1.
13. THE AGGREGATE SHALL BE COURSED, USED AND LAD NOT IN MASSACHUSETTS STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES, 1988 EDITION SECTION 460 FOR CLASS 1 BITUMINOUS CONCRETE PAVEMENT, AS SPECIFICALLY SET FORTH IN SECTION 460.20 AND 460.22.
14. EROSION CONTROL, GRASS MATING (SIDE SLOPE GREATER THAN 4 HORIZONTAL TO 1 VERTICAL) FOLLOWING COMPLETION OF GRAVING, THE FOLLOWING SEED MIX SHALL BE APPLIED:

CRACKING RED RESCUE	% BY WEIGHT
30	
WHITE BUTCH CLOVER	
30	
RED TOP	
10	
SEED AT THE RATE OF 2 1/2 2,000 SF OF 50#/ACRE AND WITH 1/2 BUSH/ACRE OF WINTER RYE	
17. ALL DISTURBED AREAS ARE TO BE LOADED AND SEEDED WITH A MINIMUM OF 8" OF TOP SOIL SPREAD EVENLY THROUGHOUT. SLOPE STABILITY UNTIL VEGETATION IS ESTABLISHED.
18. ALL STUUPS, TOP SOIL, SUB SOIL AND OTHER DESTRUCTIVE MATERIALS ARE TO BE REMOVED FROM THE PROPOSED BUILDING AND PAVING AREAS.

STANDARD BLASTING CONDITIONS

1. RESIDENTS WITHIN 300 FEET OF THE PROPERTY LINE SHALL BE GIVEN THE OPPORTUNITY TO REQUEST A PRE-BLAST AND POST-BLAST SURVEY IN ACCORDANCE WITH 627 CMR 13.11 (2).
2. RESIDENTS WITHIN 100 FEET OF ANY BLAST HOLE SHALL BE PROVIDED WITH PRE-BLAST SURVEYS.
3. SURVEYS: COUNTY'S GEO-TECHNICAL CONSULTANT SHALL DESIGN A BLAST PROGRAM WHEREIN NO PARTICLE VELOCITY WILL EXCEED 1.0 INCHES PER SECOND AT THE DWELLING OF ANY ADJACENT. THE SCOPE OF THIS BLAST PROGRAM SHALL INCLUDE THE DWELLING OF ANY ADJACENT AS WELL AS THE PUBLIC RIGHT OF WAY. THE NEAREST HOME TO THE BLAST HOLE BETWEEN THE BLAST AND THE HOME, MULTIPLE SEISMOGRAPHS SHALL BE UTILIZED WHERE DEEMED APPROPRIATE BY THE GEO-TECHNICAL CONSULTANT.
4. BLASTING WILL BE PERMITTED BETWEEN 8:00 AND 3:00 P.M., MONDAY THROUGH FRIDAY.
5. THE APPLICANT SHALL PROVIDE PHYSICAL NOTICE OF BLAST TO PROPERTY OWNERS ADJACENT TO SUBDIVISION (ADJACENTS) BY KNOCKING ON DOORS OR RINGING DOORBELLS OR SAID PARTIES IMMEDIATELY PRIOR TO BLASTS. THE APPLICANT SHALL PROVIDE AN ANTICIPATED SCHEDULE TO THE ADJACENT OWNERS. THE APPLICANT SHALL PROVIDE AN ANTICIPATED SCHEDULE TO THE ADJACENT OWNERS.
6. THE APPLICANT SHALL PROVIDE THE PLANNING BOARD WITH THE NAMES AND ADDRESSES OF ALL PARTIES REQUESTING A PRE-BLAST SURVEY AND OF THOSE RECEIVING UNLAWFUL SURVEYS.
7. SURVEYS: PLANNING BOARD REGARDING BLASTING FILED WITH THE PRE DEPARTMENT SHALL BE PROVIDED BY THE APPLICANT TO THE PLANNING BOARD. IF THE PLANNING BOARD DEEMS THE BASIS OF ANY COMPLAINT TO BE A SERIOUS VIOLATION OF THESE CONDITIONS, THE PLANNING BOARD MAY ORDER THE BLAST WORK TO STOP FOR A PERIOD OF TIME NOT TO EXCEED FIVE (5) WORKING DAYS. THE APPLICANT SHALL IN SUCH EVENT APPEAR BEFORE THE PLANNING BOARD AND PROVIDE A WRITTEN EXPLANATION OF THE REASON FOR THE VIOLATION OF THESE CONDITIONS.
8. THE APPLICANT SHALL PAY FOR THE COST OF TWO (2) SPOT CHECKS WEEKLY BY THE PRE DEPARTMENT RELATING TO BLASTING. COPIES OF DAILY LOGS AND SENSING RECORDS OF EACH BLAST AND THE DAY'S ACTIVITIES SHALL BE PROVIDED BY THE APPLICANT TO THE PLANNING BOARD AND THE PLANNING BOARD WITHIN FIVE (5) WORKING DAYS, OR SOONER IF REQUESTED.
9. THE APPLICANT SHALL PROVIDE PRIOR TO THE COMMENCEMENT OF BLASTING, A NAME, ADDRESS AND TELEPHONE NUMBER OF A CONTACT PERSON FOR MATTERS RELATING TO NOISE. THIS CONTACT PERSON SHALL BE AVAILABLE TO ALL RESIDENTS WITHIN 300 FEET OF THE PROPERTY.



10/8/19

REV. NO.	DATE	REVISION
1	10/8/19	TOWN COMMENTS / LOCAL ENGINEERING COMMENTS

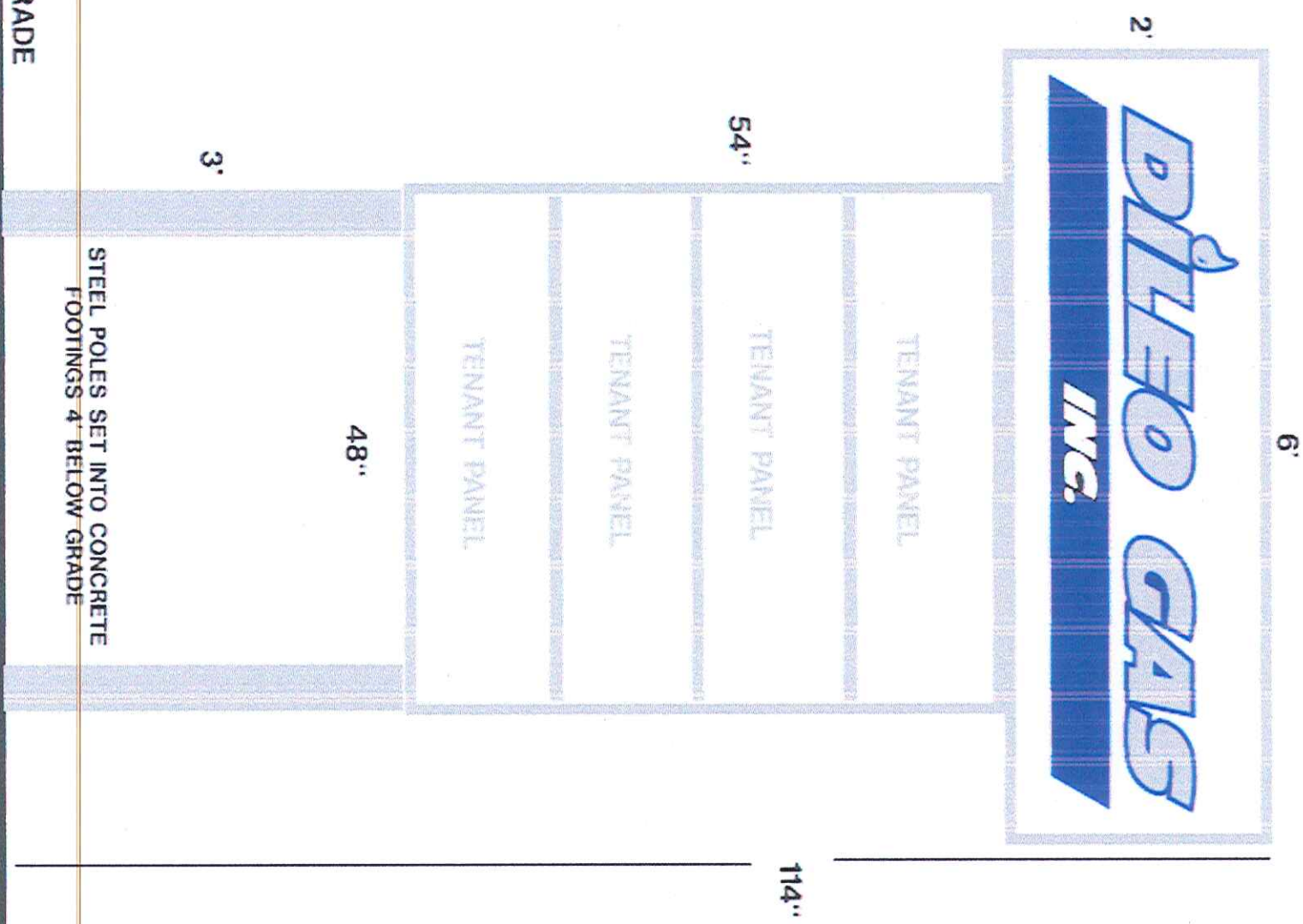
SITE DEVELOPMENT PLAN
FOR
51 TECHNOLOGY PARK ROAD
STURBRIDGE, MASSACHUSETTS 01566

PREPARED FOR:
DILEO GAS
630 SUNDERLAND ROAD
WORCESTER, MASSACHUSETTS 01604

PREPARED BY:
J.M. GRENIER ASSOCIATES INC.
787 HARTFORD TURNPIKE
SHREWSBURY, MASSACHUSETTS 01545
TEL NO.: (508) 845-2500
FAX NO.: (508) 842-0800

DATE: **SEPTEMBER 5, 2019**
SCALE: **N.T.S.**
SHEET NO.: **DETAIL PLAN 2/2**
PROJECT NO.: **G-565**

TOTAL SQUARE FEET 30'



- (1) 30' square illuminated directory sign.
- (1) 2'x8' panel and (1) 4'x54" panel with (4 tenants). Aluminum cabinet (grey) with 2" steel framework. Welded to (2) 4"x4"x1/4" steel posts, set into concrete footings 4' below grade. White lexan faces with vinyl graphics design. LED lighting with power supplies.