

## PUBLIC MEETING TOWN OF HUDSON, NH FEBRUARY 12, 2020

The Town of Hudson Planning Board will hold a regularly scheduled meeting on Wednesday, February 12, 2020 at 7:00 p.m. in the "Buxton Community Development Conference Room" at Town Hall. The following items will be on the agenda:

- I. CALL TO ORDER BY CHAIRPERSON AT 7:00 P.M.
- II. PLEDGE OF ALLEGIANCE
- III. ROLL CALL
- IV. SEATING OF ALTERNATES
- V. MINUTES OF PREVIOUS MEETING(S)
  - 22 January 2020 Meeting Minutes Decisions

## VI. NEW BUSINESS

A. Verizon Wireless Small Cell Wireless Antenna<br/>CU# 01-202 North Ridge Road<br/>Map 139/Lot 012

Purpose of Plan: to propose the installation of a small cell wireless antenna to be mounted atop an existing utility pole. Application Acceptance & Hearing.

Β.	Adelaide Street 4-Lot Subdivision	12 Adelaide Street
	SB# 05-19	Map 182/Lot 196

Purpose of Plan: to depict the subdivision of Map 186, Lot 196, into four (4) residential lots. Application Acceptance & Hearing.

C.	Griffin Road Lot Line Relocation	25 Griffin Road
	SB# 03-20	Map 135/Lot 017

Purpose of plan: to propose a lot line adjustment between lots 019 and proposed lot 017-004. Application Acceptance & Hearing.

D.	Griffin Road Subdivision	25 Griffin Road
	SB# 04-20	Map 135/Lot 017

Purpose of plan: to depict the subdivision of Map 135/Lot 017 into six residential lots. Application Acceptance & Hearing.

G. Granite Heights Subdivision Plan SB# 05-20

334 Central Street Map 161/Lot 029

Purpose of Plan: to depict an amended subdivision plan that proposes 19 residential lots in an Open Space Development (OSD). The previous project was approved under the name "Vista Knoll Estates". Application Acceptance & Hearing.

## VII. OTHER BUSINESS

A. Regulation Amendment: §276-5 Hearing on Amendment; to revise this regulation in accordance with state law for notification of public hearings and clarification of direct and indirect abutters.

## VIII. ADJOURNMENT

All plans and applications are available for review in the Planning Office. Comments may be submitted in writing until 10:00 a.m. on the Tuesday prior to the day of the meeting. The public is invited to attend.

POSTED: Town Hall, Library & Post Office – 01-24-20

Brian Groth, Town Planner

5	TOWN OF	HUDSON	ALL
$\int $	Planning	Board	INCORPORATED THE
	Timothy Malley, Chairman	Roger Coutu, Selectmen Liaison	

12 School Street • Hudson, New Hampshire 03051 • Tel: 603-886-6008 • Fax: 603-594-1142

## MINUTES/DECISIONS OF THE PLANNING BOARD MEETING DATE: JANUARY 22, 2020

In attendance = X	Alternate Seated = S	Partial Attendance = P	Excused Absence = E
Tim Malley	Jordan Ulery	William Collins	Charlie Bracket
ChairX	Vice-Chair <u>X</u>	SecretaryX	MemberX
Dillon Dumont	Ed Van der Veen	Elliott Veloso	Roger Coutu
Member <u>E</u>	Member <u> </u>	AlternateX	Select. RepX
Marilyn McGrath	Brian Groth		

Alt. Select. Rep. \_\_E\_\_\_ Town Rep. \_\_X\_\_\_

- I. CALL TO ORDER BY CHAIRPERSON AT 7:02 P.M.
- II. PLEDGE OF ALLEGIANCE
- III. ROLL CALL
- IV. SEATING OF ALTERNATES

Mr. Veloso seated for Mr. Dumont.

## V. MINUTES OF PREVIOUS MEETING(S)

• 11 December 19 Meeting Minutes – Decisions

Deferred to the February 12, 2020 meeting.

## VI. PERFORMANCE SURETIES

A. Mansfield Drive Subdivision Performance Bond, Map 147/Lot 024.

Mr. Coutu moved to establish a performance surety in the amount of \$87,999.60 for the Mansfield Drive Subdivision, Map 147/Lot 24, Derry Lane, Hudson, NH, in its entirety, and in accordance with the written recommendation of the Town Engineer, Elvis Dhima's Interoffice Memo in file, dated January 16, 2020, together with the Road Guarantee Estimate Form. Note: said surety shall be established in the form of a Hampton-style letter of credit or cash deposit held by the Town.

Motion seconded by Mr. Veloso. All in favor – motion carried 6/0/0.

B. Request to Release Corridor Impact Funds by Elvis Dhima, Town Engineer.

Deferred to the February 12, 2020 meeting.

## VII. OTHER BUSINESS

- A. Zoning Amendments
  - 1. Wetland Conservation Overlay District; Article IX, Wetland Conservation District; to establish a Conditional Use Permit process to protect wetlands and wetland buffers.

Chairman Malley opened the public input portion of the hearing at 7:06pm, seeing no one in the audience, Malley closed the public input portion of the hearing at 7:06pm.

Mr. Collins moved to recommend the zoning amendment to replace the existing Wetland Conservation District with the Wetland Conservation Overlay District, where proposed land development activity within the wetlands or their buffers require a Conditional Use Permit, where the current process is a Special Exception. This amendment maintains or improves the current level of protection of wetlands, and creates a more effective and efficient process in evaluating wetland impacts.

Motion seconded by Mr. Veloso. All in favor – motion carried 6/0/0.

2. Duplexes; Article II, Terminology, §334-6 Definitions: DUPLEX; to clarify definition of Duplex buildings.

Chairman Malley opened the public input portion of the hearing at 7:08pm, seeing no one in the audience, Malley closed the public input portion of the hearing at 7:08pm.

Mr. Coutu moved to recommend the zoning amendment to revise the definition of "Duplex" to clarify the characteristics of two-family residential structures.

Motion seconded by Mr. Veloso. All in favor – motion carried 6/0/0.

## VIII. ADJOURNMENT

Motion to adjourn by Mr. Ulery. Seconded by Mr. Veloso. All in favor - motion carried.

Meeting adjourned at 7:24 p.m.

William Collins, Secretary

These minutes are in draft form and have not yet been approved by the Planning Board.

# VERIZON WIRELESS SMALL CELL ANTENNA CONDITIONAL USE PERMIT CU#01-20

STAFF REPORT

February 12, 2020

SITE: Utility pole adjacent to 2 North Ridge Road, Map 139 Lot 12

ZONING: Residential-1 (R1)

**PURPOSE OF PLANS:** to propose the installation of a small cell wireless antenna to be mounted atop an existing utility pole.

**PLANS UNDER REVIEW:** Hudson NW SC06 NH; prepared by: Hudson Design Group, LLC, 45 Beechwood Drive, N. Andover, MA 01845; prepared for: Verizon Wireless c/o Structure Consulting Group, 49 Brattle Street. Arlington, MA 02474; consisting of 3 sheets and Notes 1-2 on Sheet 2; last revised December 20, 2019.

## **ATTACHMENTS:**

- A. Project Narrative
- B. Affidavit of Radio Frequency Engineer
- C. Town Department Comments

## **APPLICATION TRACKING:**

- December 17, 2019 Application received.
- February 12, 2020 Public hearing scheduled.

## **STAFF COMMENTS:**

The applicant is seeking a conditional use permit to install a 4G antenna and associated equipment on an existing PSNH utility pole on Derry Road. The pole is adjacent to 2 North Ridge Road and across the street from Alvirne High School.

The Town Engineer has requested a structural assessment of the pole to be conducted to ensure it is capable of the additional weight. The applicant has agreed to the assessment for the Engineer's approval prior to installation.

As the location is within the public Right-of-Way, the Department of Public Works was consulted for their approval. The DPW Director has no issue with this application, noting that the equipment is up high enough to preclude damage to town vehicles & equipment. The lowest hanging piece of equipment is proposed to be 5-feet above ground.

The Assessor's office made note of RSA 12-K which states: "Any municipality or other authority which receives an application to construct a new tower or to complete a substantial modification to an existing tower or mount which will be visible from any other New Hampshire

CU# 01-20 Staff Report Page 1 of 2

## FEB: 0 4 2020



## TOWN OF HUDSON PLANNING DEPARTMENT

## AFFIDAVIT OF RADIO FREQUENCY ENGINEER

The undersigned, in support of the application to install a wireless communications facility consisting of one antenna and associated radio equipment on the existing utility pole (#PSNH 83S / Bell Atlantic 82S) located on Derry Road in Hudson, New Hampshire, states the following:

- My name is Keith Vellante. I have a Bachelor of Science degree in Electrical Engineering from the University of New Hampshire and I am employed as a Radio Frequency (RF) Engineer for C Squared Systems, LLC. C Squared Systems has entered into a contract with Verizon Wireless to provide RF consulting services on behalf of Verizon Wireless. I have reviewed the proposed site with the Radio Frequency Engineer responsible for the Verizon Wireless network design in the area of New Hampshire that includes the Town of Hudson, NH.
- 2. Verizon Wireless is a federally licensed provider of wireless communications services with a national footprint.
- 3. The above-mentioned location is within an area where Verizon Wireless has identified a need to install a wireless communications facility in order to provide reliable wireless service. The search area for the proposed facility was determined by the fact that wireless service needs significant improvement in northern Hudson along Derry Road, around Alvirne High School, Hills Garrison Elementary School, Rodgers Memorial Library and the nearby recreational parks, athletic fields and parking areas. Furthermore, it was determined that the areas served by the proposed facility would interact well with those of existing and planned facilities in the surrounding area.

Site Name:	Site Address:	Utility Pole Number:	Latitude:	Longitude:	Ground Elevation (AMSL):	Antenna Centerline Height (AGL):
Hudson NW SC06 NH	Derry Road	# PSNH 83S / Bell Atlantic 82S	42.7925	-71.4378	196'	31.3'

The following table provides details of the proposed site:

- 4. A conventional Verizon Wireless LTE macro-site consists (in part) of RRHs (Remote Radio Heads) located near the antennas on a tower, rooftop, or other support structure, which are connected via fiber optic cables to a BBU (Baseband Unit) located at the site in an equipment shelter or other weatherproof enclosure. The BBU performs network signal processing between the RRHs at the site, and Verizon's LTE core network.
- 5. C-RAN (Cloud Radio Access Network) nodes and small cells also utilize RRHs at each site, however a centralized BBU capable of supporting RRHs at multiple sites is implemented to gain certain efficiencies, both from a network and environmental standpoint. The proposed location is one of multiple additional C-RAN nodes and small cells planned to address capacity and coverage deficiencies in Hudson and the surrounding area.

- 6. C-RAN and small cell deployments are intended to complement, not replace, the conventional LTE macro-network sites, and are typically used as a capacity solution targeting isolated areas of heavy network usage, a.k.a "hot spots." In doing so, the C-RAN nodes and small cells serve to offload the demand on the existing sites serving these "hot spots." This not only improves service to the specifically targeted area, but also improves overall system performance elsewhere in the network.
- 7. The purpose of the proposed facility is to provide adequate service capacity and improve coverage along Derry Road, around Alvirne High School, Hills Garrison Elementary School, Rodgers Memorial Library, and the nearby recreational parks, athletic fields, and parking areas in the vicinity of the proposed location. Verizon Wireless does not currently provide acceptable LTE service in this area of Town.
- 8. To find a site that would provide adequate capacity and coverage improvement, the Verizon Wireless RF Design Group utilizes computer modeling to define a search area. The search area is designed such that a site located within the area and at a given height would have a high probability of completing the capacity and coverage objectives in the target areas. The RF Design Group develops the network by working off existing sites from which to design the network.
- 9. Verizon Wireless' search of the area and subsequent analysis determined that installing the proposed facility on the existing utility pole referenced herein would be the most appropriate solution to meet its network capacity and coverage objectives to the areas immediately surrounding the proposed location.
- 10. I have reviewed the proposed installation to be placed on this utility pole as well as the other existing and proposed antenna site locations used in Verizon Wireless' system in and around the surrounding areas. I have analyzed the potential benefits this site would represent to Verizon Wireless' network and its users. I employ computer simulations, which incorporate the results of field tests of existing facilities, to determine existing radio frequency (RF) coverage for Verizon Wireless' system. These simulations model characteristics such as antenna types, antenna height, output power, terrain, land cover, and RF propagation effects of the frequency utilized.

Cell Name:	Latitude:	Longitude:	Street Address:	Town/State:	Antenna Centerline Height (ft AGL):	Status
Hudson	42.7355	-71.3928	51 Trigate Road	Hudson, NH	188	On-Air
Hudson 2	42.7802	-71.3803	10 Park Avenue	Hudson, NH	125	On-Air
Hudson C	42.7663	-71.4132	193 Central Street	Hudson, NH	107	On-Air
Hudson N	42.8238	-71.4134	29 West Road	Hudson, NH	147	On-Air
Hudson W	42.7293	-71.4297	24 Flagstone Drive	Hudson, NH	70	On-Air
Londonderry 4	42.8428	-71.3644	135 A Nashua Road	Londonderry, NH	115	On-Air
Merrimack	42.8269	-71.5022	Premium Outlets Blvd.	Merrimack, NH	110	On-Air
Merrimack 2	42.8521	-71.4945	26 Columbia Circle	Merrimack, NH	150	On-Air
Merrimack 4	42.7948	-71.4725	Harris Pond Road	Merrimack, NH	140	On-Air
Nashua 4	42.7640	-71.4922	10 Whipple Street	Nashua, NH	140	On-Air
Nashua Dt	42.7575	-71.4584	57 Tylor Street	Nashua, NH	100	On-Air
Nashua Dt 2	42.7413	-71.4539	39 Orchard Avenue	Nashua, NH	110	On-Air
Pelham 2	42.7605	-71.3438	Rockyhill Road	Pelham, NH	115	On-Air
W Nashua	42.7874	-71.5041	2 Somerset Parkway	Nashua, NH	94	On-Air
Windham 2	42.8033	-71.3109	19 Haverhill Road	Windham, MH	138	On-Air

11. The following table details site specific information of the surrounding Verizon Wireless macro-sites used to generate the RF maps attached hereto:

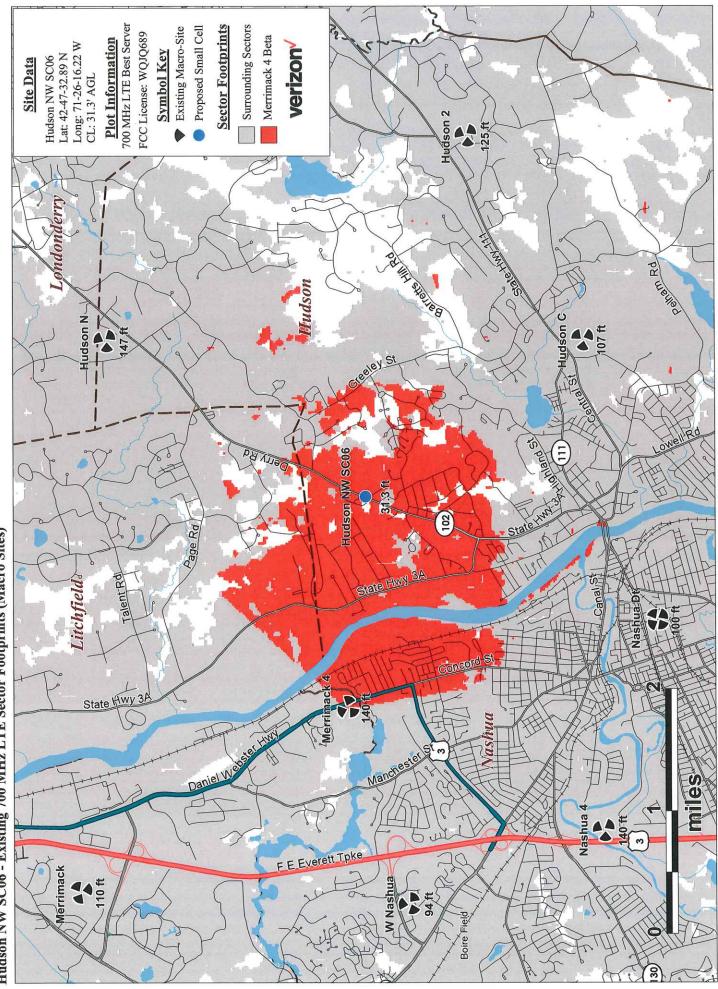
- 12. The signal propagation plots included as attachments were produced using deciBel Planner<sup>™</sup>, a Windows-based RF propagation computer modeling program and network planning tool. The software considers the topographical features of an area, land cover, antenna models, antenna heights, RF transmitting power and receiver thresholds to predict coverage and other related RF parameters used in site design and network expansion.
- 13. The RF map titled "Hudson NW SC06 Existing 700 MHz LTE Sector Footprints (Macro Sites)" attached hereto depicts the areas primarily served by the sectors (a.k.a. signal "footprints") of the "On-Air" Verizon Wireless macro-sites in the area, and shows a unique color (red) for one particular sector of interest "Merrimack 4" beta. For clarity, all other sectors of less interest with respect to the proposed facility are shown in grey. "On-Air" sites are existing Verizon Wireless facilities. As demand for wireless voice and data services continues to grow, Verizon Wireless manages the footprint of each sector so that it can support the demand within the area it is primarily serving. In addition to improving coverage to the immediate area, the proposed site is also needed to serve existing and anticipated demand in the vicinity and thereby offload some of the burden experienced by the surrounding sites. In that way, those surrounding sites will be able to more adequately serve the demand for service in the areas nearer to them. Please note that the outer parts of each sector footprint may include areas that presently have signal strength below the targeted value required for reliable service to Verizon Wireless' customers. The fact that low-level signal may reach these areas does not mean that these areas experience adequate coverage. These unreliable areas of low signal level can impose a significant capacity burden on the sites primarily serving the area.
- 14. The RF map titled "Hudson NW SC06 Existing 700 MHz & 2100 MHz LTE Coverage (Macro-Sites)" attached hereto depicts the coverage provided from the "On-Air" and "Approved" Verizon Wireless macro-sites in the Hudson area. The green and yellow shaded areas represent the minimum desired level of coverage for this area for the 700 MHz and 2100 MHz network layers, respectively. Because of the superior propagation characteristics of 700 MHz relative to 2100 MHz frequencies, the 2100 MHz coverage areas (yellow) are generally contained within the 700 MHz coverage areas (green). As such, the deficient areas of 700 MHz coverage are defined by the unshaded or white areas, whereas the deficient areas of 2100 MHz coverage consist of both the green and white areas. As shown in this plot, the existing Verizon Wireless macro-sites in the area are unable to provide adequate coverage (particularly at 2100 MHz) to the targeted areas around Fort Phoenix State Reservation.
- 15. The map titled "<u>Hudson NW SC06 Area Terrain Map</u>" attached hereto details the terrain features around the proposed small cell facility. These terrain features play a key role in dictating both the unique coverage achieved from a given location, and the coverage gaps within the network. The blue and green shades correspond to lower elevations, whereas the orange, red, and grey shades indicate higher elevations.
- 16. As shown in the aforementioned maps, the proposed facility is centrally located within the targeted area of deficient service, making it suitable to provide the intended coverage improvement and capacity relief to this "hot spot" of network usage along Derry Road and to Alvirne High School, Hills Garrison Elementary School, Rodgers Memorial Library and the nearby recreational parks, athletic fields and parking areas. The proposed facility will offload the "Merrimack 4" beta sectors currently serving the area, which will in turn improve the overall system performance elsewhere within the respective service areas.
- 17. I have concluded that the proposed facility will satisfy the present capacity and coverage needs that motivated Verizon Wireless to establish a search ring in this vicinity. Any reduction in the proposed antenna configuration and/or equipment would limit optimal performance of the facility, which would diminish the site's effectiveness.

- 18. Verizon Wireless certifies that the proposed facility will not cause interference to any lawfully operating emergency communication system, television, telephone, or radio in the surrounding area. The FCC has licensed Verizon Wireless to transmit and receive in the Upper C Block of the 700 MHz band, B Block of the Cellular (850 MHz) band, the E and F Blocks of the PCS (1900 MHz) band, and the A and B Blocks of the AWS (2100 MHz) band of the RF spectrum. As a condition of the FCC licenses, Verizon Wireless is prohibited from interfering with other licensed devices that are being operated in a lawful manner. Furthermore, no emergency communication system, television, telephone, or radio is licensed to operate on these frequencies, and therefore interference is highly unlikely.
- 19. Pursuant to its Federal Communications Commission (FCC) licenses, Verizon Wireless is required to ensure that all radio equipment operating at the proposed communications facility and the resulting radio frequency exposure levels are compliant with FCC requirements as well as federal and state health and safety standards.
- 20. Providing reliable wireless communication services is a benefit to the residents of the Town of Hudson, as well as to mobile customers traveling throughout the area. The proposed facility is well suited to meet Verizon Wireless' network requirements for the intended areas. The absence of a wireless telecommunications facility at or near this immediate location will result in the continued existence of inadequate network capacity and gaps in service in this area. Without the proposed facility, Verizon Wireless will be unable to provide reliable wireless communication services in this area of the Town; therefore, Verizon Wireless respectfully requests that the Town of Hudson act favorably upon the proposed facility.

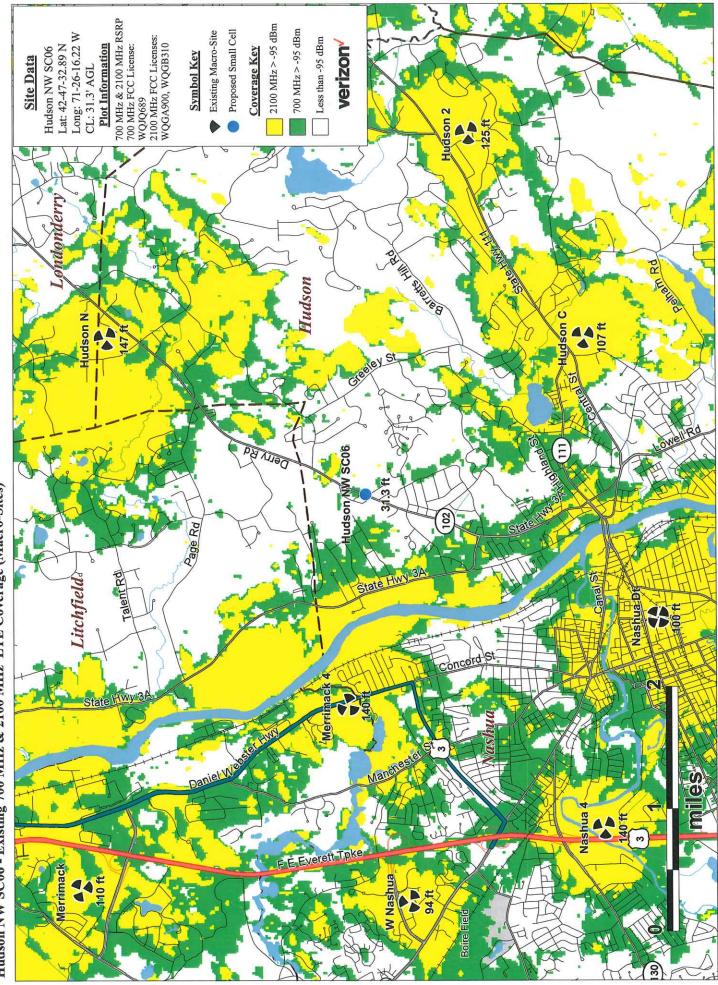
Signed and sworn under the pains and penalties of perjury January 23rd, 2020.

Keith (Illoute

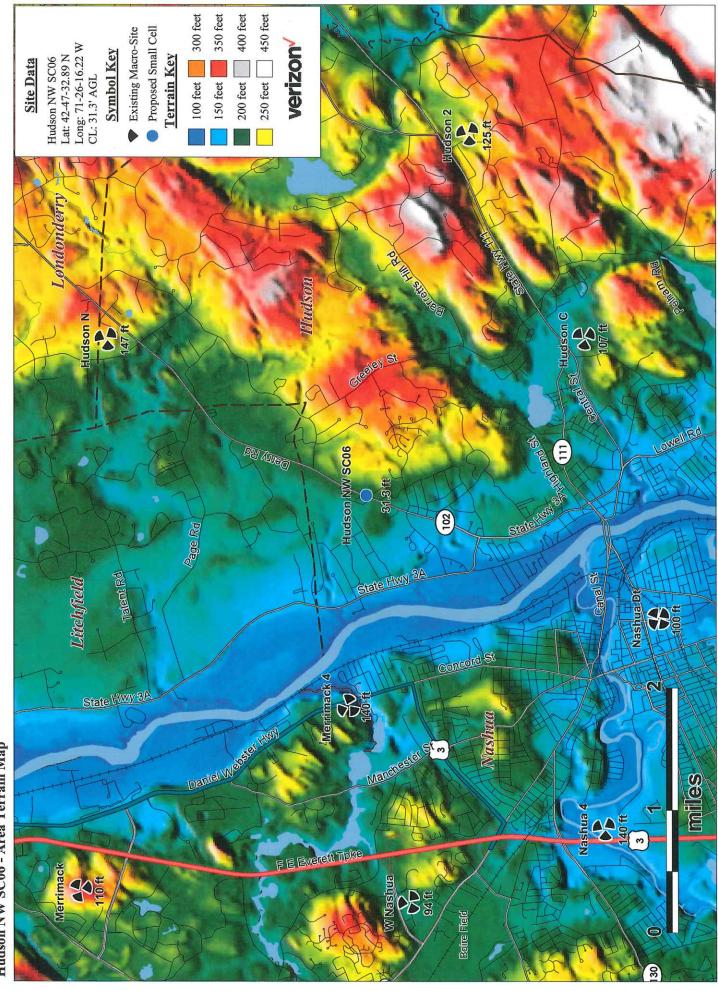
Keith Vellante Radio Frequency (RF) Engineer C Squared Systems, LLC 65 Dartmouth Drive Auburn, NH 03032



Hudson NW SC06 - Existing 700 MHz LTE Sector Footprints (Macro Sites)



Hudson NW SC06 - Existing 700 MHz & 2100 MHz LTE Coverage (Macro-Sites)



Hudson NW SC06 - Area Terrain Map

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DEC 1 7 2019

#### CONDITIONAL USE PERMIT APPLICATION TOWN OF HUDSON, NEW HAMPSHIRE

TOWN OF HUDSON Lot # 12LANNING DEPARTMENT Date of Application: 12/16/19 \_\_\_\_\_ Tax Map #\_139 Name of Project: Verizon Wireless Small Cell Utility Pole Attachment - Derry Road Zoning District: \_\_\_\_\_ General CU# \_\_\_\_\_ (For Town Use) General CU# \_\_\_\_\_ (For Town Use) 01-0 (For Town Use) ZBA Action: PROPERTY OWNER: **DEVELOPER:** Name: \_Ronald Forcier Verizon Wireless c/o Structure Consulting Group Address: 2 North Ridge Road, Hudson, NH 03051 49 Brattle Street, Arlington, MA 02474 Address: 781-860-2446 Telephone #\_\_\_\_\_ Fax #\_\_\_\_\_\_ bskillin@structureconsulting.net Email: SURVEYOR PROJECT ENGINEER Name: Hudson Design Group LLC Hudson Design Group LLC 45 Beechwood Drive, Address: 45 Beechwood Drive, North Andover, MA 01845 Address: North Andover, MA 01845 978-557-5553 Telephone # 978-557-5553 Fax #\_\_\_\_\_ Email:

#### PURPOSE OF PLAN:

Proposed installation of a small cell wireless antenna to be mounted atop existing utility pole #83S/82S in the public right of way. The antenna will provide capacity relief to the nearby towers and boost coverage in the locality of the utility pole.

Plan Routing Date: 121	(FOR TOWN USE) 809 Conditional	Permit Date: 1820			
I have no comments					
Initials)	ief Assessor	Date: <u>12 - 23 - 19</u>			
	Department Review:				
Zoning Engineeri	ng Assessor Police	FirePlanning			
H	ghway Dept.	Consultant			
Fees Paid # 210.40					

Page 3 of 9 Rev Aug 2015 A I imagine Attached BSA 12-K: 7 is not in play, but I thought I'd mention it. I have A call into Bunskillin As to whether this is A 50 install or not. So

## TITLE I THE STATE AND ITS GOVERNMENT

## CHAPTER 12-K DEPLOYMENT OF PERSONAL WIRELESS SERVICE FACILITIES

## Section 12-K:7

#### 12-K:7 Regional Notification. -

I. (a) Any municipality or other authority which receives an application to construct a new tower or to complete a substantial modification to an existing tower or mount which will be visible from any other New Hampshire municipality within a 20-mile radius shall provide written notification of such application and pending action to such other municipality within the 20-mile radius.

(b) This notification shall include sending a letter to the governing body of the municipality within the 20-mile radius detailing the pending action on the application and shall also include publishing a notice in a newspaper customarily used for legal notices by such municipality within the 20-mile radius, presenting a synopsis of the application, providing relevant information concerning the applicable permits required and the date of the next public hearing on the application. Where a public hearing is scheduled by the local governing body, such notice shall be published not less than 7 days nor more than 21 days prior to the public hearing date.

II. (a) Any person, prior to constructing a new tower in any location where no approval is required but which will be visible from any other New Hampshire municipality within a 20-mile radius, shall provide written notification of such planned construction to such other municipality within the 20-mile radius.

(b) This notification shall include sending a letter to the governing body of the municipality within the 20-mile radius detailing the planned construction and shall also include publishing a notice in a newspaper customarily used for legal notices by such municipality within a 20-mile radius, presenting a synopsis of the planned construction.

III. Municipalities within the 20 mile radius described in paragraphs I or II and their residents shall be allowed to comment at any public hearing related to the application. Regional notification and comments from other municipalities or their residents shall not be construed to imply legal standing to challenge any decision.

Source. 2000, 240:1, eff. Aug. 7, 2000. 2013, 267:7, eff. Sept. 22, 2013.

DEC 1 7 2019

TOWN OF HUDSON

#### CONDITIONAL USE PERMIT APPLICATION TOWN OF HUDSON, NEW HAMPSHIRE

Lot # 12LANNING DEPARTMENT Date of Application: 12/16/19 Tax Map # 139 Name of Project: Verizon Wireless Small Cell Utility Pole Attachment - Derry Road General CU# Zoning District: (For Town Use) (For Town Use) ZBA Action: PROPERTY OWNER: **DEVELOPER:** Name: Ronald Forcier Verizon Wireless c/o Structure Consulting Group Address: 2 North Ridge Road, Hudson, NH 03051 49 Brattle Street, Arlington, MA 02474 Address: 781-860-2446 Telephone # Fax #\_\_\_\_\_ bskillin@structureconsulting.net Email: PROJECT ENGINEER SURVEYOR Name: Hudson Design Group LLC Hudson Design Group LLC 45 Beechwood Drive, Address: 45 Beechwood Drive, North Andover, MA 01845 Address: North Andover, MA 01845 978-557-5553 Telephone # 978-557-5553 Fax # Email:

#### PURPOSE OF PLAN:

Proposed installation of a small cell wireless antenna to be mounted atop existing utility pole #83S/82S in the public right of way. The antenna will provide capacity relief to the nearby towers and boost coverage in the locality of the utility pole.

(FOR TOWN USE) Plan Routing Date: 121819 Conditional Permit Date: 18	20			
I have no comments I have comments (attach to form)				
E20 Title: Taun Engineer Date: 1211.	<u>e113</u>			
Department Review:				
Zoning Zoning Engineering Assessor Police Fire Planning				
Highway Dept. Consultant				
Fees Paid #210.40				

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## Dhima, Elvis

From: Sent: To: Subject: Dhima, Elvis Thursday, December 19, 2019 8:23 AM Groth, Brian; Dubowik, Brooke Verizon Antenna Tech. Review

Brian

I have two comments

- 1. Applicant shall provide a structural assessment and certification that the existing pole is capable of handling the additional weight
- 2. No work will be allowed until Item 1 has been provided to the Engineering Department.

Thank you

Ε

Elvis Dhima, P.E. Town Engineer

Town of Hudson, NH 12 School Street Hudson, NH 03051 Phone: (603) 886-6008 Mobile: (603) 318-8286



Town of Hudson NEW HAMPSHIRE 03051

DEC 1 7 2019

## CONDITIONAL USE PERMIT APPLICATION TOWN OF HUDSON, NEW HAMPSHIRE

TOWN OF HUDSON

Date of Application: 12/16/19	Tax Map #139 Lot # 18LANNING DEPA	
Name of Project: Verizon Wireless Small Cell	Utility Pole Attachment - Derry Road	
Zoning District: (For Town Use)	General CU#	
ZBA Action:		
PROPERTY OWNER:	DEVELOPER:	
Name: Ronald Forcier	Verizon Wireless c/o Structure Consulting Group	
Address: 2 North Ridge Road, Hudson, NH 03051	49 Brattle Street, Arlington, MA 02474	
Address:		
Telephone #	781-860-2446	
Fax #		
Email:	bskillin@structureconsulting.net	
PROJECT ENGINEER	<u>SURVEYOR</u>	
Name: Hudson Design Group LLC	Hudson Design Group LLC	
Address: 45 Beechwood Drive,	45 Beechwood Drive,	
Address: North Andover, MA 01845	North Andover, MA 01845	
Telephone # 978-557-5553	978-557-5553	
Fax #		
Email:		

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(FOR TOWN USE) Plan Routing Date: 12-1819 Conditional Pert	nit Date: 1820
X I have no comments I have comments (attac	h to form)
(Initials) Title: Fire chief	Date: 12/24/11
Department Review:	
ZoningEngineeringAssessorPoliceF	ire Planning
Highway Dept.	_ Consultant
Fees Paid #210.40	j

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DEC 1 7 2019

## CONDITIONAL USE PERMIT APPLICATION TOWN OF HUDSON, NEW HAMPSHIRE

	N, NEW HAMPSHIRE	TOWN OF HUDSON
Date of Application: <u>12/16/19</u>	Tax Map # 139 Lot # 12	ANNING DEPARTMENT
Name of Project: Verizon Wireless Small Cell	Utility Pole Attachment - Derry Road	
Zoning District:(For Town Use)	General CU#	
ZBA Action:	······	
PROPERTY OWNER:	DEVELOPER:	
Name: Ronald Forcier	Verizon Wireless c/o Structure Consultir	ng Group
Address: 2 North Ridge Road, Hudson, NH 03051	49 Brattle Street, Arlington, MA 02474	and any other states and the states of the s
Address:		
Telephone #	781-860-2446	
Fax #		Magazytaya di katay
Email:	bskillin@structureconsulting.net	
PROJECT ENGINEER	<b>SURVEYOR</b>	
Name: Hudson Design Group LLC	Hudson Design Group LLC	
Address:45 Beechwood Drive,	45 Beechwood Drive,	
Address: North Andover, MA 01845	North Andover, MA 01845	
Telephone # 978-557-5553	978-557-5553	
Fax #		
Email:		
	E OF PLAN:	
Proposed installation of a small cell wireless antenn the public right of way. The antenna will provide		
are public light of way. The antenna will provide	e capacity relief to the hearby towers	

coverage in the locality of the utility pole.	
Plan Routing Date: 12-1819 Condition	E) ional Permit Date: 1820
XXX I have no comments I have comme	ents (attach to form)
DaB Title: Captain	Date: 01/28/20
Department Revi	
Zoning Engineering Assessor XX Pol	lice Fire Planning
Highway Dept.	Consultant
Fees Paid	<u>.D.40</u>

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DEC 17 2019

TOWN OF HUDSON

#### CONDITIONAL USE PERMIT APPLICATION TOWN OF HUDSON, NEW HAMPSHIRE

Lot # 12LANNING DEPARTMENT Date of Application: 12/16/19 Tax Map # 139 Name of Project: Verizon Wireless Small Cell Utility Pole Attachment - Derry Road General CU# Zoning District: (For Town Use) (For Town Use) ZBA Action: PROPERTY OWNER: DEVELOPER: Name: Ronald Forcier Verizon Wireless c/o Structure Consulting Group Address: 2 North Ridge Road, Hudson, NH 03051 49 Brattle Street, Arlington, MA 02474 Address: 781-860-2446 Telephone #\_\_\_\_\_ Fax #\_\_\_\_\_ bskillin@structureconsulting.net Email: PROJECT ENGINEER SURVEYOR Name: Hudson Design Group LLC Hudson Design Group LLC 45 Beechwood Drive, Address: 45 Beechwood Drive, North Andover, MA 01845 Address: North Andover, MA 01845 978-557-5553 Telephone # 978-557-5553 Fax # Email:

#### PURPOSE OF PLAN:

Proposed installation of a small cell wireless antenna to be mounted atop existing utility pole #83S/82S in the public right of way. The antenna will provide capacity relief to the nearby towers and boost coverage in the locality of the utility pole.

(FOR TOWN USE) Plan Routing Date: 12/18/19 Conditional Permit Date: 18/2	0				
I have no comments I have comments (attach to form)					
BA Title: ZONING ADMIN Date: 12-13-19					
(Initials)					
<u>Department Review</u> : Zoning Engineering Assessor Police Fire Planning					
Highway Dept. Consultant					
Fees Paid #210.40					

Page 3 of 9 Rev Aug 2015

DEC 17 2019

TOWN OF HUDSON

## CONDITIONAL USE PERMIT APPLICATION TOWN OF HUDSON, NEW HAMPSHIRE

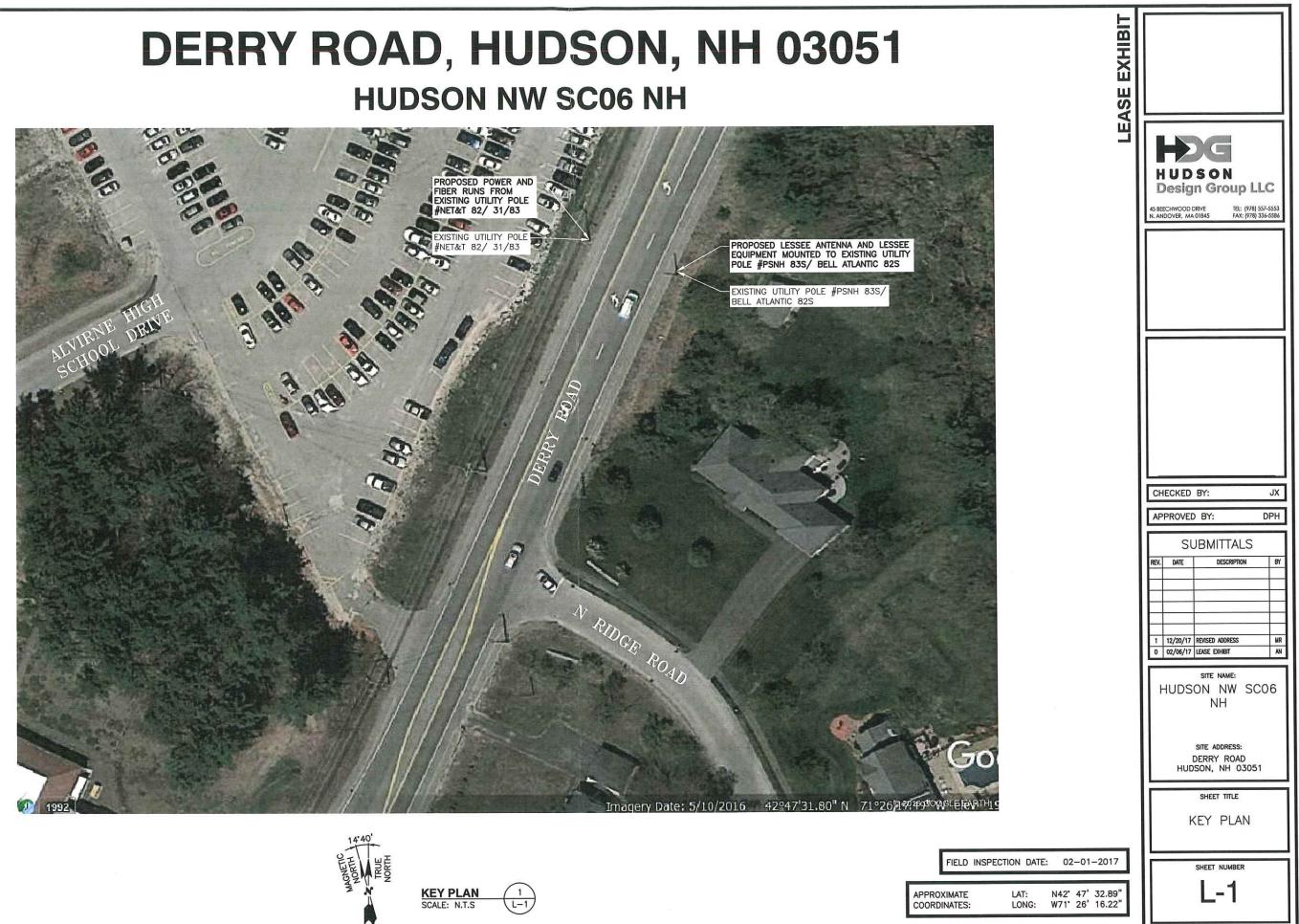
	PLANNING DEPARTMENT
Date of Application: 12/16/19	Tax Map # 139 Lot # 12 LANNING DEPARTMENT
Name of Project: Verizon Wireless Small Cell	Utility Pole Attachment - Derry Road
Zoning District: (For Town Use)	General CU# $0 - 20$
ZBA Action:	
PROPERTY OWNER:	DEVELOPER:
Name: Ronald Forcier	Verizon Wireless c/o Structure Consulting Group
Address: 2 North Ridge Road, Hudson, NH 03051	
Address:	
Telephone #	
Fax #	
Email:	
PROJECT ENGINEER	SURVEYOR
Name: Hudson Design Group LLC	Hudson Design Group LLC
Address: 45 Beechwood Drive,	45 Beechwood Drive,
Address: North Andover, MA 01845	North Andover, MA 01845
Telephone # 978-557-5553	978-557-5553
Fax #	
Email:	

#### PURPOSE OF PLAN:

Proposed installation of a small cell wireless antenna to be mounted atop existing utility pole #83S/82S in the public right of way. The antenna will provide capacity relief to the nearby towers and boost coverage in the locality of the utility pole.

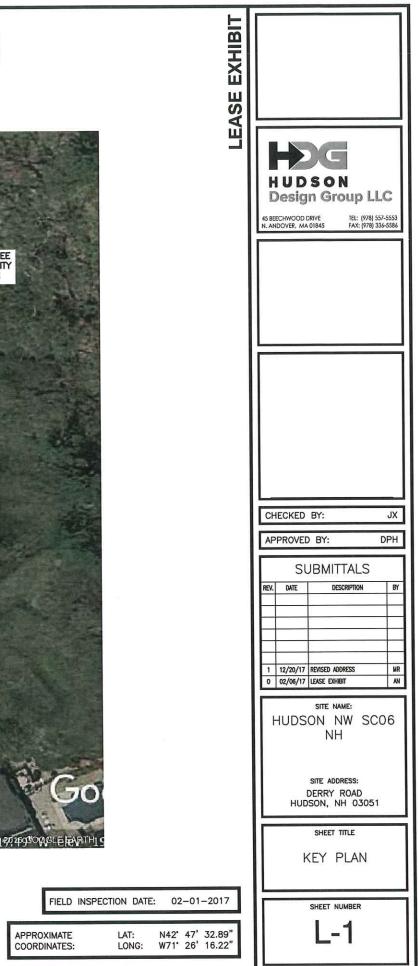
Plan Routing Date: 121819 Conditional Permit Date: 1820			
I have no comments I have comments (attach to form)			
(Initials) Title: P(1) Director Date: 1628/20:20	5		
Department Review:			
ZoningEngineeringAssessorPoliceFirePlanning			
Highway DeptConsultant			
Fees Paid # 210.40			

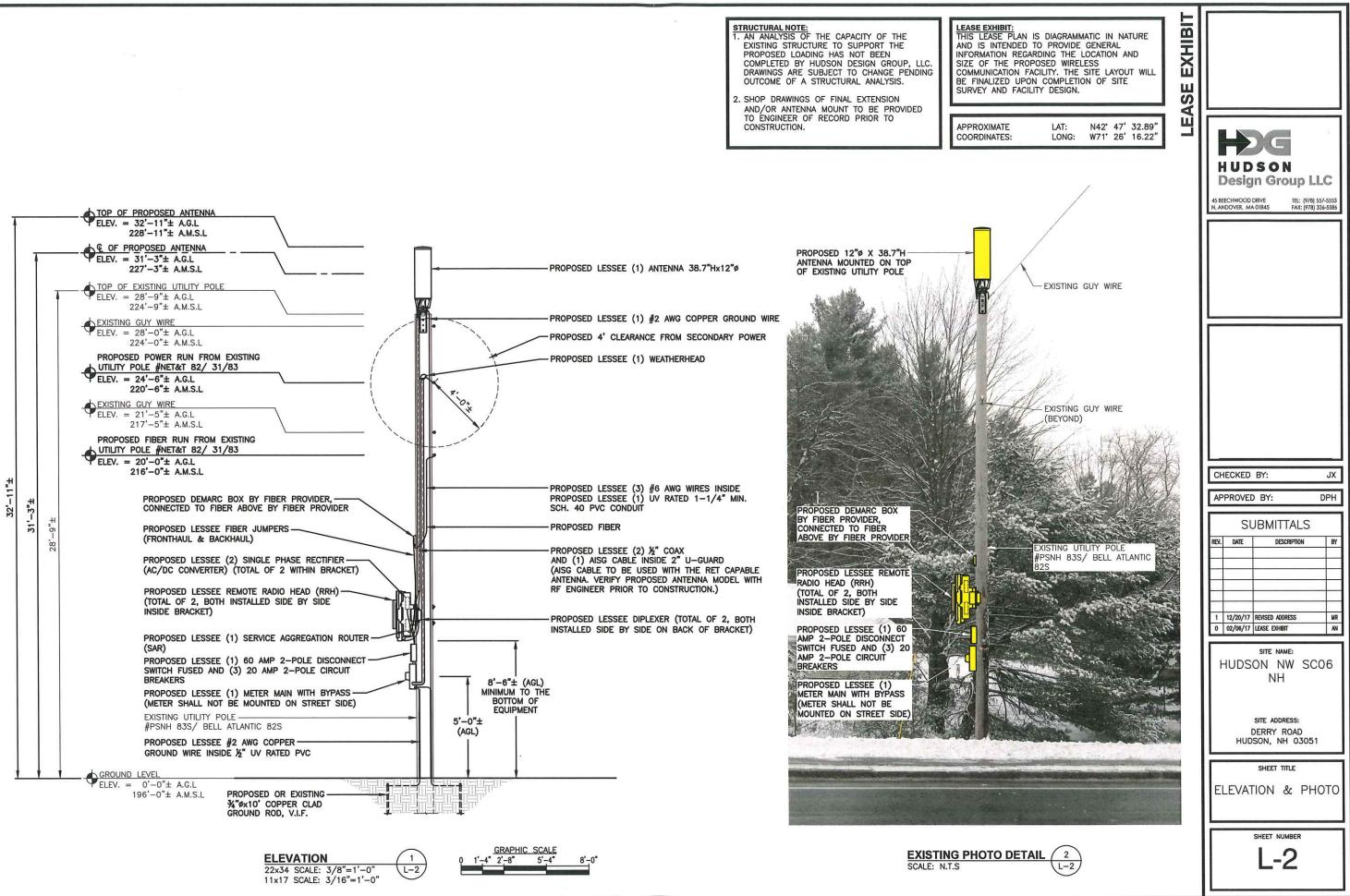
# **HUDSON NW SC06 NH**

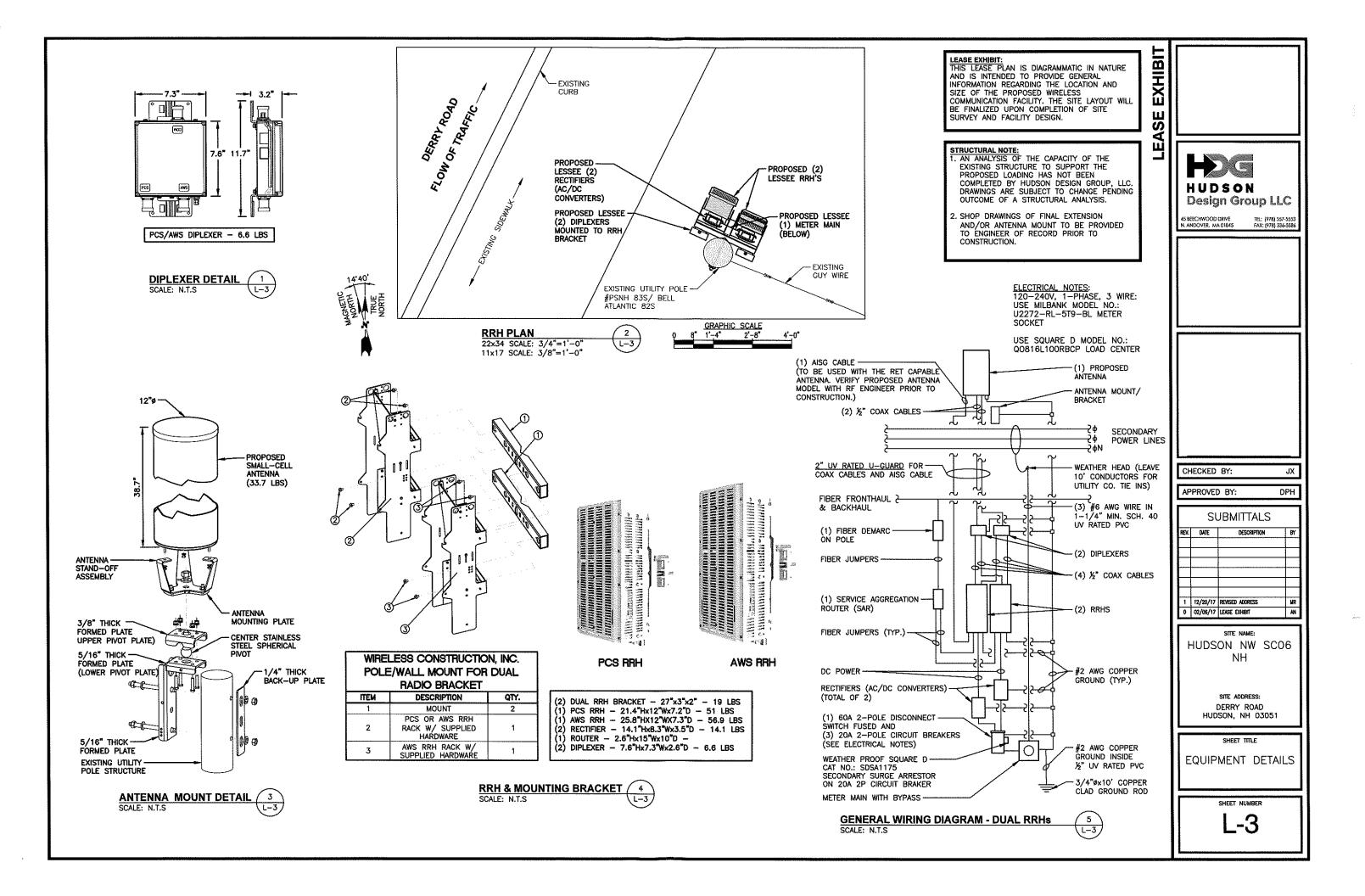












# ADELAIDE ST. SUBDIVISION SUBDIVISION APPLICATION SB #05-19

STAFF REPORT

February 12, 2020

SITE: 12 Adelaide Street, Map 182 Lot 196

ZONING: Town Residential (TR)

PURPOSE OF PLANS: to depict the subdivision of Map 186, Lot 196, into four (4) residential lots.

**PLANS UNDER REVIEW:** Subdivision Plan, Land of Pathway Homes; prepared by: Keach Nordstrom Associates, Inc. 19 Commerce Park North, Suite 3B, Bedford, NH 03110; prepared for: Pathway Homes, Inc., 79 Cortland Drive, Bedford, NH 03110; consisting of 2 sheets and notes 1-14 on Sheet 1; dated November 4, 2019 and last revised December 6, 2019.

## **ATTACHMENTS:**

- A. Town Department comments.
- B. CAP Fee worksheet.

## **APPLICATION TRACKING:**

- December 4, 2019 Application received.
- January 2, 2020 Revised plans received.
- February 12, 2020 Public hearing scheduled.

## **COMMENTS & RECOMMENDATIONS:**

## Paper Streets

The portions of Harwood Street and Oriole Street that appears on this plan are <u>paper</u> <u>streets</u>. These are road dedications made to the Town that have never been accepted or constructed as public roads. A paper street dedicated between 1893 and 1969 that remains unbuilt 20 years after dedication is automatically released from public servitude. These streets were dedicated circa 1910, and therefore, were automatically released from public servitude. Accordingly, the Town does not have the ability to accept these streets as public roads.

Ownership of the land underlying the paper street area is typically absorbed by the abutting parcels, split along the centerline of the paper street. However, all property owners that own lots within the original subdivision still retain full rights to utilize the area of the paper street for access to their land. This creates a situation in which the Town cannot accept the paper street as a public right-of-way in the ordinary sense, but the individual property owners still have full rights in the paper street, including the right to use the paper street for public access to their land. It should be noted that the Town is one of the property owners that has rights in the paper street.

The issues with Hardwood Street are threefold.

First, where should the boundary line between proposed lot 196-3 and existing lot 179 be drawn? The plan shows the applicant's lot claiming what they believe to be their apportionment of both Harwood Street and Oriole Street (rear of parcel). For the purposes of this application, the area of Harwood Street is relevant as it provides the necessary frontage for proposed lot 196-3. Upon advisement of Town Counsel, that issue may be resolved with either a boundary line agreement, or in the absence of an agreement, by court order in an action to <u>quiet title</u>.

A "<u>quiet title</u>" action is a determination of ownership of real estate made by a judge. This action resolves, or "quiets," other claims of ownership.

The second issue involves the rights of others to utilize the area of Harwood Street. A boundary line agreement between the applicant and the owner of lot 179 would not distinguish the rights of others, including the Town, to use the area of Harwood Street. A quiet title action could potentially resolve these issues. A court ruling favorable to the applicant would possibly free Harwood Street from all other claims and rights of access, essentially dissolving the paper street. However, without such action, access rights remain for the other lots originally conceived when the paper street was dedicated.

The third issue, related to the second, involves from what point to measure the side yard setback for proposed lot 196-3. Town Counsel has indicated that "reasonable minds can differ" on this question: does the setback apply from the edge of the Hardwood Street ROW, or from the centerline? Since the Town is among the group of property owners that has rights in the paper street, it can meet the definition of Right-of-Way, meaning the setback applies from the edge of the paper street. This third issue could also be resolved with a favorable ruling to the applicant in a quiet title action.

Town Counsel has indicated that the issues presented by the plan are unique, and accordingly, the Planning Board has some discretion. The issue with locating the common boundary line between proposed lot 196-3 and existing lot 179 ideally should be resolved before acceptance as it presents a threshold concern regarding title ownership, zoning compliance, and the feasibility of lot 196-3 without variance relief from the ZBA. Depending on how the Planning Board assess the other issues, the Planning Board may either accept the plan for review, or equally, decline to accept the plan for review on jurisdictional grounds on the basis that resolution of the private property rights in the area of the paper street have to be resolved before the Planning Board can act on the application. If the Planning Board refuses to accept jurisdiction, a motion and the reasons therefore should be clearly stated.

## Environmental Issues

As noted by the Town Engineer, Town records indicate the presence of asbestos in the area. Accordingly, the Town Engineer has requested that as a condition of approval the applicant employs a contractor who is licensed by NH DES to do asbestos disposal site work, if necessary. Other contaminants may be present as well.

> SP# 05-19 Staff Report Page 2 of 3

## Stormwater Management

The Town Engineer has identified a stormwater management issue at the corner of Adelaide Street and Raymond Street, immediately adjacent to the project area.

If approved, the proposal would likely establish new driveways, which would exacerbate the existing drainage problem. Therefore, the Town Engineer has requested that stormwater design associated with this project ties into the catch basin near the corner of Adelaide Street and Raymond Street.

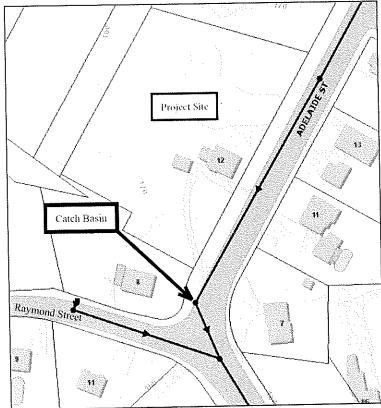


Figure 1- Location of catch basin

## DRAFT MOTIONS

# <u>ACCEPT</u> the <u>subdivision</u> application:

I move to accept the subdivision plan for 12 Adelaide Street, Map 182 Lot 196

Motion by: \_\_\_\_\_Second: \_\_\_\_\_Carried/Failed: \_\_\_\_\_

[If the Board needs more information, move to defer the application and indicate why]

## **<u>CONTINUE</u>** the public hearing to a date certain:

I move to continue the public hearing for the lot line adjustment application and subdivision application for 12 Adelaide Street, Map 182 Lot 196, to date certain, February 26, 2020.

Motion by: \_\_\_\_\_Second: \_\_\_\_\_Carried/Failed: \_\_\_\_\_

[If the Board needs more time to deliberate, move to <u>continue</u> the hearing]

SP# 05-19 Staff Report Page 3 of 3

## APPROVE the subdivision plan application:

I move to approve the subdivision application for Subdivision Plan, Land of Pathway Homes; prepared by: Keach Nordstrom Associates, Inc. 19 Commerce Park North, Suite 3B, Bedford, NH 03110; prepared for: Pathway Homes, Inc., 79 Cortland Drive, Bedford, NH 03110; consisting of 2 sheets and notes 1-14 on Sheet 1; dated November 4, 2019 and last revised December 6, 2019; subject to, and revised per, the following stipulations:

- 1. All stipulations of approval shall be incorporated into the Notice of Decision, which shall be recorded at the HCRD, together with the Plan.
- 2. A cost allocation procedure (CAP) amount of \$5,813 per single-family residential unit shall be paid prior to the issuance of a Certificate of Occupancy for the new house lot.
- All monumentation shall be set or bonded for prior to the Planning Board endorsing the Plan-of-Record.
- Applicant shall employ contractor licensed by NH DES to perform work in asbestos disposal sites, as necessary, if necessary.
- Applicant shall provide drainage improvements to the satisfaction of the Engineering Department and Department of Public Works along the proposed lots and 8 Raymond Street.
- Applicant shall be responsible for street restoration to the satisfaction of the Engineering Department and Department of Public Works along the proposed lots. Milling and overlay form curb to curb could be required, depending on all curb cuts including water, sewer and gas.
- Approval of this plan shall be subject to final engineering review.
- Construction activities involving the proposed undeveloped lots shall be limited to the hours between 7:00 A.M. and 7:00 P.M., Monday through Saturday. No exterior construction activities shall occur on Sunday.

Motion by: \_\_\_\_\_\_Second: \_\_\_\_\_Carried/Failed: \_\_\_\_\_\_.

## Dhima, Elvis

From:Dhima, ElvisSent:Wednesday, December 04, 2019 1:53 PMTo:Dubowik, Brooke; Groth, BrianCc:Forrence, Jess; Lavacchia, James; Twardosky, Jason; Stickney, DoreenaSubject:RE: Adelaide Street Subdivision SB#05-19 Sign Off

Brian

Please find below my comments:

- 1. Our asbestos records indicate that asbestos is present in this area. Applicant shall have a licensed ADS contractor in the state of NH under contract and on site during construction.
- 2. Applicant shall provide plan and profile for all the proposed drivewaγ's sight distances, prior to approval of the lot merger.
- 3. Applicant shall provide drainage improvements to the satisfaction of the Engineering and Public Works Department along Adelaide Street along the proposed lots and 8 Raymond Street.
- 4. Applicant shall be responsible for street restoration to the satisfaction of the Engineering and Public Works Department along Adelaide Street. Milling and overlay from curb to curb could be required, depending on all curb cuts (water, sewer, gas)
- 5. Applicant shall be required to have a pre-construction meeting prior to any construction activity.

Thank you

E

Elvis Dhima, P.E. Town Engineer

Town of Hudson, NH 12 School Street Hudson, NH 03051 Phone: (603) 886-6008 Mobile: (603) 318-8286



From: Dubowik, Brooke

Sent: Wednesday, December 04, 2019 9:28 AM To: Bianchi, Dave <dbianchi@hudsonnh.gov>; Buttrick, Bruce <bbuttrick@hudsonnh.gov>; Buxton, Robert <RBuxton@hudsonnh.gov>; Dhima, Elvis <edhima@hudsonnh.gov>; Forrence, Jess <jforrence@hudsonnh.gov>; Groth, Brian <bgroth@hudsonnh.gov>; Michaud, Jim <jmichaud@hudsonnh.gov> Subject: Adelaide Street Subdivision SB#05-19 Sign Off

Hi all,

Attached is a department sign off request for a new subdivision application for 12 Adelaide Street. Please return page 5 to me at your earliest convenience. If you have any questions, please feel free to contact either myself, or Brian. Thank you,

Date of Application:	11/11/19	Tax Map #:	182	Lot #:	196
Site Address: <u>12 Adel</u>					
Name of Project: Land					
Zoning District: Town	Residence (TR)	General SB#:		(For Town I	Ise Only)
Z.B.A. Action:				(101 10411 0	
PROPERTY OWNER:		DEVELOPE	<u>R:</u>		
Name: Pathway Hom	es, Inc.	Same as C	)wner		
Address: 79 Cortland	Drive		- 14 Martin & Safe (1999 - 199		
Address: Bedford, NH	03110			·····	
Telephone # (239) 707	7-3776				
Email: pathwayhome	snh@yahoo.com				
PROJECT ENGINEER	•	SURVEYO	<u>R:</u>		
Name: Keach-Nords	trom Assoc., Inc.	Keach-No	rdstrom	Assoc., I	n <b>c.</b>
Address: 10 Commer			erce Pa	rk No., Su	lite 3
Address: Bedford, NH			IH 0311	0	
Telephone # (603) 62		(603) 627-	2881		
Email: pchisholm@k		m mdahlber	g@kead	chnordstro	m.com

PURPOSE OF PLAN: The purpose of the plan is to show information for the subdivision of Lot 196 on Adelaide Street in the Town of Hudson, NH, and no other purpose.

	(For Town Use C	Daly)
Routing Date:	Deadline Date:	Meeting Date:
I have no	comments I have com	nments (attach to form)
E20 Title:	Town Engineer	Date:2[4/15
Department:		
Zoning: Enginee	ring: 🖊 Assessor: Police:	Fire: DPW: Consultant:

Page 2 of 8 Subdivision Application - Hudson NH

Date of Application:	11/11/19	Tax Map #:	182	Lot #: _	196
Site Address: 12 Adel					
Name of Project: Land	s of Pathway Home	es, Inc.			
Zoning District: Town	Residence (TR)	General SB#:		(For Town I	Jse Only)
Z.B.A. Action:					
PROPERTY OWNER:		DEVELOPE	<u>ER:</u>		
Name: Pathway Hom	es, Inc.	Same as C	Dwner		
Address: 79 Cortland	Drive				
Address: Bedford, NH	03110	adard the second descent in a subsecond			
Telephone # (239) 707	7-3776				
Email: pathwayhome	snh@yahoo.com				
PROJECT ENGINEER	1 1	SURVEYO	<u>R.</u>		
Name: Keach-Nordst	from Assoc., Inc.	Keach-No	rdstrom	Assoc., I	nc
Address: 10 Commer		3 10 Comm	erce Pa	rk No., Su	lite 3
Address: Bedford, NH		Bedford,	NH 031	0	
Telephone # (603) 62		(603) 627	-2881		
Email: pchisholm@l		m mdahlber	g@kea	chnordstro	om.com

## PURPOSE OF PLAN:

The purpose of the plan is to show information for the subdivision of Lot 196 on Adelaide Street in the Town of Hudson, NH, and no other purpose.

(For Town Use Only) 7 Routing Date: 12-4-14 Deadline Date: Meeting Date:	
I have no comments I have comments (attach to form) Title: Chief Assessor Date: 12-4-49 (Initial)	-
Department: Zoning:Engineering:Assessor:Police:Fire:DPW:Consultant:	

Page 2 of 8 Subdivision Application - Hudson NH

Date of Application:	11/11/19	Tax Map #:	182	Lot #:	196
Site Address: <u>12 Adel</u> a	aide Street				
Name of Project: Land	s of Pathway Home	s, Inc.			
Zoning District: Town	Residence (TR)	General SB#:	•	(For Town T	Jse Only)
Z.B.A. Action:					
PROPERTY OWNER:		DEVELOPE	<u>R:</u>		
Name: Pathway Hom	es, Inc.	Same as O	wner		
Address: 79 Cortland	Drive				
Address: Bedford, NH	03110				<u> </u>
Telephone # (239) 707	-3776				
Email: pathwayhome	snh@yahoo.com				
PROJECT ENGINEER	•	<u>SURVEYO</u> I	<u>R:</u>		
Name: Keach-Nordst	rom Assoc., Inc.	Keach-No	rdstrom	Assoc., li	<u>nc.</u>
Address: 10 Commerce	ce Park No., Suite 3	<u>10 Comme</u>	erce Par	<u>k No., Su</u>	ite 3
Address: Bedford, NH		Bedford, N	IH 0311	0	
Telephone # (603) 62		(603) 627-	2881		
Email: pchisholm@k		n mdahlberg	g@keac	hnordstro	m.com

## PURPOSE OF PLAN:

The purpose of the plan is to show information for the subdivision of Lot 196 on Adelaide Street in the Town of Hudson, NH, and no other purpose.

	(For T	'own Use Only)		
Routing Date:	Deadline Date:		Meeting D	late:
X I have no comments I have comments (attach to form)				rm)
	Fie chief			12/19/19
(Initials)				
Department:			/	
Zoning: Engineer	ring: Assessor: P	olice:Fire	DPW:	_ Consultant:

Page 2 of 8 Subdivision Application - Hudson NH

Date of Application:	11/11/19	Tax Map #:	182	Lot #:	196
Site Address: <u>12 Adel</u>					
Name of Project: Land	s of Pathway Home	es, Inc.			
Zoning District: Town	Residence (TR)	General SB#:		(For Town I	Jse Only)
Z.B.A. Action:			······		
PROPERTY OWNER:		DEVELOPE	<u>R:</u>		
Name: Pathway Hom	ies, Inc.	Same as C	wner		
Address: 79 Cortland					
Address: Bedford, NH	03110				
Telephone # (239) 707	7-3776				
Email: pathwayhome	esnh@yahoo.com		() ( ) /	W 2017 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 -	
PROJECT ENGINEER		<b>SURVEYO</b>	<u>R:</u>		
Name: Keach-Nords	trom Assoc., Inc.	Keach-No	rdstrom	Assoc., I	nc
Address: 10 Commer	ce Park No., Suite	<u>3 10 Comm</u>	erce Pa	rk No., Su	iit <del>e</del> 3
Address: Bedford, Nh		Bedford, N	<u>1H 031 -</u>	0	
Telephone # (603) 62		(603) 627-	-2881		•••••
Email: pchisholm@l		m mdahlber	g@kead	chnordstro	om.com

## PURPOSE OF PLAN:

The purpose of the plan is to show information for the subdivision of Lot 196 on Adelaide Street in the Town of Hudson, NH, and no other purpose.

	(For Toy	n Use Only)			
Routing Date:	Deadline Date:		_ Meeting Da	nte:	
I have no comments I have comments (attach to form)					
BR Title: ZONING ADMINISTRATOR Date: 1-29-20					
(Initials)					
Department: Zoning:Engineer	ing: Assessor: Pol	ice:Fire:	DPW:	Consultant:	

Page 2 of 8 Subdivision Application - Hudson NH

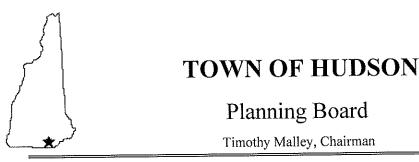
Date of Application:	11/11/19	Tax Map #:	182	Lot #:	196
Site Address: 12 Adel	aide Street				
Name of Project: Land	s of Pathway Home	es, Inc.	an filme and a second		
Zoning District: Town	Residence (TR)	General SB#:		(For Town U	Ise Only)
Z.B.A. Action:				(101 10000 (	,
PROPERTY OWNER:		DEVELOPE	<u>R:</u>		
Name: Pathway Hom	es, Inc.	Same as C	wner		
Address: 79 Cortland	Drive				
Address: Bedford, NH	03110				
Telephone # (239) 707	7-3776		. <u></u>		
Email: pathwayhome	snh@yahoo.com				
PROJECT ENGINEER	•	SURVEYO			
Name: Keach-Nords	rom Assoc., Inc.	Keach-No	rdstrom	Assoc., I	nc.
Address: 10 Commer	ce Park No., Suite	3 <u>10 Comme</u>	erce Pa	rk No., Su	ite 3
Address: Bedford, NH		Bedford, N	VH 031-	0	
Telephone # (603) 62		(603) 627-	2881		
Email: pchisholm@k		m mdahlberg	g@kead	chnordstro	om.com

## PURPOSE OF PLAN:

The purpose of the plan is to show information for the subdivision of Lot 196 on Adelaide Street in the Town of Hudson, NH, and no other purpose.

	(For Town	Use Only)	
Routing Date:	Deadline Date:	Meeting I	Date:
		e comments (attach to fo	orm)
	Captain	Date:	12/04/2019
(Initials)			
Department:			
Zoning: Engineer	ring: Assessor: Polic	e:XX_Fire: DPW: _	Consultant:

Page 2 of 8 Subdivision Application - Hudson NH





12 School Street · Hudson, New Hampshire 03051 · Tel: 603-886-6008 · Fax: 603-594-1142

## **CAP FEE WORKSHEET - 2020**

Date <u>:</u>	<u>02-05-20</u> Zo	one # <u>1</u>	Map/Lot:	<u>182</u> 12 Ad	/196-000 eliade Stree	<del></del>
Project	Name: <u>Adelaide</u>	Street 4-Lot Su	ıbdivision			
Propose	d ITE Use #1:	Single Family	Residential L	ots		
Propose	d Building Area	(square footage	e):	N/A		<u>S.F.</u>
CAP FF	CES: (ONE CHE	CK NEEDED)				
1.	(Bank 09) 2070-701	Traffic Imp	provements	<u>\$</u>	1,835.00	
2.	(Bank 09) 2050-182	Recreation		<u>s</u>	400.00	
3.	(Bank 09) 2080-051	School		<u>\$</u>	3,578.00	
		Total CAP	Fee	<u>\$</u>	5,813.00	

\*\*\* These CAP Fee prices are based on a Single-Family Detached House for the calendar year 2020, and do not apply to the existing Single-Family Detached House\*\*\*

## SUBDIVISION/SITE PLAN WAIVER REQUEST FORM Town of Hudson, New Hampshire

Name of Subdivision/Site Plan: Granite Heights

Street Address: 334 Central Street

I <u>Paul Chisholm (Authorized Agent)</u> hereby request that the Planning Board waive the requirements of item <u>HR 289-37.A.</u> of the Subdivision/Site Plan Checklist in reference to a plan presented by <u>Keach-Nordstrom Associates, Inc.</u> (name of surveyor and engineer) dated <u>December 6, 2019</u> for property tax map(s) <u>161</u> and lot(s) <u>29</u> in the Town of Hudson, NH.

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e. (For Subdivisions) and RSA 674:44, III (e) (For Site-Plans). Without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Subdivision/Site Plan regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

This would be an unnecessary financial hardship for the applicant because they would have to

construct the entire road and not be able to recoup their costs in an acceptable time frame

given the amount of work required for construction. The project viability would be at risk and

the originally approved parcels could be constructed at once.

Reason(s) for granting this waiver, relative to not being contrary to the Spirit and Intent of the Subdivision/Site Plan regulations: (if additional space is needed please attach the appropriate documentation hereto):

The Spirit and Intent of this regulation is to limit growth management to a reasonable degree.

The previous approval is vested and can be constructed all at once. Approving this plan will technically cause the phasing requirement to reset, according to the Town. The Applicant believes the spirit and intent of the regulation will be maintained because of the past history of this parcel.

Signed:

Applicant or Authorized Agent

**Planning Board Action:** 

Waiver Granted

Waiver Not Granted

## WAIVER REQUEST FORM

Name of Subdivision/Site	Plan: Granite H	eights		
Street Address: 334 Ce	ntral Street			
I Paul Chisholm, Pl	E (Authorized Ag	ent)	hereby request that the Planning B	loard
waive the requirements of	titem 289-18(B)	2)	of the Hudson Land Use Regula	tions
in reference to a plan pres	ented by Keach-N	Jordstrom As	sociates, Inc.	
	(name of	surveyor and e	ngineer) dated December 6, 2019	for
property tax map(s)	161 and lot(s	)29	in the Town of Hudson, NH.	

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e., without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Land Use Regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

Special conditions exist on this property that distinguish it from others in the area. There is only one allowable access point to this property due Central Street's 'limited access' designation, the shape of the parcel and direct adjacent surrounding development. No fair and substantial relationship exists between the general public purposes of the ordinance provision and the specific application of the regulation on the property because this waiver was previously granted for a longer, less compliant cul-de-sac. The proposed use is reasonable and allowed by right on this property.

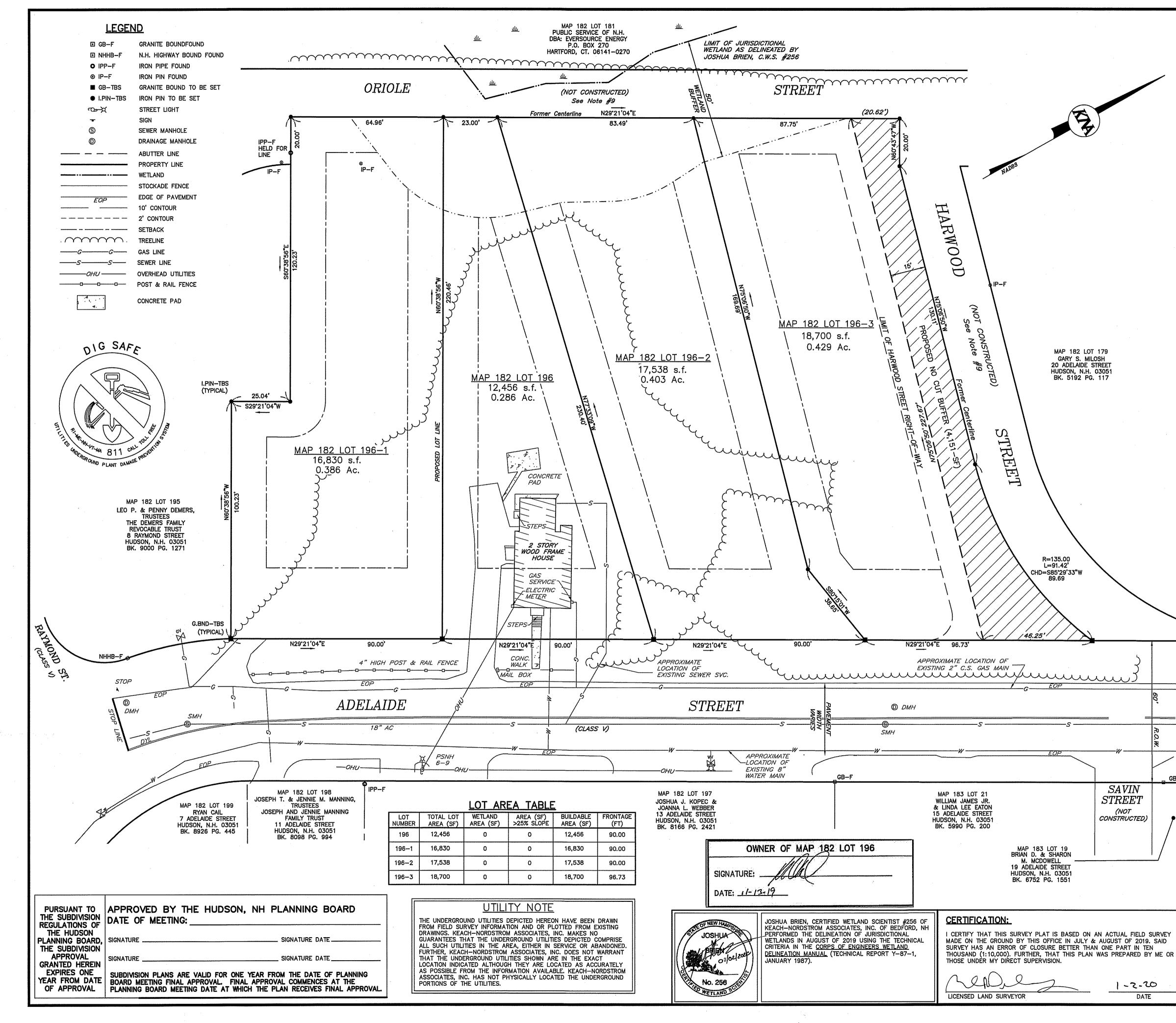
Reason(s) for granting this waiver, relative to not being contrary to the spirit and intent of the Land Use Regulations: (if additional space is needed please attach the appropriate documentation hereto):

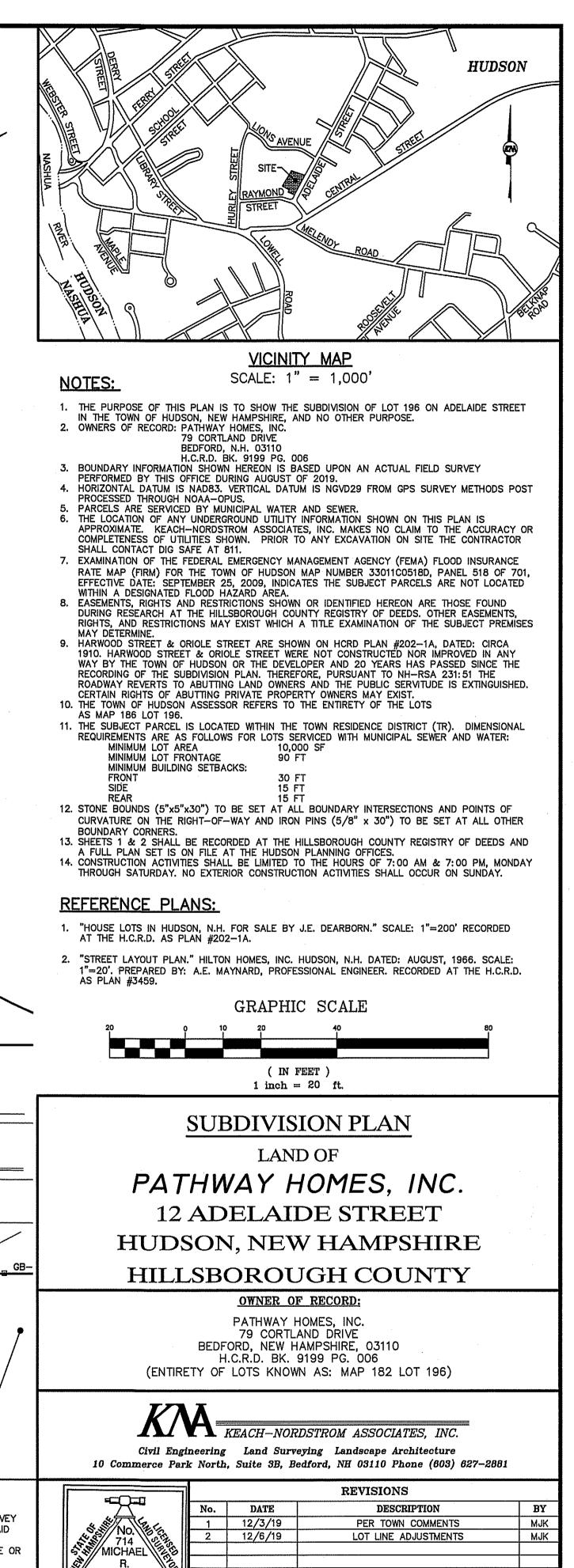
The spirit and intent of regulation is based on safety. There are a number of safety features proposed, including a water main extension and hydrants, that did not exist in the original proposal. Additionally, the proposed cul-de-sac length is shorter than the original approval, which directly meets the spirit and intent of the ordinance. The Applicant reviewed this project with the Fire Chief prior to submission and he was satisfied with the safety features proposed and project.

Signed:

Applicant or Authorized Agent

Page 6 of 8 Subdivision Application - Hudson NH





DAHLBERG

DATE: NOVEMBER 4, 2019

**PROJECT NO: 19-0729-1** 

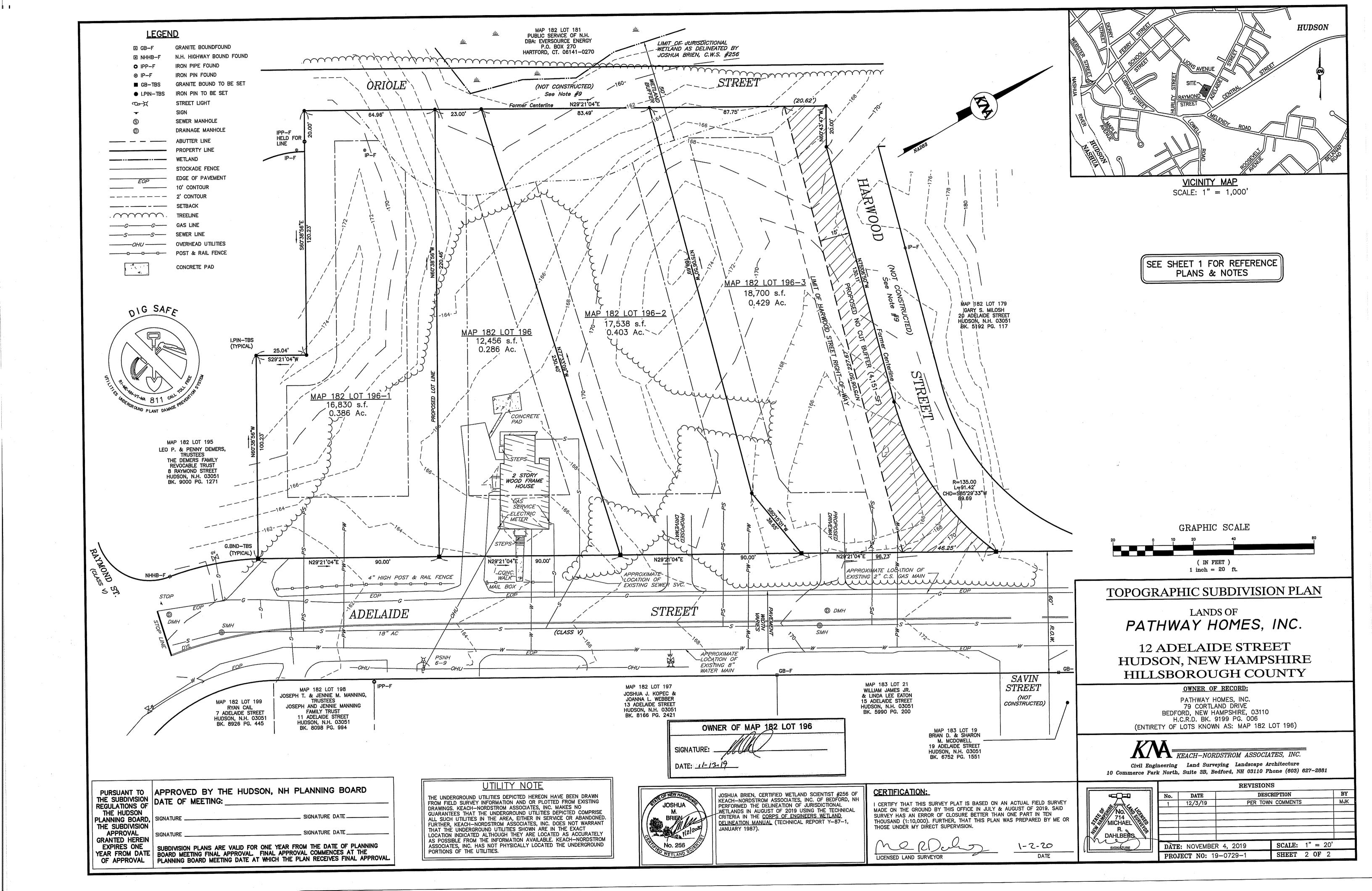
**SCALE:** 1'' = 20'

SHEET 1 OF 2

SIGNATURE

(NOT

1-2-20 DATE



# LAVINIA MILLER LAND, 25 GRIFFIN RD. LOT LINE RELOCATION SB #03-20 &

## **SUBDIVISION APPLICATION SB#04-20**

**STAFF REPORT** February 12, 2020

SITE: 25 Griffin Road, Map 135 Lot 17

ZONING: Residential-2 (R2) & General-1 (G-1)

**PURPOSE OF PLANS:** To relocate a lot line between 15 Griffin Rd. (Map 135 Lot 19) and 25 Griffin Road (Map 135 Lot 17); and to subdivide Lot 17 into six lots.

**PLANS UNDER REVIEW:** Lavinia Miller Land Lot Line Adjustment Plan & Subdivision Plan; prepared by: Keach Nordstrom Associates, Inc. 19 Commerce Park North, Suite 3B, Bedford, NH 03110; prepared for: LaMontagne Builders, Inc., 317 South River Road, Bedford, NH 03110; consisting of 4 sheets and notes 1-14 on Sheet 2; dated October 31, 2019 and last revised January 27, 2020.

Sight Distance Plan; prepared by: Keach Nordstrom Associates, Inc. 19 Commerce Park North, Suite 3B, Bedford, NH 03110; prepared for: LaMontagne Builders, Inc., 317 South River Road, Bedford, NH 03110; consisting of 6 sheets; dated January 14, 2020.

#### **ATTACHMENTS:**

- A. Fuss & O'Neill review letter dated 1/6/2020.
- B. Town department comments.
- C. CAP fee worksheets.

#### **APPLICATION TRACKING:**

- December 17, 2019 Application submitted.
- January 29, 2020 Revised plan set received.
- February 12, 2020 Public hearing scheduled.

#### **COMMENTS & RECOMMENDATIONS:**

#### Zoning

This application seeks to subdivide a lot that is approximately 15 acres in size into 6 lots, which range from 1 to 5+ acres. The application also includes a lot line adjustment to the benefit of 15 Griffin Road, which is to receive 6,640 square feet of land from 24 Griffin Road.

SB #03-20 & #04-20 Staff Report Page 1 of 4

#### **DRAFT MOTIONS**

# (If the Board needs more information, move to defer the application) <u>ACCEPT the lot line adjustment application:</u>

I move to accept the lot line adjustment plan between 15 Griffin Rd. (Map 135 Lot 19) and 25 Griffin Road (Map 135 Lot 17).

Motion by: \_\_\_\_\_\_Second: \_\_\_\_\_Carried/Failed: \_\_\_\_\_

#### ACCEPT the subdivision application:

I move to accept the subdivision plan for 25 Griffin Road (Map 135 Lot 17).

Motion by: \_\_\_\_\_\_ Second: \_\_\_\_\_ Carried/Failed:

# (If the Board needs more time to deliberate, move to continue the hearing) **CONTINUE** the public hearing to a date certain:

I move to continue the public hearing for the lot line adjustment application and subdivision application concerning 15 Griffin Rd. (Map 135 Lot 19) and 25 Griffin Road (Map 135 Lot 17), to date certain, February 26, 2020.

Motion by: \_\_\_\_\_\_Second: \_\_\_\_\_Carried/Failed: \_\_\_\_\_

[ADDITIONAL DRAFT MOTIONS ARE ON THE FOLLOWING PAGE]

FUSS&O'NEILL

January 6, 2020

# RECEIVED

(AI)

JAN 0 9 2020

#### TOWN OF HUDSON PLANNING DEPARTMENT

Mr. Brian Groth Town Planner Town of Hudson 12 School Street Hudson, NH 03051

Re: Town of Hudson Planning Board Review Lavinia Miller Land Subdivision, 25 Griffin Road Tax Map 135, Lot 17; Acct. #1350-940 Reference No. 20030249.1850

Dear Mr. Groth:

Fuss & O'Neill, Inc. has reviewed the first submission of the materials received on December 12, 2019, related to the above-referenced project. Authorization to proceed was received on December 18, 2019. A list of items reviewed is enclosed. The scope of our review is based on the Subdivision Plan Review Codes, Stormwater Codes, Driveway Review Codes, Sewer Use Ordinance 77, Zoning Regulations, and criteria outlined in the CLD Consulting Engineers Proposal approved September 16, 2003, revised September 20, 2004, June 4, 2007, September 3, 2008, and October 2015.

We have included a copy of Fuss & O'Neill's evaluation of the checklist for your reference. We note that several items could not be verified by Fuss & O'Neill and require action by the Town.

The project appears to consist of creating a six (6)-lot residential subdivision out of a 14.973-acre existing lot. The subject lots are proposed to be serviced by private water and sewer. No new roadways are proposed as part of the subdivision.

The following items are noted:

#### 1. Administrative and Subdivision Review Codes (HR 276 & HR 289)

- a. Hudson Regulation 276-11.1.B.(4), 289-27.A.(3). The Planning Board approval block does not match the language required in the regulations and is not located in the lower left hand corner.
- b. HR 276-11.1.B.(18) and 289-27.B.(3). The applicant has not shown proposed topography on the plan set.

F:\Proj2003\030249 Hudson\Site\1850 Lavinia Miller Land Subdivision\1850 Lavina Miller Ltr1 01xx20.Docx © 2019 Fuss & O'Neill, Inc

The Gateway Building 50 Commercial Street Manchester, NH 03101 t 603.668.8223 800.286.2469

www.fando.com

California Connecticut Maine Massachusetts New Hampshire Rhode Island Vermont



Mr. Brian Groth January 6, 2020 Page 2 of 5

- c. HR 276-11.1.B.(21)(b). The applicant has not shown the proposed locations of any houses or driveways on the plan set nor provided alternative proposals for consideration.
- d. HR 276-11.1.B.(22). The applicant has not shown any pavement, gravel or structures on any of the proposed lots so compliance with the Regulation could not be verified.
- e. HR 276-11.1.B.(25). The applicant has not shown any parking or travelways within the subject lots so compliance with the Regulation could not be verified.
- f. HR 276-15. The applicant has not noted the need to call DigSafe nor included their logo and/or phone number on the plan set.
- g. HR 289-4 and HR 289-28.A. The applicant has included a legend for the installation of stone bounds and iron pins on the plans. The applicant should also provide a detail for any stone bounds to be installed.
- h. HR 289-17.C. The applicant should note the angles of the proposed lot lines where they intersect with Griffin Road as several appear to be close to 45 degrees.
- i. HR 289-20.A.(1). The applicant has not provided finish floor elevations on the plan set for any proposed buildings.
- j. HR 289-22. The applicant has not proposed any open spaces on the plan set.
- k. HR 289-26.B.(3). The applicant has shown existing utility easements on the plan set. Copies of these easements were not included in the review package.
- 1. HR 289-27.B.(1). The applicant has not provided an engineer's seal on the plan set.
- m. HR 289-37.A. The applicant has not included any construction phasing information in the subdivision submission.

#### 2. Driveway Review Codes (HR 193-10)

- a. HR 193-10.A. The applicant has not shown the locations of any proposed driveways on the plans.
- b. HR 193-10.J. The applicant has not provided any proposed details for the construction of driveways on the plans.
- c. The applicant has shown an existing stone wall within the Griffin Road right-ofway that blocks potential driveway access to lot 17 outside of the adjacent N.E. Power Easement. The applicant should clarify how access will be provided to this lot and if removal of a portion of the existing stone wall is proposed. This stone wall would be located within the Town Right-of-Way with the proposed Roadway Dedication area.



Mr. Brian Groth January 6, 2020 Page 3 of 5

#### 3. Roadway Design

- a. HR 289-18.A. The applicant has proposed a Roadway Dedication area along the subject lot at York Road. We note that the existing Right-of-Way appears to be 50 feet wide, with the majority of the road centered within that Right-of-Way. The applicant should review this layout with the Town to determine if the additional dedication area is needed at this location.
- b. HR 289-18.A. The applicant has proposed a Roadway Dedication area along the subject lot at Griffin Road. We note that this revised Right-of-Way will create a non-tangential property line at the abutting properties, and include some features within the Right-of-Way which were previously on private property (utility poles, stone wall, etc.). The applicant should confirm with the Town that this Roadway Dedication area and revised property line layout is desired.

#### 4. Drainage Design / Stormwater Management (HR 289-20.C. / Chapter 290)

a. HR 289-20. and 290. The applicant has not proposed any drainage improvements or show any proposed grading for the site. Drainage calculations were not provided in the package received for review.

#### 5. Zoning (HR 334)

- a. HR 334-14 and HR 276-11.1.B.(20). The applicant has not noted any proposed building heights on the plan set.
- b. HR 334-20. The site is located in the General One (G1) and Residential Two (R2) Districts. The plans do not indicate whether single family homes are intended for the subject lots. Both single family homes and two family homes are permitted in these districts.
- c. HR 334-27. We note that the applicant meets the lot size requirements for the district that each lot is located in, including several proposed lots that are located mostly in one district with a small portion in the other district. Those lots meet the district requirement where they mostly reside. We also note that lots 17-3 and 17-4 would be required to be single family lots based on their size within the R2 district per Attachment 4 of the Ordinance.
- d. HR 334-27. Several of the lots include utility easement areas. Copies of these easements were not included in the review package, but they likely include prohibitions on building within these areas. Proposed house locations are not shown on the plans.
- e. HR 334.39. The applicant has shown wetlands on the plans and included their square footage in the lot table on Sheet 2.
- f. HR 334-39. The applicant has shown wetlands buffer areas on the plans. We note that no septic or well head protection areas are located within these buffers.



Mr. Brian Groth January 6, 2020 Page 4 of 5

- g. HR 334-62. The applicant has not proposed any sign installations as a part of this project.
- h. HR 334-83. The site is not located in a designated flood hazard area. The applicant has noted this on the plans.

#### 6. Sewer/Water Design/Conflicts & Utility Design/Conflicts (HR 276-13.E.)

- a. HR 276-13. The applicant has not shown the location of any electric, telephone, television or other utility services on the plan set.
- b. HR 276-13.G. and 289-27.B.(5). The applicant has shown septic locations on the plan set and provided test pit information. A typical design for each system was not provided in the package received for review.
- c. HR 276-13.H. The applicant has shown well radii on each proposed lot. We note that the well radii on lots 17-2, 17-3 and 17-4 overlap onto other properties. The applicant has noted a typical protective well radius easement on lot 17-1 but has not labeled the other locations. A copy of this easement document was not included in the review package.
- d. HR 276-13.H. The applicant has proposed a well radius for lot 17-2 that overlaps onto Griffin Road. We note that having a roadway within a protective well radius could lead to salt contamination of that well from winter road maintenance. We recommend that applicant relocate this well.
- e. HR 276-13.H. The applicant has shown a portion of the 4K area for lot 17-4 within the protective well radius for that lot.
- f. The applicant has shown an old well within proposed lot 17-2. The applicant should note if this well is to remain, be removed, abandoned, etc. and provide details as appropriate.

#### 7. Erosion Control/Wetland Impacts

- a. HR 290-5.K.(20). The applicant has not shown any proposed erosion control measures on the plan set.
- b. HR 290-5.K.(20). The applicant has not provided any erosion control measure details in the plan set.
- c. The Town should reserve the right to require additional erosion control measures.

#### 8. State and Local Permits

- a. The applicant has not noted the need to acquire any permits for this project on the plan set.
- b. Additional local permitting may be required.



Mr. Brian Groth January 6, 2020 Page 5 of 5

#### 9. Other

- a. The applicant has shown an existing cellar hole within proposed lot 17-1. The applicant should include notes/details on the plans about the intended plan to address this feature.
- b. The applicant should note on the plans if any sections of existing stone walls are proposed to be removed.

Please feel free to call if you have any questions.

Very truly yours,

Steven W. Reichert, PE

SWR:mjt

Enclosure

cc: Town of Hudson Engineering Division – File Keach-Nordstrom Associates 10 Commerce Park North, Suite 3B Bedford, NH 03110 pchisholm@keachnordstrom.com



### MEMORANDUM

TO:	File
FROM:	Steven W. Reichert PE Gud
DATE:	January 6, 2020
RE:	Town of Hudson Planning Board Review Lavinia Miller Land Subdivision, 25 Griffin Road Tax Map 135, Lot 1 Sub7 Acct. #1350-940 Fuss & O'Neill Reference No. 20030249.1850

The following list itemizes the set of documents reviewed related to the Lavinia Miller Land Site Plan, located at 25 Griffin Road, in Hudson, New Hampshire.

- Email correspondence between the Town of Hudson and Fuss & O'Neill, dated between December 13, 2019 and January 3, 2020.
- Letter of Transmittal received by Fuss & O'Neill from Keach-Nordstrom Associates, Inc., dated December 11, 2019 and received on December 12, 2019, and a Letter of Transmittal addressed to Town of Hudson 'Neill from Keach-Nordstrom Associates, Inc. dated December 11, 2019, including the following:
  - 1. Copy of *Letter of Intent*, prepared by Keach-Nordstrom Associates, Inc., dated December 11, 2019.
  - 2. Copy of *Subdivision Application*, to the Town of Hudson, New Hampshire for Map 135, Lot 17, dated November 8, 2019.
  - 3. Copy of *Lavinia Miller Land Subdivision Plan*, Map 135, Lot 17, 25 Griffin Road, Hudson, New Hampshire, prepared by Keach-Nordstrom Associates, Inc., dated October 31, 2019, unless otherwise noted, and including the following:
    - a. Overview, Sheet 1 of 3.
    - b. Residential Subdivision Plan, Sheet 2 of 3.
    - c. Topographic Subdivision Plan, Sheet 3 of 3.
    - d. Test Pit Data, Sheet 1 of 1.

#### SWR:mjt

cc: Brian Groth – Town of Hudson Town of Hudson Engineering Division – File

# APPLICATION FOR SUBDIVISION PLAN REVIEW TOWN OF HUDSON, NEW HAMPSHIRE

Twenty-one (21) days prior to Planning Board Meeting, a complete <u>subdivision plan</u> to include all supporting materials/documents must be submitted in final form. The subdivision plan shall comply with the following specifications/requirements.

Applicant hittals $\begin{array}{c c} Applicant \\ Initials \\ a) \\ c \\ $	Applicant       Staff         Initials       a)       Submission of eight (8) full sets of Site Plans       Staff         Initials       b)       Submission of eight (8) full sets of Site Plans       Staff         (sheet size: 22" x 34") shall be submitted at the time of application       filing, followed by the submission of seventeen (17) 11" x 17" plan         sets (revised if applicable) to the Community Development       Department no later than 10:00 AM Tuesday the week prior to         the scheduled public hearingconceptual review date       b)       Seventeen (17) subdivision narrative, describing the project         (c)       Plan scale at not less the one inch equals fifty feet (1" = 50")       Fuss & ONeilWSWR         (d)       Locus plan with 1,000" minimun radius of site to surrounding are Fuss & ONeilWSWR       Fuss & ONeilWSWR         (f)       Plan date by day/month/year       Fuss & ONeilWSWR         (f)       Planning Board approval block       Fuss & ONeilWSWR         (g)       Planning Board approval block       Fuss & ONeilWSWR         (g)       Names and addresses of property owner(s) and signature(s)       Fuss & ONeilWSWR         (h)       Noveh norise fuel on the plan       Fuss & ONeilWSWR	
	North point shall be inscribed on the plan Property lines: exact locations and dimensions Fuss & ONeil/SWR Acreage/sq. ft. of entire subdivision Proposed lots, with lot numbers and area of each lot. Note: Fuss & ONeil/SWR each proposed lots shall be listed on the plan, in chart form, indicating in square feet/acreage the total lot area, wetland, slope area greater than 25% and total net contiguous useable upland area.	5 5 5 5

Lavinia Miller Land Subdivision Plan Town of Hudson CLD Reference No. 03-0249.1850 Reviewed January 6, 2019

a) One full size set received by Fuss & O'Neill.

b) A narrative was not provided with the package received for review.

e) Month/day/year

g) Approval block language doesn't match Regulation.

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Page 1 of 4

-	<ul> <li>Unable to verify 5-day update criteria.</li> </ul>	o) Most features not shown.			q) None listed.	-	s) No waivers noted.						No proposed grading shown.					aa) None proposed.	ab) None proposed.		
	(u	(0			<u>(</u> р		s)				1	ĥ	5				z)	<b>a</b> a	ab		
Staff Initials	Certified list of names and addresses of bordering abutters, Fuss & ONeillSWR shown on Tax Assessor's records not more than five (5) days	prior to application date to be listed out plath. Location of all structures, roads, wetlands, hydrants, wells, septic systems, 4k reserve area, floodways/floodplains,	driveways, travel areas, parking areas, natural features within 200 feet of the tract.	Locations of existing and proposed permanent monuments Fuss & ONeil/SWR and benchmarks within 200 feet of the tract.	Pertinent highway projects	Assessor's Map and Lot number(s)	Waiver application form shall be submitted with the subdivision	application, note on plan listing waivers requested/granted, and	all waivers granted to the subdivision regulations shall be listed			Stormwater drainage plan	Topographical contours at 2-foot intervals existing and proposed	Utilities: existing and proposed	Building and wetland setback lines	Rights of way, existing and proposed			ab) Typical roadway cross-section, road profile, stationing and	curve data, etc.	
Applicant Initials	(u	(0		(d	(b	r.	s)			-	[]	(n	() ()	(m	x	Х	(Z	aa	ab		

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Page 2 of 4

<ul><li>ac) Copies of protective well easements were not received for review.</li><li>ad) See other comments.</li></ul>	<ul> <li>ah) Shpwn on plan. Copies not received as part of review package.</li> <li>ai) Engineer stamp not provided.</li> <li>ak) None stated.</li> <li>an) Not provided.</li> </ul>
Staff Initials Fuss & ONeil/SWR Fuss & ONeil/SWR Fuss & ONeil/SWR	Fuss & O'Neil/SWR
	<ul> <li>signature to the respective plan.</li> <li>ah) Easements, existing and proposed</li> <li>ai) State of New Hampshire engineer's seal, signature, surveyor's seal, and signature</li> <li>aj) Error of closure (1 in 10,000 or better)</li> <li>ak) Drafting errors/omissions</li> <li>al) Note outlining phasing schedule</li> <li>am) Narrative description starting the purpose, location, long range plans impacts on traffic, schools and utilities</li> <li>an) Aerial photograph of site and area within 200 feet of the subdivision parcel</li> <li>ao) Fiscal impact study</li> <li>apporting data</li> </ul>
Applicant Initials a a a a a	

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Page 3 of 4

Staff Initials				83-B er AC	Fuss & O'NeilVSWR	1 1	
	Copies of any proposed or existing easements, covenants, deed restrictions, right of way agreements or other similar documents Copy of applicable Town, State, Federal approval/permits to include but not limited to the following:		tic)	<ul> <li>shoreland protection certification in accordance with RSA483-B</li> <li>if applicable, review application with Lower Merrimack River Local Advisory Committee (LMRLAC) and attach LMRLAC project comments hereto.</li> </ul>	coded bar chart) s shall clearly delineate d (new) lot lines	of the Planning Board.	
	Copies of any proposed or existing easements, covenants, de restrictions, right of way agreements or other similar documer Copy of applicable Town, State, Federal approval/permits to include but not limited to the following:	<ul> <li>sewer application</li> <li>flood plain permit</li> <li>wetlands special exception</li> <li>variance</li> </ul>	<ul> <li>erosion control permit (149:8a)</li> <li>WSPCC subdivision approval (septic)</li> <li>dredge and fill permit</li> </ul>	f applicable, review application in Local Advisory Committee (LMR) project comments hereto.	at) Off-streagreement(s) au) Presentation plan (colored, with color coded bar chart) av) Fees paid to clerk aw) Plans that include relocation of lot lines shall clearly delineate the former (old) lot lines from proposed (new) lot lines	Any and all items may be waived under the purview of the Planning Board.	
		<ul> <li>sewer application</li> <li>flood plain permit</li> <li>wetlands special e</li> <li>variance</li> </ul>	<ul> <li>erosion control permi</li> <li>WSPCC subdivision</li> <li>dredge and fill permit</li> <li>curb curd/drivewav per</li> </ul>	- shoreland r - if applicabl Local Adv project co	at) Off-site agreement(s) au) Presentation plan (cc av) Fees paid to clerk aw) Plans that include rel the former (old) lot l	til items may be w	
Applicant Initials	ar) as)				33 33 31 39 39 31 39 39 31	Any and a	

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ar) Not provided.

as) None provided or noted as required.

at) None provided.au) No prosentation plan received, require Town action.av) Requires Town action.

Page 4 of 4



# **TOWN OF HUDSON**

FIRE DEPARTMENT

39 FERRY STREET, HUDSON, NEW HAMPSHIRE 03051



Emergency 911 603-886-6021 603-594-1164

Robert M. Buxton Chief of Department

Brian Groth TO: Town Planner

**Business** 

Fax

- Robert M. Buxton FR: Fire Chief
- DT: December 24, 2019
- 25 Griffin Road (Map 135 / Lot 17) RE:

The following is a list of site plan concerns for this project. This review was completed utilizing plans submitted by Keach-Nordstrom Associates dated October 31, 2019.

1. Addressing will need to be obtained from the Hudson Fire Department prior to a building permit being issued.

\*\*The following life safety and fire protection concerns provided are for informational purposes to the applicant and Planning Board for this project. Final determinations on these issues occur after further review of the project.

- A. A blasting permit will be required for any blasting on the site in accordance with the Hudson Town Code, Chapter 202.
- B. All storage either inside or outside of hazardous materials, liquids or chemicals presenting a physical or health hazard as listed in NFPA 1, Section 20.15.2.2 shall be in accordance with the applicable portions of the following:

NFPA 13, Standard for the Installation of Sprinkler Systems NFPA 30, Flammable and Combustible Liquids Code NFPA 30B, Code for the Manufacture and Storage of Aerosol Products NFPA 230, Standard for the Fire Protection of Storage NFPA 430, Code for the Storage of Liquid and Solid Oxidizers NFPA 432, Code for the Storage of Organic Peroxide Formulations NFPA 434, Code for the Storage of Pesticides

These are all of the Hudson Fire Department's concerns as of this time. If you have any further questions, please call me directly and thank you for your continued cooperation.

cc: Project Engineer

File

#### Dhima, Elvis

From: Sent: To: Subject: Dhima, Elvis Thursday, December 19, 2019 8:34 AM Groth, Brian; Dubowik, Brooke Lavinia Miller Land Tech. Review

#### Brian

I have two comments

- 1. Applicant shall provide driveway sight distance plan and profile for the proposed lots
- 2. Applicant shall provide driveway plan and profile for the proposed lots

Thank you

Ε

Elvis Dhima, P.E. Town Engineer

Town of Hudson, NH 12 School Street Hudson, NH 03051 Phone: (603) 886-6008 Mobile: (603) 318-8286



Town of Hudson NEW HAMPSHIRE 03051

## TOWN OF HUDSON

# Land Use Division



12 School Street ' Hudson, New Hampshire 03051 ' Tei: 603-886-6008 ' Fax: 603-594-1142

#### Subdivision Plan Review Zoning Review/Comments Bly 1-29-20

January 28, 2020

Re: Map 135 Lot 17 Address: 25 Griffin Rd Zoning district(s): Residential Two (R-2) & General One (G-1) Proposed 6 lot subdivision

Based on submitted plan dated Oct 31, 2019

1) This proposal creates three (3) parcels with split zoning districts within each parcel: Lot 17-2, Lot 17-1 and 17-5. I would suggest a configuration that (if possible) utilizes zoning district boundaries as parcel boundaries to avoid multiple zoning districts on a parcel, and frontage determination/compliance.

Sincerely,

Bruce Buttrick, MCP Zoning Administrator/Code Enforcement Officer (603) 816-1275 bbuttrick@hudsonnh.gov

cc: Public Folder B. Groth - Town Planner file

Tax Map #:135Lot #:17
General SB#: (For Town Use Only)
DEVELOPER:
LaMontagne Builders, Inc.
317 South River Road
Bedford, NH 03110
(603) 668-7933
SURVEYOR:
Keach-Nordstrom Assoc., Inc.
te 3 10 Commerce Park No., Suite 3
Bedford, NH 03110
(603) 627-2881
com mdahlberg@keachnordstrom.com

#### SUBDIVISION APPLICATION

#### PURPOSE OF PLAN:

The purpose of the plan is to depict the subdivision of existing Lot 17 into six separate parcels.

(For Town Use Only)								
Routing Date:	Deadline Date;	Meeting Date:						
Ib	ave no comments I have com	mments (attach to form)						
<u>3</u> P (Initials)	Title: ZONING LOWINGTE	0-ton Date: 1-29-20						
Department: Zoning:E	ngineering: Assessor: Police:	Fire: DPW: Consultant:						

Page 2 of 8 Subdivision Application - Hudson NH

Date of Application:	11/8/19	Tax Map #:	135	Lot #:	17		
Site Address: 25 Griffin I							
Name of Project: Lavinia	Miller Land						
Zoning District: Resident General-	ial-2 (R2) & 1 (G1)	General SB#:		(For Town U	(se Only)		
Z.B.A. Action:	·						
PROPERTY OWNER:		DEVELOPE	<u>R:</u>				
Name: Lavinia Miller	LaMontagn	LaMontagne Builders, Inc.					
Address: 50 Griffin Road		317 South	River Ro	oad			
Address: Hudson, NH 03	Bedford, N	Bedford, NH 03110					
Telephone #		(603) 668-7	7933				
Email:							
PROJECT ENGINEER:		SURVEYOR	<u>L:</u>				
Name: Keach-Nordstror	n Assoc., Inc.	Keach-Nor	dstrom	Assoc., Ir	1C.		
Address: 10 Commerce	Park No., Suite 3	10 Comme	rce Parl	k No., Sui	te 3		
Address: Bedford, NH 0	3110	Bedford, N	H 0311	0			
Telephone # (603) 627-2	(603) 627-	(603) 627-2881					
Email: pchisholm@kea		n mdahlberg	@keacl	hnordstro	m.com		

#### SUBDIVISION APPLICATION

#### PURPOSE OF PLAN:

The purpose of the plan is to depict the subdivision of existing Lot 17 into six separate parcels.

(For Town Use Only)								
Routing Date:	De	adline Date:	Meeting D	ate:				
Ih	ave no comments	I have con	ments (attach to fo	rm)				
(E 21) (Initials)	Title: Journ	Engenner	Date:	121(8119				
Department:	/							
Zoning: E	ngineering: Ass	essor: Police:	_Fire: DPW:	_ Consultant:				

Page 2 of 8 Subdivision Application - Hudson NH

Date of Application:	11/8/19	Tax Map #:	135	Lot #:	17		
Site Address: 25 Griffi	n Road		<u> </u>		·····		
Name of Project: Lavin	a Miller Land				·····		
Zoning District: Reside Genera	ntial-2 (R2) & al-1 (G1)	General SB#:	/	(For Town U	(se Only)		
Z.B.A. Action:							
PROPERTY OWNER:		DEVELOPE	<u>R;</u>				
Name: <u>Lavinia Miller</u>		LaMontagr	re Build	ers, Inc.			
Address: 50 Griffin Ro	ad	317 South	River R	oad			
Address: Hudson, NH	03051	Bedford, NH 03110					
Telephone #		(603) 668-	7933				
Email:							
PROJECT ENGINEER:		<u>SURVEYOI</u>	<u> </u>				
Name: Keach-Nordstr	om Assoc., Inc.	Keach-No	rdstrom	Assoc., Ir	10.		
Address: 10 Commerc	e Park No., Suite 3	10 Comme	orce Par	k No., Sui	ite 3		
Address: Bedford, NH		Bedford, N	JH 0311	0			
Telephone # (603) 627		(603) 627-	2881				
Email: pchisholm@ke			j@keac	<u>hnordstro</u>	m.com		

#### SUBDIVISION APPLICATION

<u>PURPOSE OF PLAN:</u> The purpose of the plan is to depict the subdivision of existing Lot 17 into six separate parcels.

(For Town Use Only)								
Routing Date:	Deadline Da	te:		Meeting D	ate:			
I have no comments $\cancel{X}$ I have comments (attach to form)								
Title:	File Chael			Date:	12/00/19			
Department:					4 i			
Zoning: Engineeri	ng: Assessor:	_ Police:	Fire:	_ DPW:	_ Consultant:			

Page 2 of 8 Subdivision Application - Hudson NH

#### SUBDIVISION APPLICATION

Date of Application:	11/8/19	Tax Map #:	135	Lot #:	17		
Site Address: 25 Griffi	n Road						
Name of Project: Lavin	ia Miller Land						
Zoning District: <u>Reside</u> Genera	ntial-2 (R2) & al-1 (G1)	General SB#:	<u></u>	(For Town U	Jse Only)		
Z.B.A. Action:							
PROPERTY OWNER:		DEVELOPE	<u>R:</u>				
Name: Lavinia Miller		LaMontagn	e Builde	ers, Inc.	nana manana di kina 3 1999 pana mina kilan A		
Address: 50 Griffin Ro	ad	317 South I	River Ro	oad			
Address: Hudson, NH	03051	Bedford, NI	H 03110	)			
Telephone #	(603) 668-7	(603) 668-7933					
Email:							
PROJECT ENGINEER:		<b>SURVEYOR</b>	<u>:</u>				
Name: Keach-Nordstr	om Assoc., Inc.	Keach-Nor	dstrom	Assoc., li	nc.		
Address: 10 Commerce	e Park No., Suite 3	10 Comme	rce Parl	k No., Sui	ite 3		
Address: Bedford, NH	03110	Bedford, N	H 0311	0			
Telephone # (603) 627	(603) 627-2	(603) 627-2881					
Email: pchisholm@ke	achnordstrom.com	n mdahlberg	@keac	nnordstro	m.com		

PURPOSE OF PLAN: The purpose of the plan is to depict the subdivision of existing Lot 17 into six separate parcels.

<u> </u>	(For Town Use	Only)	
Routing Date:	Deadline Date:	Meeting Date	
I have no c	omments I have co	mments (attach to form)	<i>.</i>
(Initials)	P.W. Directo	Date:	28/2020
Department:			
Zoning: Engineeri	ng: Assessor: Police:	Fire: DPW: C	onsultant:

Page 2 of 8 Subdivision Application - Hudson NH

	*22. #22/*				
Date of Application:	11/8/19	Tax Map #:	135	Lot #: _	17
Site Address: 25 Griffin	Road				
Name of Project: Lavinia	a Miller Land				
Zoning District: Resider Genera	<u>1tial-2 (R2) &amp;</u> I-1 (G1)	General SB#:		(For Town U	Jsc Only)
Z.B.A. Action:					<u></u>
PROPERTY OWNER:		DEVELOPE	<u>R:</u>		
Name: Lavinia Miller		LaMontagr	ne Build	ers, Inc.	
Address: 50 Griffin Roa	ad	317 South	River R	oad	
Address: Hudson, NH 03051		Bedford, N	Bedford, NH 03110		
Telephone #		(603) 668-	(603) 668-7933		
Email:					
PROJECT ENGINEER:		<u>SURVEYO</u>	<u>R:</u>		
Name: Keach-Nordstr	om Assoc., Inc.	Keach-No	rdstrom	Assoc., I	nc
Address: 10 Commerce	e Park No., Suite 3	10 Comme	erce Par	k No., Su	ite 3
Address: Bedford, NH		Bedford, N	JH 0311	0	
Telephone # (603) 627		(603) 627-	2881		
Email: pchisholm@keachnordstrom.com		mdahlber	mdahlberg@keachnordstrom.com		

#### SUBDIVISION APPLICATION

#### PURPOSE OF PLAN:

The purpose of the plan is to depict the subdivision of existing Lot 17 into six separate parcels.

	(For Town Use	Only)
Routing Date:	Deadline Date:	Meeting Date:
I have no c	omments I have co	mments (attach to form)
Title: (	Wet Assessor	Date: <u>12 - 23 - 9</u>
(Iņitials)		
Department:		
Zoning: Engineeri	ng: Assessor: Police:	_Fire: DPW: Consultant:

Page 2 of 8 Subdivision Application - Hudson NH



# **TOWN OF HUDSON**

Planning Board



Timothy Malley, Chairman

12 School Street · Hudson, New Hampshire 03051 · Tel: 603-886-6008 · Fax: 603-594-1142

#### **CAP FEE WORKSHEET - 2020**

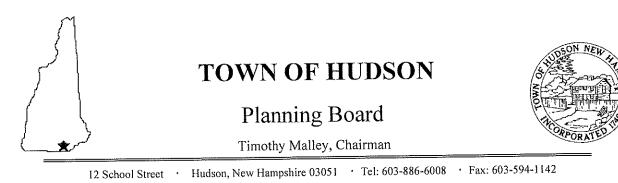
Date:	02-05-20	Zone #	1	Map/Lot: _	135/017-000	
				_	25 Griffin Road	
Project	t Name: <u>Lavi</u>	<u>nia Miller -</u>	<u>Griffin R</u>	load 6-Lot Su	bdivision	
Propos	ed ITE Use #	1: <u>Single</u>	Family I	Residential Lo	ots	
Propos	ed Building A	Area (square	footage)	•	N/A	<u>S.F.</u>
CAP F	EES: (ONE C	CHECK NEI	EDED)			
1	(Bank	: 09)				

1.	(Bank 09) 2070-701	Traffic Improvements	<u>\$</u>	1,835.00
2.	(Bank 09) 2050-182	Recreation	<u>\$</u>	400.00
3.	(Bank 09) 2080-051	School	<u>\$</u>	3,578.00
		Total CAP Fee	<u>\$</u>	5,813.00

\*\*\* These CAP Fee prices are based on a Single-Family Detached House for the calendar year 2020. \*\*\*

5,298.00

\$

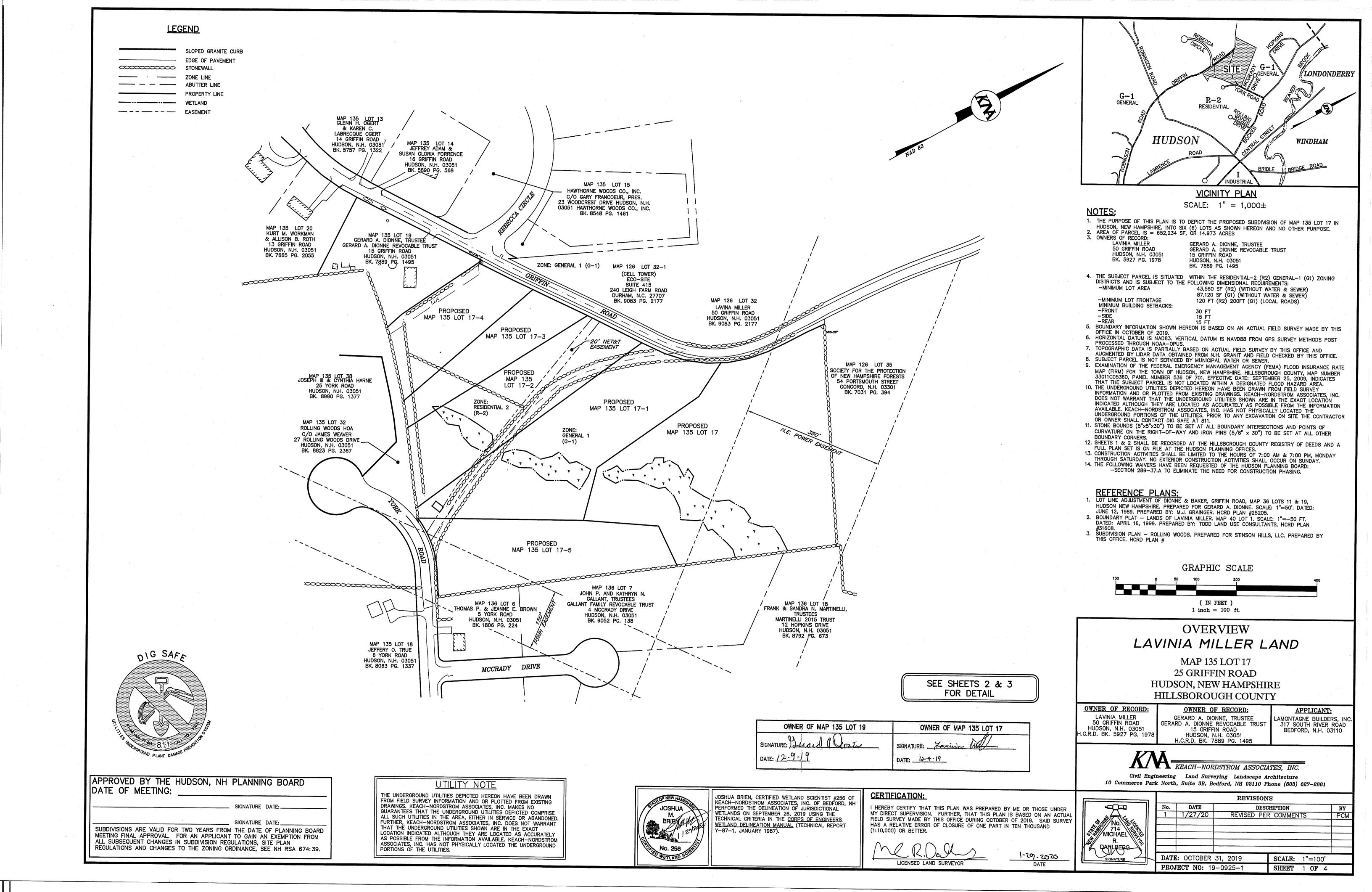


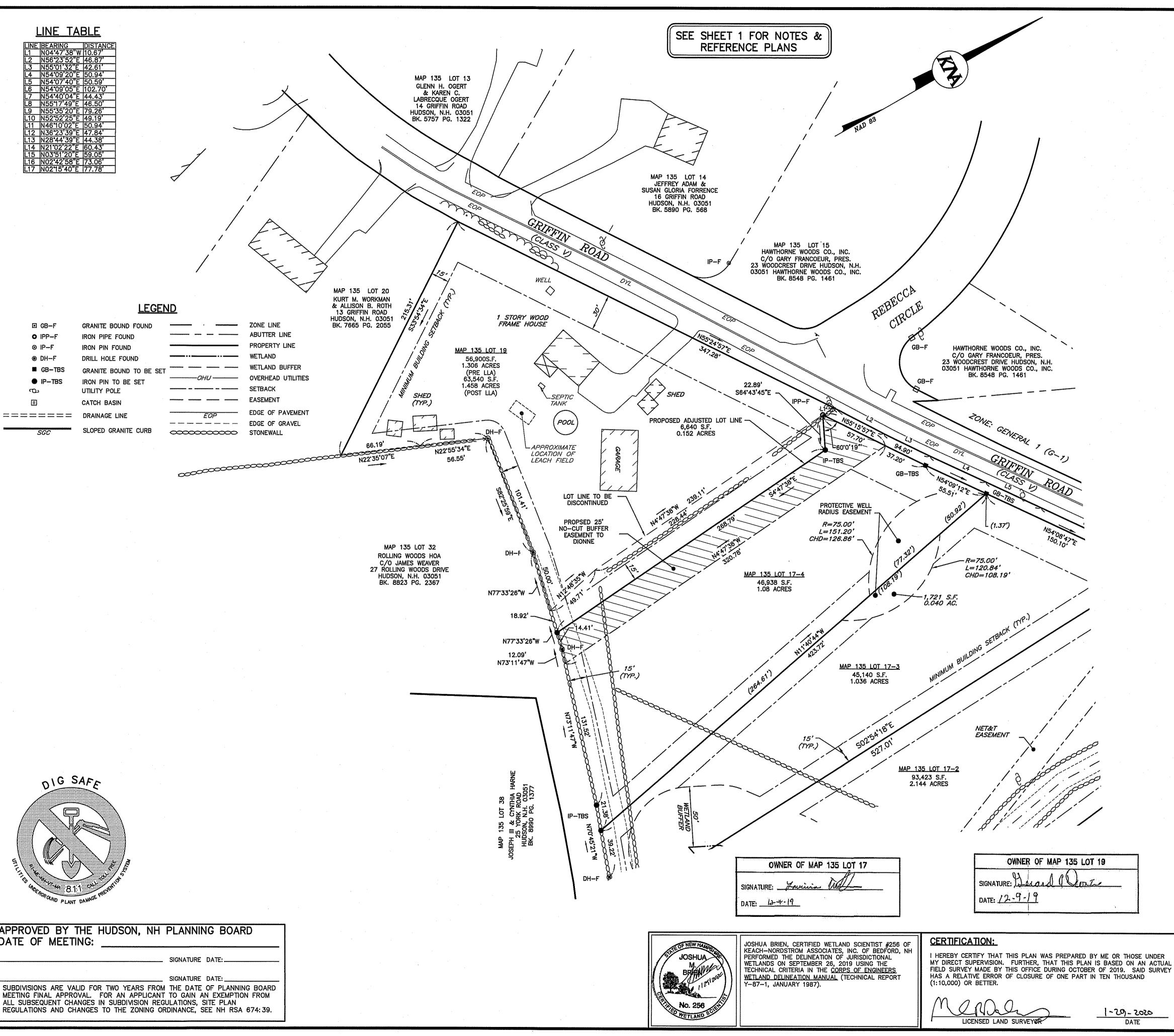
#### CAP FEE WORKSHEET - 2020

Date <u>:</u>	<u>02-05-20</u> Zor	ne # Map	/Lot: <u>135/017</u> 25 Griffir	7 <u>-000</u> 1 Road
Project N	lame: <u>Lavinia M</u>	iller - Griffin Road 6-		
Proposed	I ITE Use #1:	Two Family (Duplex)	<b>Residential Lots</b>	
Proposed	l Building Area (s	quare footage):	N/A	S.F.
CAP FE	ES: (ONE CHEC (Bank 09) 2070-701	K NEEDED) Traffic Improveme	nts <u>\$ 1</u> ,	835.00
2.	(Bank 09) 2050-182	Recreation	<u>\$</u>	100.00
3.	(Bank 09) 2080-051	School	<u>\$</u> 3,	063.00

**Total CAP Fee** 

\*\*\* These CAP Fee prices are based on a Two-Family House (Duplex) for the calendar year 2020. \*\*\*

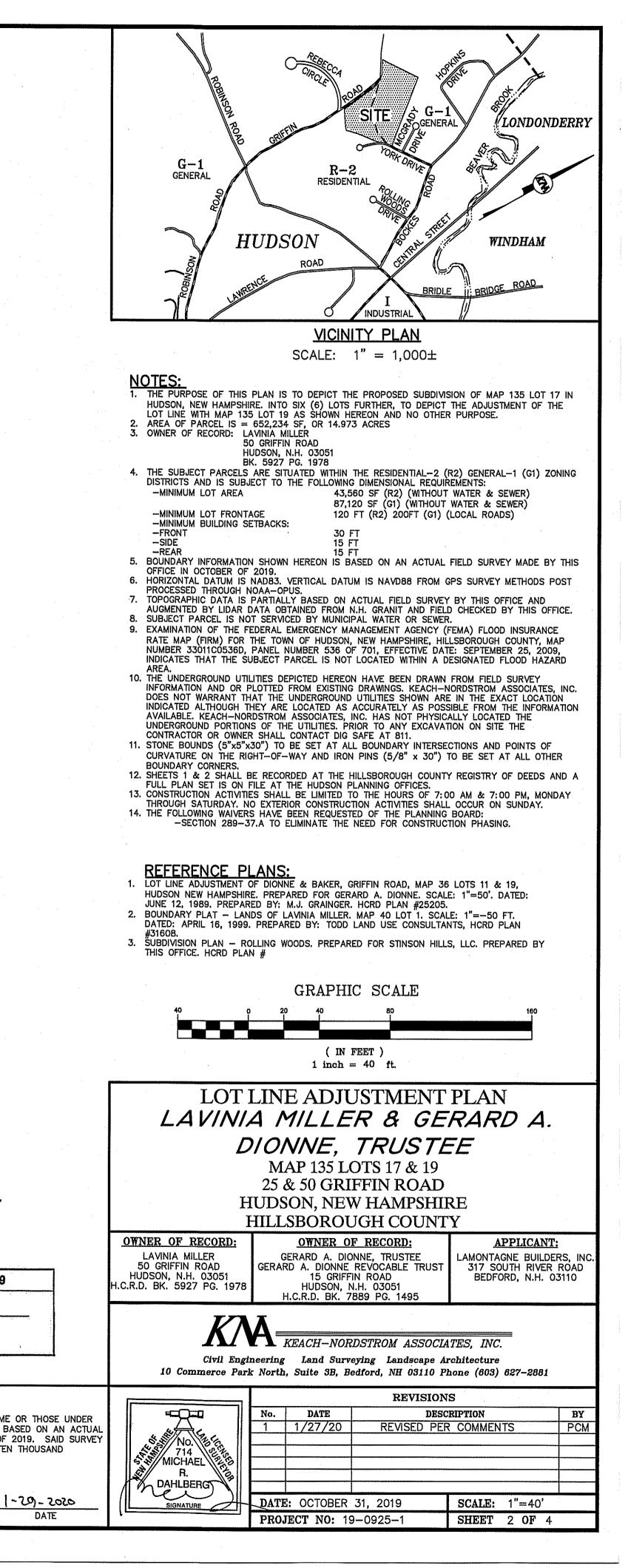


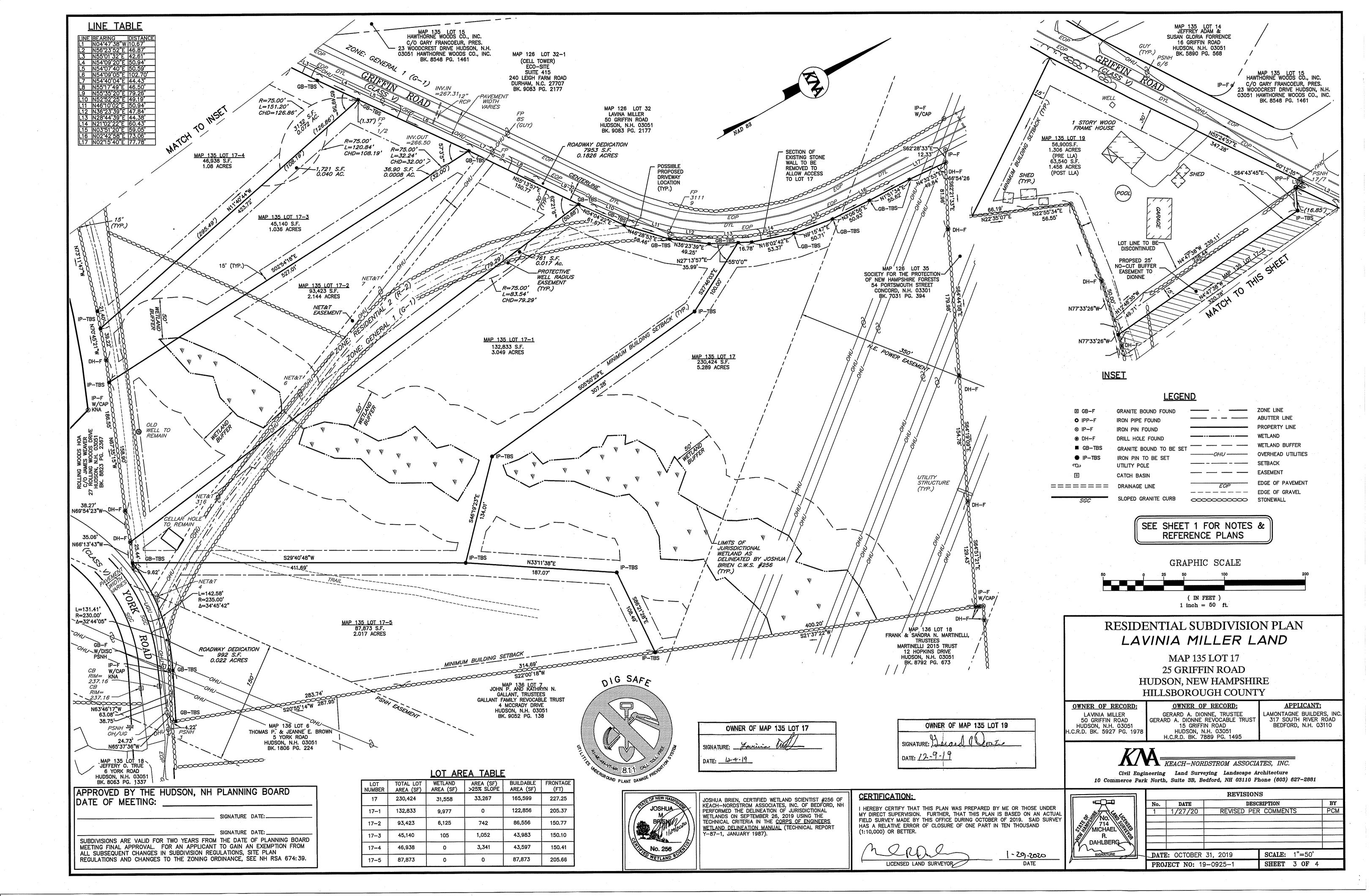


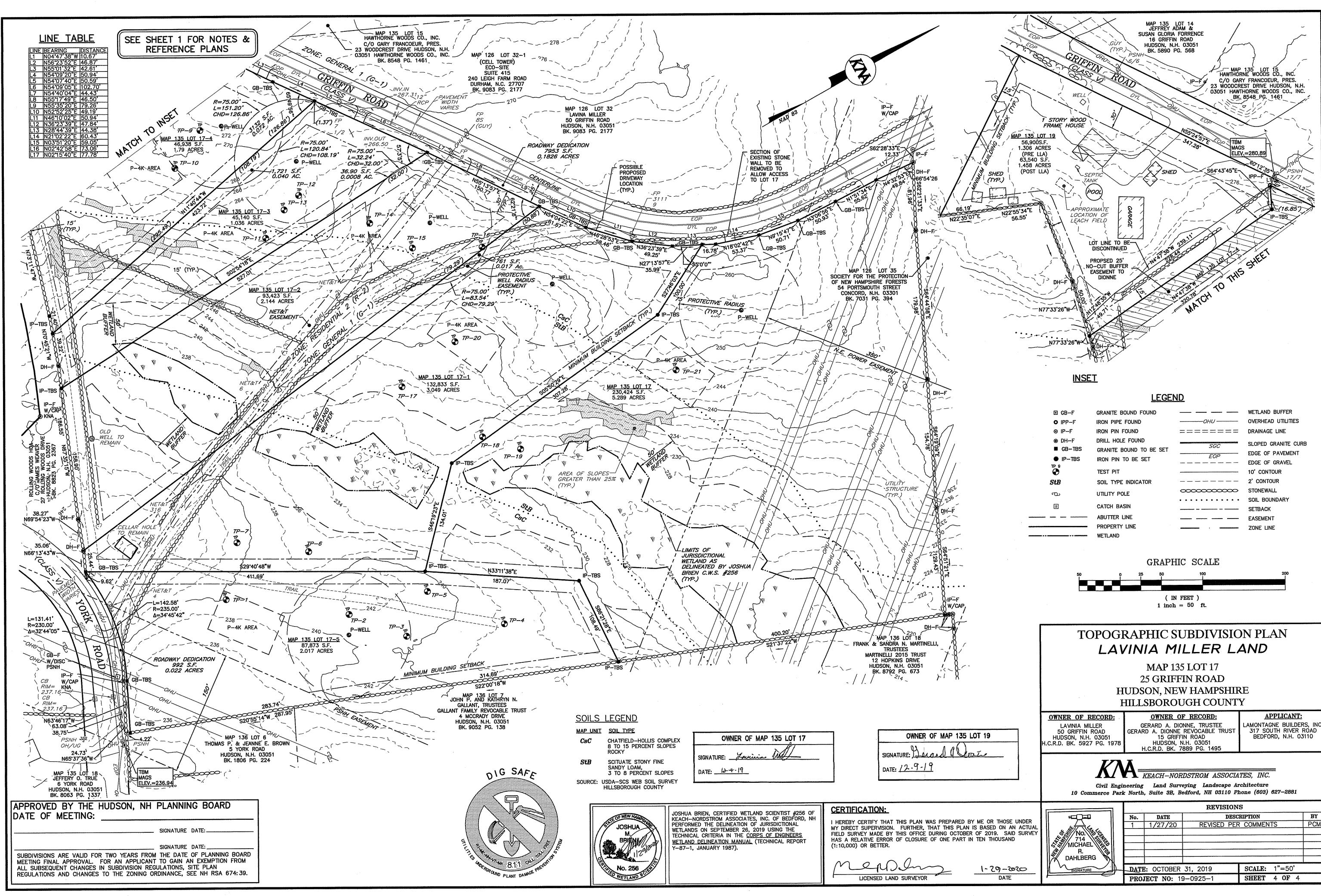


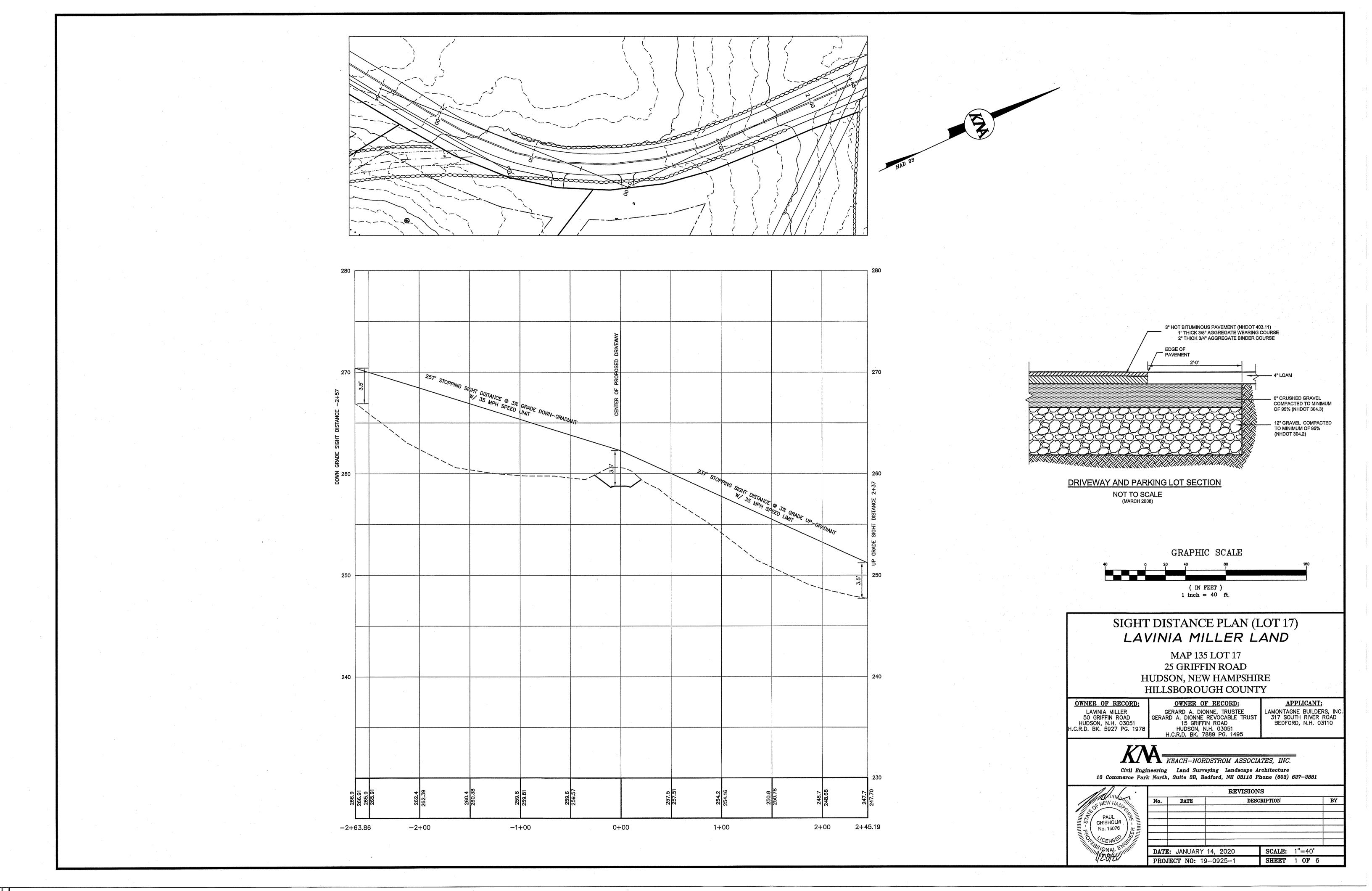
APPROVED BY THE HUDSON, NH PLANNING BOARD DATE OF MEETING:

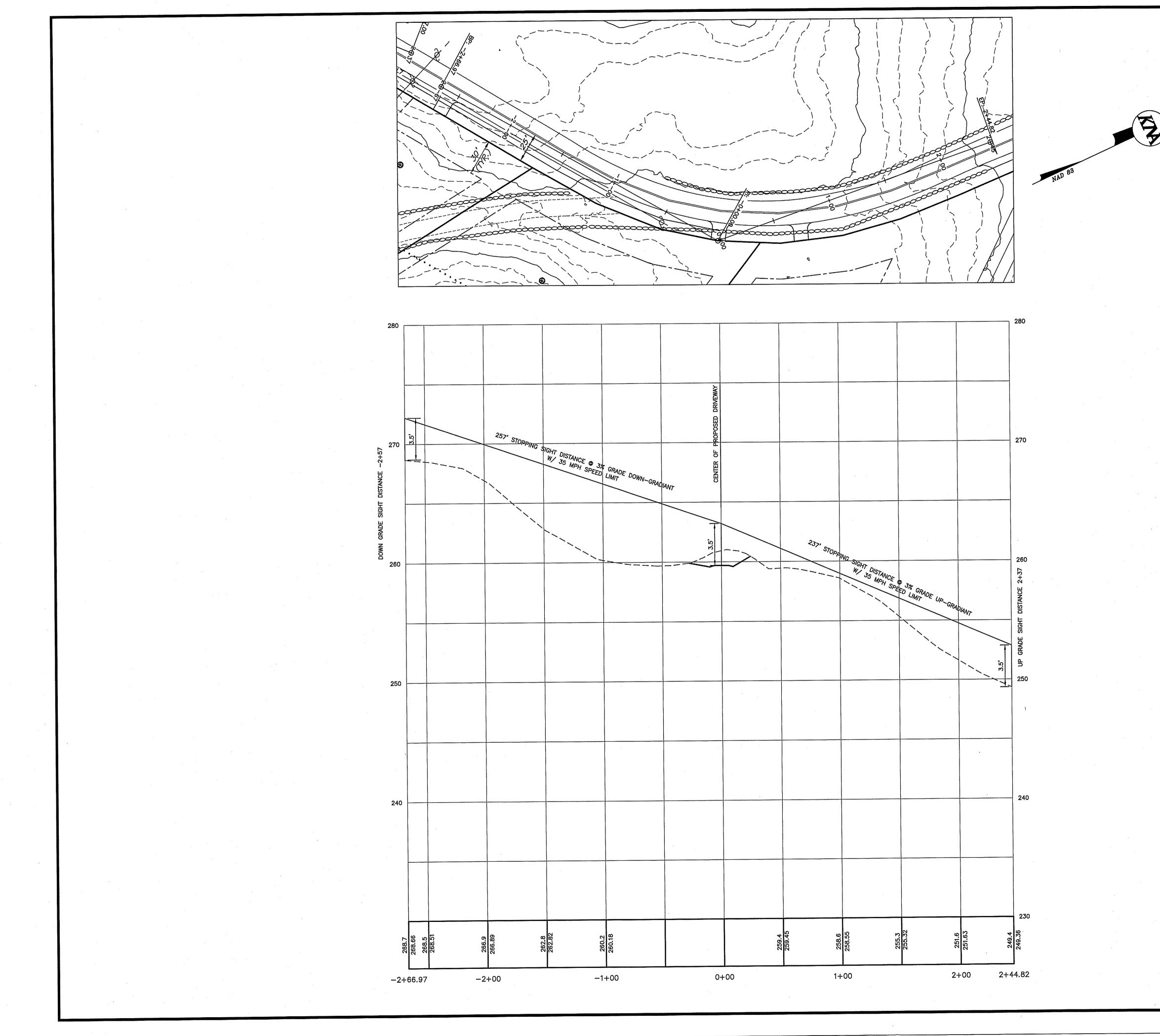
MEETING FINAL APPROVAL. FOR AN APPLICANT TO GAIN AN EXEMPTION FROM ALL SUBSEQUENT CHANGES IN SUBDIVISION REGULATIONS, SITE PLAN REGULATIONS AND CHANGES TO THE ZONING ORDINANCE, SEE NH RSA 674: 39.

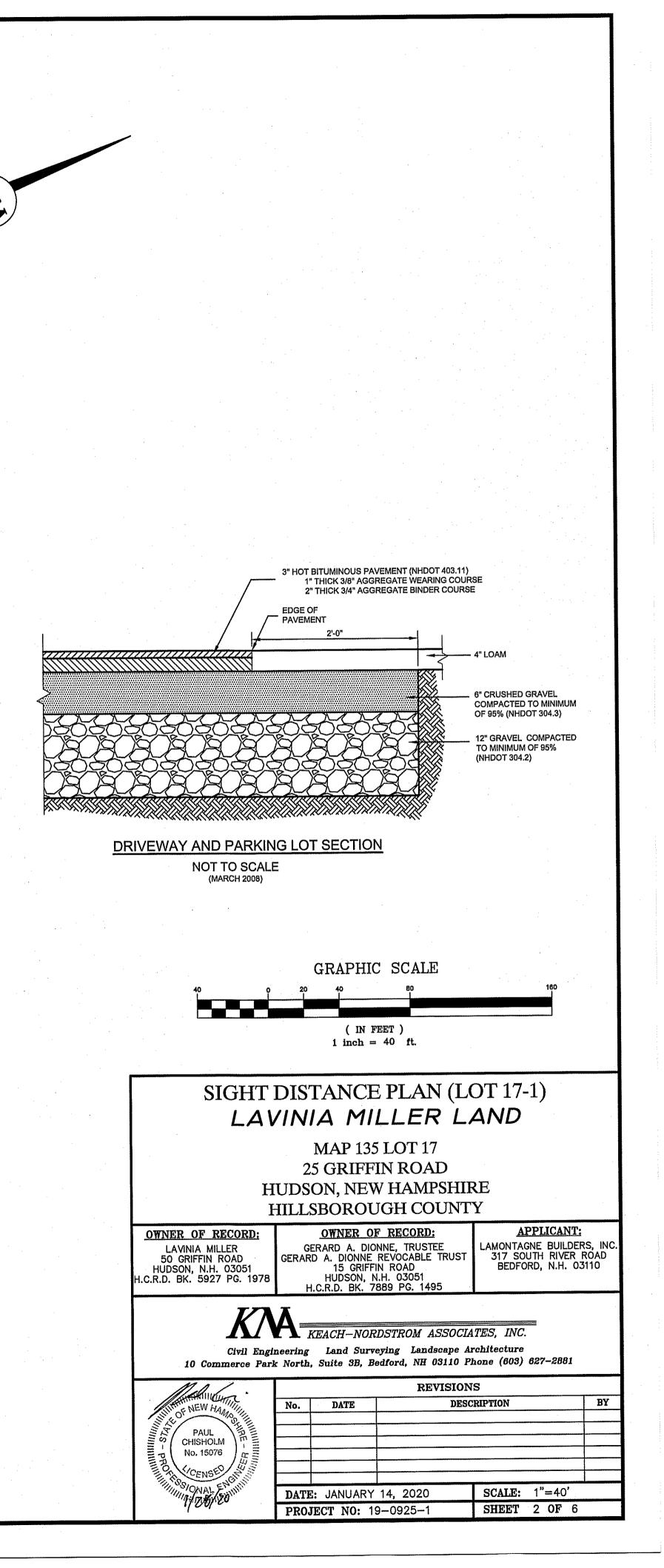


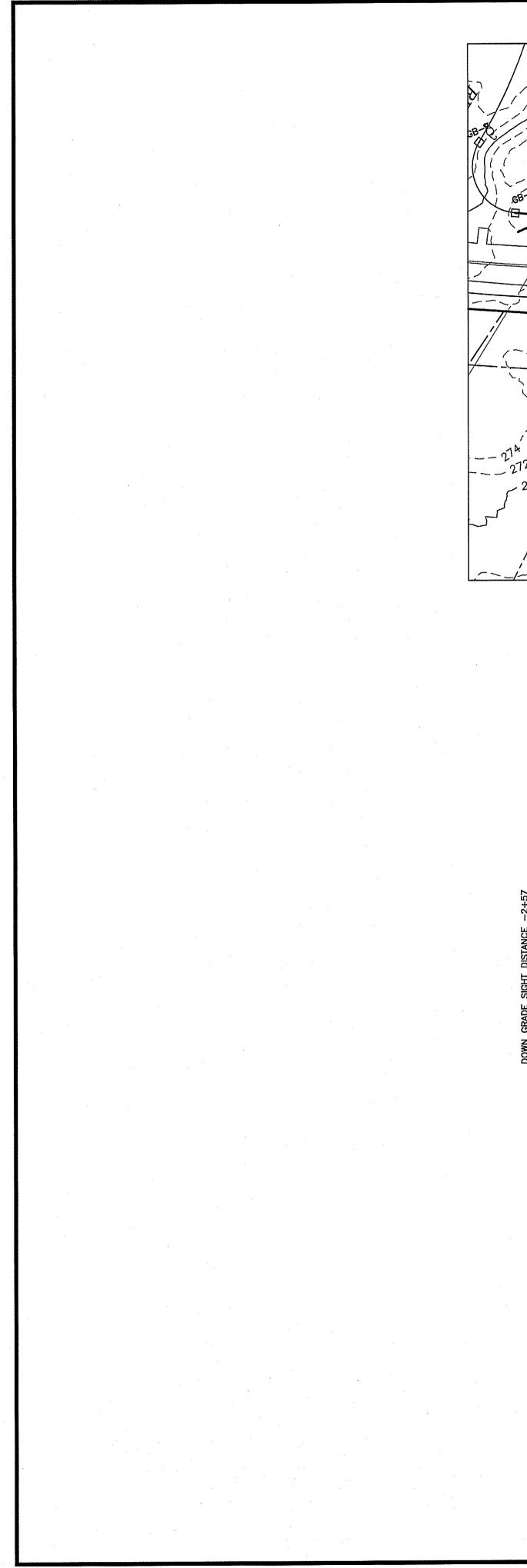


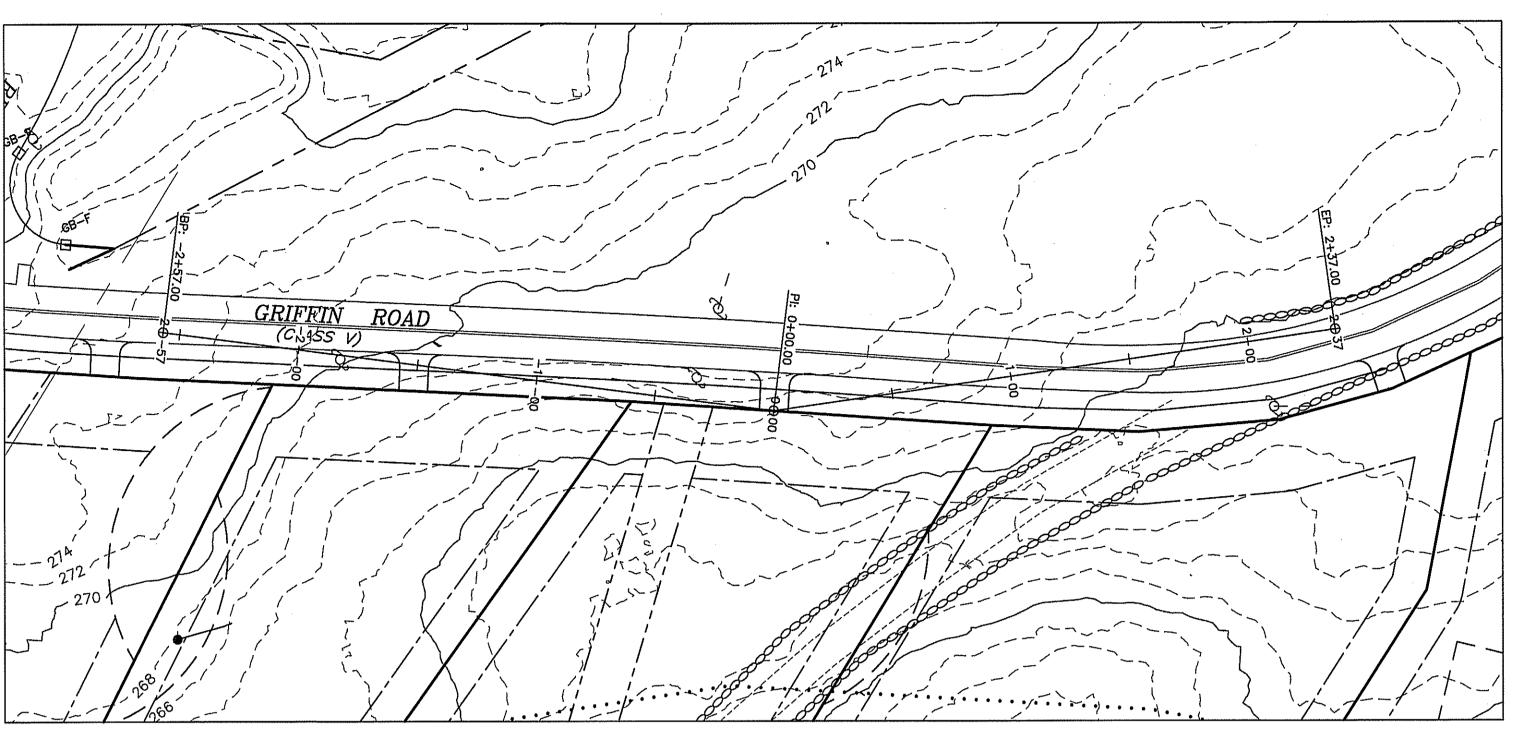


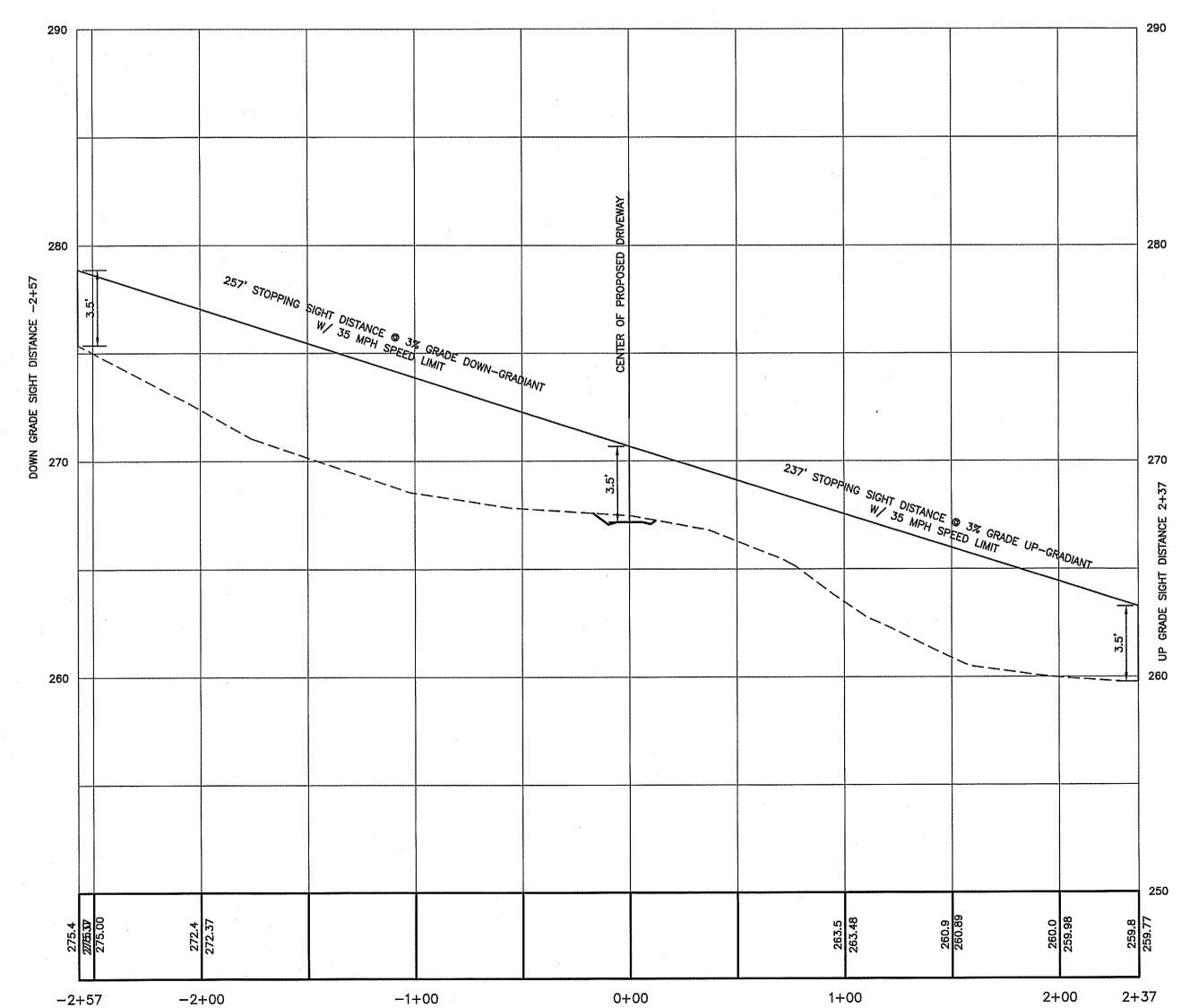


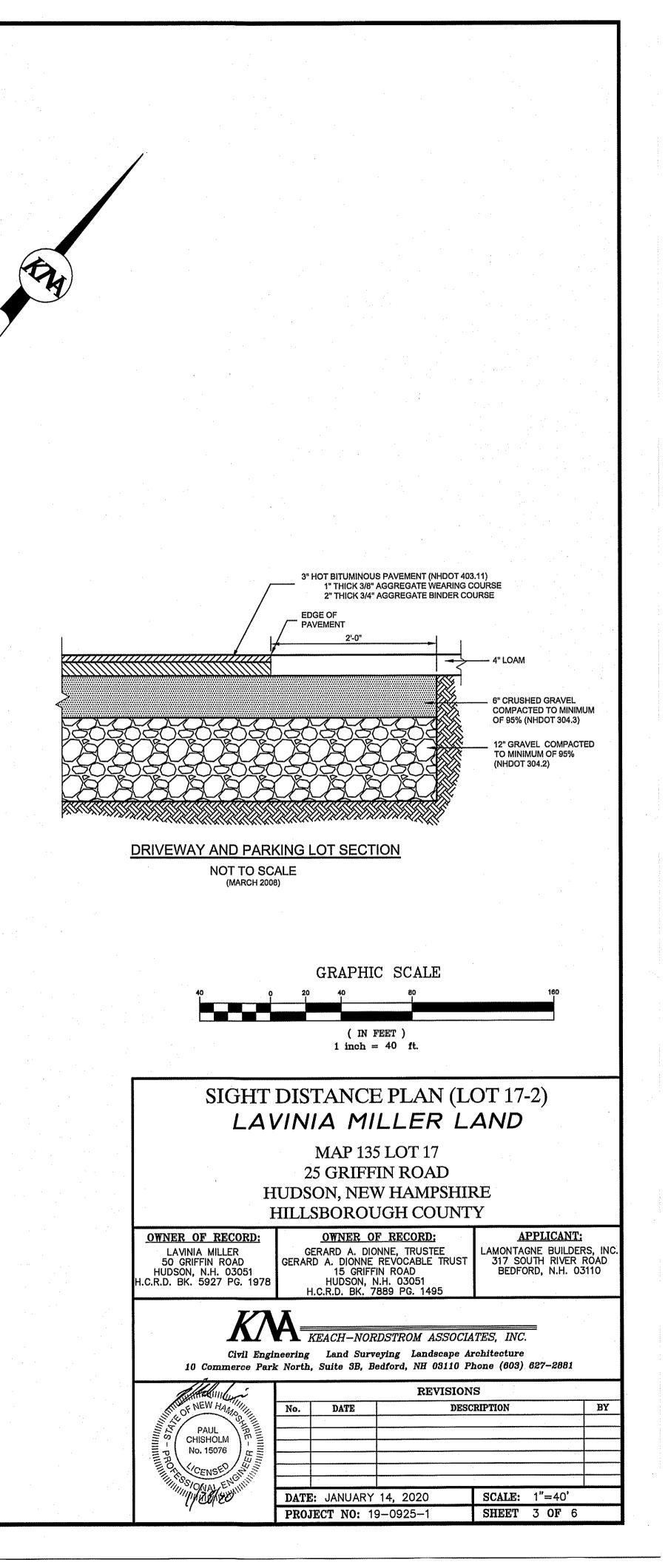


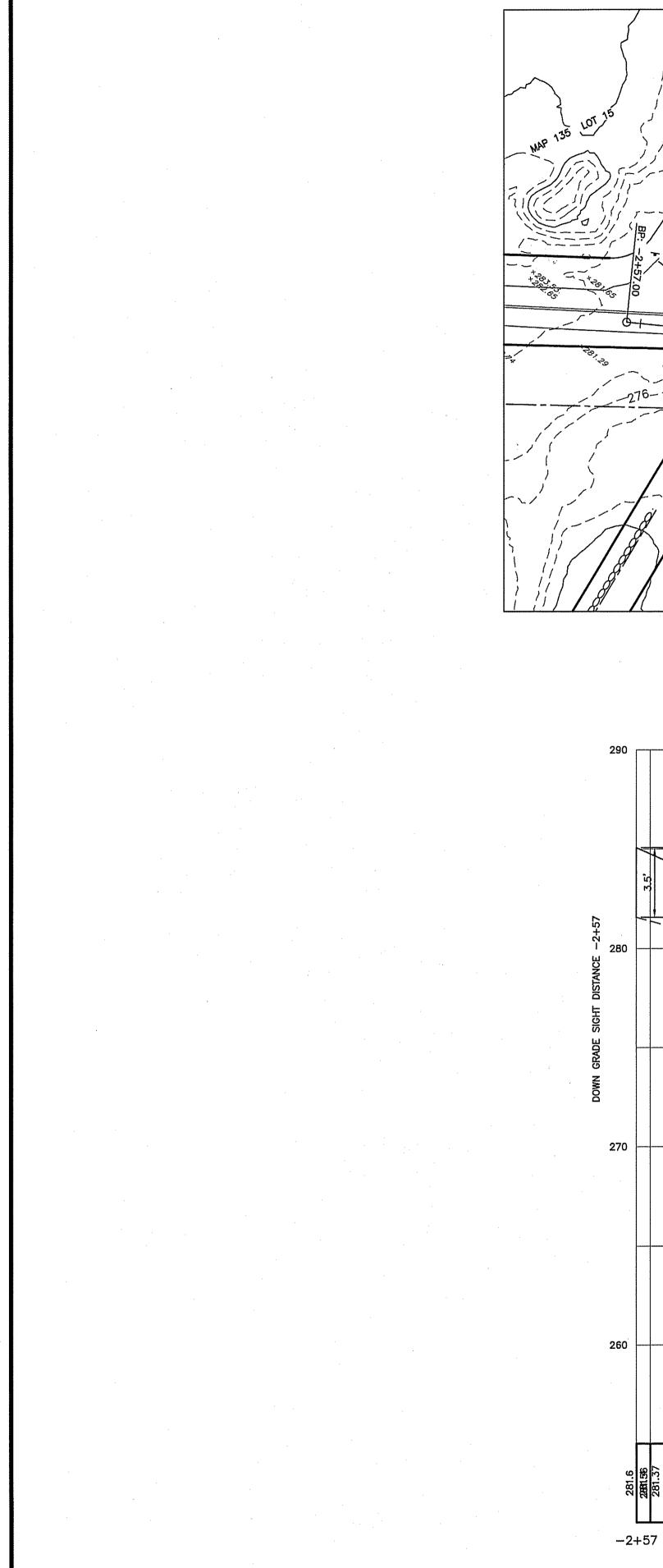


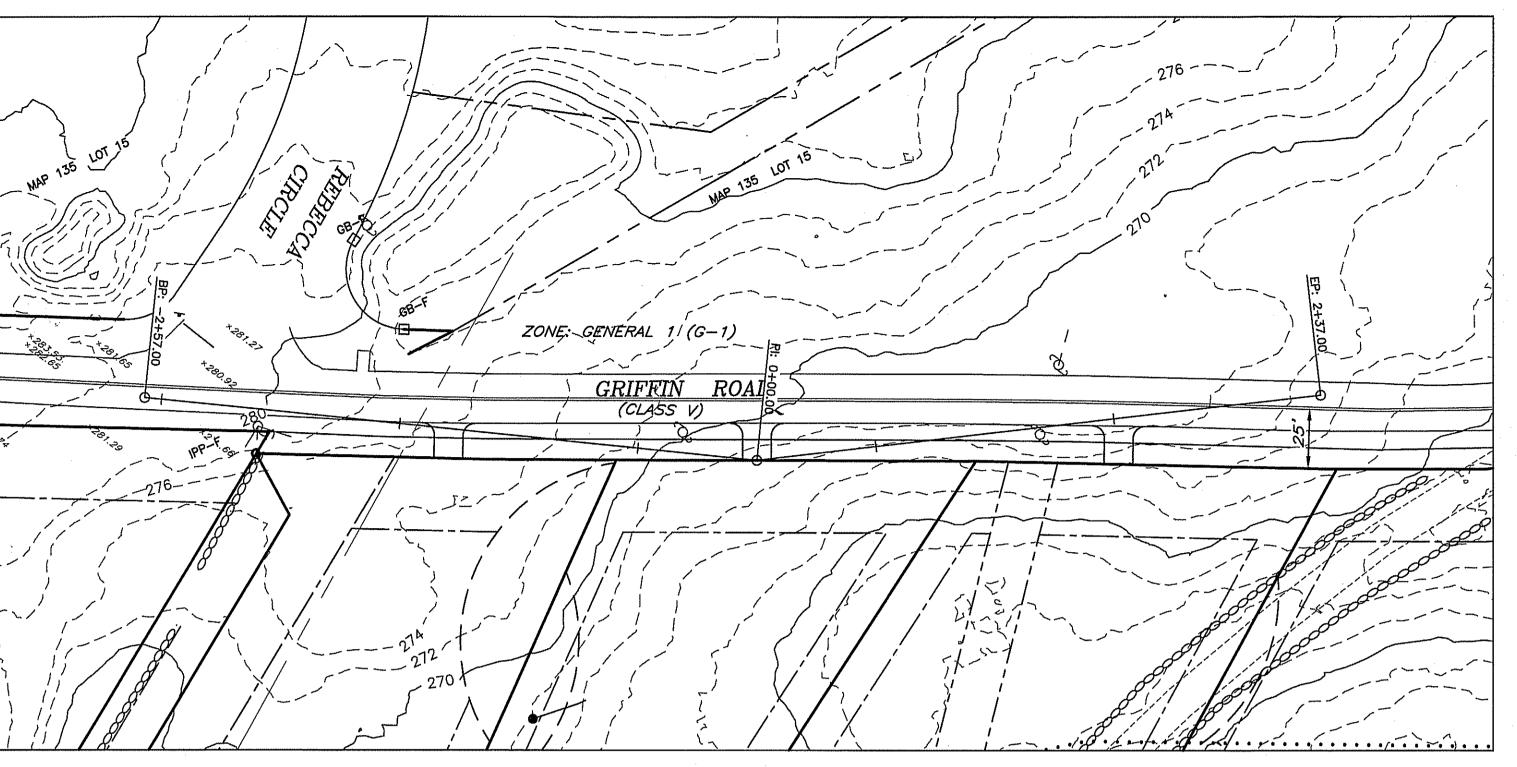


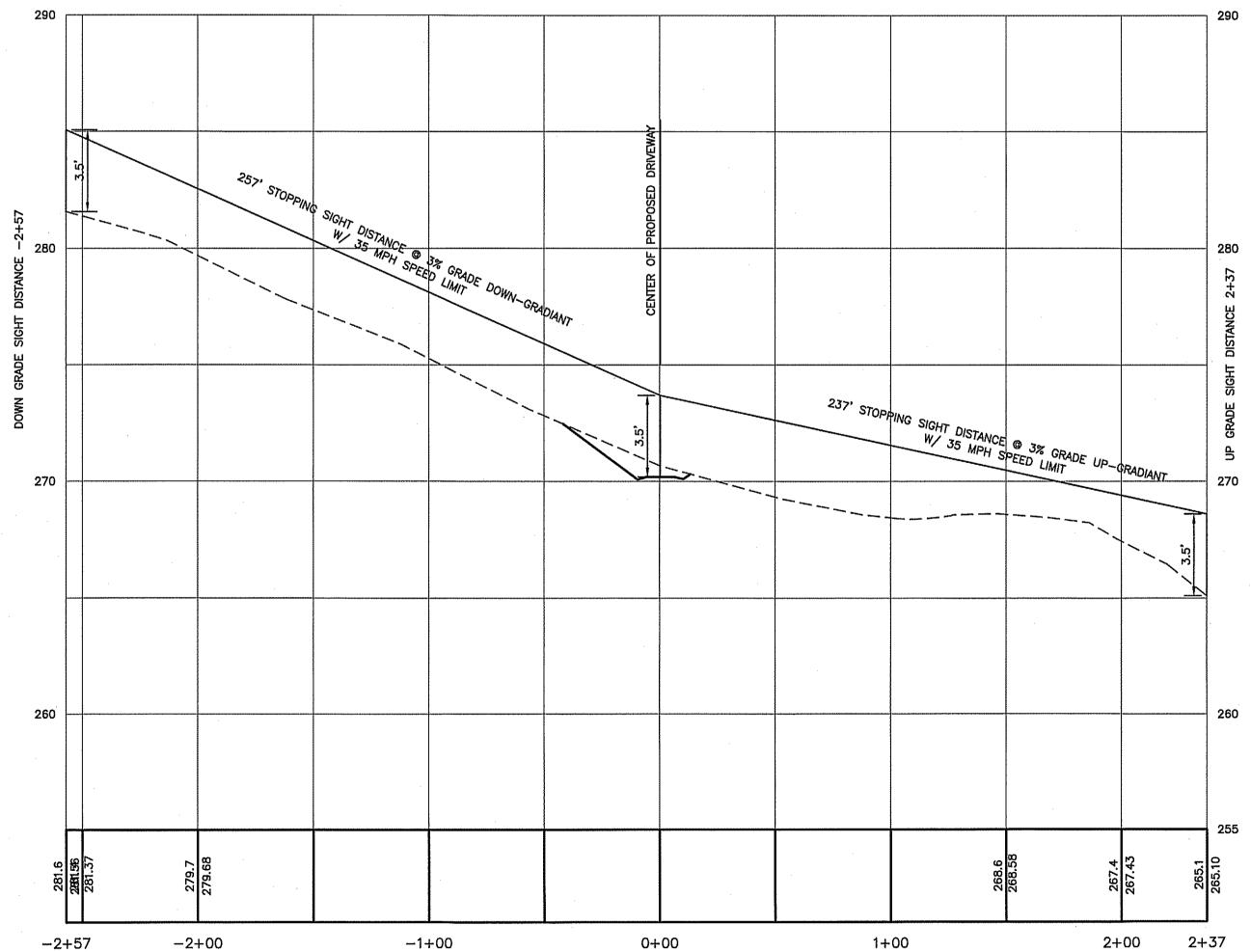




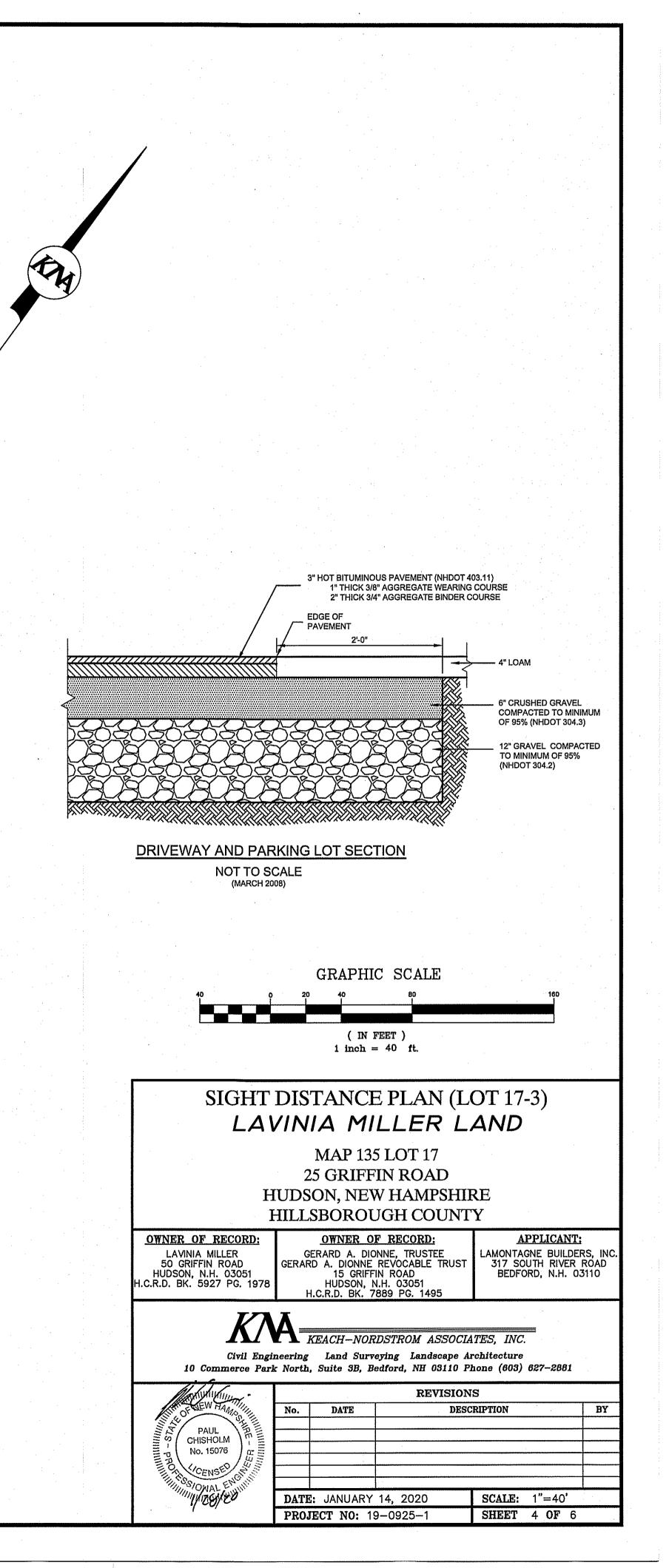


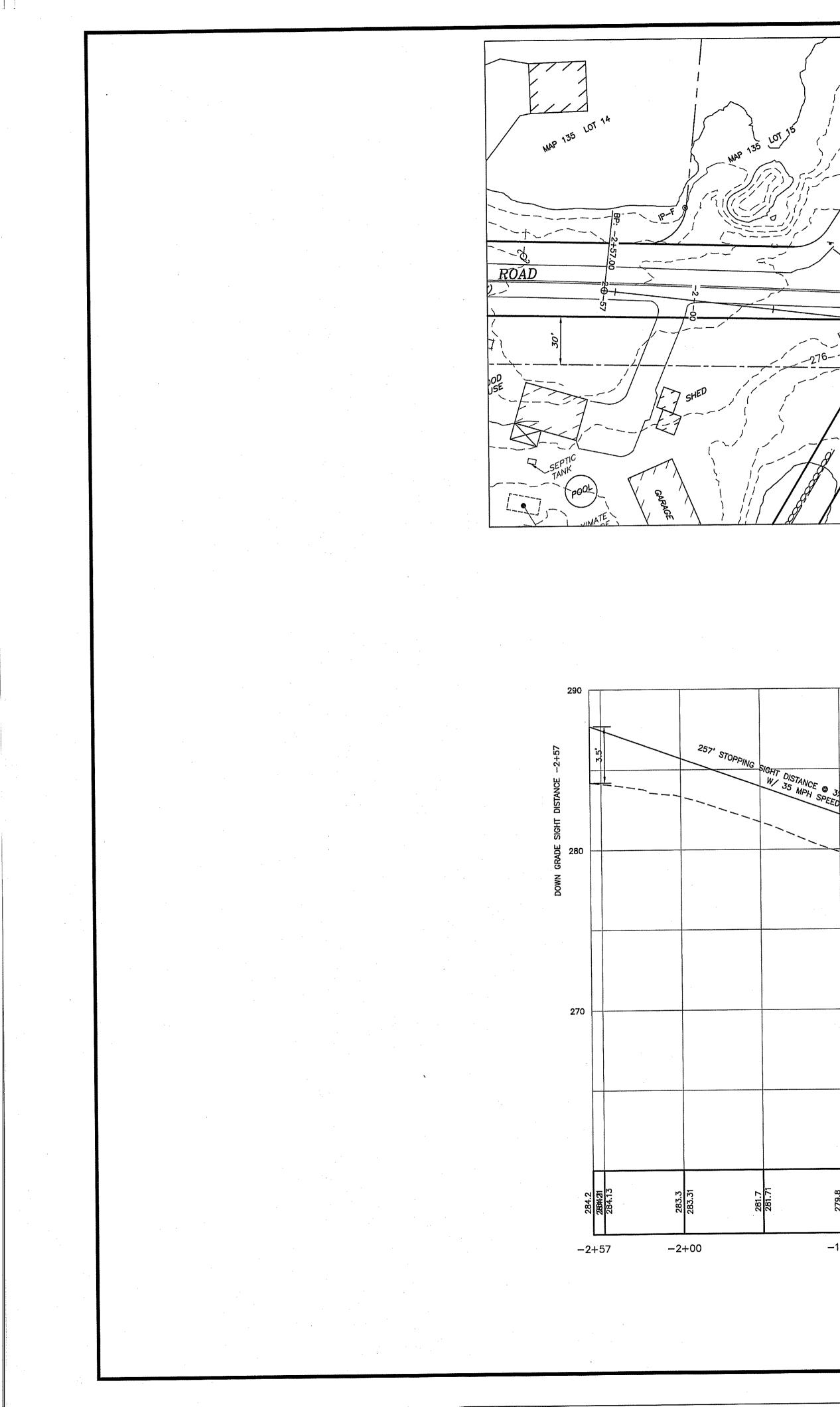


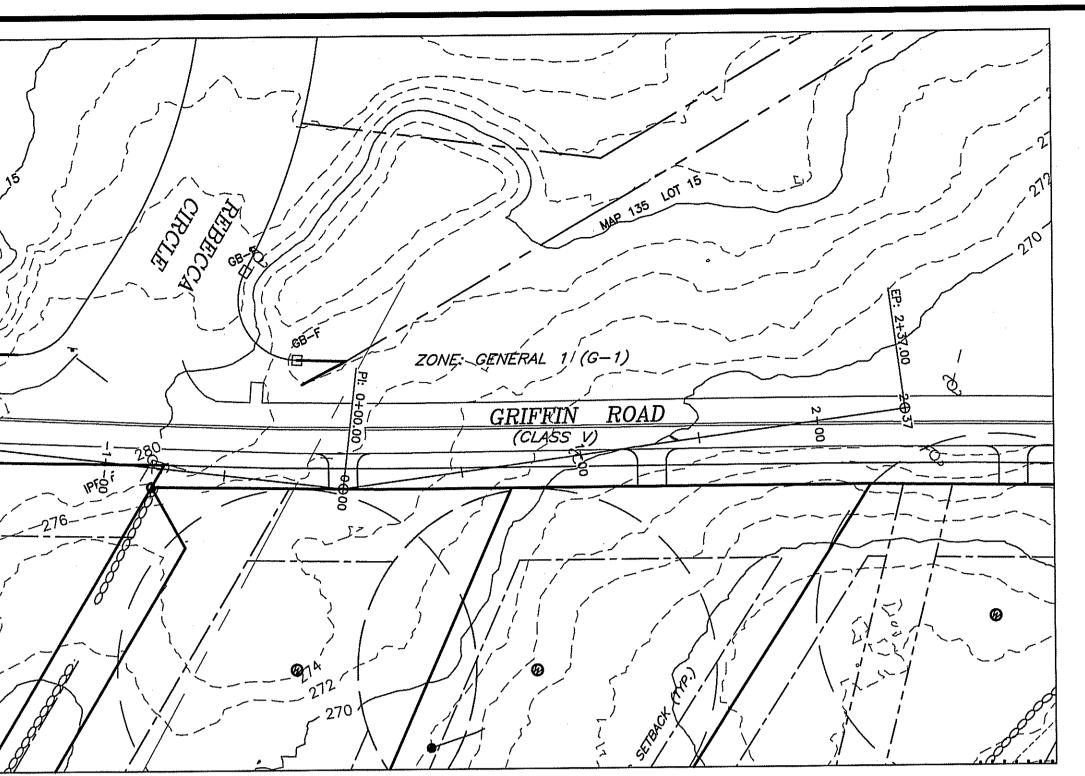


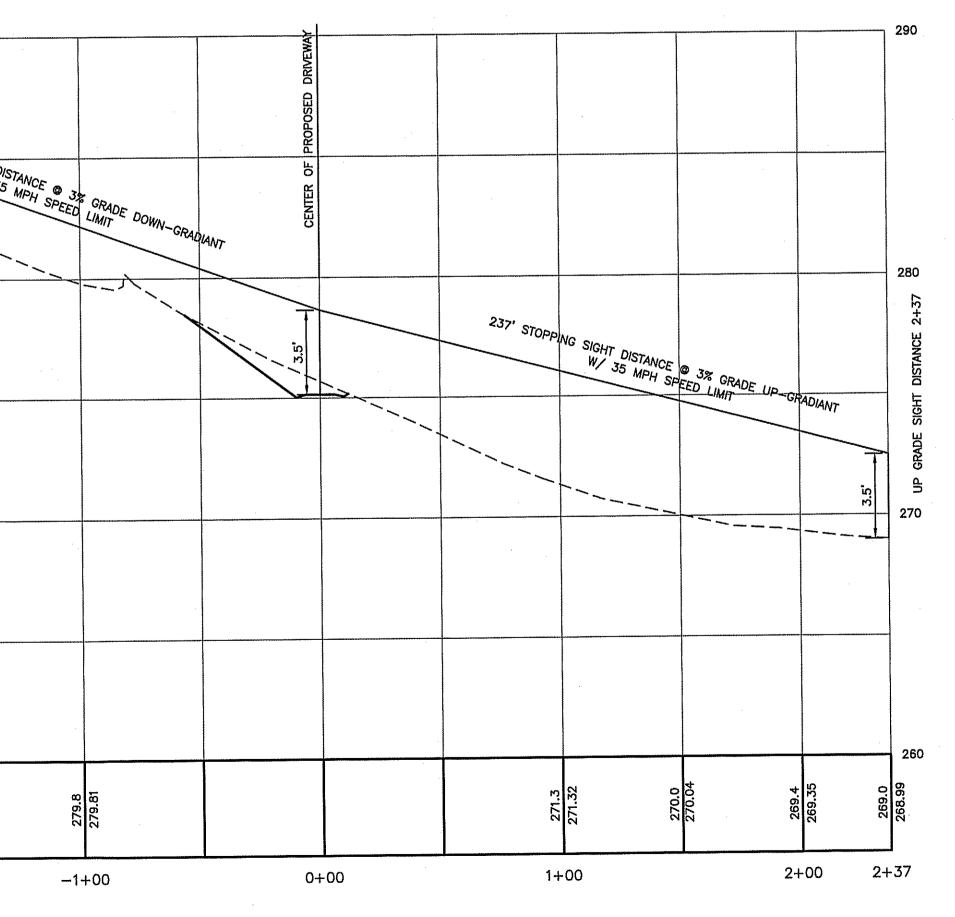


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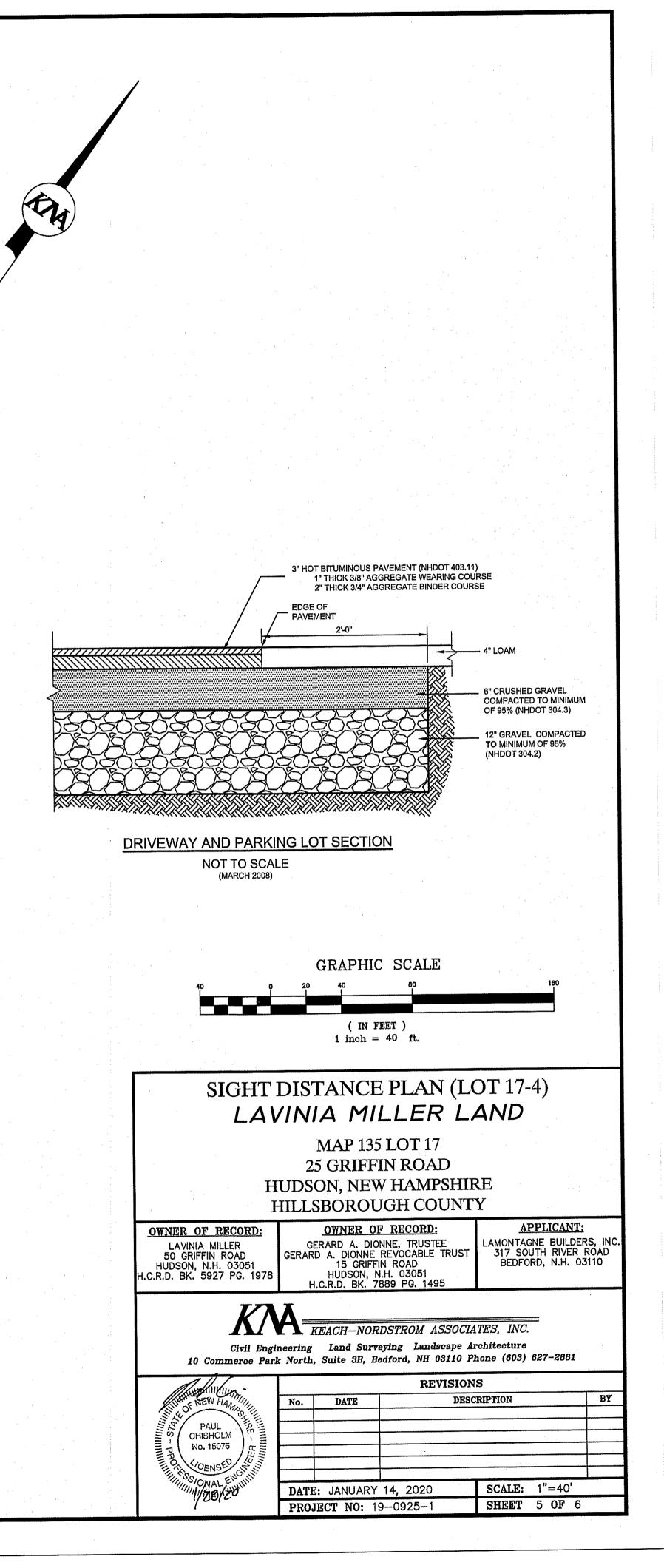




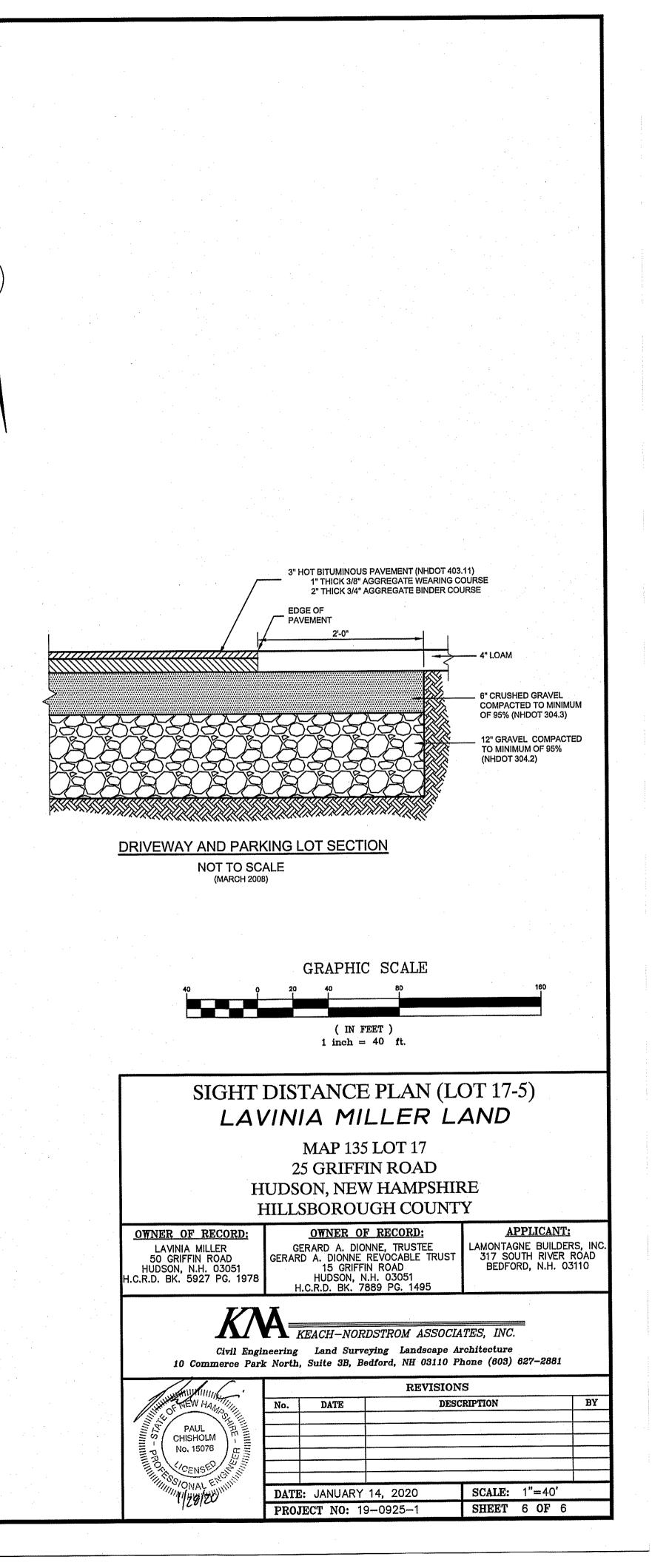




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WY

# **<u>GRANITE HEIGHTS</u>** SUBDIVISION APPLICATION SB#05-20

STAFF REPORT

February 12, 2020

SITE: 334 Central Street, Map 161 Lot 29

ZONING: Residential-2 (R2)

**PURPOSE OF PLANS:** to depict a subdivision plan that proposes 19 residential lots as an Open Space Development (OSD). The previous project was approved under the name "Vista Knoll Estates".

**PLANS UNDER REVIEW:** Granite Heights Subdivision Plan; prepared by: Keach Nordstrom Associates, Inc. 19 Commerce Park North, Suite 3B, Bedford, NH 03110; prepared for: K&M Developers, LLC, 46 Lowell Road, Hudson, NH 03051; dated December 6, 2019 and last revised January \_\_, 2020.

#### **ATTACHMENTS:**

- A. Fuss & O'Neill review letter dated 1/14/2020.
- B. Applicant response to F&O review, received 1/28/2020.
- C. Town Department comments.
- D. CAP Fee worksheets.

#### **APPLICATION TRACKING:**

- December 18, 2019 Application received.
- January 28, 2020 Revised plans received.
- February 12, 2020 Public hearing scheduled.

#### WAIVER REQUESTS:

- §289-18.B.2 Cul-de-sac roadway length.
- §289-37.A Plan schedule and form.

#### COMMENTS & RECOMMENDATIONS:

#### Previous Approval - Vista Knolls

This lot was approved for an 18-lot Open Space Development in 2005 under the name Vista Knolls. It was then developed to a point of being vested, as determined by the Town Planner in 2013, due to the amount of work performed for the roadway. While the Vista Knolls plan may be vested, this application represents a new Open Space Development application. The lack of vesting status only effects two items that have been addressed by the applicant with waiver requests:

- 1. <u>§289-18.B.2 Cul-de-sac roadway length</u>: The proposed road length is longer than 1,000 feet but shorter than the vested roadway. The Fire Chief supports this waiver as the applicant has provided adequate fire protection.
- <u>§289-37.A Plan schedule and form</u>: Since Vista Knolls was approved in 2005, the phasing period has lapsed. The applicant is asking for relief from being limited to developing only 6 lots a year as this limitation makes construction of the roadway financially infeasible. Planning staff supports this waiver as without it would result in multiple temporary cul-de-sacs and additional requirements of town staff without achieving anything of public interest.

#### Housing Type

The proposed plan has lot sizes that can accommodate either single-family homes or duplexes, in compliance with Hudson's Zoning Ordinance. Staff speculates that the applicant seeks to have the flexibility to do either type in order to respond to the fluctuating demands of the housing market. This also affects the CAP fee calculation, which is reflected in the draft motions and CAP fee worksheets.

#### **Ongoing Engineering Review**

The Town's engineering review consultant, Fuss & O'Neill, is conducting their second round of review at the time of this report. Staff expects to have this review prior to the Planning Board meeting.

#### DRAFT MOTIONS

#### ACCEPT the subdivision application:

I move to accept the open space subdivision plan for 334 Central Street, Map 161 Lot 29.

Motion by: \_\_\_\_\_\_Second: \_\_\_\_\_Carried/Failed: \_\_\_\_\_

[If the Board needs more information, move to defer the application and indicate why]

#### CONTINUE the public hearing to a date certain:

I move to continue the public hearing for the lot line adjustment application and subdivision application for 334 Central Street, Map 161 Lot 29, to date certain, February 26, 2020.

Motion by: \_\_\_\_\_Second: \_\_\_\_\_Carried/Failed: \_\_\_\_\_

[If the Board needs more time to deliberate, move to continue the hearing]

SB# 05-20 Staff Report Page 2 of 3

#### **<u>GRANT</u>** a waiver:

I move to grant a waiver from §289-18.B.2, Roadway Length, based on the Board's discussion, the testimony of the Applicant's representative, and in accordance with the language included in the submitted Waiver Request Form for said waiver.

Motion by:	Second:	 Carried/Failed:	
momon of.			

#### **<u>GRANT</u>** a waiver:

I move to grant a waiver from §289-37.A, Plan Schedule and Form, based on the Board's discussion, the testimony of the Applicant's representative, and in accordance with the language included in the submitted Waiver Request Form for said waiver.

Motion by: \_\_\_\_\_\_Second: \_\_\_\_\_Carried/Failed: \_\_\_\_\_

#### <u>APPROVE</u> the subdivision plan application:

I move to approve the open space subdivision application for Granite Heights Subdivision Plan; prepared by: Keach Nordstrom Associates, Inc. 19 Commerce Park North, Suite 3B, Bedford, NH 03110; prepared for: K&M Developers, LLC, 46 Lowell Road, Hudson, NH 03051; dated December 6, 2019 and last revised January \_\_\_\_, 2020; subject to, and revised per, the following stipulations:

- 1. All stipulations of approval shall be incorporated into the Notice of Decision, which shall be recorded at the HCRD, together with the Plan.
- 2. A cost allocation procedure (CAP) amount of \$5,813 per single-family residential unit, or \$5,298 per residential unit within a duplex (or two-family structure) shall be paid prior to the issuance of a Certificate of Occupancy for the new house lot.
- 3. All monumentation shall be set or bonded for prior to the Planning Board endorsing the Plan-of-Record.
- 4. Approval of this plan shall be subject to final engineering review.
- Construction activities involving the proposed undeveloped lots shall be limited to the hours between 7:00 A.M. and 7:00 P.M., Monday through Saturday. No exterior construction activities shall occur on Sunday.

Motion by: \_\_\_\_\_\_Second: \_\_\_\_\_Carried/Failed: \_\_\_\_\_\_.



January 14, 2020

Mr. Brian Groth Town Planner Town of Hudson 12 School Street Hudson, NH 03051

Re: Town of Hudson Planning Board Review Granite Heights Subdivision, 334 Central Street Tax Map 161, Lot 29; Acct. #1350-941 Reference No. 20030249.1870

#### Dear Mr. Groth:

Fuss & O'Neill, Inc. has reviewed the first submission of the materials received on December 18, 2019, related to the above-referenced project. Authorization to proceed was received on December 30, 2019. A list of items reviewed is enclosed. The scope of our review is based on the Subdivision Plan Review Codes, Stormwater Codes, Driveway Review Codes, Sewer Use Ordinance 77, Zoning Regulations, and criteria outlined in the CLD Consulting Engineers Proposal approved September 16, 2003, revised September 20, 2004, June 4, 2007, September 3, 2008, and October 2015.

We have included a copy of Fuss & O'Neill's evaluation of the checklist for your reference. We note that several items could not be verified by Fuss & O'Neill and require action by the Town.

The project appears to consist of creating a 19-lot residential open space development out of a 38.564 acre existing lot. The subject lots are proposed to be serviced by private sewer and public water.

The following items are noted:

#### 1. Administrative and Subdivision Review Codes (HR 276 & HR 289)

- a. Hudson Regulation 276-11.1.B.(4), 289-27.A.(3). The Planning Board approval block does not match the language required in the regulations and is not located in the lower left hand corner.
- b. HR 276-11.1.B.(6) and 289-27.B.(2). The owner's signature is not shown on the plan set.
- c. HR 276-11.1.B.(13). The applicant has not proposed any signs on the plan set nor noted that signs are to be approved by the Hudson Planning Board. Traffic sign details are included in the plans however.
- d. HR 276-11.1.B.(14). The applicant has proposed lights to be installed at the entrance and cul-de-sac end of the subdivision and noted these installations as "TYP". The applicant

The Gataway Building 50 Commercial Street Manchester, NH 03101 1 603,668,8223 800,286,2469

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New Humpshire Rhode Island

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Mr. Brian Groth January 14, 2020 Page 2 of 6

> should clarify if additional lights are proposed along the subdivision street as no others are currently shown. Also, the light detail provided references confirmation of materials with the Manchester DPW. The applicant should revise this detail for the current project.

- e. HR 276-11.1.B.(16). The applicant has not shown the locations of all driveways and parking areas within 200 feet of the tract.
- f. HR 276-11.1.B.(18). The applicant has provided proposed topography on the plans but we note that this does not include grading for individual driveways and homes within the proposed lots.
- g. HR 276-11.1.B.(20). The applicant has shown several stone walls throughout the site but has not noted whether any of these are to be removed or shall remain.
- h. HR 276-11.1.B.(21)(b). The applicant has not shown the proposed locations of any houses on the plan set nor provided alternative proposals for consideration.
- i. HR 276-11.1.B.(22). The applicant has not shown any pavement, gravel or structures on any of the proposed lots so compliance with the Regulation could not be verified.
- j. HR 276-11.1.B.(25). The applicant has not shown any parking or travelways within the subject Lots so compliance with the Regulation could not be verified.
- k. HR 276-15. The applicant has not included the DigSafe logo and phone number on the plan set.
- tn. HR 289-4 and HR 289-28.A. The applicant has included a legend for the installation of stone bounds and iron pins on the plans. The applicant should also provide a detail for stone bounds to be installed. Plan Note #21 on Sheet #2 indicates that 4"x4"x30" stone bounds are to be provided. The Regulation requires 5"x5"x30" bounds.
- n. HR 289-20.A.(1). The applicant has not provided finish floor elevations on the plan set for any proposed buildings.
- o. HR 289-26.B.(3). The applicant has shown several existing easements on the plan set. Copies of these easements were not included in the review package.
- p. HR 289-37.A. The applicant has not included any phasing information in the subdivision submission.

#### 2. Driveway Review Codes (HR 193-10)

- a. HR 193-10.C. The applicant has shown proposed driveway locations within the Right-of-Way but has not extended these into any of the proposed lots. Based on the proposed grading that is shown for several lots, driveway slopes would be much steeper than the maximum allowed by Town Construction Standards.
- b. HR 193-10.E. The applicant has shown sight distances at the intersection with Lawrence Road. We note that existing earth and brush may obscure the line of sight looking north on Lawrence from Terraceview Drive. The applicant should review and remove all such obstructions, and obtain permission from the Town for any such work within the Right-of-Way.
- c. HR 193-10.H. The applicant has proposed the driveway location for Lot 29-2 within the side setback area.



Mr. Brian Groth January 14, 2020 Page 3 of 6

#### 3. Roadway Design

- a. HR 289-18.B. The proposed cul-de-sac pavement layout does not quite match the Typical Offset Cul-De-Sac layout provided in Attachment I of the Regulation.
- b. HR 289-18.B.(1). The applicant has proposed a roadway pavement width of 24 feet. Although with the proposed length of the street the 28 foot pavement width requirement of HR 289-28.B.(2) would apply, we understand that the Town will accept a 24 foot pavement width for the subject street.
- c. HR 289-18.B.(1). The applicant has proposed a cul-de-sac turnaround pavement width of 20 feet. The Regulation requires a pavement width of 24 feet for the turnaround.
- d. HR 289-18.B.(2) The applicant has proposed a roadway length of over 1,800 feet ending in a cul-de-sac. The Regulations allow for a maximum of 1,000 feet. A waiver request was not included in the review package received by Fuss & O'Neill.
- e. HR 289-18.B.(3) The applicant should label the pavement radii of the cul-de-sac on the plan set.
- f. HR 289-18.B.(5) The applicant has not proposed a dead-end sign as required by the regulation.
- g. HR 289-18.O. The applicant has provided a typical sign post detail that does not match the two inch inside diameter galvanized post required.

## 4. Drainage Design /Stormwater Management (HR 289-20.C. /Chapter 290)

- a. HR 289-20.B.(2). The applicant has proposed catch basins approximately 80 feet from the intersection with Lawrence Road. We note the Regulation requires catch basins to be located 'near the corners of the roadway at intersecting streets'.
- b. HR 290-5.H: We note the applicants Drainage Report calculations do not account for frozen ground conditions. The applicant should provide additional information related to this condition or request a waiver from this requirement.
- c. HR 290-5.L.10.0. Although there is a decrease from Pre-condition peak flows to Postcondition peak flows, it should be noted that the clearing that will occur for lawns has not been taken into account. The Post-Condition will result in woods being replaced with lawns, which could result in an increase in runoff to a number of culverts located under Central Street if this is taken into account.
- d. We note that the Pocket Pond (1P) BMP Worksheet maximum and minimum floor elevations do not correlate with the Pocket Pond grading.
- e. The applicant should provide a stormwater practice location sheet for the proposed pocket pond in the Operation and Maintenance Plan.
- f. Where the roadway exceeds grades of 3% we recommend the applicant follow NHDOT design guidance and use a high capacity, Type F grates on catch basins.
- g. It does not appear that the elevation of FES#14 from the outlet of the infiltration basin correlates with the HydroCAD. The applicant should revise the plan to reflect an elevation of 272.00, rather than 274.80.
- h. The riprap outlet protection calculations show a d50 of 7.87 inches for HW#1, but the applicant has specified 4 inches. The applicant should revise the d50 to be greater than the 7.87 inches determined by the riprap calculation sheet. The applicant should also perform a



Mr. Brian Groth January 14, 2020 Page 4 of 6

general review of the riprap calculation sheet to ensure the calculation sheet and detail are correlated.

#### 5. Zoning (HR 334)

- a. HR 334-14 and HR 276-11.1.B.(20). The applicant has not provided any proposed building heights on the plan set.
- b. HR 334-20. The site is located in the Residential Two (R2) District. The applicant has noted that the Lots are proposed to be single family homes.
- c. FIR 334.39. The applicant has shown several wetlands on the plans and included their square footage in the lot tables on Sheets 2 and 30.
- d. FIR 334-39. The applicant has shown wetlands buffer areas on the OSD plans. We note that a portion of the reserve septic area at Lot 29-7 is located within the buffer.
- e. HR 334-50. The applicant has provided a conventional subdivision plan as a part of this submission. This plan does not include any driveways or wetlands setbacks as required.
- f. HR 334-55. We note that the applicant has proposed a street width of 24 feet. Per the Ordinance this reduction in width from 28 feet is allowed at the discretion of the Planning Board.
- g. HR 334-62. The applicant has not proposed any sign installations, other than street signs, as a part of this project.
- h. HR 334-83. The site is not located in a designated flood hazard area. The applicant has noted this on the plans.

#### 6. Sewer/Water Design/Conflicts & Utility Design/Conflicts (HR 276-13.E.)

- a. HR 276-13.G. and 289-27.B.(5). The applicant has shown septic locations on the plan set and test pit information. A typical design for each system was not provided in the package received for review.
- b. The applicant has located some of the driveway locations in the same area as the proposed septic system reserve areas. The applicant should review these locations for conflicts.
- c. The applicant should revise the notes on various water component installation details to note that all materials and installation procedures shall conform to Town of Hudson Technical Specifications instead of Pennichuck Water Works.
- d. The applicant should review the proposed water main installation with the Town to ensure that there is adequate pressure and capacity in the existing system to provide water service to the proposed subdivision.
- e. The applicant is proposing a drainage and utility easement that will include the proposed water main through proposed lot 29-11. The applicant should forward a copy of this proposed easement to the Town for their review.
- f. The applicant has not on the plans the shown the location of the proposed water main connection to an existing water main.
- g. The applicant should provide a water/drainage crossing detail, including insulation measures as needed. The applicant should also include a water main trench detail on the plans.



Mr. Brian Groth January 14, 2020 Page 5 of 6

#### 7. Erosion Control/Wetland Impacts

- a. HR 334-37. The applicant has proposed the septic location on Lot 29-7 within the Wetlands Conservation District. The applicant should review septic locations in regard to the additional setback requirements for septic systems from the Wetlands Conservation District.
- b. HR 290-5.K.(14). The applicant should provide erosion control measures down gradient from the proposed staging and stockpile are at Lot 29-19.
- c. The applicant has proposed silt fence running perpendicular to the slope on Lots 29-14 and 29-15. This could cause rilling along the silt fence and create more erosion. The applicant should revise the fence layout.
- d. The applicant should review the need for erosion control measures at the southeastern property line of Lot 29-14.
- e. The applicant has noted that the Town shall reserve the right to require additional erosion control measures.

#### 8. State and Local Permits

- a. The applicant has provided a copy of the Alteration of Terrain application as part of the package received for review. The applicant should keep the Town informed of all communications with NHDES related to the AoT application and also provide copies of any resulting design changes to the Town.
- b. The applicant has noted the need to prepare a Stormwater Pollution Prevention Plan and file a Notice of Intent before construction can begin.
- c. The applicant has noted the need to secure NHDES Subdivision, NHDES ISD, and NHDOT Excavation permits on the plans. The applicant should forward copies of all permit documentation to the Town for their records.
- d. Additional local permitting may be required.

#### 9. Other

a. The applicant has included notes #14 and #21 on sheet #2 that appear to contradict each other. The applicant should correct these notes as appropriate.

Please feel free to call if you have any questions.

Very truly yours,

/Steven W. Reichert, PE

SWR:mjt



Mr. Brian Groth January 14, 2020 Page 6 of 6

Enclosure

cc:

Town of Hudson Engineering Division – File Keach-Nordstrom Associates 10 Commerce Park North, Suite 3B Bedford, NH 03110 pchisholm@keachnordstrom.com



January 27, 2020

Mr. Brian Groth, Town Planner Town of Hudson 12 School Street Hudson, New Hampshire 03051

Subject: Granite Heights Subdivision 334 Central Street, Hudson Map 161 Lot 29 KNA Project No. 19-0408-1

Dear Mr. Groth:

Keach-Nordstrom Associates, Inc. represents the owners of the property located at 334 Central Street. On behalf of our client, we respectfully submit the enclosed revised documents and plans in response to comments from the Town's review engineer.

Specifically, please find the following material submitted under this cover:

- 1. Response to Comments Letter;
- 2. Copies of the three (3) existing easements;
- 3. Updated rip rap outlet protection calculations;
- "Site Pre-Development vs. Post Development Frozen Conditions" table and HydroCAD 2-YR Frozen Comparison;
- 5. Stormwater Operation & Maintenance Plan with attached 11"X17" plans;
- 6. Conceptual Open Space Subdivision plans (22" x 34");
- 7. Fifteen (15) reduced size (11"x17") copies of the revised Site Plans; and
- 8. Two (2) full plan sets (22"x 34").

We trust the foregoing package will prove to be a complete submittal to the Planning Board. Should you have any questions or require further information, please do not hesitate to contact me directly at the office (603) 627-2881.

Respectfully,

Allison Lewis, EIT Project Engineer Keach-Nordstrom Associates, Inc.

CC: Steven Reichert PE, Fuss & O'Neill

Civil Engineering	Land Surveying	Landsc	ape Architecture
10 Commerce Park North, Suite 3B	Bedford, NH 03110	Phone (603) 627-2881	Fax (603) 627-2915



January 15, 2020

Mr. Brian Groth, Town Planner Town of Hudson 12 School Street Hudson, New Hampshire 03051

#### Subject: Granite Heights Subdivision 334 Central Street, Hudson Map 161 Lot 29 KNA Project No. 19-0408-1

Dear Mr. Groth:

Our office is in receipt of the Fuss & O'Neill engineering review comments dated January 14, 2020. Based on the comments, we have made the required modifications to the plan set and attached a copy for final review. A response to each comment has been provided below.

## Fuss & O'Neill Engineering Review Comments dated January 14, 2020

## 1. Administrative and Subdivision Review Codes (HR 276 & HR 289)

a. Hudson Regulation 276-11.1.B.(4), 289-27.A.(3). The Planning Board approval block does not match the language required in the regulations and is not located in the lower left hand corner.

#### The Planning Board Approval block has been updated and placed on all sheets.

- b. HR 276-11.1.B.(6) and 289-27.B.(2). The owner's signature is not shown on the plan set. *Final plan set will show owner's signature.*
- c. HR 276-11.1.B.(13). The applicant has not proposed any signs on the plan set nor noted that signs are to be approved by the Hudson Planning Board. Traffic sign details are included in the plans however.

A "STOP" sign and "DEAD END" sign are located at the entrance to Terraceview Drive, and have been labeled as such on the Roadway Plan.

d. HR 276-11.1.B.(14). The applicant has proposed lights to be installed at the entrance and cul-de-sac end of the subdivision and noted these installations as 'TYP'. The applicant should clarify if additional lights are proposed along the subdivision street as no others are currently shown. Also, the light detail provided references confirmation of materials with the Manchester DPW. The applicant should revise this detail for the current project.

The light detail has been changed to reference Hudson DPW. There is one more light positioned on the eastern corner of lot 29-7. All three lights have been labeled as "PROPOSED LIGHT".

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e. HR 276-11.1.B.(16). The applicant has not shown the locations of all driveways and parking areas within 200 feet of the tract.

All driveways and parking areas within 200 feet of the tract are now shown sheet 1 titled "MASTER SUBDIVISION PLAN".

f. HR 276-11.1.B.(18). The applicant has provided proposed topography on the plans but we note that this does not include grading for individual driveways and homes within the proposed lots.

Conceptual individual lot grading has been included in the Conceptual Open Space Subdivision Plans.

g. HR 276-11.1.B.(20). The applicant has shown several stone walls throughout the site but has not noted whether any of these are to be removed or shall remain.

HR 276-11.1.B(20) states that the plan set must contain "the location of all existing buildings, DRIVEWAYS, sidewalks, parking spaces, loading area, open spaces, large trees, open drainage courses, signs, exterior lighting service areas, easements, landscaping, and other pertinent items. All existing stone walls are shown on the plans.

h. HR 276-11.1.B.(21)(b). The applicant has not shown the proposed locations of any houses on the plan set nor provided alternative proposals for consideration.

Conceptual locations of buildings are now shown on the Conceptual Open Space Subdivision Plans.

i. HR 276-11.1.B.(22). The applicant has not shown any pavement, gravel or structures on any of the proposed lots so compliance with the Regulation could not be verified.

Conceptual pavement, gravel, and structures have been shown on the Conceptual Open Space Subdivision Plans.

j. HR 276-11.1.B.(25). The applicant has not shown any parking or travelways within the subject Lots so compliance with the Regulation could not be verified.

Conceptual driveways/travelways within subject lots have been shown on the Conceptual Open Space Subdivision Plans.

k. HR 276-15. The applicant has not included the DigSafe logo and phone number on the plan set.

The DigSafe logo and phone number are now included in the plan set.

m. HR 289-4 and HR 289-28.A. The applicant has included a legend for the installation of stone bounds and iron pins on the plans. The applicant should also provide a detail for stone bounds to be installed. Plan Note #21 on Sheet #2 indicates that 4"x4"x30" stone bounds are to be provided. The Regulation requires 5"x5"x30" bounds.

Plan Note #20 referring to the stone bounds on Sheet #2 has been corrected.

n. HR 289-20.A.(1). The applicant has not provided finish floor elevations on the plan set for any proposed buildings.

Conceptual finished floor elevations have now been shown on the Conceptual Open Space Subdivision Plans.

o. HR 289-26.B.(3). The applicant has shown several existing easements on the plan set. Copies of these easements were not included in the review package.

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#### Hard copies of the existing easements are included in the revision package.

p. HR 289-37.A. The applicant has not included any phasing information in the subdivision submission.

This is an amended application to the previously approved project that was approved as one phase. Therefore, this project will also be one phase.

#### 2. Driveway Review Codes (HR 193-10)

a. HR 193-10.C. The applicant has shown proposed driveway locations within the Right-of-Way but has not extended these into any of the proposed lots. Based on the proposed grading that is shown for several lots, driveway slopes would be much steeper than the maximum allowed by Town Construction Standards.

The Conceptual Open Space Subdivision shows conceptual grading for driveways that all abide by Town Construction Standards.

b. HR 193-10.E. The applicant has shown sight distances at the intersection with Lawrence Road. We note that existing earth and brush may obscure the line of sight looking north on Lawrence from Terraceview Drive. The applicant should review and remove all such obstructions, and obtain permission from the Town for any such work within the Right-of-Way.

There is now a note located within the Roadway Plan, sheet 13, located where there may be obstructions to sight line. The note states "CUT & CLEAR ANY IMPEDIMENTS TO SIGHT DISTANCE. COORDINATE WITH THE TOWN OF HUDSON FOR WORK WITHIN THE R.O.W."

c. HR 193-10.H. The applicant has proposed the driveway location for Lot 29-2 within the side setback area.

This driveway has been relocated outside of the side setback area.

#### 3. Roadway Design

a. HR 289-18.B. The proposed cul-de-sac pavement layout does not quite match the Typical Offset Cul-De-Sac layout provided in Attachment I of the Regulation.

# The cul-de-sac width has been revised and the layout has been coordinated with the Town Engineer.

b. HR 289-18.B.(1). The applicant has proposed a roadway pavement width of 24 feet. Although with the proposed length of the street the 28 foot pavement width requirement of HR 289-28.B.(2) would apply, we understand that the Town will accept a 24 foot pavement width for the subject street.

#### No further comment.

c. HR 289-18.B.(1). The applicant has proposed a cul-de-sac turnaround pavement width of 20 feet. The Regulation requires a pavement width of 24 feet for the turnaround.

#### The cul-de-sac turnaround pavement width has been updated to 24 feet.

d. HR 289-18.B.(2) The applicant has proposed a roadway length of over 1,800 feet ending in a cul-de-sac. The Regulations allow for a maximum of 1,000 feet. A waiver request was not included in the review package received by Fuss & O'Neill.

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This project was previously approved with a waiver for the cul-de-sac length. These amended plans propose a shorter road than the previously approved road, and therefore still abides by the former waiver approval.

e. HR 289-18.B.(3) The applicant should label the pavement radii of the cul-de-sac on the plan set.

The radii have been labelled for the entire roadway.

f. HR 289-18.B.(5) The applicant has not proposed a dead-end sign as required by the regulation.

A dead-end sign has been proposed at entrance to Terraceview Drive, and labeled as such.

g. HR 289-18.O. The applicant has provided a typical sign post detail that does not match the two inch inside diameter galvanized post required.

The detail has been adjusted with a note stating a 2" inside diameter per HR 289-18.0.

## 4. Drainage Design /Stormwater Management (HR 289-20.C. /Chapter 290)

a. HR 289-20.B.(2). The applicant has proposed catch basins approximately 80 feet from the intersection with Lawrence Road. We note the Regulation requires catch basins to be located 'near the corners of the roadway at intersecting streets'.

Due to the elevation of the roadway and the elevation needed for the sediment forebay, the catch basins were placed at the lowest possible point at the roadway entrance in order to have a 1% pipe slope into the sediment forebay. The runoff from the 80' of Terraceview Drive not collected in those catch basins does not create an increase in run off to any existing catch basins, headwalls, or points of analysis along Central Street or Lawrence Road.

b. HR 290-5.H: We note the applicants Drainage Report calculations do not account for frozen ground conditions. The applicant should provide additional information related to this condition or request a waiver from this requirement.

A frozen ground comparison between pre-development and post-development has been included in this revision package.

c. HR 290-5.L.10.o. Although there is a decrease from Pre-condition peak flows to Postcondition peak flows, it should be noted that the clearing that will occur for lawns has not been taken into account. The Post-Condition will result in woods being replaced with lawns, which could result in an increase in runoff to a number of culverts located under Central Street if this is taken into account.

The construction process of replacing woods with lawn was considered in the drainage analysis. There was a slight increase in total grassed area between pre and post development due to most of the pre-development grassed area being within the right of way and was replaced with the impervious area of the proposed roadway. Therefore, a majority of post-development grassed area is what has been set aside for individual lot development.

d. We note that the Pocket Pond (1P) BMP Worksheet maximum and minimum floor elevations do not correlate with the Pocket Pond grading. The maximum and minimum floor elevations are automatically calculated in the BMP worksheet provided by NHDES. The calculation takes into account the elevation of

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seasonal high water table and the elevation of the lowest pond outlet. The proposed elevation of the pond bottom must be within the minimum and maximum elevations. With a proposed pond bottom elevation of 250.00 the pond is within the minimum and maximum.

- e. The applicant should provide a stormwater practice location sheet for the proposed pocket pond in the Operation and Maintenance Plan. *The Stormwater BMP Plan has been added to the Operation and Maintenance Plan.*
- f. Where the roadway exceeds grades of 3% we recommend the applicant follow NHDOT design guidance and use a high capacity, Type F grates on catch basins. Six type F grates have been added to catch basins along the proposed roadway. The catch basins on the Roadway Profile have been labeled as such.
- g. It does not appear that the elevation of FES#14 from the outlet of the infiltration basin correlates with the HydroCAD. The applicant should revise the plan to reflect an elevation of 272.00, rather than 274.80.

The original Stormwater BMP Plan showed the rim elevation of FES#14, 274.80, instead of the invert out elevation. The plan has been updated to show the invert out correctly as 272.00, and therefore matches the HydroCAD report.

h. The riprap outlet protection calculations show a d50 of 7.87 inches for HW#1, but the applicant has specified 4 inches. The applicant should revise the d50 to be greater than the 7.87 inches determined by the riprap calculation sheet. The applicant should also perform a general review of the riprap calculation sheet to ensure the calculation sheet and detail are correlated.

The riprap calculation sheet has been updated as well as the riprap outlet detail.

- 5. Zoning (HR 334)
  - a. HR 334-14 and HR 276-11.1.B.(20). The applicant has not provided any proposed building heights on the plan set.

Building heights will be set in accordance to Hudson Zoning Ordinances.

b. HR 334-20. The site is located in the Residential Two (R2) District. The applicant has noted that the lots are proposed to be single family homes.

Building type, square footage, exterior appearance, interior layouts, individual building layout on lots, and any other individual aspects of the residential buildings will be determined by the owner after site plan approval.

c. HR 334.39. The applicant has shown several wetlands on the plans and included their square footage in the lot tables on Sheets 2 and 30.

#### No further comment.

d. HR 334-39. The applicant has shown wetlands buffer areas on the OSD plans. We note that a portion of the reserve septic area at Lot 29-7 is located within the buffer.

The septic area within Lot 29-7 has been moved outside of the wetland buffer.

e. HR 334-50. The applicant has provided a conventional subdivision plan as a part of this submission. This plan does not include any driveways or wetlands setbacks as required. *The Conventional Subdivision Yield Plan now includes roadways, driveways, and wetland setbacks.* 

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	Dadford NEL02110	Phone (603) 627-2881	Fax (603) 627-2915
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f. HR 334-55. We note that the applicant has proposed a street width of 24 feet. Per the Ordinance this reduction in width from 28 feet is allowed at the discretion of the Planning Board.

#### No further comment.

g. HR 334-62. The applicant has not proposed any sign installations, other than street signs, as a part of this project.

#### No further comment.

i. HR 334-83. The site is not located in a designated flood hazard area. The applicant has noted this on the plans.

#### No further comment.

#### 6. Sewer/Water Design/Conflicts & Utility Design/Conflicts (HR 276-13.E.)

a. HR 276-13.G. and 289-27.B.(5). The applicant has shown septic locations on the plan set and test pit information. A typical design for each system was not provided in the package received for review.

#### Typical design details have been added to the plan set, on sheet 25.

b. The applicant has located some of the driveway locations in the same area as the proposed septic system reserve areas. The applicant should review these locations for conflicts.

Driveways have been moved where there were conflicts with proposed septic areas. If during individual lot development a driveway must pass over a septic system NHDES regulations will be followed.

c. The applicant should revise the notes on various water component installation details to note that all materials and installation procedures shall conform to Town of Hudson Technical Specifications instead of Pennichuck Water Works.

# All details referencing Pennichuck Water Works have been changed to reference Town of Hudson Technical Specifications.

d. The applicant should review the proposed water main installation with the Town to ensure that there is adequate pressure and capacity in the existing system to provide water service to the proposed subdivision.

The proposed water main installation is currently being looked into by Weston & Sampson and coordinated with the Town Engineer.

e. The applicant is proposing a drainage and utility easement that will include the proposed water main through proposed lot 29-11. The applicant should forward a copy of this proposed easement to the Town for their review.

## The applicant's attorney is currently drafting a proposed easement and it will be forwarded to the Town once finalized.

f. The applicant has not on the plans the shown the location of the proposed water main connection to an existing water main.

An Offsite Utility Plan has been added to the plan set to show the water main connection.

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g. The applicant should provide a water/drainage crossing detail, including insulation measures as needed. The applicant should also include a water main trench detail on the plans.

#### The water/drainage crossing detail has been added to the plan set.

#### 7. Erosion Control/Wetland Impacts

a. HR 334-37. The applicant has proposed the septic location on Lot 29-7 within the Wetlands Conservation District. The applicant should review septic locations in regard to the additional setback requirements for septic systems from the Wetlands Conservation District.

The septic area within lot 29-7 has been moved outside of the wetland setback.

- b. HR 290-5.K.(14). The applicant should provide erosion control measures down gradient from the proposed staging and stockpile are at Lot 29-19.
   A silt fence has been placed on the down gradient side of the staging and stockpile area at lot 29-19.
- c. The applicant has proposed silt fence running perpendicular to the slope on Lots 29-14 and 29-15. This could cause rilling along the silt fence and create more erosion. The applicant should revise the fence layout.

The silt fence location has been revised.

d. The applicant should review the need for erosion control measures at the southeastern property line of Lot 29-14.

#### Silt fence has been added and revised to the southeastern property line of lot 29-14

e. The applicant has noted that the Town shall reserve the right to require additional erosion control measures.

#### No further comment.

#### 8. State and Local Permits

a. The applicant has provided a copy of the Alteration of Terrain application as part of the package received for review. The applicant should keep the Town informed of all communications with NHDES related to the AoT application and also provide copies of any resulting design changes to the Town.

#### The town will be informed of all communications with NHDES related to AoT.

b. The applicant has noted the need to prepare a Stormwater Pollution Prevention Plan and file a Notice of Intent before construction can begin.

#### No Further Comment.

c. The applicant has noted the need to secure NHDES Subdivision, NHDES ISD, and NHDOT Excavation permits on the plans. The applicant should forward copies of all permit documentation to the Town for their records.

# Once the applicant is in receipt of these documents they will be forwarded to the Town of Hudson.

c. Additional local permitting may be required.

No further comment.

#### 9. Other

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a. The applicant has included notes #14 and #21 on sheet #2 that appear to contradict each other. The applicant should correct these notes as appropriate. *Note #14 has been removed from sheet #2.* 

I trust the content of this response letter and its attachments has addressed each of the comments, as noted. Should you have further questions or require additional information, please do not hesitate to contact our office.

Respectfully,

Allison Lewis Project Engineer

Civil Engineering

Land Surveying

Landscape Architecture

10 Commerce Park North, Suite 3B Bedford, NH 03110

I, NH 03110 Phone (603) 627-2881

SUBDIVISION	APPLICATION

Date of Application:	12/10/19	Tax Map #:	161	Lot #: _	29
Site Address: <u>334 Centra</u>	l Street				
Name of Project: Granite	Heights				
Zoning District: Residenti	al (R-2)	General SB#:			
Z.B.A. Action:				(For Town (	Jse Only)
PROPERTY OWNER:		DEVELOPE	<u>R:</u>		
Name: K & M Developer:	s, LLC.	Same as C	)wner		
Address: 46 Lowell Road					<u></u>
Address: Hudson, NH 03	051			·····	
Telephone #			z,		
Email:					
PROJECT ENGINEER:		SURVEYO	<u>R:</u>		
Name: Keach-Nordstrom	Assoc., Inc.	Keach-No	rdstrom	Assoc., li	nc.
Address: 10 Commerce F	ark No., Suite 3	10 Comme	rce Par	<u>k No., Su</u>	ite 3
Address: Bedford, NH 03	110	Bedford, N	IH 0311	0	
Telephone # (603) 627-2	881	(603) 627-	2881		
Email: pchisholm@keac			i@keac	hnordstro	m.com

#### PURPOSE OF PLAN:

The purpose of this plan is to depict an amended subdivision plan that proposes 19 lots in an open space development on Map 161 Lot 29. The previous project was approved under the name "Vista Knoll Estates".

	(For 7	Fown Use Only)				
Routing Date:	Deadline Date:		Meeting D	ate:		
I have no comments I have comments (attach to form)						
	itle: ZONING LOMU					
Department: Zoning:Engi	neering: Assessor: F	olice:	DPW:	_Consultant:		

Page 2 of 8 Subdivision Application - Hudson NH

SB#05-20 Attachment C

## TOWN OF HUDSON

## Land Use Division



12 School Street ' Hudson, New Hampshire 03051 ' Tel: 603-886-6008 ' Fax: 603-594-1142

#### Subdivision Plan Review Zoning Review/Comments Pl 1-29-2-

January 29, 2020

Re: Map 161 Lot 29 Address: 334 Central Street Zoning district: Residential Two (R-2) Proposed 19 lot subdivision

Submitted plans dated December 6, 2019

1) I don't see any "Yield" plan for the comparison of a "conventional" subdivision with the proposed OSD. <u>§334-50 Density</u>: "Total open space provided as a part of an OSD application must be of sufficient land area, when added together with the total land area devoted to individual lots, to provide an overall density no greater than that which would be provided in a non-OSD development."

2) The OSD plan should include the buildable lot area calculations per Article VII per: \$334-50 Density: "Minimum density requirements for all uses in an OSD correspond with the minimum lot size requirements established in Article <u>VII</u>, Dimensional Requirements."

3) The OSD plan for <u>\$334-53 Open Space Requirements</u>: should be tabulated on the plans as follows: **B**.

Roadways, driveways, rights-of-way, utility easements, parking areas and other developed areas, except for recreational paths, trails or facilities, may not be included as part of minimum open space requirements.

Wetland(s), road rights-of-way, and slopes in excess of 25%, shall not be considered in the calculation of total lot area. The one-hundred-year floodplain areas shall not exceed 25% of the total land area of the OSD.

4) the "table" entitled <u>Table of Zoning Requirements Residential Single Family</u>, indicates the proposal is for two family (60,000 sqft) as well as note #4 indicates 60,000 sqft (two family).

Is the "open space" that is reserved, actually usable (due to steep slopes/access) for pedestrians in accordance with the purposes of open space §334-47?: "[1]t is also designed to provide for increased recreational opportunities and to promote greater neighborhood cohesion, without altering overall land use densities or land use patterns."

Sincerely,

Bruce Buttrick, MCP Zoning Administrator/Code Enforcement Officer

cc: Public Folder B. Groth - Town Planner file

## SB#05-20 Attachment c

## JAN 0 6 2020

	SUBDIVISI	ON APPLICATION		TO PLANN	WN OF JING D	HUDSON EPARTMENT
Date of Application:	12/10/19	Tax Map #:	161	Lot #:	29	
Site Address: 334 Cent	ral Street					
Name of Project: Granit	e Heights					
Zoning District: Resider	ntial (R-2)	General SB#:		(For Town	Use Only	)
Z.B.A. Action:						· · · · · · · · · · · · · · · · · · ·
PROPERTY OWNER:		DEVELOPE				
Name: K & M Develop	ers, LLC.	Same as C	Dwner			
Address: 46 Lowell Roa	ad					
Address: Hudson, NH (	)3051					
Telephone #						
Email:		<u> </u>				
PROJECT ENGINEER:		<u>SURVEYO</u> I	<u> </u>			
Name: Keach-Nordstro	om Assoc., Inc.	Keach-Nor	dstrom	Assoc., I	nc.	
Address: 10 Commerce Park No., Suite 3		10 Comme	10 Commerce Park No., Suite 3			
Address: Bedford, NH	03110	Bedford, N	IH 031	10		
Telephone # (603) 627	-2881	(603) 627-	2881			
Email: pchisholm@ke	achnordstrom.com	mdahlberg	@kead	chnordstro	om.com	1

#### PURPOSE OF PLAN:

The purpose of this plan is to depict an amended subdivision plan that proposes 19 lots in an open space development on Map 161 Lot 29. The previous project was approved under the name "Vista Knoll Estates".

(For Town Use Only)					
Routing Date:	Deadline Date:	M	lecting Dat	e:	
	no comments $U$				
<u> </u>	le: <u>Jour Enblu</u>	nt F.A.	_ Date:	1/6/20	
Department:	,				
Zoning: Engin	eering: 📝 Assessor: I	olice:Fire:I	DPW:	Consultant:	

Page 2 of 8 Subdivision Application - Hudson NH

#### Dhima, Elvis

 To:
 Dubowik, Brooke; Groth, Brian

 Subject:
 RE: Subdivision Application Sign Off

Brian

Please find below comments

- 1. Applicant shall state if the proposed plans meet the new MS 4 requirements
- 2. Applicant shall provide a complete plan & profile for the proposed water main
- 3. Applicant shall provide plan, profile and sight distance for each proposed driveway
- 4. Applicant shall relocate the drainage manholes to the center of the travel lane versus center of the road
- 5. Applicant shall add a 2" blow off at the end of the proposed water main.
- 6. Plans indicate that drainage runoff for approximately 75 feet from the entrance will discharge to Lawrence Road. Applicant shall provide drainage mitigating for this section of the road.

Thank you

E

Elvis Dhima, P.E. Town Engineer

Town of Hudson, NH 12 School Street Hudson, NH 03051 Phone: (603) 886-6008 Mobile: (603) 318-8286



Town of Hudson NEW HAMPSHIRE 03051

From: Dubowik, Brooke
Sent: Friday, January 03, 2020 1:11 PM
To: Bianchi, Dave <dbianchi@hudsonnh.gov>; Buttrick, Bruce <bbuttrick@hudsonnh.gov>; Buxton, Robert
<RBuxton@hudsonnh.gov>; Dhima, Elvis <edhima@hudsonnh.gov>; Forrence, Jess <jforrence@hudsonnh.gov>; Groth,
Brian <bgroth@hudsonnh.gov>; Michaud, Jim <jmichaud@hudsonnh.gov>
Subject: Subdivision Application Sign Off

Happy Friday! Attached is a sign off for a Subdivision Plan for Granite Heights (the old Vista Knolls) at 334 Central Street. Please have your comments back by 1/10/2020. Thank you,

Brooke Dubowik Planning Administrative Aide II



Town of Hudson 12 School Street

#### **SUBDIVISION APPLICATION**

Date of Application:	12/10/19	Tax Map #:161 Lot #:29					
Site Address: 334 Con	tral Street						
Name of Project: Grani	te Heights						
Zoning District: Reside	ntial (R-2)	General SB#:					
				(For Town U	lse Only)		
Z.B.A. Action:				· · · · · · · · · · · · · · · · · · ·			
PROPERTY OWNER:		DEVELOPE	<u>R:</u>				
Name: K & M Develop	ers, LLC.	Same as C	)wner	± 1			
Address: 46 Lowell Roa	ad	<u> </u>			••••••••••••••••••••••••••••••••••••••		
Address: <u>Hudson, NH (</u>	03051						
Telephone #							
Email:				<u></u>			
PROJECT ENGINEER:		SURVEYOR	SURVEYOR:				
Name: Keach-Nordstro	om Assoc., Inc.	Keach-Nor	Keach-Nordstrom Assoc., Inc.				
Address: 10 Commerce	Park No., Sulte 3	10 Comme	10 Commerce Park No., Suite 3				
Address: Bedford, NH	03110	Bedford, N	Bedford, NH 03110				
Telephone # (603) 627-	2881	(603) 627-2	(603) 627-2881				
Email: pchisholm@kea	achnordstrom.com	mdahlberg	mdahlberg@keachnordstrom.com				
<u>PURPOSE OF PLAN:</u> The purpose of this plan is to depict an amended subdivision plan that proposes 19 lots in an open space development on Map 161 Lot 29. The previous project was approved under the name "Vista Knoll Estates".							
	(For T	'own Use Only)					
Routing Date:	Deadline Date:	M	ceting D	ate:			
I have no con	nments <u>×</u> I	have comments (atta	ach to for	m)			
<u>Chriss</u> Title:	Fier chier		Date:	2/2/202	ిప		

(Initials)

Department:

Zoning: \_\_\_\_ Engineering: \_\_\_\_ Assessor: \_\_\_ Police: \_\_\_ Fire: \_\_\_ DPW: \_\_\_ Consultant: \_\_\_\_

Page 2 of 8 Subdivision Application - Hudson NH

## **TOWN OF HUDSON**

FIRE DEPARTMENT

39 FERRY STREET, HUDSON, NEW HAMPSHIRE 03051



Robert M. Buxton Chief of Department

Emergency 911 Business 603-886-6021 Fax 603-594-1164

- TO: Brian Groth Town Planner
- FR: Robert M. Buxton
- DT: January 31, 2020
- RE: Granite Heights, Map 161, Lot 29

The following is a list of subdivision concerns for this project. This review was completed utilizing plans submitted by Paul Chisholm from KNA dated December 6, 2019.

- Street name for the project as listed Terraceview Drive will need to be formally reviewed by the Hudson Fire Department for formal acceptance.
- 2. Street Addressing for the project will need to be obtained from the Hudson Fire Department prior to the issuance of any building permit.
- 3. The length of the cul-de-sac is over 1,000' in length which exceeds the maximum length allowed in the Town of Hudson. The developer has proposed a very generous spacing of fire hydrants in the project with a total of 4 fire hydrants. The Fire Department would find this application of hydrant spacing to be acceptable and would not object to the proposed road length.
- 4. The entrance into the development looks to be at a fairly steep angle. We would note that a maximum slope for the road not exceed Town of Hudson road standard and would ask for a review on entry angles from both the Robinson Road and Central Street approaches. This will allow for assurance that the large fleet owned by the Hudson Fire Department will be able to access the site appropriately.
- 5. Please provide three (3) hydrant maps signed by the Hudson Fire Department, the Hudson Water Company and the property owner. There shall be a hydrant flag acceptable to the current Town of Hudson Engineering Department's specifications provided for all water supply appurtenances.

\*\*The following life safety and fire protection concerns provided are for informational purposes to the applicant and Planning Board for this project. Final determinations on these issues occur after further review of the project.

• A blasting permit will be required for any blasting on the site in accordance with the Code of the Town of Hudson, Chapter 202.

These are all of the Hudson Fire Department's concerns as of this time. If you have any further questions, please call me directly and thank you for your continued cooperation.

cc: Project Engineer File

## TOWN OF HUDSON

Office of the Assessor



Jim Michaud Chief Assessor, CAE email: <u>imichaud@hudsonnh.gov</u>

www.hudsonnh.gov

12 School Street · Hudson, New Hampshire 03051 · Tel: 603-886-6009 · Fax: 603-594-1160

To: Brian Groth, Town Planner

January 7, 2020

From: Jim Michaud, Chief Assessor

Re: Granite Heights subdivision proposal -revised

In reviewing the proposed subdivision plan I offer the following comments;

1. For Assessing and valuation purposes it is unclear if these are intended to be approved as single-family lots, or duplex/2-family lots. If that can be ascertained that would be of assistance to Assessing.

SB#05-20 Attachment C

#### SUBDIVISION APPLICATION

Date of Application:	12/10/19	Tax Map #:	161	Lot #:	29		
Site Address: 334 Cent	tral Street				~~~~~~		
Name of Project: Granil	te Heights						
Zoning District: Reside	General SB#:		(n) (n )	In Onto)			
Z.B.A. Action:				(For lown (	Jse Only)		
PROPERTY OWNER:		DEVELOPE	<u>R:</u>				
Name: K & M Develop	ers, LLC.	Same as C	Dwner				
Address: 46 Lowell Roa	ad						
Address: Hudson, NH (	03051						
Telephone #							
Email:	<u></u>						
PROJECT ENGINEER;		<u>SURVEYO</u>	<u>R:</u>				
Name: Keach-Nordstro	om Assoc., Inc.	Keach-Nor	Keach-Nordstrom Assoc., Inc.				
Address: 10 Commerce	e Park No., Suite 3	10 Comme	10 Commerce Park No., Suite 3				
Address: Bedford, NH	Bedford, N	IH 0311	0				
Telephone # (603) 627	(603) 627-	2881					
Email: pchisholm@ke	<u>mdahlberg</u>	@keac	hnordstro:	m.com			

#### PURPOSE OF PLAN:

The purpose of this plan is to depict an amended subdivision plan that proposes 19 lots in an open space development on Map 161 Lot 29. The previous project was approved under the name "Vista Knoll Estates".

(For Town Use Only)					
Routing Date:	Deadline Date:	Meeting Date:			
I have no comments I have comments (attach to form)					
(Initials) Title:	P.W. Director	Date: 1/28/12020			
Department:					
Zoning: Enginee	ring:Assessor:Police:	_Fire: DPW: Consultant:			

Page 2 of 8 Subdivision Application - Hudson NH

## SB#05-20 Attaphment C

JAN '0 \$ 2020

TOWN OF HUDSON PLANNING DEPARTMENT

#### SUBDIVISION APPLICATION

Date of Application:	12/10/19	Tax Map #:	161	Lot #:	29
Site Address: 334 Cen	tral Street				
Name of Project: Grani	te Heights				
Zoning District: Reside	ntial (R-2)	General SB#:	· · · · · <u>· · · · · · · · · · · · · · </u>	/Dee Town I	Ing (July)
				(For Lown (	se ony)
Z.B.A. Action:				· · · · · · · · · · · · · · · · · · ·	ara <b>4</b>
PROPERTY OWNER:		DEVELOPE	<u>3R:</u>		
Name: K & M Develop	ers, LLC.	Same as (	Same as Owner		
Address: 46 Lowell Ro	ad				
Address: Hudson, NH	03051		<b></b>		
Telephone #					
Email:					
PROJECT ENGINEER:		SURVEYO	<u>R;</u>		
Name: Keach-Nordstr	om Assoc., Inc.	Keach-No	rdstrom	Assoc., li	10.
Address: 10 Commerc		10 Comme	erce Pa	rk No., Su	ite 3
Address: Bedford, NH		Bedford, NH 03110			
Telephone # (603) 627		(603) 627-2881			
Email: pchisholm@ke	achnordstrom.com	mdahlberg	g@kead	chnordstro	m.com

#### PURPOSE OF PLAN:

The purpose of this plan is to depict an amended subdivision plan that proposes 19 lots in an open space development on Map 161 Lot 29. The previous project was approved under the name "Vista Knoll Estates".

(For Town Use Only)				
Routing Date:	Deadline Da	te: Meeting	Date:	
XX I have no	comments	I have comments (attach to form)		
DaB Title:	Captain	Date:	01/03/2020	
(Initials)				
Department:				
Zoning: Engineer	ing: Assessor:	_Police: XX Fire: DPW:	Consultant:	

Page 2 of 8 Subdivision Application - Hudson NH



## **TOWN OF HUDSON**

Planning Board

Timothy Malley, Chairman



12 School Street · Hudson, New Hampshire 03051 · Tel: 603-886-6008 · Fax: 603-594-1142

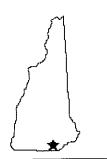
#### **CAP FEE WORKSHEET - 2020**

Date:	02-05-20	Zone # 1	Map/Lot: <u>161/0</u> 2	29-000
			334 Cen	tral Street
Project	t Name:	Granite Heights 19	-Lot Subdivision	
Propos	ed ITE Use #	1: <u>Single Family Res</u>	idential Lots	
Propos	ed Building A	Area (square footage):	N/A	S.F.
•	U			

#### CAP FEES: (ONE CHECK NEEDED)

1.	(Bank 09) 2070-701	Traffic Improvements	<u>\$ 1,835.00</u>
2.	(Bank 09) 2050-182	Recreation	<u>\$ 400.00</u>
3.	(Bank 09) 2080-051	School	<u>\$ 3,578.00</u>
		Total CAP Fee	<u>\$ 5,813.00</u>

\*\*\* These CAP Fee prices are based on a Single-Family Detached House for the calendar year 2020. \*\*\*



## **TOWN OF HUDSON**

## Planning Board



Timothy Malley, Chairman

12 School Street · Hudson, New Hampshire 03051 · Tel: 603-886-6008 · Fax: 603-594-1142

#### **CAP FEE WORKSHEET - 2020**

Date <u>:</u>	02-05-20	Zone #	1	Map/Lot:	<u>161</u> 334 C	/029-000 entral Stre	et
Project	t Name:	Granite	Heights	19-Lot Subd	ivision		
Propos	sed ITE Use #1:		I	Duplex			
Propos	sed Building Ar	ea (square	footage)	•	N/A		<u>S.F.</u>
CAP F	TEES: (ONE CI	IECK NEE	(DED)				
1.	(Bank ( 2070-70	,	fic Impr	ovements	<u>\$</u>	1,835.00	
2.	(Bank ( 2050-18	19) 32 Reci	reation		<u>\$</u>	400.00	
3.	(Bank ( 2080-05		ool		<u>s</u>	3,063.00	

\*\*\* These CAP Fee prices are based on a Single-Family Residential unit for the calendar year 2020. This fee applies to each unit in the duplex. \*\*\*

5,298.00

\$

**Total CAP Fee** 

#### SUBDIVISION/SITE PLAN WAIVER REQUEST FORM Town of Hudson, New Hampshire

Name of Subdivision/Site Plan: Granite Heights

Street Address: 334 Central Street

I Paul Chisholm (Authorized Agent) hereby request that the Planning Board waive the requirements of item <u>HR 289-37.A.</u> of the Subdivision/Site Plan Checklist in reference to a plan presented by <u>Keach-Nordstrom Associates</u>, Inc. (name of surveyor and engineer) dated <u>December 6, 2019</u> for property tax map(s) <u>161</u> and lot(s) 29 in the Town of Hudson, NH.

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e. (For Subdivisions) and RSA 674:44, III (e) (For Site-Plans). Without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Subdivision/Site Plan regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

This would be an unnecessary financial hardship for the applicant because they would have to

construct the entire road and not be able to recoup their costs in an acceptable time frame given the amount of work required for construction. The project viability would be at risk and the originally approved parcels could be constructed at once.

Reason(s) for granting this waiver, relative to not being contrary to the Spirit and Intent of the Subdivision/Site Plan regulations: (if additional space is needed please attach the appropriate documentation hereto):

The Spirit and Intent of this regulation is to limit growth management to a reasonable degree.

The previous approval is vested and can be constructed all at once. Approving this plan will technically cause the phasing requirement to reset, according to the Town. The Applicant believes the spirit and intent of the regulation will be maintained because of the past history of this parcel.

Signed:

Applicant or Authorized Agent

Planning Board Action:

Waiver Granted

Waiver Not Granted

Page 1 of 1 Rev Feb. 2012

#### WAIVER REQUEST FORM

Name of Subdivision/S	ite Plan:	Granite Heig	phts		
Street Address: 334 (	Central St	reet			
I Paul Chisholm,	PE (Autho	orized Ageni	t)	hereby request that the Planning Boa	ard
waive the requirements	of item 28	89-18(B)(2)		of the Hudson Land Use Regulation	ons
in reference to a plan p	resented by	Keach-Nor	dstrom	Associates, Inc.	
		_(name of su	veyor ar	ad engineer) dated December 6, 2019	for
property tax map(s)	161	and lot(s)	29	in the Town of Hudson, NH.	

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e., without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Land Use Regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

Special conditions exist on this property that distinguish it from others in the area. There is only one allowable access point to this property due Central Street's 'limited access' designation, the shape of the parcel and direct adjacent surrounding development. No fair and substantial relationship exists between the general public purposes of the ordinance provision and the specific application of the regulation on the property because this waiver was previously granted for a longer, less compliant cul-de-sac. The proposed use is reasonable and allowed by right on this property.

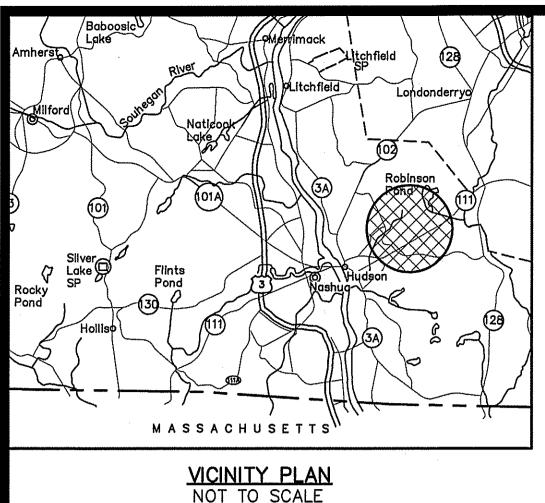
Reason(s) for granting this waiver, relative to not being contrary to the spirit and intent of the Land Use Regulations: (if additional space is needed please attach the appropriate documentation hereto):

The spirit and intent of regulation is based on safety. There are a number of safety features proposed, including a water main extension and hydrants, that did not exist in the original proposal. Additionally, the proposed cul-de-sac length is shorter than the original approval, which directly meets the spirit and intent of the ordinance. The Applicant reviewed this project with the Fire Chief prior to submission and he was satisfied with the safety features proposed and project.

Signed:

Applicant or Authorized Agent

Page 6 of 8 Subdivision Application - Hudson NH

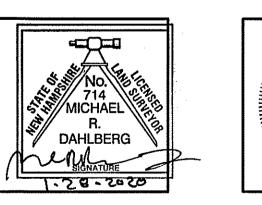


# RESIDENTIAL SUBDIVISION GRANITE HEIGHTS MAP 161; LOT 29 CENTRAL STREET AND LAWRENCE ROAD HUDSON, NEW HAMPSHIRE

OWNER/APPLICANT: K&M DEVELOPERS, LLC 46 LOWELL ROAD HUDSON, NH 03051 603-880-7799

PREPARED BY: KEACH-NORDSTROM ASSOCIATES, INC. 10 COMMERCE PARK NORTH, SUITE 3B BEDFORD, NEW HAMPSHIRE 03110 (603) 627-2881





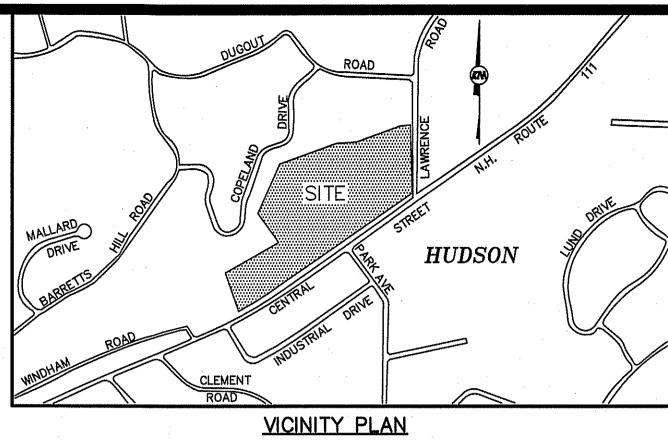


**K**A Land Surveying Landscape Architectu Suite 3B. Bedford. NH 03110 Phone (603) 627-2881

DECEMBER 6, 2019 PROJECT NO. 19-0408-1

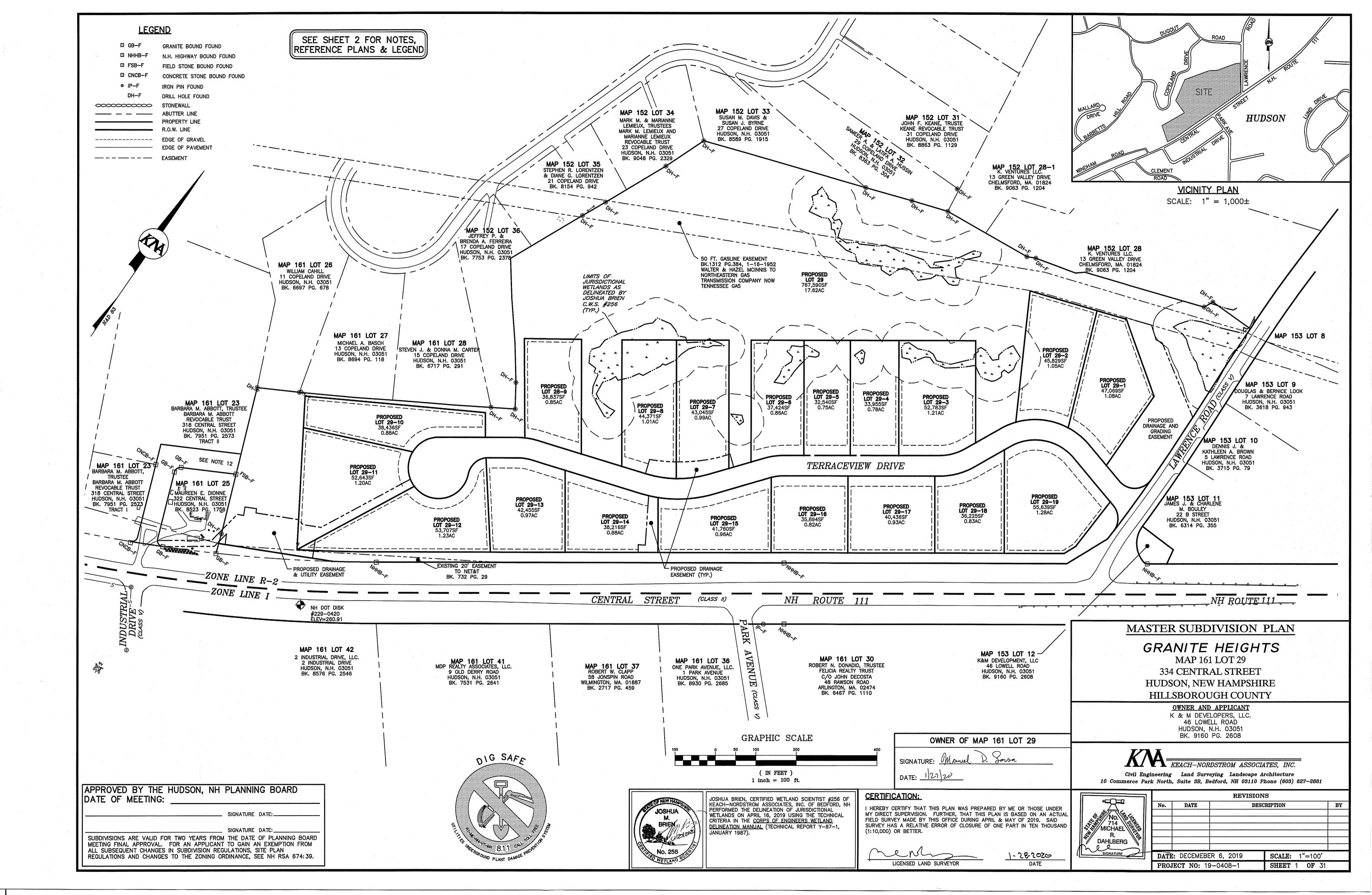
# SHEET TITLE

MASTER SUBDIVISION PLAN **PROJECT NOTES** SUBDIVISION PLAN **TOPOGRAPHIC SUBDIVISION PLAN** ROADWAY PLAN **ROADWAY PROFILE OFF-SITE DRAINAGE PROFILES** SIGHT DISTANCE PLAN STORMWATER BMP PLAN EROSION CONTROL PLAN CONSTRUCTION DETAILS OFFSITE UTILITY PLAN TEST PIT LOGS CONVENTIONAL SUBDIVISION YIELD PLAN



SCALE: 1'' = 1000

SHEET No.



## NOTES:

- 1. THE PURPOSE OF THIS PLAN IS TO DEPICT AN AMENDED (PREVIOUSLY APPROVED AS VISTA KNOLLS) 19 LOT RESIDENTIAL OPEN SPACE DEVELOPMENT; EACH LOT OWNER WITHIN THE OPEN SPACE SUBDIVISION SHALL POSSESS AN EQUAL SHARE OF THE COMMON OPEN SPACE AREA ASSOCIATED WITH THIS DEVELOPMENT. THIS PLAN IS FOR
- ASSESSOR'S MAP 161 LOT 29 IN HUDSON, NEW HAMPSHIRE AND NO OTHER PURPOSE. TOTAL SITE AREA: 1,679,877 S.F. OR 38.564 ACRES.
- OWNER OF RECORD: K & M DEVELOPERS. LLC.

– SIDE - REAR

- 46 LOWELL ROAD HUDSON, N.H. 03051
- BK. 9160 PG. 2608
- 4. THE SUBJECT PARCEL IS LOCATED WITHIN THE RESIDENTIAL (R-2) ZONING DISTRICT AND IS SUBJECT TO THE FOLLOWING DIMENSIONAL REQUIREMENTS: MINIMUM BUILDING SETBACKS: - FRONT

50	FT			
15	FT			
15	FT			
LIONAL L				

- 5. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE IN APRIL & MAY OF 2019.
- 6. HORIZONTAL DATUM IS NAD83. VERTICAL DATUM IS NAVD88. BOTH DATUMS WERE
- OBTAINED THROUGH GPS METHODS UTILIZING NHDOT DISK #229-0420. 7. EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAPS (FIRM) FOR THE TOWN OF HUDSON, NEW HAMPSHIRE. HILLSBOROUGH COUNTY, MAP NUMBER 33011C0517D, PANEL NUMBER 517 OF 701 AND MAP NUMBER 33011C0519D, PANEL NUMBER 519 OF 701, EFFECTIVE DATE SEPTEMBER 25, 2009, INDICATE THAT NO PORTION OF THE SUBJECT PARCEL IS LOCATED IN A DESIGNATED FLOOD ZONE.
- 8. WATER SERVICE INFORMATION IS PER TOWN OF HUDSON. 9. LIBERTY UTILITIES MAINTAINS A 4" GAS MAIN ALONG INDUSTRIAL DRIVE AND PARK AVENUE THAT IS STUBBED ON THE NORTH EAST SIDE OF PARK AVENUE
- APPROXIMATELY 176' FROM CENTRAL STREET. 10. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 811.
- 11. EASEMENTS, RIGHTS AND RESTRICTIONS SHOWN OR IDENTIFIED HEREON ARE THOSE FOUND DURING RESEARCH AT THE HILLSBOROUGH COUNTY REGISTRY OF DEEDS. OTHER EASEMENTS, RIGHTS AND RESTRICTIONS MAY EXIST WHICH A TITLE EXAMINATION OF THE SUBJECT PREMISES MAY DETERMINE.
- 12. THIS PARCEL IS JOINTLY OWNED BY K&M DEVELOPERS PER H.C.R.D. BK. 9160 PG. 2608, TRACT IV, UNDIVIDED 50% INTEREST AND BY BARBARA M. ABBOTT, TRUSTEE OF THE BARBARA M. ABBOTT REVOCABLE TRUST PER H.C.R.D. BK. 7951 PG. 2573, TRACT
- I. UNDIVIDED 50% INTEREST. 13. THE OPEN SPACE SUBDIVISION IS TO BE SERVICED BY MUNICIPAL WATER & INDIVIDUAL SEPTIC SYSTEMS.
- 14. PROPER EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO CLEARING AND EXCAVATION. THE CONTROLS SHALL BE MAINTAINED IN GOOD WORKING ORDER UNTIL COMPLETION OF CONSTRUCTION. THE TOWN OF HUDSON RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES DURING CONSTRUCTION, IF NECESSARY.
- 15. OPEN SPACE:
- REQUIRED OPEN SPACE AREA = 330,936 SF PROVIDED OPEN SPACE AREA = 763,581 SF
- 16. PERMITS REQUIRED: -NHDES AOT
  - -NHDES SUBDIVISION -NHDES INDIVIDUAL SUBSURFACE DISPOSAL (SEPTIC SYSTEMS)
  - -NHDOT EXCAVATION PERMIT
- 17. MAINTENANCE OF THE ONSITE DRAINAGE SYSTEM SHALL BE CONSTRUCTED AND MAINTAINED IN COMPLIANCE WITH LOCAL AND NHDES REQUIREMENTS FOR SUCH SYSTEMS.
- 18. IF LOT DEVELOPMENT INVOLVES BLASTING AND/OR RAMMING OF BEDROCK MATERIALS, SAID ACTIVITIES SHALL BE LIMITED TO THE HOURS BETWEEN 7:00 A.M. AND 5:00 P.M. MONDAY THROUGH FRIDAY ONLY. SAID BLASTING / RAMMING ACTIVITIES SHALL BE PROHIBITED ON SATURDAY AND SUNDAY.
- 19. CONSTRUCTION ACTIVITIES INVOLVING THE LOTS SHALL BE LIMITED TO THE HOURS BETWEEN 7:00 A.M AND 6:00 P.M., MONDAY THROUGH FRIDAY. INTERIOR CONSTRUCTION ACTIVITIES ARE ALLOWED ON SATURDAY 7:00 A.M. AND 6:00 P.M. BOTH INTERIOR AND EXTERIOR CONSTRUCTION ACTIVITIES ARE PROHIBITED ON
- SUNDAYS. 20. STONE BOUNDS (5"X5"X30") TO BE SET AT ALL BOUNDARY INTERSECTIONS AND POINTS OF CURVATURE ON THE RIGHT-OF-WAY AND IRON PINS (5/8"X30") TO BE
- SET AT ALL OTHER BOUNDARY CORNERS. 21. A CERTIFICATE OF APPROVAL FROM THE BOARD OF HEALTH OF THE TOWN OF HUDSON AND FROM THE STATE OF NEW HAMPSHIRE SHALL BE REQUIRED FOR THE PROPOSED ON-LOT UTILITIES.
- 22. THIS APPROVAL IS SUBJECT TO FINAL ENGINEERING REVIEW.

#### LOT NUMBER | LOT AREA (SF) | FRON 47,069 29-1 45,829 29-2 52,783 29-3 33,955 29-4 32,540 29-5 37,424 29-6 43,045 29-7 44,371 29-8 36,837 29-9 38,436 29-10 52,643 29-11 53,707 29-12 42,455 29-13 38,216 29-14 . 41,760 29-15 35,694 29-16 40,436 29-17 -36,225 29-18 55,639 29-19 3

#### STATE LOT SIZING CALCULATIONS: THE PREDOMINANT SOIL GROUP CHATFIELD-HOLLIS COMPLEX. THE MOST RESTRICTIVE UPLAND SLOPE IS "D"

LOT

MINIMUM LOT LOADING FACTOR USED IS 1.73.

DENSITY FOR OPEN SPACE SUB
TOTAL AREA OF EXISTING PARC
-WETLAND AREA
-STEEP SLOPES
NET AREA FOR LOT LOADING
28.8 ACRES x 2,000 GPD/AC./
33,294  GPD = 221  BEDROOMS

- REFERENCE PLANS: STATE OF NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS PLANS OF PROPOSED FEDERAL AND SECONDARY PROJECT NO. S28 (6) & (7), N.H. PROJECT NO. S-3791-B. DATED: AUGUST, 1959. ON FILE AT THE NHOOT RECORDS DIVISION, CONCORD, NEW HAMPSHIRE.
- 2. "SUBDIVISION PLAN-MAP 31 LOT 88-1, LINCOLN ESTATES, BARRETTS HILL ROAD & DUGOUT ROAD." HUDSON, NEW HAMPSHIRE, PREPARED FOR: HING Y. WATT, DATED: JULY 7, 1992. SCALE: 1"=100'. PREPARED BY: MAYNARD & PAQUETTE CONSULTING ENGINEERS & LAND SURVEYORS. RECORDED AT THE H.C.R.D. AS PLAN #27226. 3. "BOUNDARY PLAT OF S & P FARMS TRUST." PREPARED FOR: ALBERT E. SMITH, JR.
- TRUSTEE. MAP 32 LOT 11. HUDSON, NEW HAMPSHIRE. DATED: DECEMBER 13, 1995. SCALE: 1"=100'. PREPARED BY: TODD LAND USE CONSULTANTS. RECORDED AT THE H.C.R.D. AS PLAN #27796.
- 4. "LOT LINE RELOCATION & SUBDIVISION PLAN, MAP 152 LOT 28 AND MAP 153 LOTS 1, 10 & 14 LAWRENCE ROAD, HUDSON, NEW HAMPSHIRE." PREPARED FOR: K. VENTURES, LLC. DATED: OCTOBER 22, 2004. SCALE: 1"=50'. PREPARED BY: MAYNARD & PAQUETTE ENGINEERING ASSOCIATES, LLC. RECORDED AT THE H.C.R.D. AS PLAN #34115.



## SIGNATURE DATE: \_\_\_\_

SIGNATURE DATE: \_\_\_

SUBDIVISIONS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FOR AN APPLICANT TO GAIN AN EXEMPTION FROM ALL SUBSEQUENT CHANGES IN SUBDIVISION REGULATIONS, SITE PLAN REGULATIONS AND CHANGES TO THE ZONING ORDINANCE, SEE NH RSA 674:39.

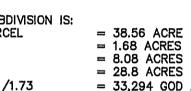
APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING:

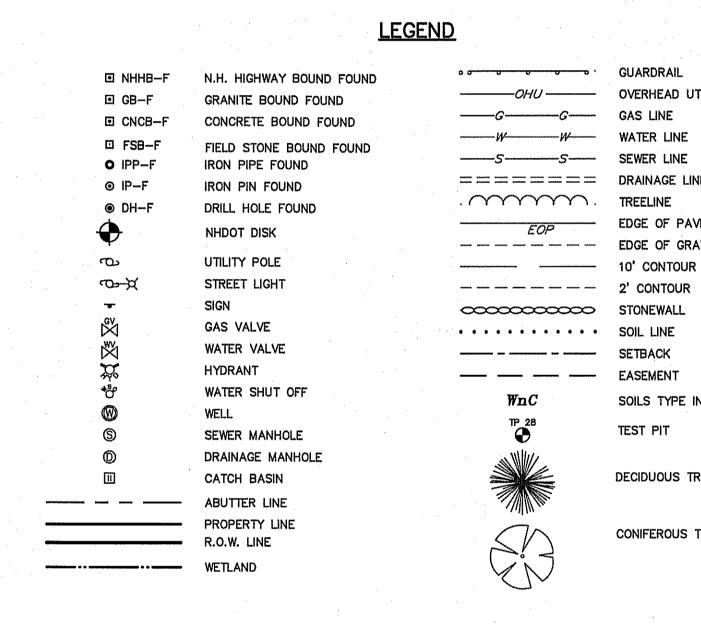
	TABLE OF LOT A	REAS		
NTAGE (FT)	STEEP SLOPES (SF)	WETLANDS (SF)	NON-CONTIGUOUS AREA (SF)	BLA (SF)
132.91	13,404	0	0	33,665
133.64	12,548	0	0	33,281
196.89	11,500	3,579	0	37,704
120.00	3,471	482	0	30,002
115.00	181	809	0	31,550
132.51	3	2,956	0	34,465
133.03	1,353	1,991	236	39,465
138.79	1,781	10,248	0	32,342
145.89	5,781	0	0	31,056
192.34	4,912	0	0	33,524
89.38	19,531	0	0	33,112
246.59	18,837	0	0	34,870
189.18	12,252	0	0	30,203
239.40	7,335	0	0	30,881
287.10	11,223	0	0	30,537
190.32	5,472	0	0	30,222
215.00	10,016	0	0	30,420
186.99	5,255	0	. 0	30,970
329.70	14,304	0	149	41,186

	MAP UNIT SL	OPE CLASS	DRAINAGE CLASS	SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS
	CANTON FINE SANDY LOAM	0-8%	WELL.	400B/DCDBB	UDORTHENTS, SANDY	0-8%	MODERATELY WEL
	CANTON FINE SANDY LOAM	8-15%	WELL	400C/DCDBB	UDORTHENTS, SANDY	8-15%	MODERATELY WEL
	CANTON FINE SANDY LOAM	15-25%	WELL.	400B/ECDBB	UDORTHENTS, SANDY	08%	SOMEWHAT POOR
	CANTON FINE SANDY LOAM	25% +	WELL	444B	NEWFIELDS FINE SANDY LOAI	M 0-8%	MODERATELY WEL
	HOLLIS FINE SANDY LOAM	8-15%	WELL	444C	NEWFIELDS FINE SANDY LOA	M 8—15%	MODERATELY WEL
	HOLLIS FINE SANDY LOAM	15-25%	WELL	444D	NEWFIELDS FINE SANDY LOA	M 15-25%	MODERATELY WEL
	CHATFIELD FINE SANDY LOAM	8-15%	WELL	500E/CCABB	UDORTHENTS, LOAMY	25% +	WELL
	CHATFIELD FINE SANDY LOAM	15-25%	WELL	500B/FCDCC	UDORTHENTS, LOAMY	0-8%	POORLY
	CHATFIELD FINE SANDY LOAM	25% +	WELL	514B	LEICESTER FINE SANDY LOAM	1 0-8%	POORLY
	TIMAKWA MUCK	0-3%	VERY POORLY			• .	
CCABB	UDORTHENTS, SANDY	08%	WELL	THIS MAP PRODUCT IS COOPERATIVE SOILS S	WITHIN THE TECHNICAL STAN	DARDS OF THE POSE PRODUCT.	PRODUCED BY
CCABB	UDORTHENTS, SANDY	8-15%	WELL	A CERTIFIED SOIL SCIE	ENTIST, AND IS NOT A PRODUC	T OF THE USD	A NATURAL
CCABB	UDORTHENTS, SANDY	15-25%	WELL	ACCOMPANIES THIS M	NON SERVICE. THERE IS A NA AP AND MAP KEY.	ARRAIIVE REPUR	
CCABB	UDORTHENTS, SANDY	25% +	WELL				· · · · · · · · · · · · · · · · · · ·
	UDORTHENTS, SANDY	0-8%	WELL				
CCDBB					SCS SOILS LE	GEND	
CCDBB CCDBB	UDORTHENTS, SANDY	8-15%	WELL				
CCDBB	UDORTHENTS, SANDY UDORTHENTS, SANDY	8—15% 25% +	WELL WELL	CtD c			
					IATFIELD-HOLLIS-ROCK OUTCR	OP COMPLEX, 1	

SITE_S	PECIFIC SOIL MAP	UNIT KE	Y
YMBOL		SLOPE CLASS	DRAINAGE CLASS
2B 2C 2D 2E 3C 3D 9C	CANTON FINE SANDY LOAM CANTON FINE SANDY LOAM CANTON FINE SANDY LOAM CANTON FINE SANDY LOAM HOLLIS FINE SANDY LOAM HOLLIS FINE SANDY LOAM CHATFIELD FINE SANDY LOAM		WELL WELL WELL WELL WELL WELL
CABB CABB CABB	CHATFIELD FINE SANDY LOAN CHATFIELD FINE SANDY LOAN TIMAKWA MUCK UDORTHENTS, SANDY UDORTHENTS, SANDY UDORTHENTS, SANDY		WELL WELL VERY POORLY WELL WELL WELL
CCABB CCDBB CCDBB	UDORTHENTS, SANDY UDORTHENTS, SANDY UDORTHENTS, SANDY	25% + 0-8% 8-15%	WELL WELL WELL WELL
400E/CCDBB 400B/CCEBB 400C/CCEBB	UDORTHENTS, SANDY UDORTHENTS, SANDY UDORTHENTS, SANDY	25% + 0-8% 8-15%	WELL WELL
400D/CCEBB 400B/DCABB	UDORTHENTS, SANDY UDORTHENTS, SANDY	15—25% 0—8%	WELL MODERATELY WELL



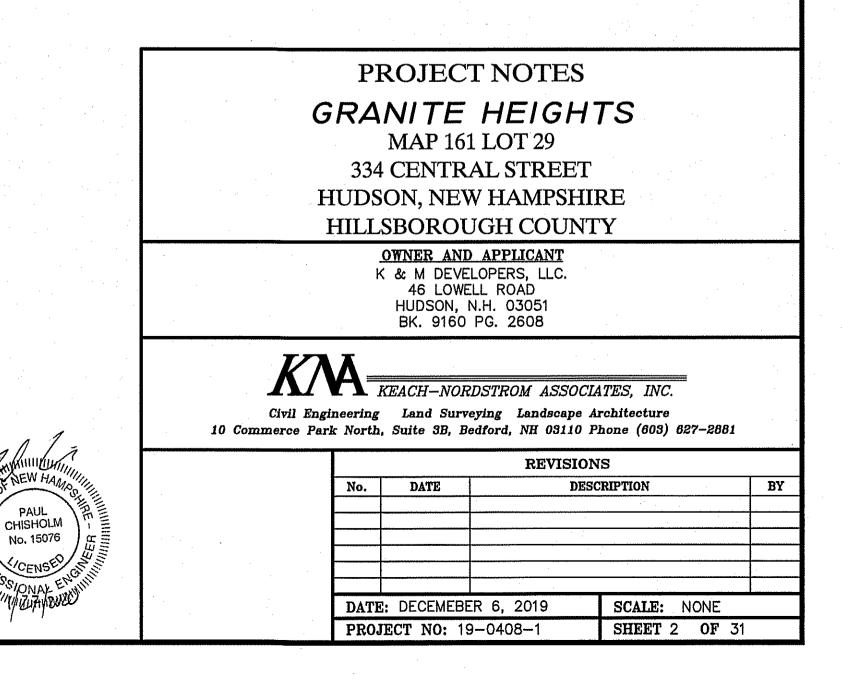
= 33,294 GOD ALLOWED ALLOWED ON LOT

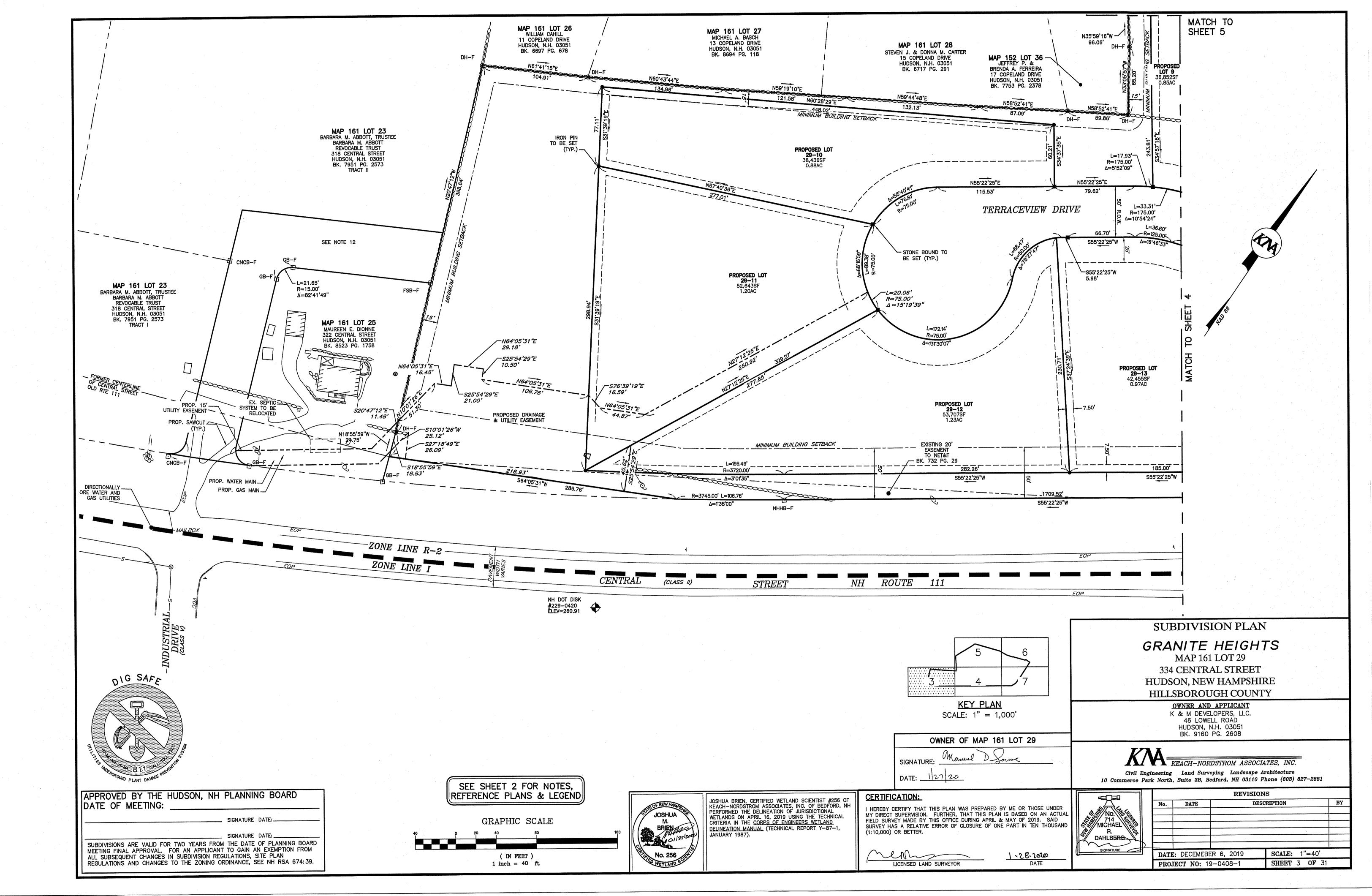


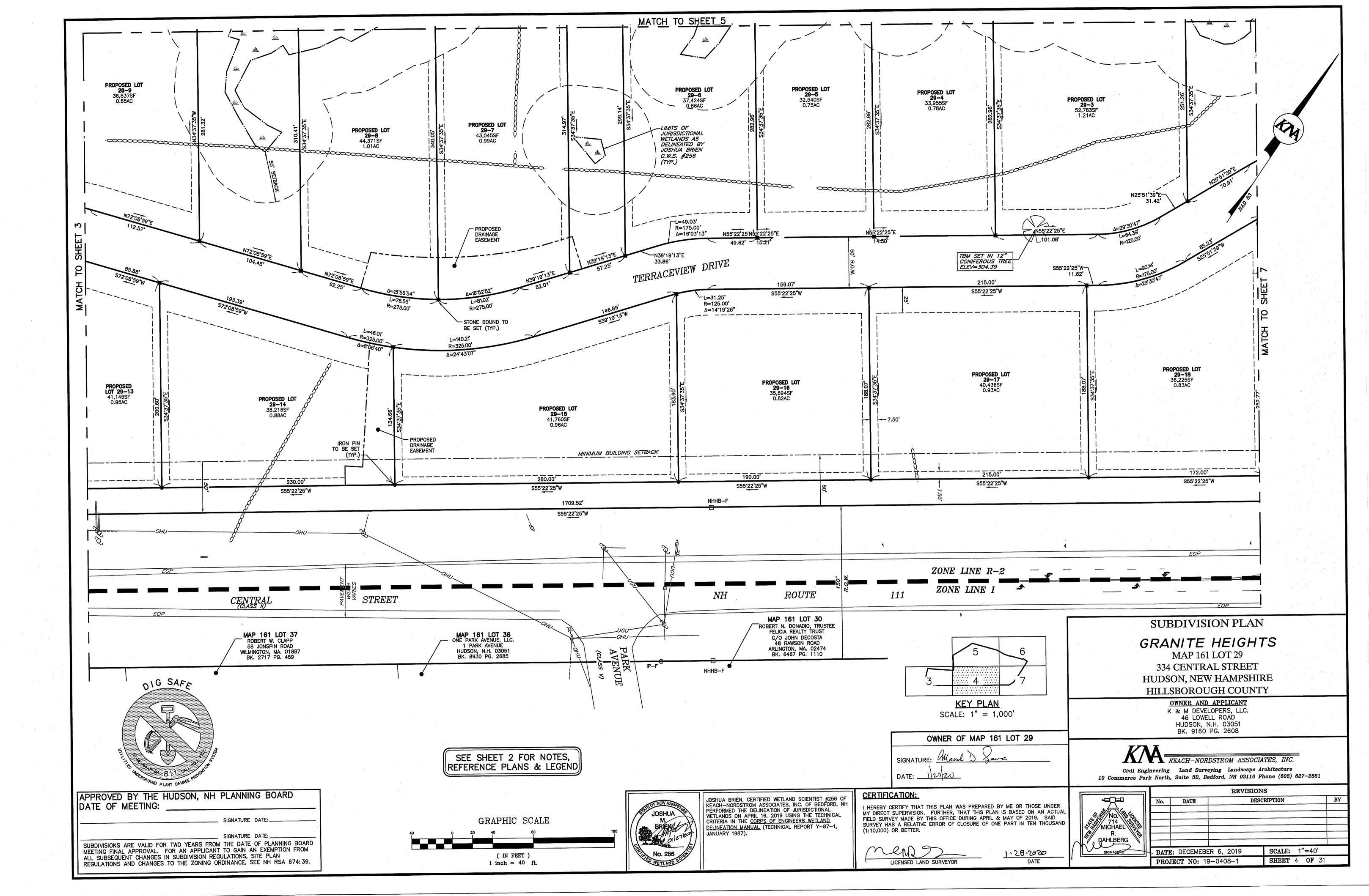
-------OHU ------ OVERHEAD UTILITIES EDGE OF PAVEMENT ----- EDGE OF GRAVEL SOILS TYPE INDICATOR TEST PIT

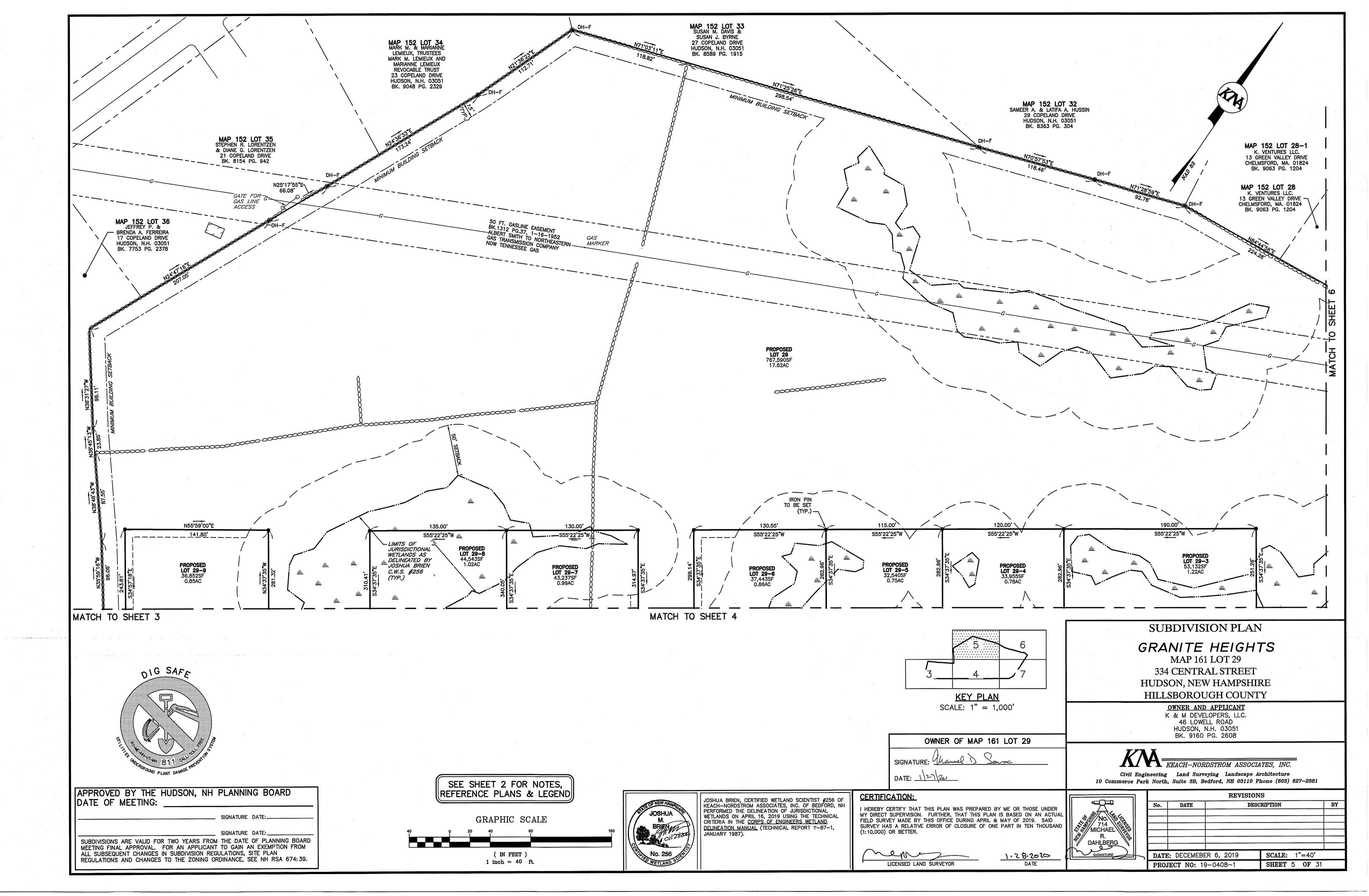
DECIDUOUS TREE

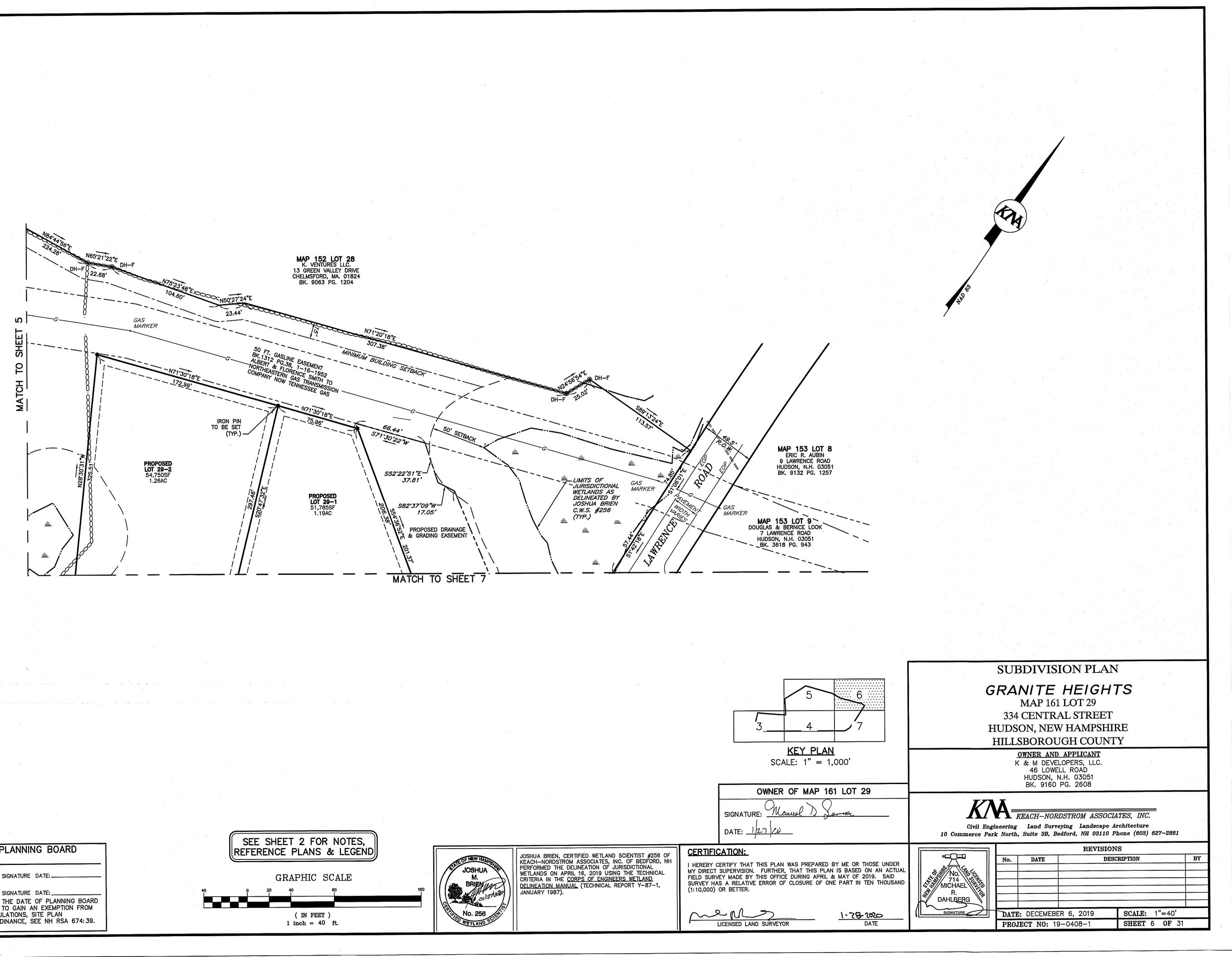
CONIFEROUS TREE







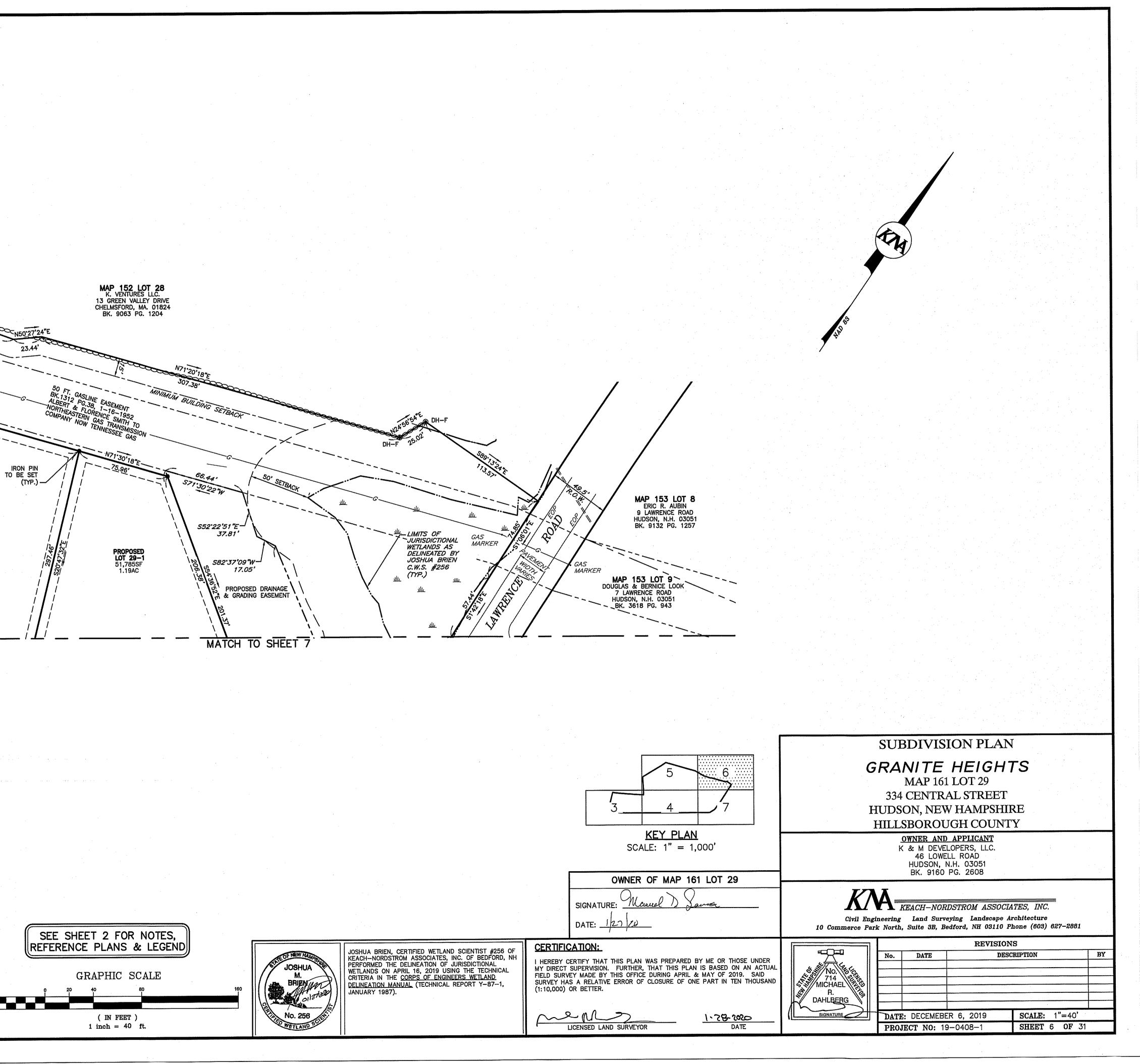


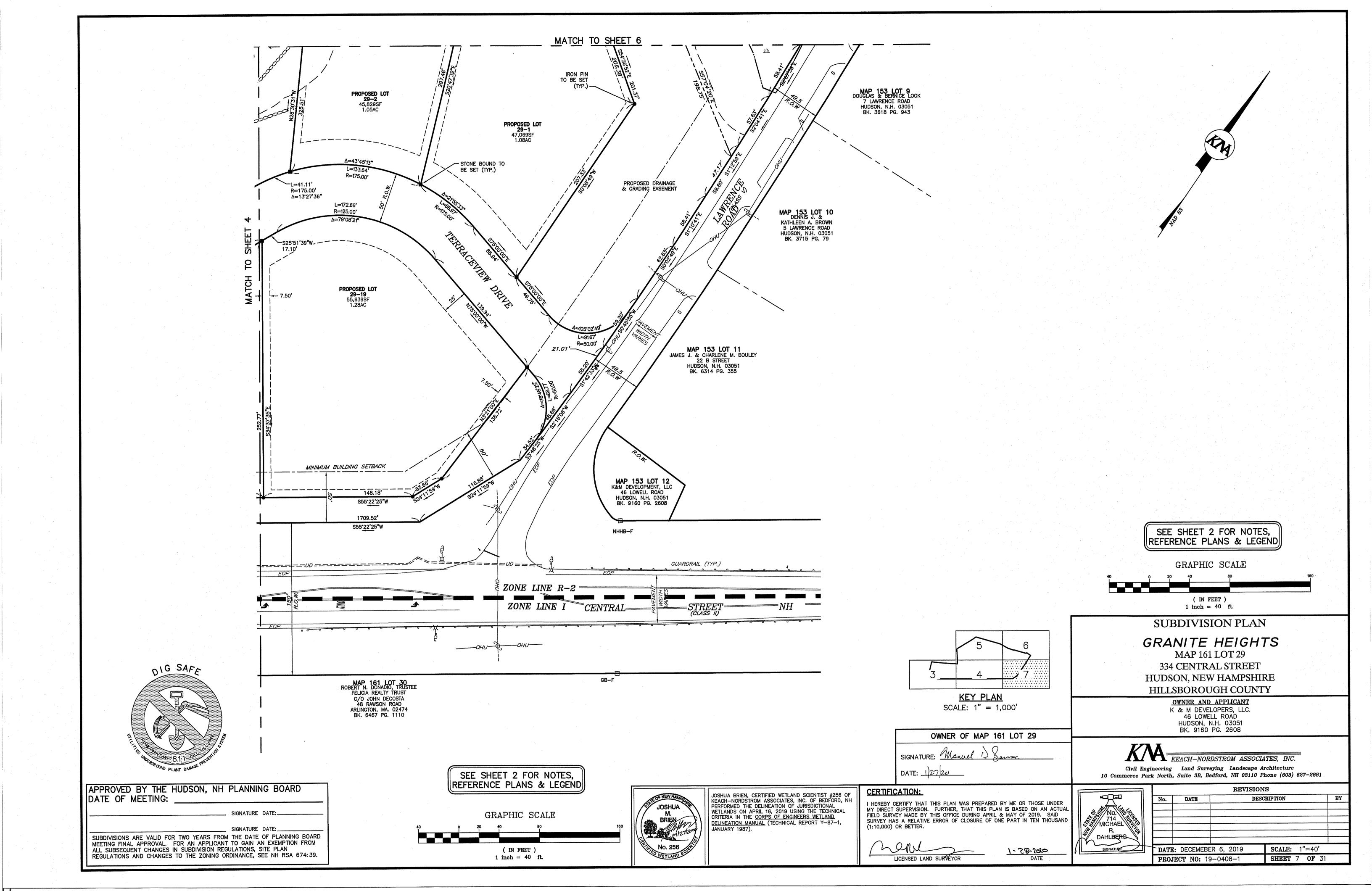


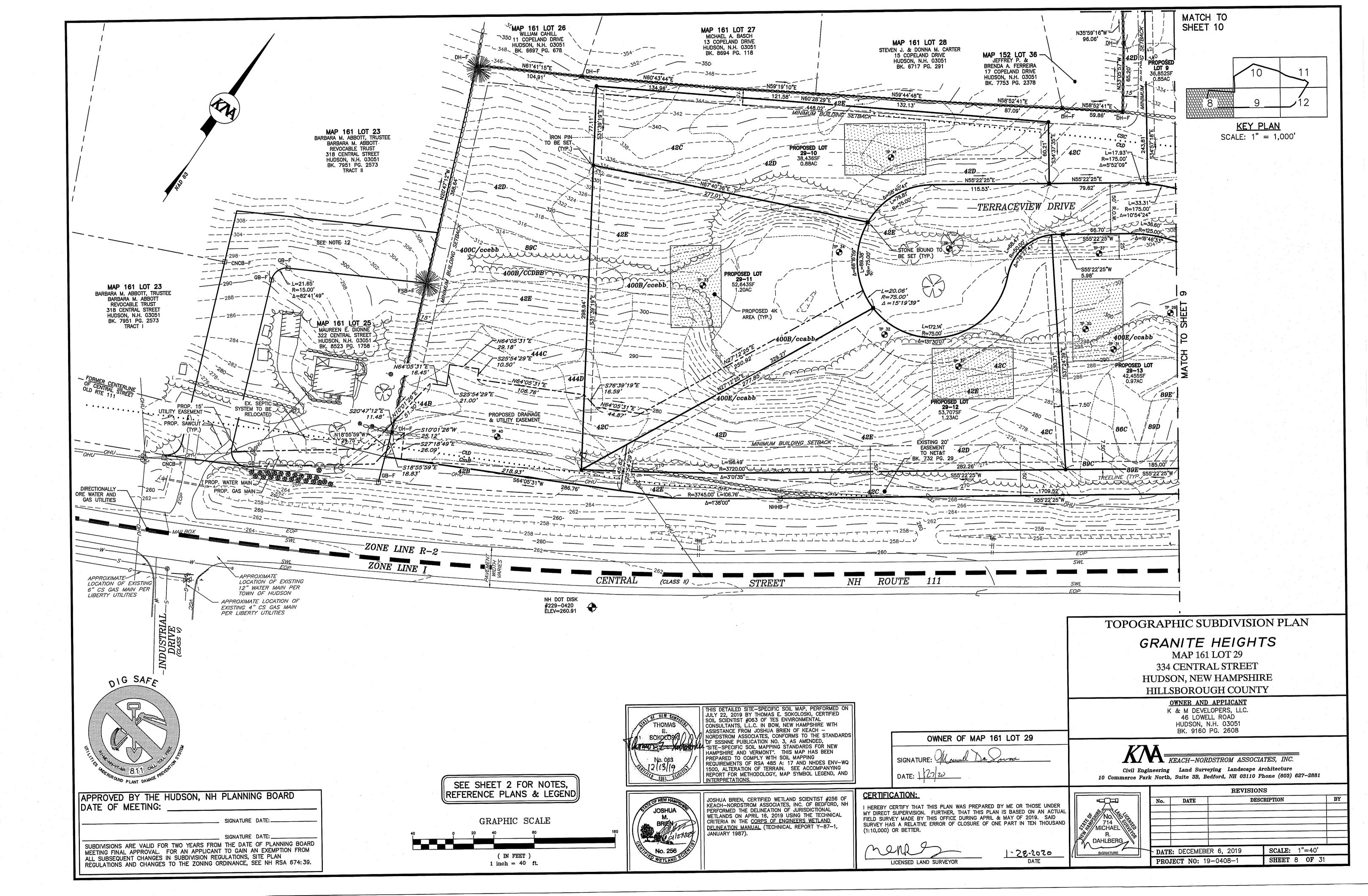


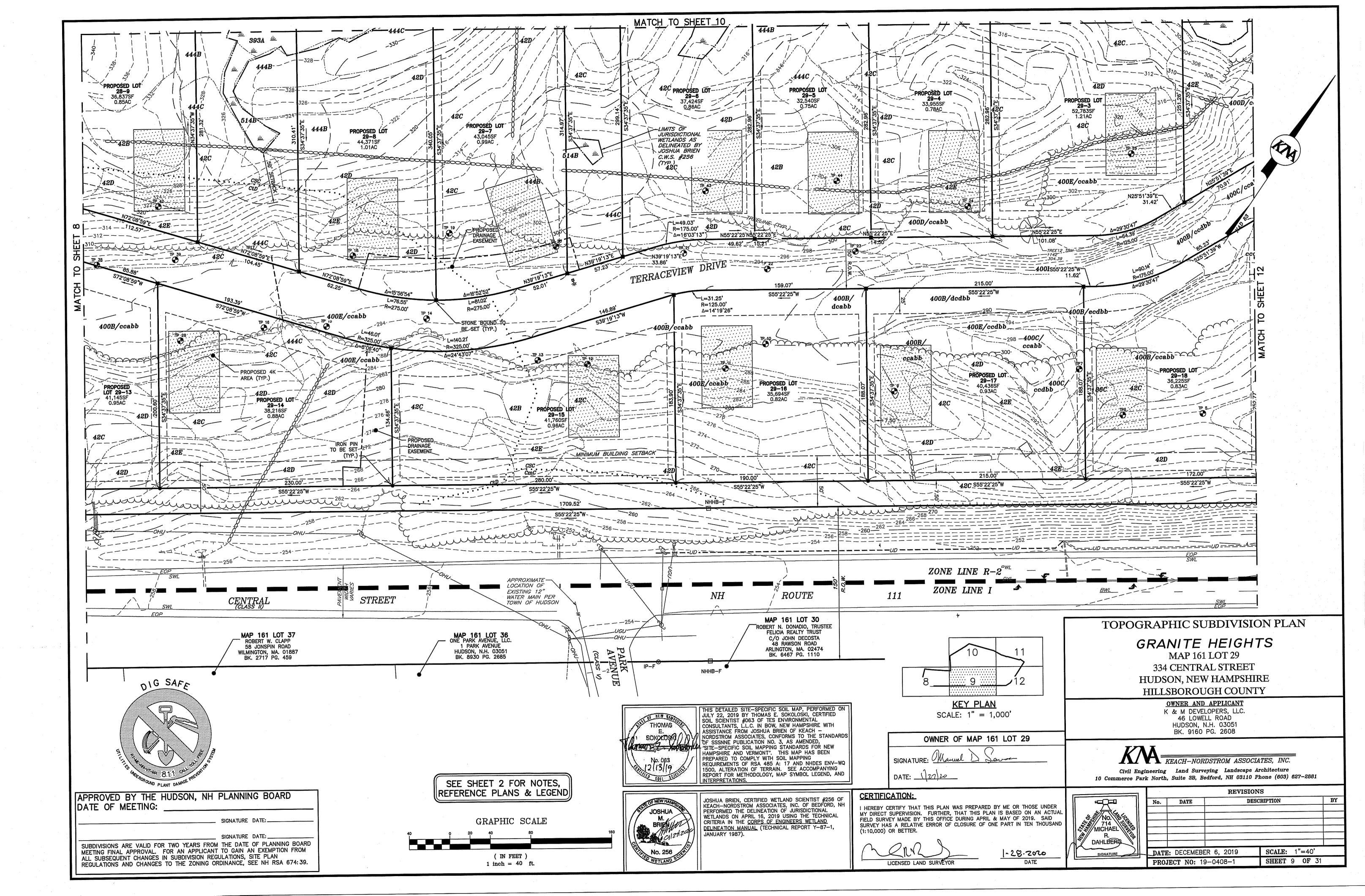
APPROVED BY THE HUDSON, NH PLANNING BOARD DATE OF MEETING:

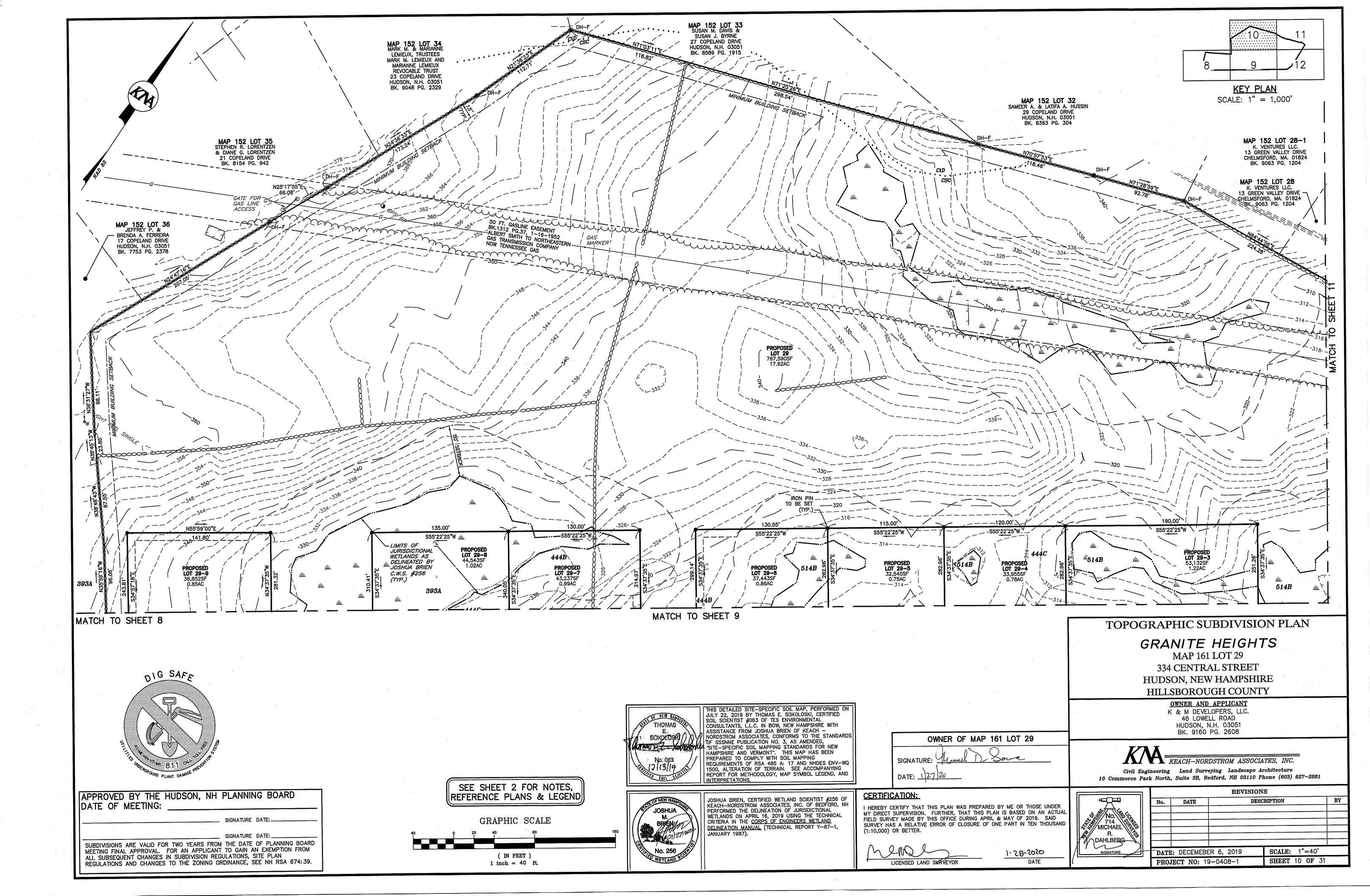
SUBDIVISIONS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FOR AN APPLICANT TO GAIN AN EXEMPTION FROM ALL SUBSEQUENT CHANGES IN SUBDIVISION REGULATIONS, SITE PLAN REGULATIONS AND CHANGES TO THE ZONING ORDINANCE, SEE NH RSA 674:39.

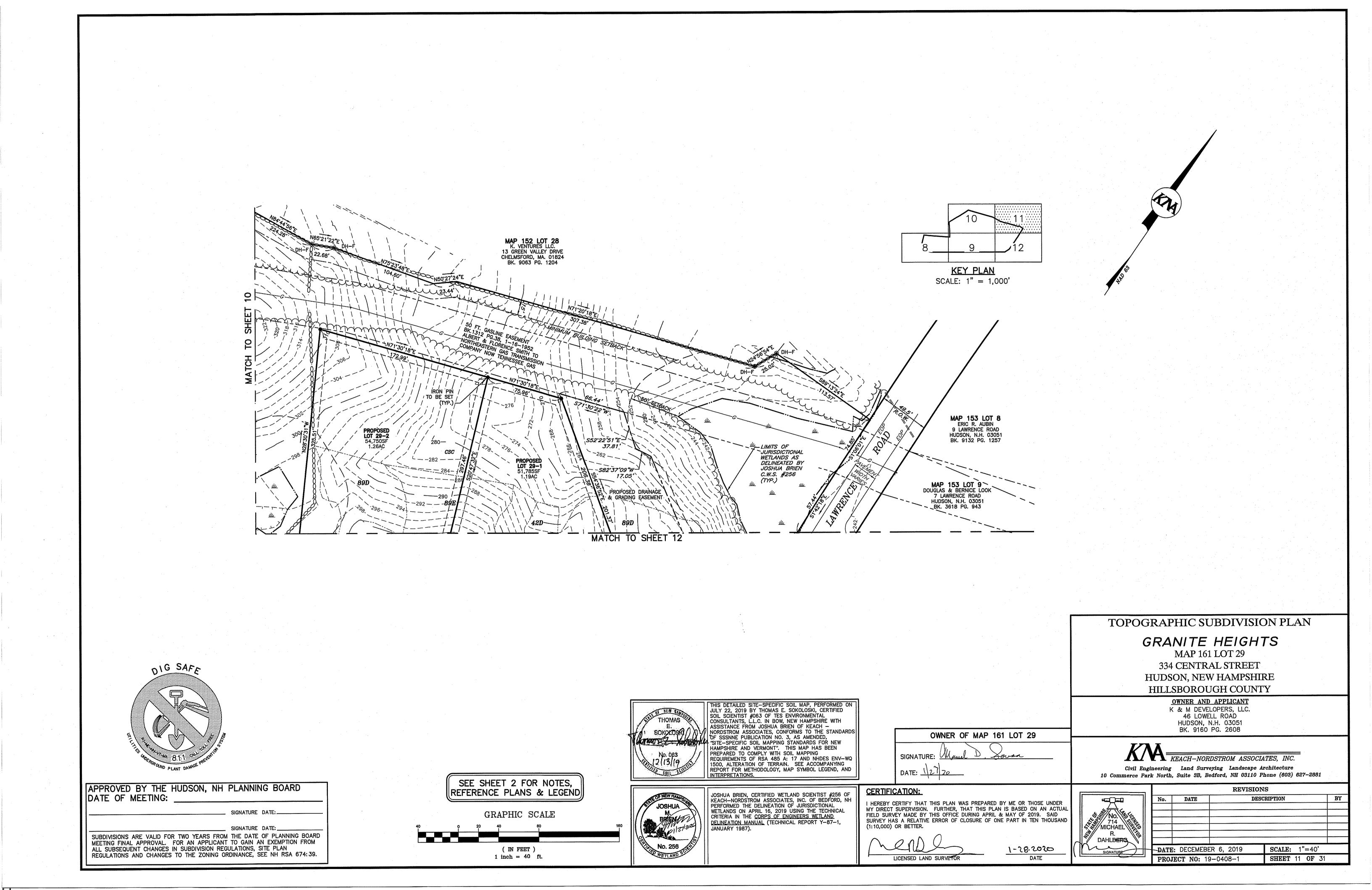


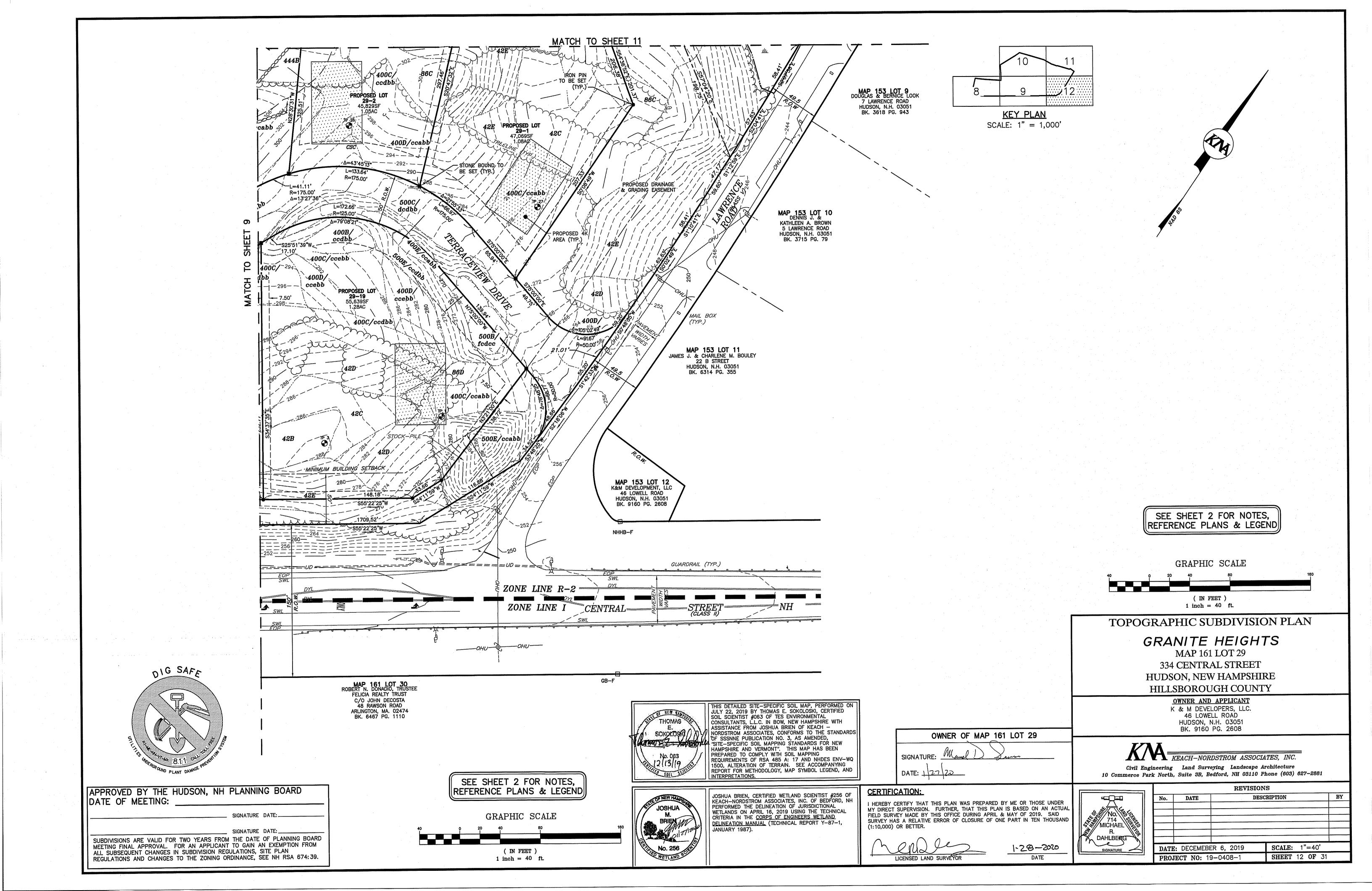








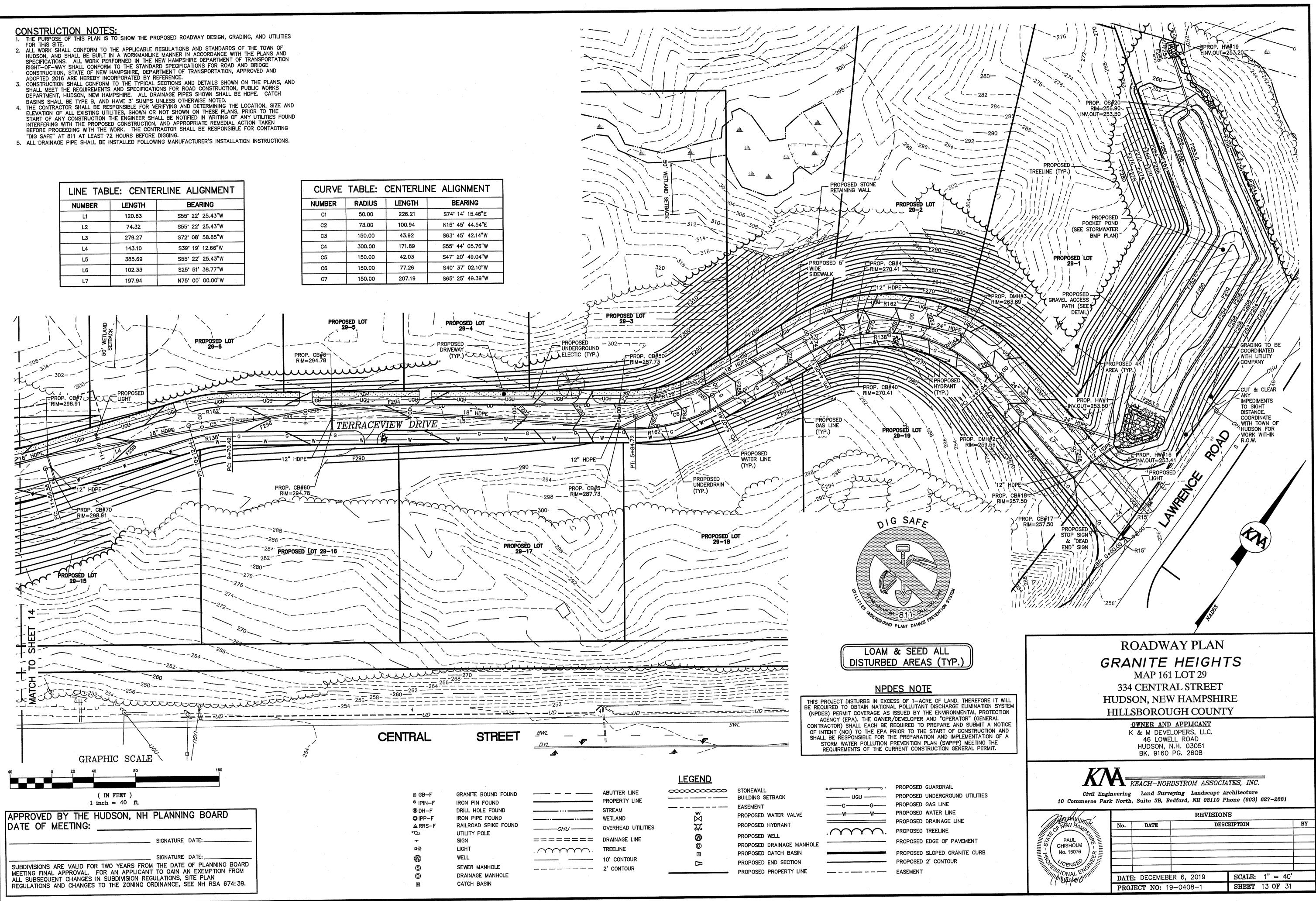




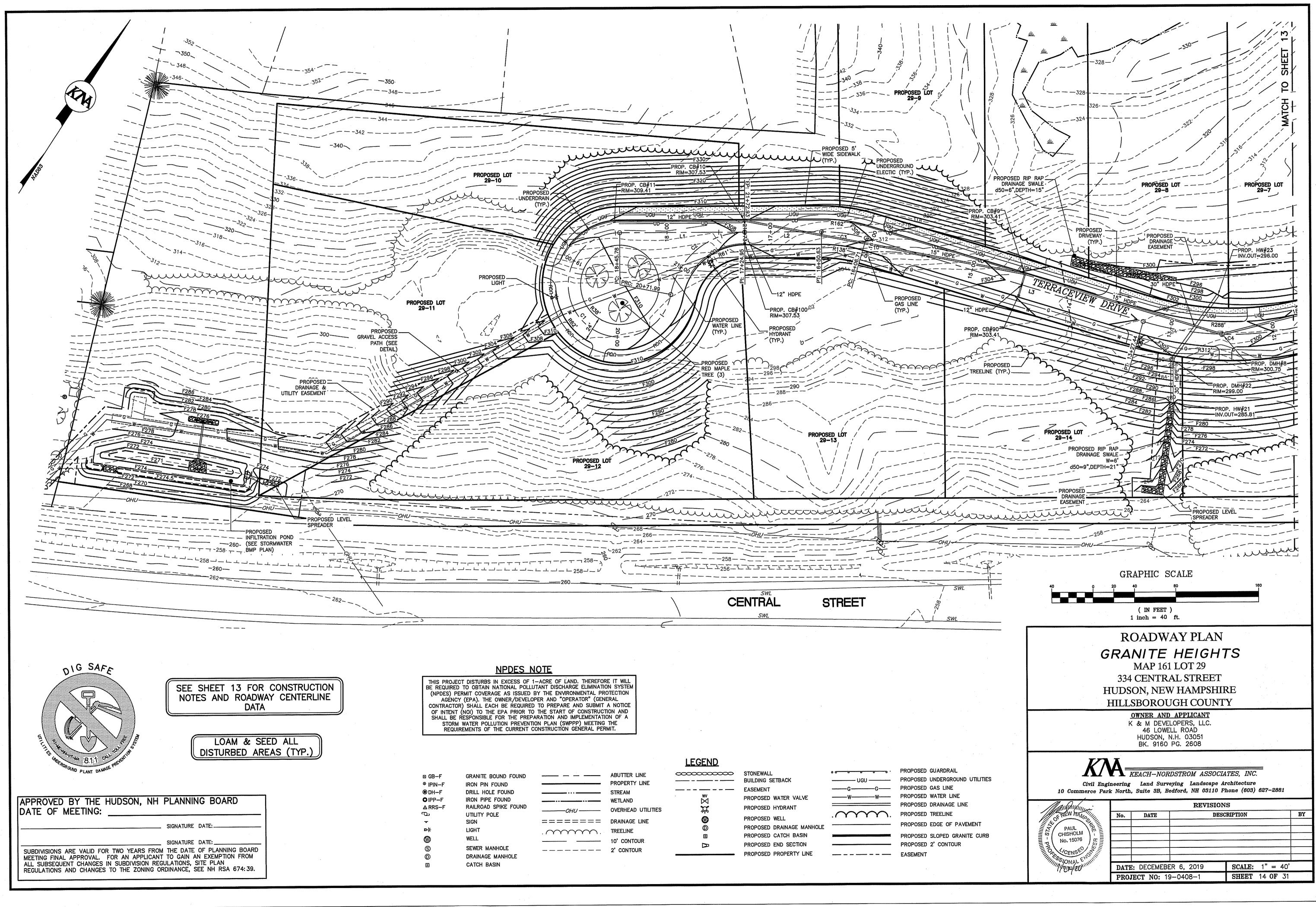
- ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION TAKEN

NUMBER	LENGTH	BEARING
L1	120.83	S55* 22' 25.43"W
L2	74.32	S55* 22' 25.43"W
L3	279.27	S72* 08' 58.85"W
L4	143.10	S39' 19' 12.66"W
L5	385.69	S55' 22' 25.43"W
L6	102.33	S25' 51' 38.77"W
L7	197.94	N75' 00' 00.00"W

CURVE	TABLE:	CENTERLINE			
NUMBER	RADIUS	LENGTH			
C1	50.00	226.21			
C2	73.00	100.94			
С3	150.00	43.92			
C4	300.00	171.89			
C5	150.00	42.03			
C6	150.00	77.26			
C7	150.00	207.19			



GRANITE BOUND FOUND IRON PIN FOUND DRILL HOLE FOUND IRON PIPE FOUND RAILROAD SPIKE FOUND UTILITY POLE SIGN LIGHT WELL	<i>OHU</i> ================================	ABUTTER LINE PROPERTY LINE STREAM WETLAND OVERHEAD UTILITIES DRAINAGE LINE TREELINE 10' CONTOUR		STONEWALL BUILDING SETBACK EASEMENT PROPOSED WATER VALVE PROPOSED HYDRANT PROPOSED WELL PROPOSED DRAINAGE MANHOLE PROPOSED CATCH BASIN PROPOSED END SECTION	• • • • • • • • • • • • • • • • • • •	PROPOSED GUARDRAIL PROPOSED UNDERGROUND PROPOSED GAS LINE PROPOSED WATER LINE PROPOSED DRAINAGE LINI PROPOSED TREELINE PROPOSED EDGE OF PAVI PROPOSED SLOPED GRAN PROPOSED 2' CONTOUR
SEWER MANHOLE DRAINAGE MANHOLE		2' CONTOUR	<u>لا</u>	PROPOSED PROPERTY LINE		EASEMENT



GRANITE BOUND FOUND
IRON PIN FOUND
DRILL HOLE FOUND
IRON PIPE FOUND
RAILROAD SPIKE FOUND
UTILITY POLE
SIGN
LIGHT
WELL
SEWER MANHOLE
DRAINAGE MANHOLE
CATCH BASIN

<b></b>	
······	
OHU	

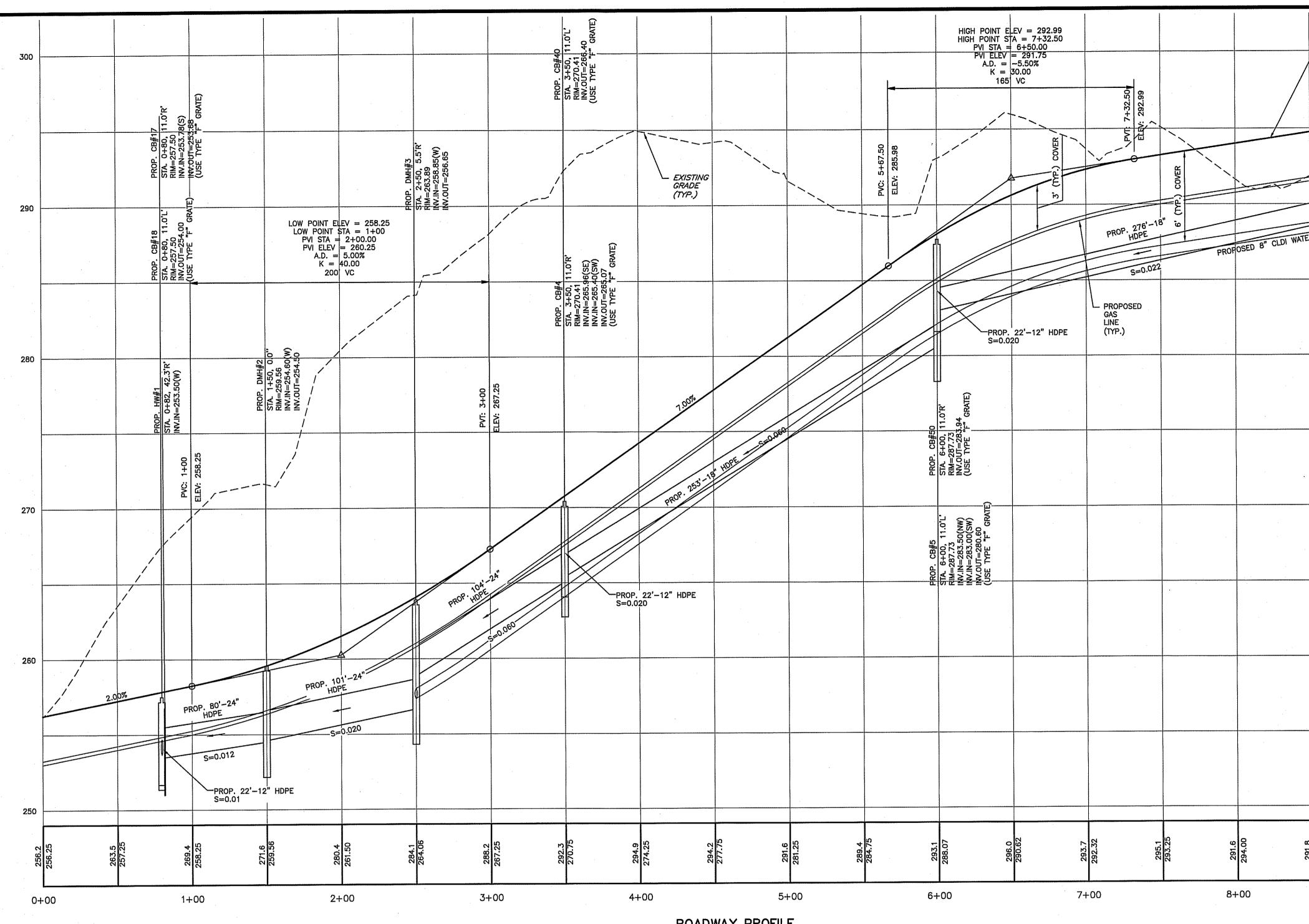
TTER LINE	
PERTY LINE	
AND	
RHEAD UTILITIES	
NAGE LINE	

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STONEWALL BUILDING SETBACK					
ASEMENT					
ROPOSED WATER VALVE					
ROPOSED HYDRANT					
ROPOSED WELL					
ROPOSED DRAINAGE MANHOLE					
ROPOSED CATCH BASIN					
ROPOSED END SECTION					
ROPOSED PROPERTY LINE					

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UGU	P
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PROPOSED	GUARDRAIL
PROPOSED	UNDERGROUN
PROPOSED	GAS LINE
PROPOSED	WATER LINE
PROPOSED	DRAINAGE LI
PROPOSED	TREELINE
PROPOSED	EDGE OF PA
PROPOSED	SLOPED GRA
PPOPOSED	2' CONTOUR

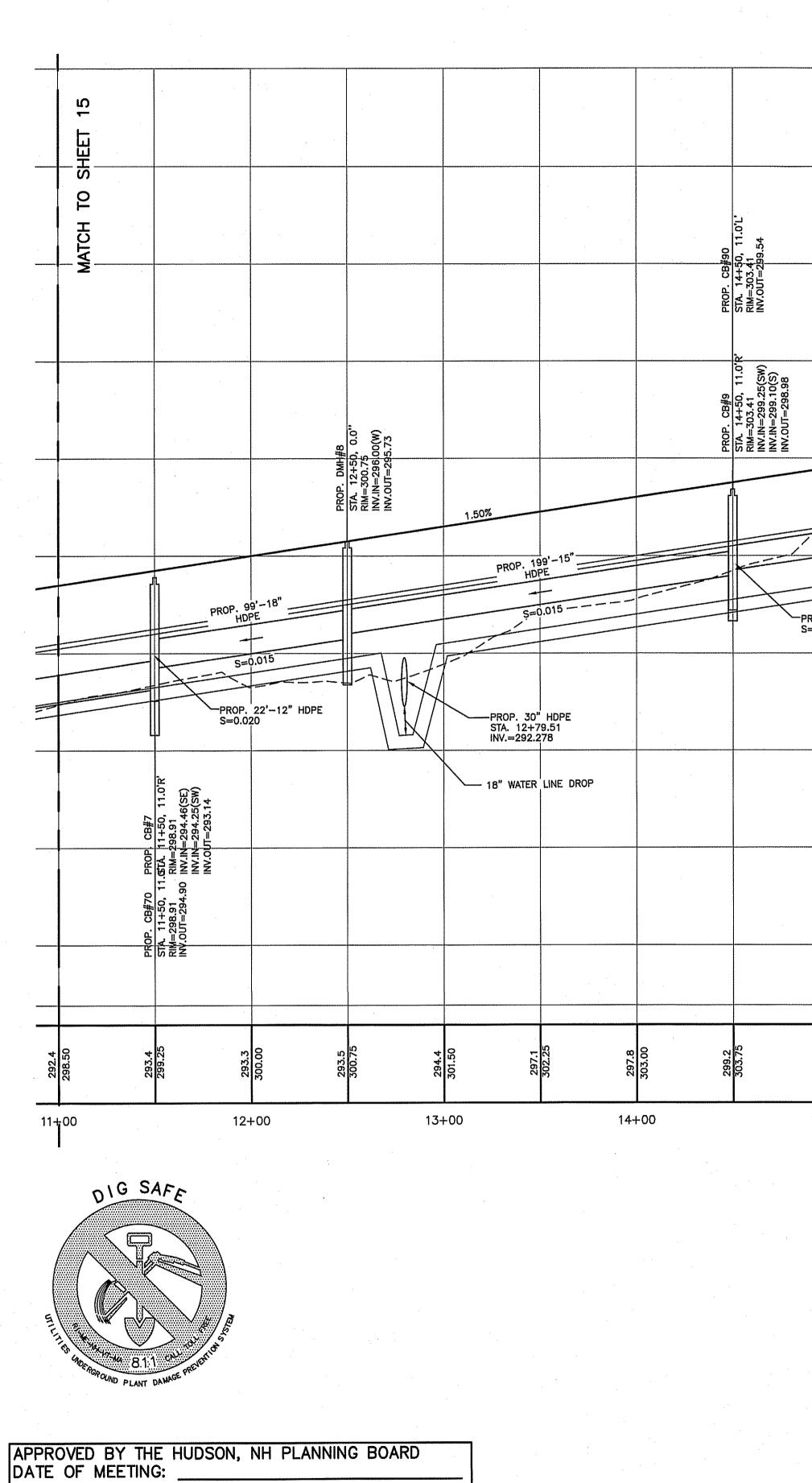




  $\frac{\text{ROADWAY PROFILE}}{\text{SCALE:} \quad 1'' = 40'(\text{HORIZ.})} \\ 1'' = 4'(\text{VERT.})$ 

GRAPHIC SCALE 40 0 20 40 80 (IN FEET ) 1 inch = 40 ft.

	. · ·					· · · ·
	- PROPOSED				· · ·	
	FINISH GRADE (TYP.)					
			PRO	P. 276'-18" HDPE		
_						
		PROP. 22'-12" H	DPF		O	
WATE	R MAIN	S=0.020			SHEET 1	
	1.0'L' 30	· · · · · · · · · · · · · · · · · · ·			T0 SI	
	Р. СВ#60 8+75, 1 =294.78 ЭUT=290.6				MATCH 1	
					<b>Z</b>	
	PROP. CB#6 STA. B+75, 11.0'R' RIM=294.78 INV.IN=290.36(SE) INV.IN=289.01(SW)	INV.0JT=289.07	. •			
	PROP. STA. R INV.IN	O.VVI				
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			Nam barren annan ar far fundi a la balanda da gran an an an an an an an an			· · · · · · · · · · · · · · · · · · ·
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291.8	294.75 294.75	295.50 292.3	296.25 291 a	297.00	297.75 292.4	298.50
	9-	 +00	10	+00	11-	 t 00
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				MAP 161 LC	DT 29	
				CENTRAL ON, NEW H		
· .				SBOROUGH	PLICANT	
. •			ŀ	K & M DEVELOPE 46 LOWELL R HUDSON, N.H. BK. 9160 PG.	RS, LLC. COAD 03051 2608	
· · ·			KA =			S INC
		10 Comr	Civil Engineering	KEACH-NORDSTI Land Surveying , Suite 3B, Bedford	Landscape Archi	tecture
•		THAT NEW HA	Moliling No.	DATE	REVISIONS DESCRIP	TION BY
	160	PAUL CHISHOLT No. 15076				
		PROFILE PROFILE PROFILE PROFILE STONAL			0010	
			DATI PRO	E: DECEMEBER 6, IECT NO: 19-04		CALE: 1" = 40' HEET 15 OF 31



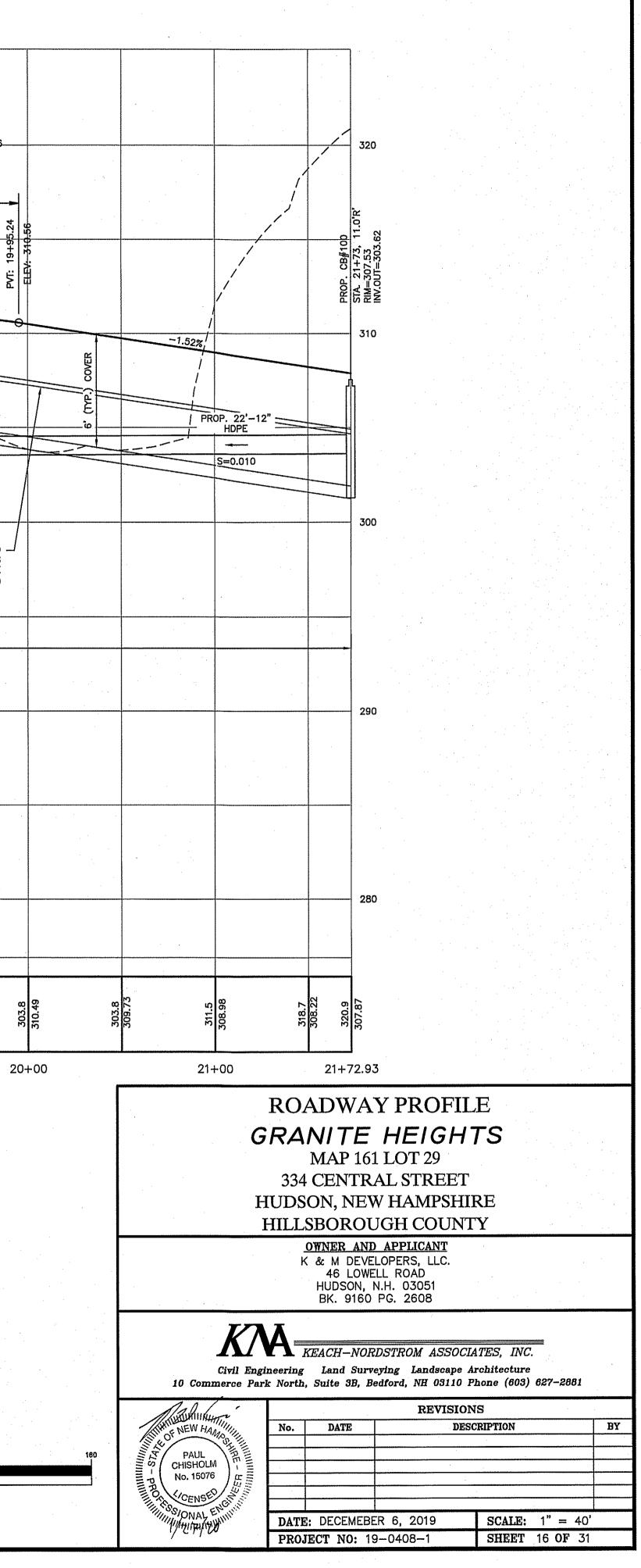
	SIGNATURE	DATE:	
	SIGNATURE	DATE:	
SUBDIVISIONS ARE VALID FOR TWO YEARS FROM MEETING FINAL APPROVAL. FOR AN APPLICANT	THE DATE	OF PLANNING	BOARD
ALL SUBSEQUENT CHANGES IN SUBDIVISION REGI REGULATIONS AND CHANGES TO THE ZONING OR	JLATIONS, S	SITE PLAN	

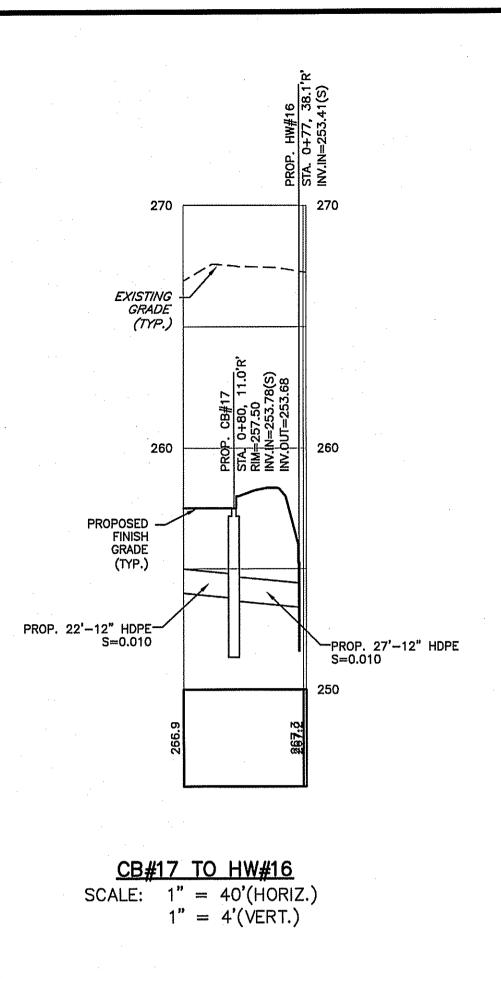
			<b>1</b>					•	,	
					/		EXISTING GRADE		HIGH POINT EL HIGH_POINT_ST PVI STA -	EV = 310.91 \_ <u>= 19+49.76</u>
								29 29	HIGH POINT EL HIGH_POINT_ST PVI STA = PVI ELEV A.D. = K = 5 90'	19+50.00 = 311.25 -3.02% 30.00 VC 
			r · · · · · · · · · · · · · · · · · · ·		PROP. CB#10 STA. 17+25, 11.0'R' RIM=307.53 INV.IN=303.40(SW) INV.IN=303.40(SW)		- PROPOSED FINISH O GRADE (TYP.) O	<u> </u>	ELEV: 310	PVT-
						PROP. 126'-1 HDPE	2"			
		PROP. 276'-1 HDPE S=0.015				S=0.015				
-PROP. S=0.0	PROPOSE 22'-12" HDPE 20	D 8" CLDI WATER M	AIN		STA. 17+24.95 ELEV.=307.88'					PROPOSED – GAS LINE (TYP.)
									PROPOSED C	UL-DE-SAC
*****							· · · · · · · · · · · · · · · · · · ·			
301.9	304.50 307.9	305.25 312.0	306.00 315.6	306.75 320.8	307.50 318.9	308.25 319.6	309.00 319.2	309.75 314.1	310.50 305.1	310.91
15-	+00	16-	+00	17-	+00	18-	-00	19-	+00	:

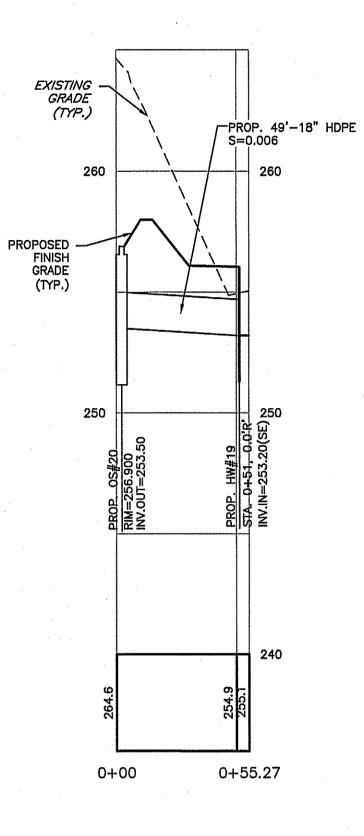
16+00

 $\frac{\text{ROADWAY PROFILE}}{\text{SCALE:} \quad 1'' = 40'(\text{HORIZ.})} \\ 1'' = 4'(\text{VERT.})$ 

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





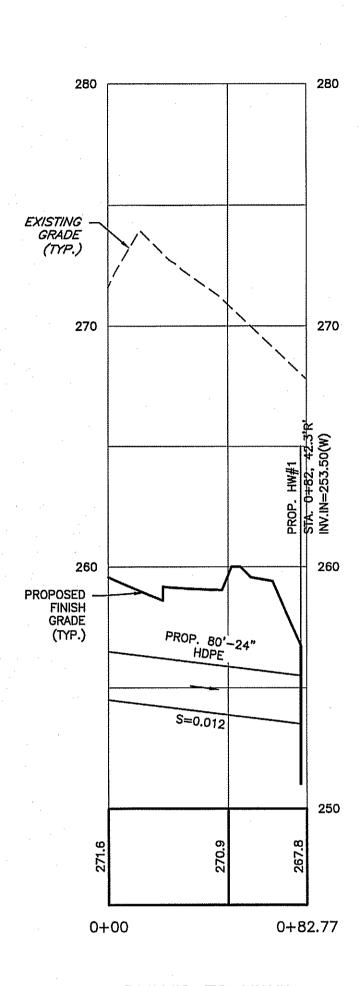


OS#20 TO HW#19 SCALE: 1" = 40'(HORIZ.) 1" = 4'(VERT.)

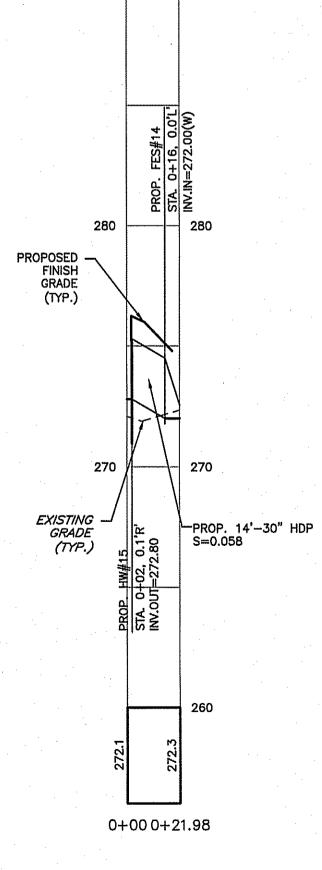


APPROVED BY THE H DATE OF MEETING:	HUDSON,	NH	PLANNING BOARD
			SIGNATURE DATE:
			SIGNATURE DATE:
MEETING FINAL APPROVAL.	FOR AN APPI N SUBDIVISIO	LICANT	I THE DATE OF PLANNING BOAF TO GAIN AN EXEMPTION FROM SULATIONS, SITE PLAN RDINANCE, SEE NH RSA 674:39





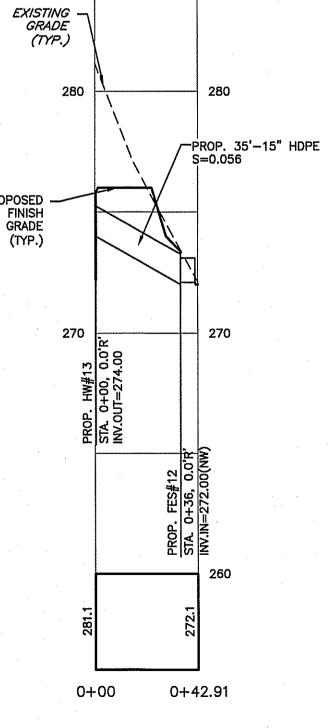
DMH#2 TO HW#1 SCALE: 1" = 40'(HORIZ.) 1" = 4'(VERT.)



290 <sub>L</sub>

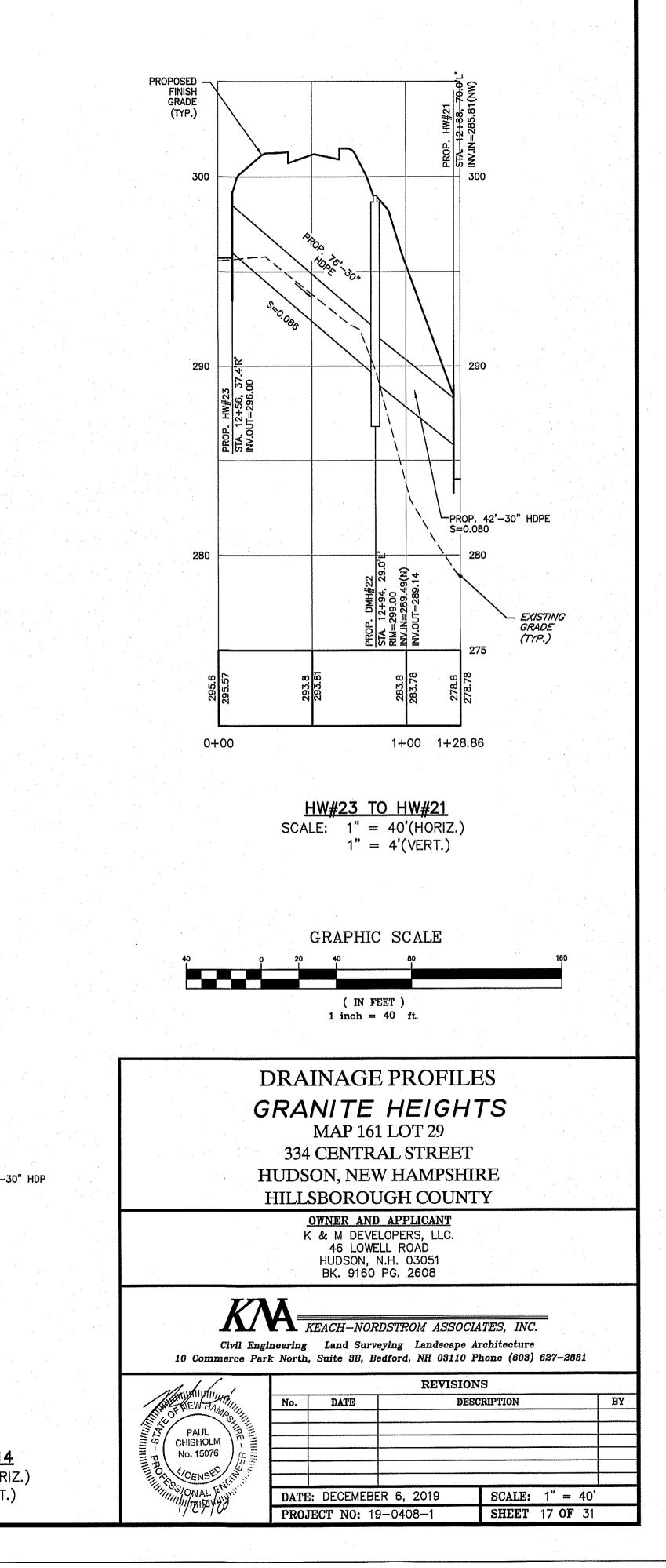
290

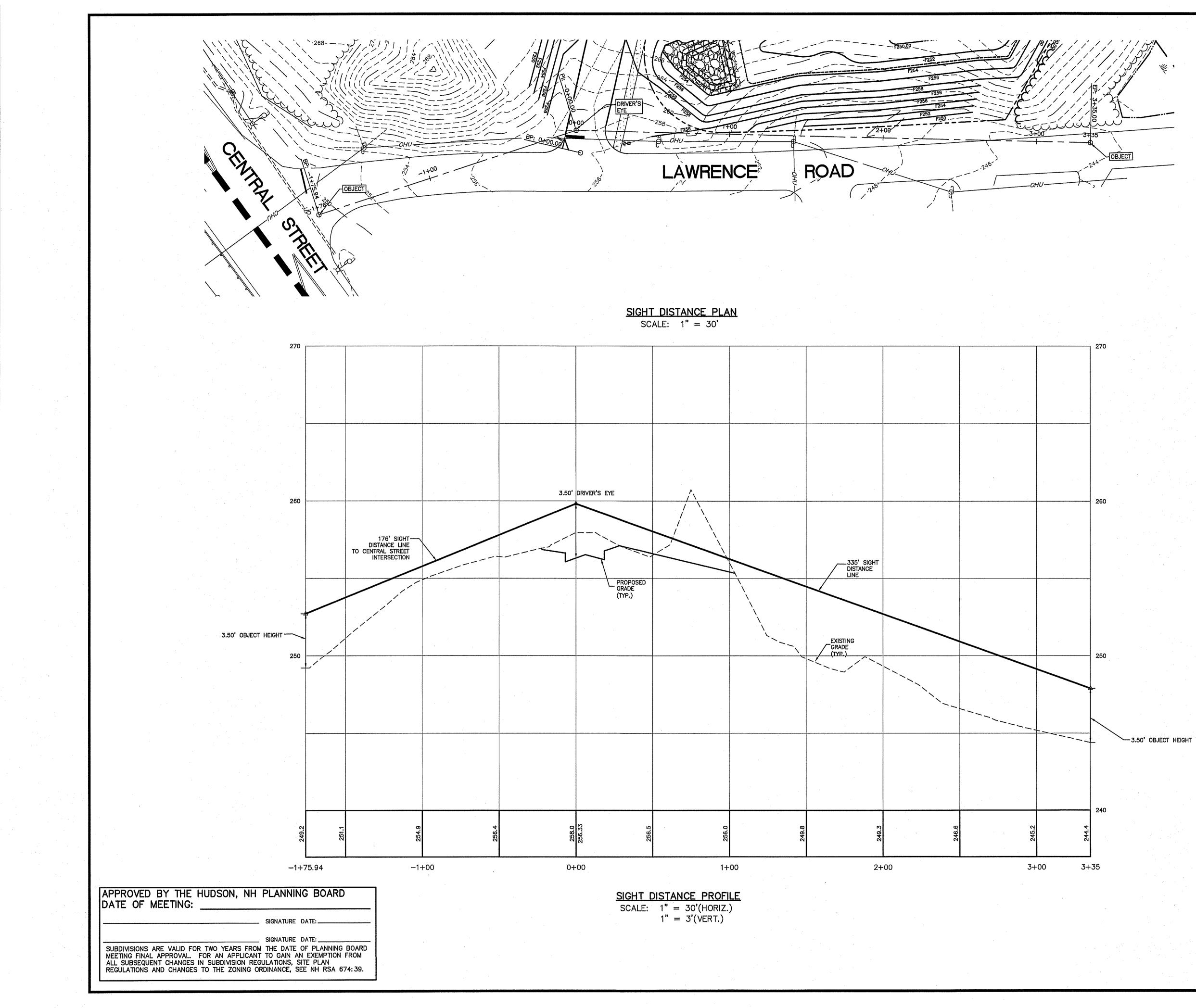
<u>HW#15 to FES#14</u> SCALE: 1'' = 40'(HORIZ.)1'' = 4'(VERT.)



<u>HW#13 TO FES#12</u> SCALE: 1" = 40'(HORIZ.)1" = 4'(VERT.)









NADBS

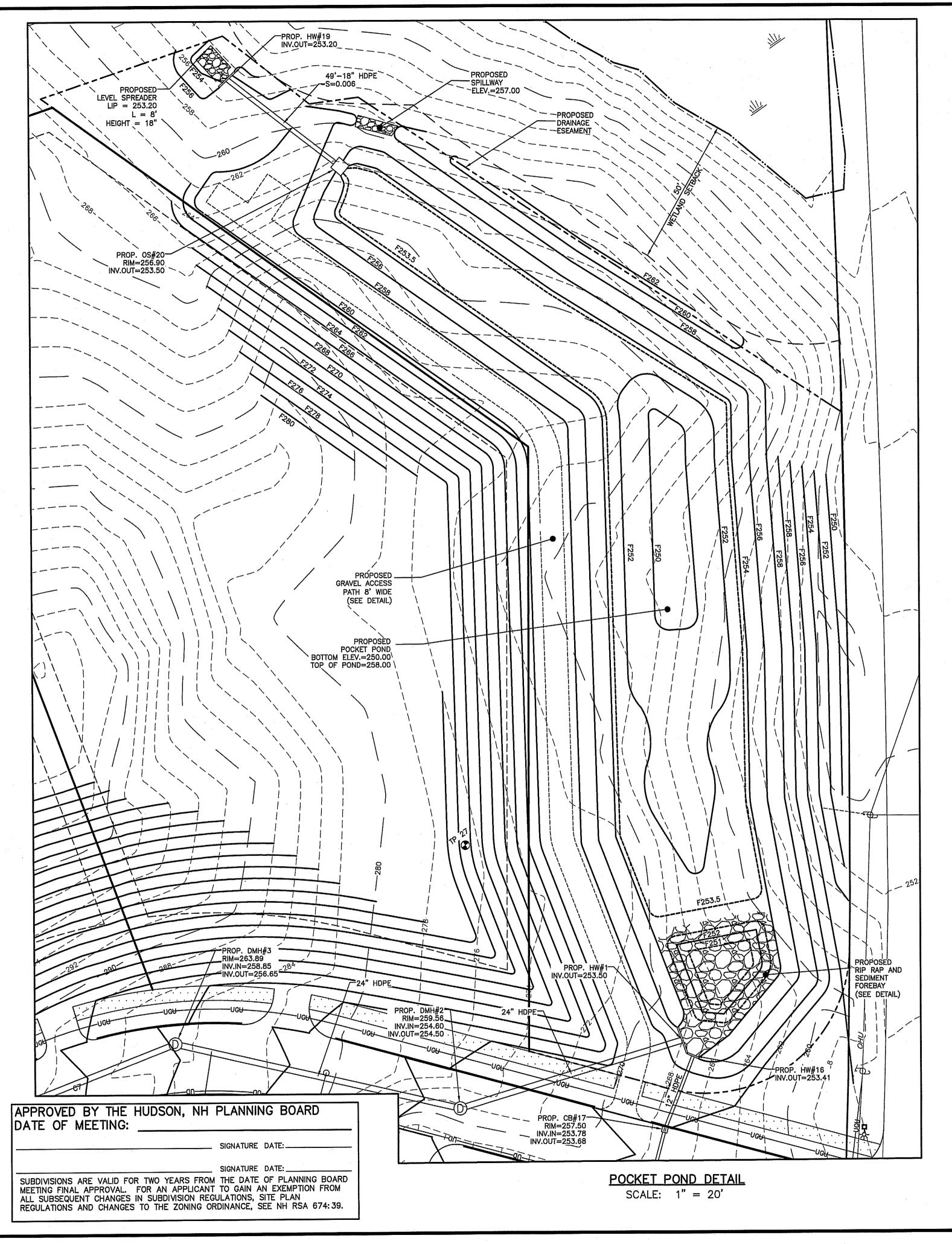
# LEGEND

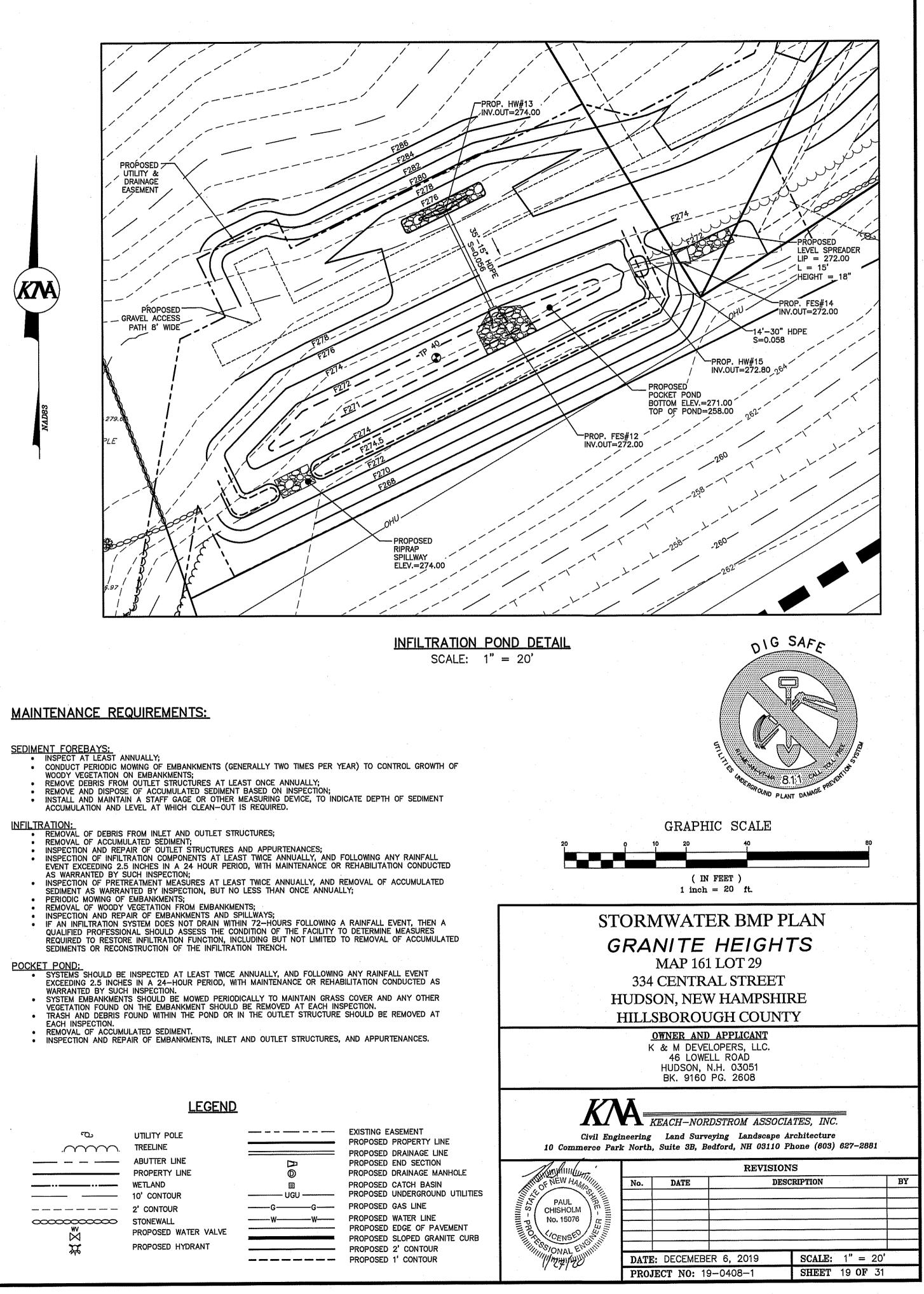
©_ ₽ 	UTILITY POLE LIGHT CATCH BASIN PROPERTY LINE WETLAND OVERHEAD UTILITIES DRAINAGE LINE TREELINE
	EDGE OF PAVEMENT EDGE OF GRAVEL 10' CONTOUR 2' CONTOUR
ۍ ۳	PROPOSED UTILITY POLE PROPOSED SIGN PROPOSED PROPERTY LINE
	PROPOSED TREELINE PROPOSED EDGE OF PAVEMENT PROPOSED SLOPED GRANITE CURB PROPOSED 2' CONTOUR EASEMENT

	GRAPHIC S	80	120	
	1  inch = 30	•	· · · · · · · · · · · · · · · · · · ·	
S	IGHT DIST	<b>FANCE PL</b>	AN	
G	RANITE	HEIGHT	rs	
	<b>MAP</b> 16	1 LOT 29		
		AL STREET		
	IUDSON, NE			
	HILLSBOROU		Y	
	K & M DEVE 46 LOW HUDSON,	D APPLICANT ELOPERS, LLC. ELL ROAD N.H. 03051 PG. 2608		
Civil Engi 10 Commerce Part	neering Land Surv	RDSTROM ASSOCIA reying Landscape An Nedford, NH 03110 Pl		
Alexandre i		REVISION	S	
THE OF NEW HAMDS	No. DATE	DESC	RIPTION	BY
PAUL CHISHOLM No. 15076 PBOT SSIONAL ENDING				
NO. 19070			· · · · · · · · · · · · · · · · · · ·	
SONAL EN MILLING	DATE: DECEMEB	ER 6, 2019	<b>SCALE:</b> $1'' = 30'$	
· 1. 6.97 2*	PROJECT NO: 1		SHEET 18 OF 31	

PROJECT NO: 19-0408-1

SHEET 18 OF 31





# MAINTENANCE REQUIREMENTS:

KN

- WOODY VEGETATION ON EMBANKMENTS;

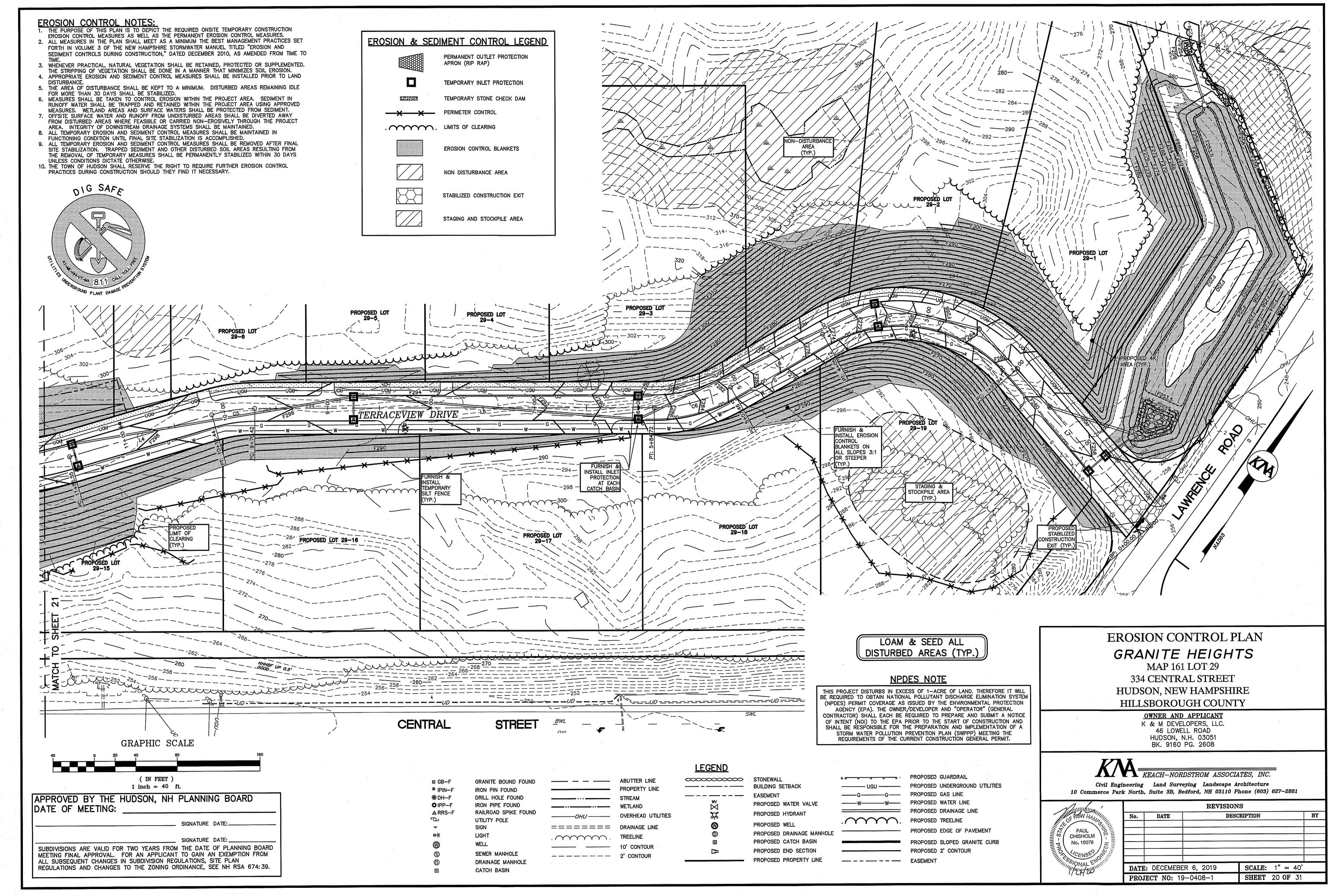
- PERIODIC MOWING OF EMBANKMENTS;
- REMOVAL OF WOODY VEGETATION FROM EMBANKMENTS;

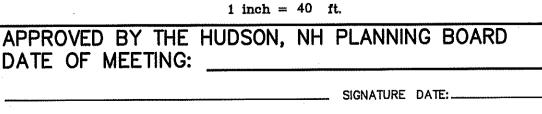
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X

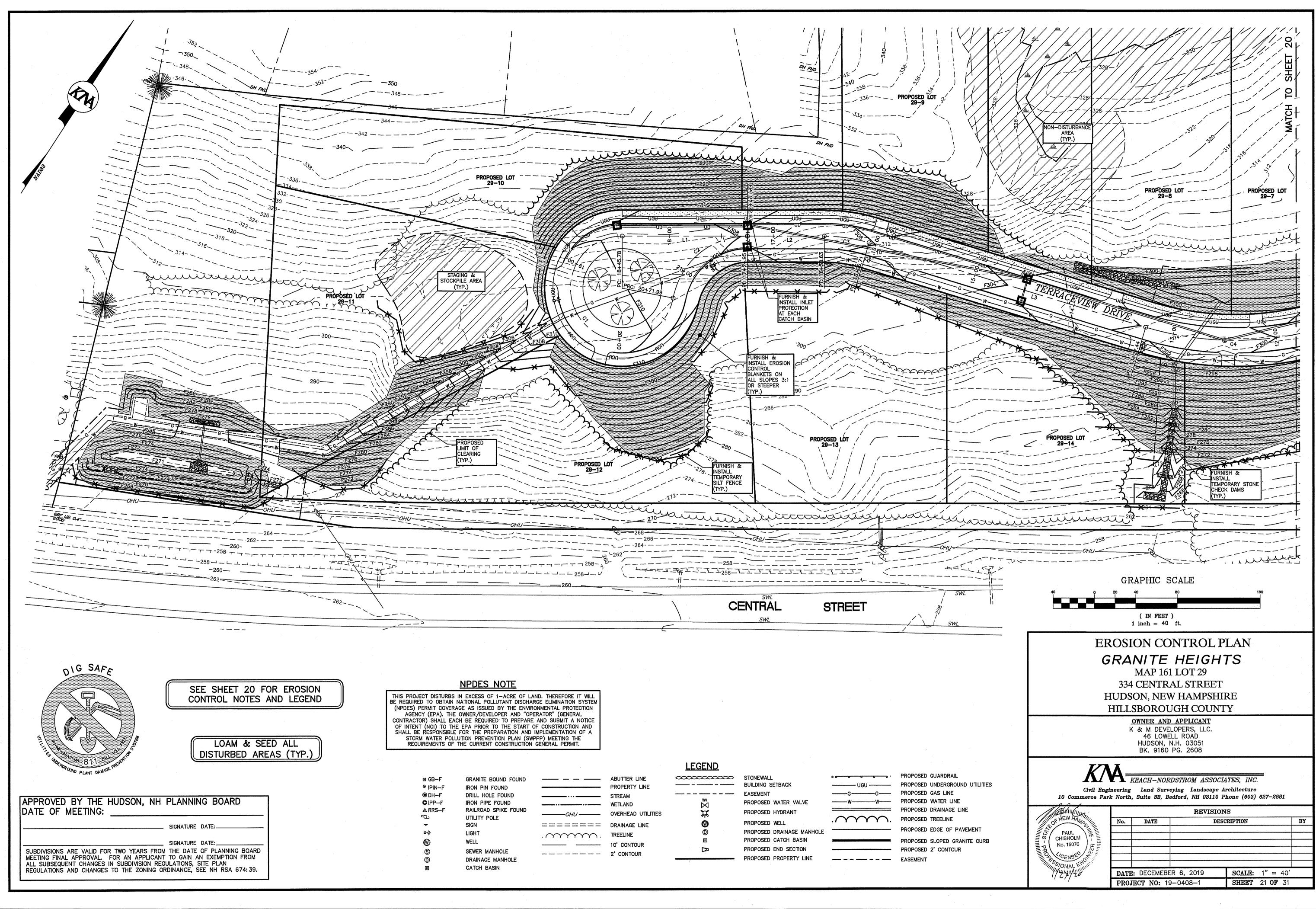
- WARRANTED BY SUCH INSPECTION.

UTILITY POLE TREELINE		EXISTING E
ABUTTER LINE	Α	PROPOSED
PROPERTY LINE	l D	PROPOSED
VETLAND O' CONTOUR	UGU	PROPOSED PROPOSED
2' CONTOUR	GG	PROPOSED
STONEWALL		PROPOSED
PROPOSED WATER VALVE		PROPOSED
PROPOSED HYDRANT		PROPOSED
		PROPOSED

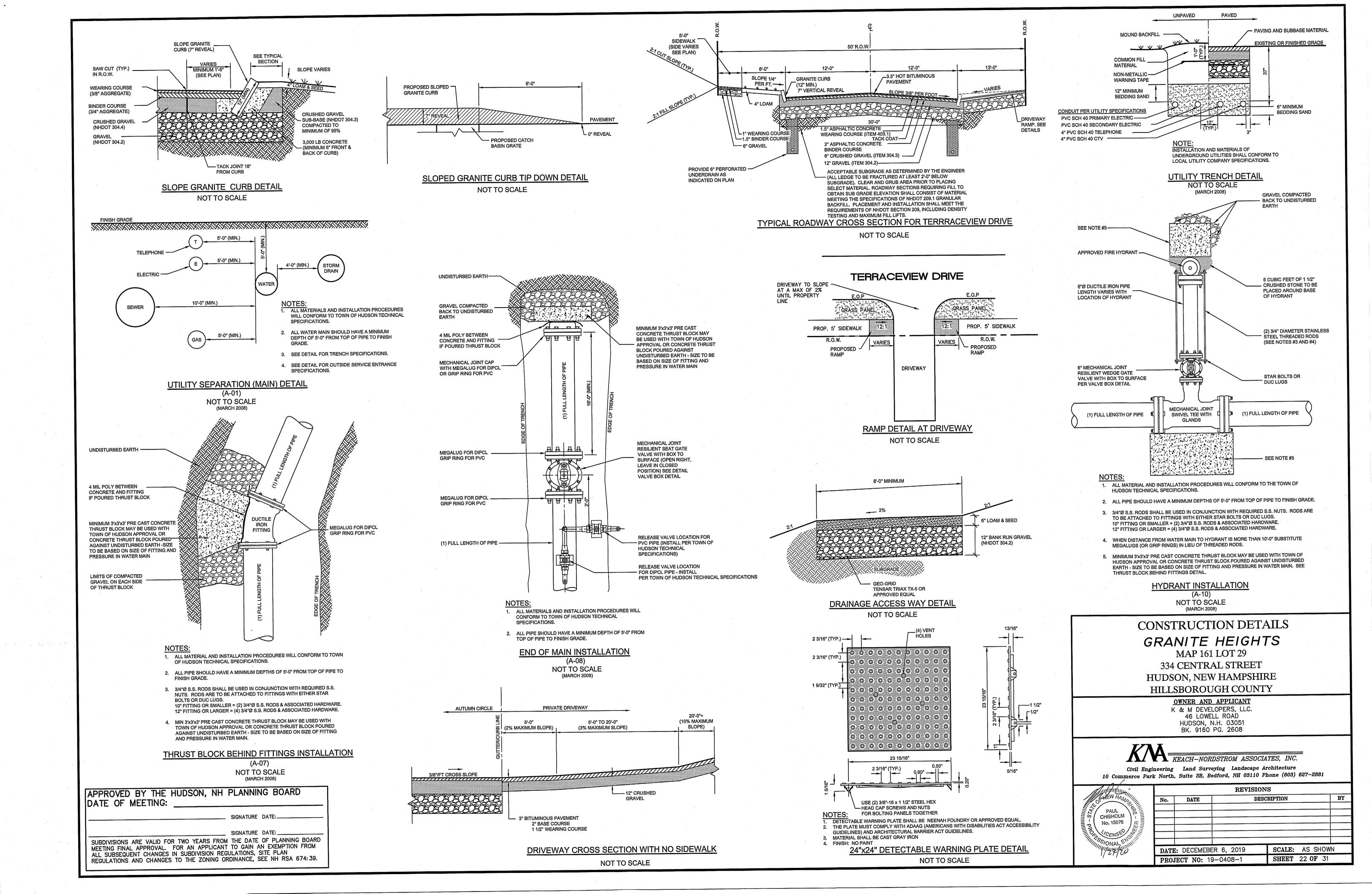


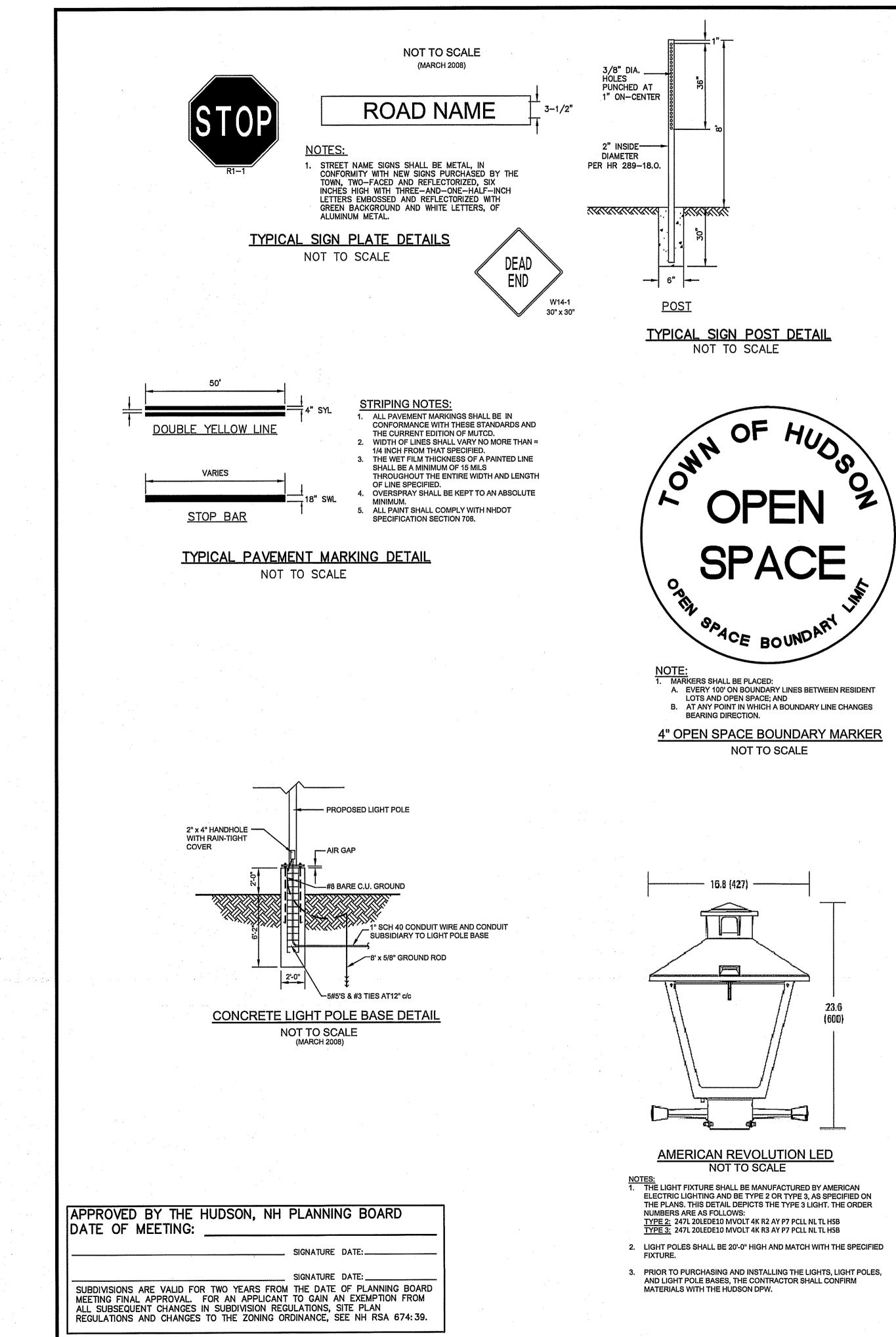


GRANITE BOUND FOUND IRON PIN FOUND DRILL HOLE FOUND IRON PIPE FOUND RAILROAD SPIKE FOUND UTILITY POLE SIGN LIGHT WELL SEWER MANHOLE	 ABUTTER LINE PROPERTY LINE STREAM WETLAND OVERHEAD UTILITIES DRAINAGE LINE TREELINE 10' CONTOUR 2' CONTOUR	STONEWALL BUILDING SETBACK EASEMENT PROPOSED WATER VALVE PROPOSED HYDRANT PROPOSED WELL PROPOSED DRAINAGE MANHOLE PROPOSED CATCH BASIN PROPOSED END SECTION	• • • • • • • • • • • • • • • • • • •	PROPOSED GUARDRAIL PROPOSED UNDERGROUND PROPOSED GAS LINE PROPOSED WATER LINE PROPOSED DRAINAGE LINE PROPOSED TREELINE PROPOSED EDGE OF PAVE PROPOSED SLOPED GRANI PROPOSED 2' CONTOUR
SEWER MANHOLE DRAINAGE MANHOLE CATCH BASIN	2' CONTOUR	 PROPOSED PROPERTY LINE		EASEMENT



				<b>LEGEND</b>			
F IRON PIN DRILL HO IRON PIF RAILROAD UTILITY F SIGN LIGHT WELL SEWER M	DLE FOUND E FOUND D SPIKE FOUND POLE IANHOLE	ОНU = = = = = = = = ^	ABUTTER LINE PROPERTY LINE STREAM WETLAND OVERHEAD UTILITIES DRAINAGE LINE TREELINE 10' CONTOUR 2' CONTOUR		STONEWALL BUILDING SETBACK EASEMENT PROPOSED WATER VALVE PROPOSED HYDRANT PROPOSED WELL PROPOSED DRAINAGE MANHOLE PROPOSED CATCH BASIN PROPOSED END SECTION PROPOSED PROPERTY LINE	• • • • • • • • • • • • • • • • • • •	PROPOSED GUARDRA PROPOSED UNDERGR PROPOSED GAS LINE PROPOSED WATER LI PROPOSED DRAINAGE PROPOSED TREELINE PROPOSED EDGE OF PROPOSED SLOPED C PROPOSED 2' CONTO EASEMENT

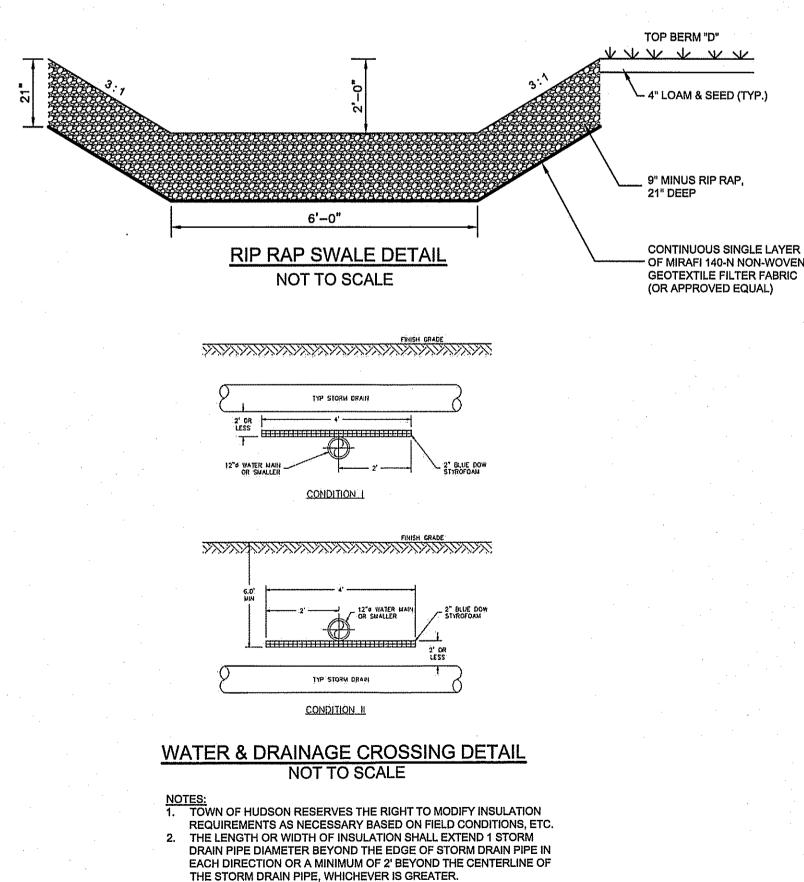




## **CONSTRUCTION NOTES:**

1. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. IN THE EVENT THAT A DISCREPANCY FROM THE INFORMATION SHOWN ON THESE PLANS IS FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO RESOLVE THE SITUATION.

- 2. PRIOR TO CONSTRUCTION, CONTACT DIG SAFE CENTER, TOLL FREE 811. NEW HAMPSHIRE STATE LAW REQUIRES NOTIFICATION AT LEAST THREE BUSINESS DAYS BEFORE DIGGING OPERATIONS START. IF AN EMERGENCY, CALL IMMEDIATELY.
- 3. ALL WORKMANSHIP AND MATERIALS INCORPORATED INTO THE CONSTRUCTION OF ROADS AND DRAINAGE SHOWN HEREON SHALL CONFORM WITH THE STANDARDS OF THE TOWN OF HUDSON ENGINEERING DEPARTMENT AND THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AS PUBLISHED AND AMENDED BY THE N.H.D.O.T.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROL DEVICES, AS SHOWN IN THESE PLANS, THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH APPLICABLE NHDES STANDARDS. THE EROSION CONTROL MEASURES PROVIDED SERVE AS A GUIDE ONLY AND SHALL BE CONSIDERED A MINIMUM STANDARD. CONTRACTOR SHALL IMPLEMENT ANY AND ALL ADDITIONAL MEASURES AS FIELD CONDITIONS DICTATE OR AS REQUIRED BY LOCAL OR STATE GUIDELINES. ALL EROSION CONTROL SHALL BE MAINTAINED AND/OR REPLACED IF DAMAGED.
- 5. THE CONTRACTOR SHALL STABILIZE ALL DITCHES, SWALES AND PONDS PRIOR TO DIRECTING STORM WATER RUN-OFF TO THEM.
- 6. SILT SOXX TO BE CONSTRUCTED AS IDENTIFIED ON THIS PLAN. SILT SOXX BARRIERS TO BE CHECKED WEEKLY AND/OR AFTER LARGE STORM EVENTS. ALL SILT MATERIAL
- TO BE REMOVED. ANY DAMAGED SILT SOXX SHALL BE REINSTALLED IMMEDIATELY. 7. SLOPE STABILIZATION METHODS SHALL BE PROVIDED IN ACCORDANCE WITH THE NHDES SITE SPECIFIC PERMIT OR AS FIELD CONDITIONS DICTATE. SLOPE STABILIZATION SHALL BE PROVIDED ON ALL SLOPES 3:1 AND GREATER AS A MINIMUM STANDARD. PROVIDE SLOPE STABILIZATION ON SLOPES LESS THAN 3:1 IF WARRANTED, AS FIELD CONDITIONS
- 8. THE DRAINAGE DESIGN AND EROSION CONTROL MEASURES AS PROPOSED MEET ALL TOWN AND STATE REQUIREMENTS AND BEST MANAGEMENT PRACTICES AS PROMULGATED BY THE NHDES.
- 9. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRICTION OPERATIONS IN THE IMMEDIATE
- 10. TOPSOIL SHALL BE REMOVED FOR ITS TOTAL DEPTH WITHIN THE LIMITS OF GRADING, UNLESS OTHERWISE DIRECTED. THE TOPSOIL SHALL BE STOCKPILED AND USED IN ITS ENTIRETY. STOCKPILE SOIL IN ACCORDANCE WITH NHDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION).
- 11. UNSUITABLE MATERIAL, ROOTS, AND STUMPS WITHIN THE LIMITS OF WORK SHALL BE REMOVED FROM THE SITE AS ORDERED. DISPOSAL OF SUCH MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS AND GUIDELINES AS APPLICABLE OR AS DIRECTED.
- 12. THE SUBGRADE SHALL BE SCARIFIED TO ASSURE THAT ALL BOULDERS AND COBBLES OVER 6" ARE REMOVED PRIOR TO SHAPE, GRADE, AND COMPACTION ACTIVITIES. 13. ALL WORKMANSHIP AND MATERIALS INCORPORATED INTO THE CONSTRUCTION OF
- ELECTRIC LINES SHALL CONFORM WITH THE STANDARDS OF THE OWNING UTILITY COMPANY.
- 14. ALL WORKMANSHIP AND MATERIALS INCORPORATED INTO THE CONSTRUCTION OF TELEPHONE LINES SHALL CONFORM WITH THE STANDARDS OF THE OWNING TELEPHONE COMPANY.
- 15. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND WITHIN THE CONSTRUCTION AREA. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR. 16. THE CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES AND ARRANGE FOR ALL
- INSPECTIONS. 17. UTILITY STUB CONNECTIONS SHOWN TO PROPOSED LOTS ARE APPROXIMATE AND INTENDED TO ILLUSTRATE FEASIBILITY OF CONSTRUCTING CONNECTIONS. THE CONTRACTOR SHALL PROVIDE SERVICE STUBS AS DIRECTED BY THE OWNING UTILITY
- COMPANY AND LOCAL AUTHORITY. 18. CONTRACTOR SHALL COORDINATE WITH PHONE, CABLE, AND ELECTRIC COMPANIES FOR
- POTENTIAL NEED OF INDIVIDUAL SECTORS AT EACH LOT SERVICE CONNECTION. 19. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES.
- 20. THE CONTRACTOR SHALL VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION.



3. ALL BUTT JOINT SEAMS TO BE OVERLAPPED WITH A 1' PIECE OF INSULATION CENTERED OVER THE SEAM.

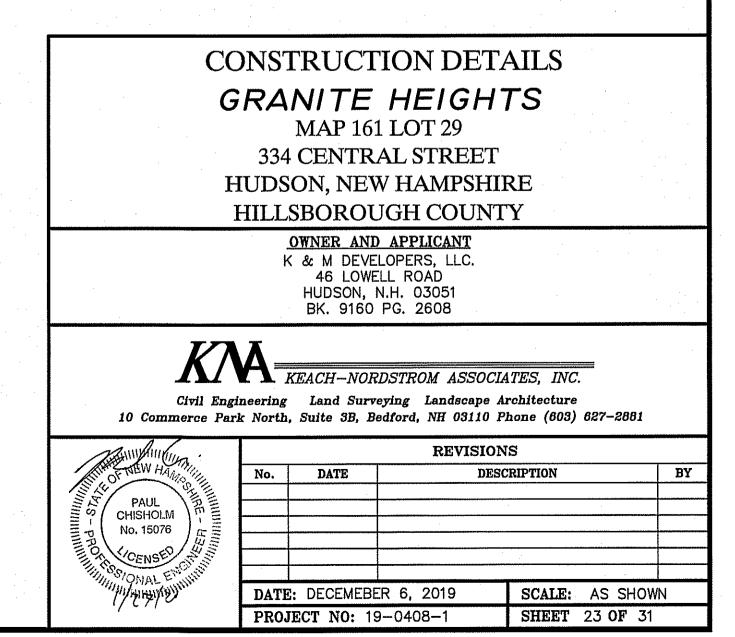
# BEST MANAGEMENT PRACTICES FOR BLASTING

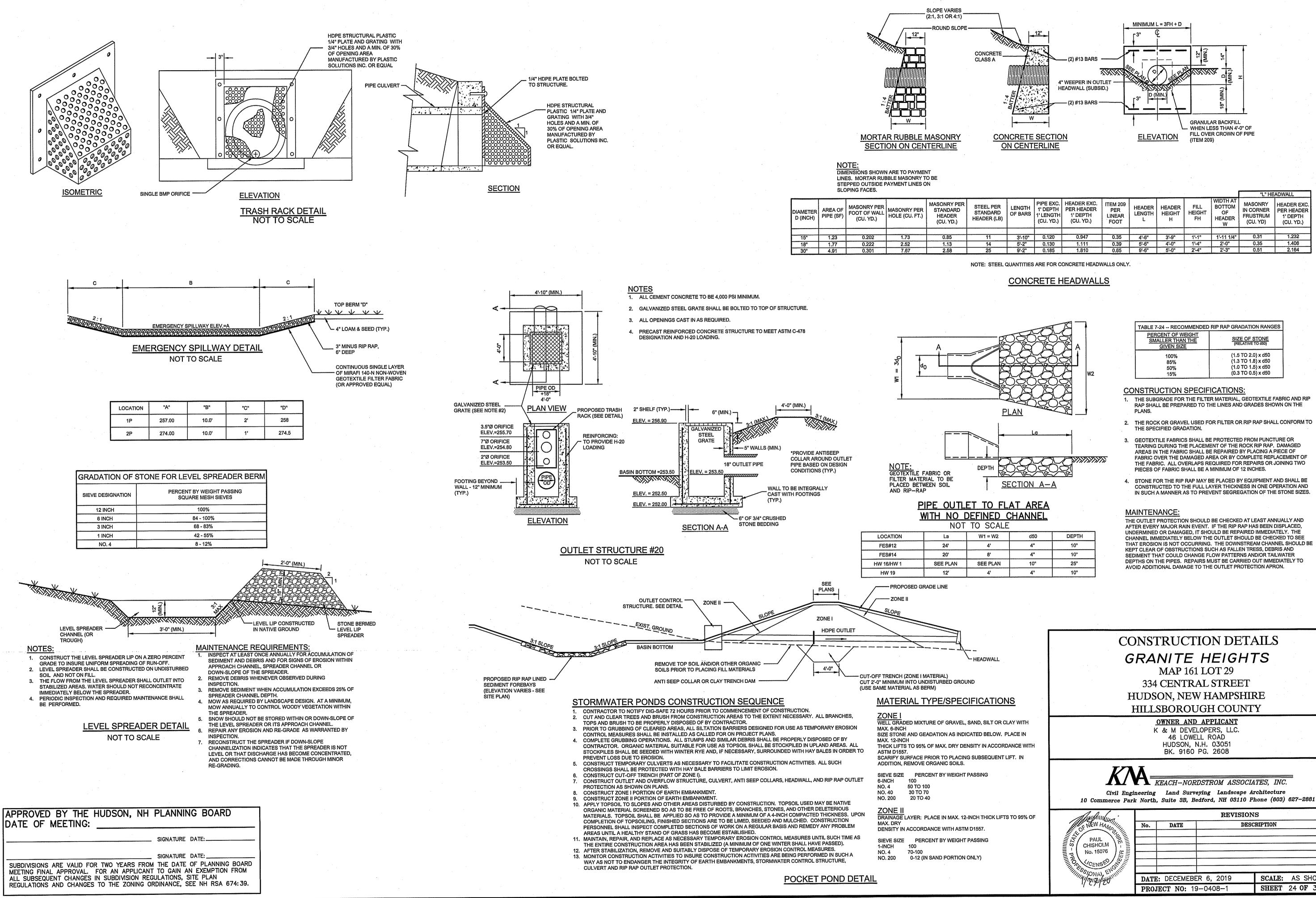
IF MORE THAN 5000 CUBIC YARDS ARE BLASTED: IDENTIFY DRINKING WATER WELLS LOCATED WITHIN 2000 FEET OF THE PROPOSED BLASTING ACTIVITIES. DEVELOP A GROUNDWATER QUALITY SAMPLING PROGRAM TO MONITOR FOR NITRATE AND NITRITE EITHER IN THE DRINKING WATER SUPPLY WELLS OR IN OTHER WELLS THAT ARE REPRESENTATIVE OF THE DRINKING WATER SUPPLY WELLS IN THE AREA. THE PLAN MUST INCLUDE PRE AND POST BLAST WATER QUALITY MONITORING AND BE APPROVED BY NHDES PRIOR TO INITIATING BLASTING. THE GROUNDWATER SAMPLING PROGRAM MUST BE IMPLEMENTED ONCE APPROVED BY NHDES.

BEST MANAGEMENT PRACTICES FOR BLASTING. ALL ACTIVITIES RELATED TO BLASTING SHALL FOLLOW BEST MANAGEMENT PRACTICES (BMPS) TO PREVENT CONTAMINATION OF GROUNDWATER INCLUDING PREPARING, REVIEWING AND FOLLOWING AN APPROVED BLASTING PLAN; PROPER DRILLING, EXPLOSIVE HANDING AND LOADING PROCEDURES; OBSERVING THE ENTIRE BLASTING PROCEDURES; EVALUATING BLASTING PERFORMANCE; AND HANDLING AND STORAGE OF BLASTED ROCK.

(1) LOADING PRACTICES.

- THE FOLLOWING BLASTHOLE LOADING PRACTICES TO MINIMIZE ENVIRONMENTAL EFFECTS SHALL BE FOLLOWED: (A) DRILLING LOGS SHALL BE MAINTAINED BY THE DRILLER AND COMMUNICATED DIRECTLY TO THE BLASTER. THE LOGS SHALL INDICATE DEPTHS AND LENGTHS OF VOIDS, CAVITIES, AND FAULT ZONES OR OTHER WEAK ZONES ENCOUNTERED AS WELL AS GROUNDWATER CONDITIONS.
- (B) EXPLOSIVE PRODUCTS SHALL BE MANAGED ON SITE SO THAT THEY ARE EITHER USED IN THE BOREHOLE. RETURNED TO THE THE DELIVERY VEHICLE, OR PLACED IN SECURE CONTAINERS FOR OFF SITE DISPOSAL (C) SPILLAGE AROUND THE BOREHOLE SHALL EITHER BE PLACED IN THE BOREHOLE OR CLEANED UP AND
- RETURNED TO AN APPROPRIATE VEHICLE FOR HANDLING OR PLACEMENT IN SECURED CONTAINERS FOR OFF SITE DISPOSAL. (D) LOADED EXPLOSIVES SHALL BE DETONATED AS SOON AS POSSIBLE AND SHALL NOT BE LEFT IN THE
- BLASTHOLES OVERNIGHT, UNLESS WEATHER OR OTHER SAFETY CONCERNS REASONABLY DICTATE THAT DETONATION SHOULD BE POSTPONED. (E) LOADING EQUIPMENT SHALL BE CLEANED IN AN AREA WHERE WASTEWATER CAN BE PROPERLY CONTAINED
- AND HANDLED IN A MANNER THAT PREVENTS RELEASE OF CONTAMINANTS TO THE ENVIRONMENT. (F) EXPLOSIVES SHALL BE LOADED TO MAINTAIN GOOD CONTINUITY IN THE COLUMN LOAD TO PROMOTE COMPLETE DETONATION. INDUSTRY ACCEPTED LOADING PRACTICES FOR PRIMING, STEMMING, DECKING AND COLUMN RISE NEED TO BE ATTENDED TO.
- (2) EXPLOSIVE SELECTION. THE FOLLOWING BMPS SHALL BE FOLLOWED TO REDUCE THE POTENTIAL FOR GROUNDWATER CONTAMINATION WHEN EXPLOSIVES ARE USED:
- (A) EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT ARE APPROPRIATE FOR SITE CONDITIONS AND SAFE BLAST EXECUTION.
- (B) EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT HAVE THE APPROPRIATE WATER RESISTANCE FOR THE SITE CONDITIONS PRESENT TO MINIMIZE THE POTENTIAL FOR HAZARDOUS EFFECT OF THE PRODUCT UPON GROUNDWATER (3) PREVENTION OF MISFIRES.
- APPROPRIATE PRACTICES SHALL BE DEVELOPED AND IMPLEMENTED TO PREVENT MISFIRES.
- (4) MUCK PILE MANAGEMENT. MUCK PILES (THE BLASTED PIECES OF ROCK) AND ROCK PILES SHALL BE MANAGED IN A MANNER TO REDUCE THE POTENTIAL FOR CONTAMINATION BY IMPLEMENTING THE FOLLOWING MEASURES:
- (A) REMOVE THE MUCK PILE FROM THE BLAST AREA AS SOON AS REASONABLY POSSIBLE. (B) MANAGE THE INTERACTION OF BLASTED ROCK PILES AND STORMWATER TO PREVENT CONTAMINATION OF WATER SUPPLY WELLS OR SURFACE WATER.
- (5) SPILL PREVENTION MEASURES AND SPILL MITIGATION. PILL PREVENTION AND SPILL MITIGATION MEASURES SHALL BE IMPLEMENTED TO PREVENT THE RELEASE OF FUEL AND OTHER RELATED SUBSTANCES TO THE ENVIRONMENT. THE MEASURES SHALL INCLUDE AT A MINIMUM: (A) THE FUEL STORAGE REQUIREMENTS SHALL INCLUDE:
- STORAGE OF REGULATED SUBSTANCES ON AN IMPERVIOUS SURFACE. 2. SECURE STORAGE AREAS AGAINST UNAUTHORIZED ENTRY.
- 3. LABEL REGULATED CONTAINERS CLEARLY AND VISIBLY.
- . INSPECT STORAGE AREAS WEEKLY.
- 5. COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS. 3. WHEREVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS, 75 FEET FROM PRIVATE WELLS, AND 400 FEET FROM PUBLIC
- 7. SECONDARY CONTAINMENT IS REQUIRED FOR CONTAINERS CONTAINING REGULATED SUBSTANCES STORED OUTSIDE, EXCEPT FOR ON PREMISE USE HEATING FUEL TANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE TANKS OTHERWISE REGULATED.
- (B) THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE: . EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED SUBSTANCES CLOSED AND SEALED.
- . PLACE DRIP PANS UNDER SPIGOTS, VALVES, AND PUMPS. 3. HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK AREAS. 4. USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED SUBSTANCES.
- 5. PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.
- (C) THE TRAINING OF ON SITE EMPLOYEES AND THE ON SITE POSTING OF RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT OF A SPILL OF REGULATED SUBSTANCES. (D) FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED
- EQUIPMENT WILL COMPLY WITH THE REGULATIONS OF THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES [NOTE THESE REQUIREMENTS ARE SUMMARIZED IN WD-DWGB-22-6 BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT" OR ITS SUCCESSOR DOCUMENT.





						1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -			"L" HE	ADWALL
TEEL PER TANDARD ADER (LB)	LENGTH OF BARS	PIPE EXC. 1' DEPTH 1' LENGTH (CU. YD.)	HEADER EXC. PER HEADER 1' DEPTH (CU. YD.)	ITEM 209 PER LINEAR FOOT	HEADER LENGTH L	HEADER HEIGHT H	Fill Height Fh	WIDTH AT BOTTOM OF HEADER W	MASONRY IN CORNER FRUSTRUM (CU. YD)	HEADER EXC. PER HEADER 1' DEPTH (CU. YD.)
11	3'-10"	0.120	0.947	0.35	4'-6"	3'-9"	1'-1"	1'-11 1/4"	0.31	1.232
14	5'-2"	0.130	1.111	0.39	5'-6"	4'-0"	1'-4"	2'-0"	0.35	1.406
25	9'-2"	0.185	1.810	0.65	9'-6"	5'-0"	2'-4"	2'-3"	0.51	2.164

W1 = W2	d50	DEPTH			
4'	4"	10"			
8'	4"	10"			
EE PLAN	10"	25"			
4'	<b>4</b> "	10"			

TABLE 7-24 RECOMMENDED	RIP RAP GRADATION RANGES
PERCENT OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE (RELATIVE TO d50)
100% 85% 50% 15%	(1.5 TO 2.0) x d50 (1.3 TO 1.8) x d50 (1.0 TO 1.5) x d50 (0.3 TO 0.5) x d50

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE

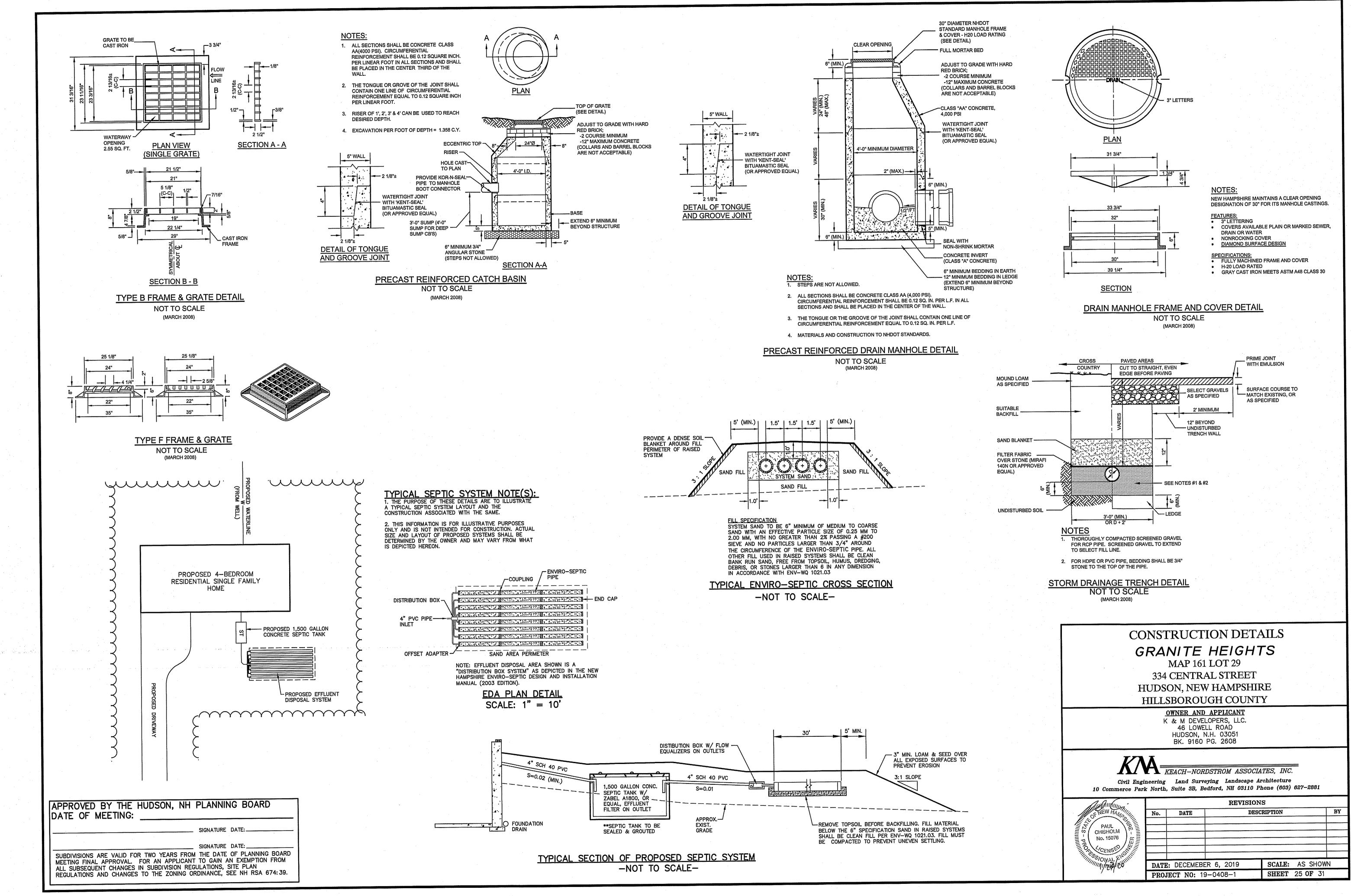
- 2. THE ROCK OR GRAVEL USED FOR FILTER OR RIP RAP SHALL CONFORM TO
- 3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
- 4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR RAIN EVENT. IF THE RIP RAP HAS BEEN DISPLACED. UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TRESS, DEBRIS AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

GRANITE HEIGHTS HUDSON, NEW HAMPSHIRE

KEACH-NORDSTROM ASSOCIATES. INC. Civil Engineering Land Surveying Landscape Architecture

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### TURF ESTABLISHMENT SCHEDULE

PURPOSE TO ESTABLISH AND MAINTAIN PERMANENT AND TEMPORARY TURF AREAS, RESTORE GROWTH TO EXISTING TURF AREAS DISTURBED DURING CONSTRUCTION AND CONTROL SOIL EROSION.

### PREPARATION AND EXECUTION:

- 1. RAKE THE SUBGRADE OF ALL AREAS TO BE LOAMED AND SEEDED TO REMOVE RUBBISH, STICKS, ROOTS AND STONES LARGER THAN 1 INCH. PLACE LOAM OVER AREAS TO BE SEEDED AND SPREAD.
- FINE GRADE SURFACE AND SUPPLEMENT WITH SUITABLE LOAM WHERE NEEDED TO CREATE A UNIFORM SURFACE ACCORDING TO THE FINISH GRADES INDICATED: TOP AND BOTTOM OF SLOPES SHALL BE ROUNDED. NO LOAM SHALL BE SPREAD IF THE SUBGRADE IS EXCESSIVELY WET OR FROZEN
- IF THE pH OF THE SOIL NEEDS TO BE RAISED, APPLY LIME EVENLY OVER LOAM SURFACE AND THOROUGHLY INCORPORATE LIME INTO THE LOAM BY HEAVY RAKING TO AT LEAST ONE-HALF THE DEPTH OF THE LOAM.
- APPLY FERTILIZER AND MIX WITH THE UPPER 2 INCHES OF LOAM.
- DETERMINE APPROPRIATE MIXTURE FOR AREA TO BE SEEDED BASED ON EXAMINATION OF PROJECT PLANS. UNIFORMLY SPREAD THE SEED BY BROADCASTING OR HYDROSEEDING. IF BROADCASTING, LIGHTLY RAKE INTO THE PREPARED SURFACE AND ROLL, IF, HYDROSEEDING, USE 4 TIMES THE RECOMMENDED RATE OF INOCULANT. AFTER SEED IS SPREAD, WATER THOROUGHLY WITH A FINE
- SEEDING AND INITIAL FERTILIZING SHALL BE DONE BETWEEN APRIL 1 AND JUNE 1 OR BETWEEN AUGUST 15 AND OCTOBER 14, OR AS PERMITTED. SEEDING SHALL NOT BE DONE DURING WINDY WEATHER OR WHEN THE GROUND IS FROZEN. EXCESSIVELY WET OR OTHERWISE UNTILLABLE.
- WITHIN 24 HOURS AFTER SEEDING OPERATION, UNIFORMLY MULCH THE AREA WITH STRAW. ANCHOR MULCH ON ALL SLOPES EXCEEDING 3 : 1 USING MULCH NETTING INSTALLED IN
- ACCORDANCE WITH THE MANUFACTURER. PROTECT AND PREVENT AGAINST WASHOUTS, ANY WASHOUTS WHICH OCCUR SHALL BE PROMPTLY
- REGRADED AND RESEEDED. 10. WHEN IT IS IMPRACTICAL TO ESTABLISH PERMANENT GROWTH ON DISTURBED EARTH BY OCTOBER 14. A TEMPORARY SEED MIXTURE SHALL BE USED. WHEN TEMPORARY SEEDING CANNOT ESTABLISH VISIBLE GROWTH, THE DISTURBED AREA SHALL BE COVERED WITH SIX INCHES OF MULCH FOR THE

### MAINTENANCE

WINTER.

ALL SEEDED AREAS SHALL BE KEPT WATERED AND IN GOOD CONDITION. RESEED AS NECESSARY TO ESTABLISH HEALTHY UNIFORM GROWTH OVER THE ENTIRE SEEDED AREA. MAINTAIN SEEDED AREAS IN AN APPROVED CONDITION UNTIL FINAL ACCEPTANCE. MAINTENANCE SHALL INCLUDE REPAIRS FOR DAMAGE CAUSED BY EROSION.

### **APPLICATION RATES**

I. LOAM SHALL BE APPLIED AT A MINIMUM COMPACTED THICKNESS OF 4 INCHES. 2. LIME SHALL BE USED WHEN NECESSARY TO RAISE THE pH OF THE SOIL AND APPLIED AT ONE OF THE FOLLOWING RATES:

EXISTING SOIL Ph	TONS/ACRE	POUNDS/CUBIC YARD		
4.0 - 4.4	3 .	1.2		
4.5 - 4.9	2	0.8		
5.0 - 5.4	1	0.4		

FERTILIZER SHALL BE APPLIED AT THE FOLLOWING RATE:

POUNDS/1,000 SF	MEASUREMENT FACTOR
20.0	1.0
13.4	1.5
10.5	1.9
POUNDS/1,000 SF	MEASUREMENT FACTOR
20.0	1.0
16.7	1.2
	20.0 13.4 10.5 POUNDS/1,000 SF 20.0

MULCH SHALL BE APPLIED AT A RATE OF 13 CUBIC YARDS PER 1,000 S.F. OF LANDSCAPE BED.

- MATERIALS: LOAM SHALL CONSIST OF LOOSE, FRIABLE TOPSOIL WITH NO ADMIXTURE OF REFUSE OR MATERIAL TOXIC TO PLANT GROWTH. LOAM SHALL BE FREE OF VIABLE PARTS OF PROHIBITED INVASIVE PLANTS AND BE GENERALLY FREE OF STONES, LUMPS, STUMPS AND SIMILAR OBJECTS LARGER
- THAN 2 INCHES IN GREATEST DIAMETER, SUBSOIL, ROOTS AND WEEDS. THE MINIMUM AND MAXIMUM pH VALUE SHALL BE FROM 5.5 TO 7.6. LIME SHALL BE A CALCIC OR DOLOMITIC GROUND AGRICULTURAL LIMESTONE CONTAINING NOT LESS THAN 95% OF EITHER CALCIUM OR MAGNESIUM CARBONATE, OR BOTH. IT SHALL CONFORM TO THE
- STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS AND SHALL COMPLY WITH ALL STATE AND FEDERAL RULES AND REGULATIONS. FERTILIZER SHALL BE STANDARD COMMERCIAL GRADE FERTILIZER CONFORMING TO ALL STATE AND FEDERAL RULES AND REGULATIONS AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL
- AGRICULTURAL CHEMISTS. EXCEPT AS PERMITTED, THE ANALYSIS RATIO SHALL BE 1:1:1 FOR INITIAL APPLICATION AND 3:1:2 FOR REFERTILIZATION APPLICATION. GRASS SEED SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE AGRICULTURAL AND
- VEGETABLE SEED LAWS AND SHALL INCLUDE NO "PRIMARY NOXIOUS WEED SEEDS." SEED MIXTURE FOR LAWN AREAS SHALL CONSIST OF THE FOLLOWING:

KIND OF SEED	MINIMUM PURITY (%)	MINIMUM GERMANATION (%)	POUNDS/ACRE (TOTAL 120 POUNDS)
CREEPING RED FESCUE	96	85	40
PERENNIAL RYEGRASS	98	90	50
KENTUCKY BLUEGRASS	97	85	25
REDTOP	. 95	80	5

6. SEED MIXTURE FOR SLOPE AREAS SHALL CONSIST OF THE FOLLOWING:

KIND OF SEED	MINIMUM PURITY (%)	MINIMUM GERMANATION (%)	POUNDS/ACRE (TOTAL 95 POUNDS)
CREEPING RED FESCUE	96	85	35
PERENNIAL RYEGRASS	98	90	30
REDTOP	95	80	5
ALSIKE CLOVER	97	90	5
BIRDSFOOT TREFOIL	98	80	5
LANCE-LEAVED COREOPSIS	95	80	4
OXEYE DAISY	95	80	3
BLACKEYED SUSAN	95	80	4
WILD LUPINE	95	80	4

APPROVED BY THE DATE OF MEETING:	-	NH	PLANNI	NG BOARD
· · · · · · · · · · · · · · · · · · ·			SIGNATURE	DATE:
SUBDIVISIONS ARE VALID FO				DATE:

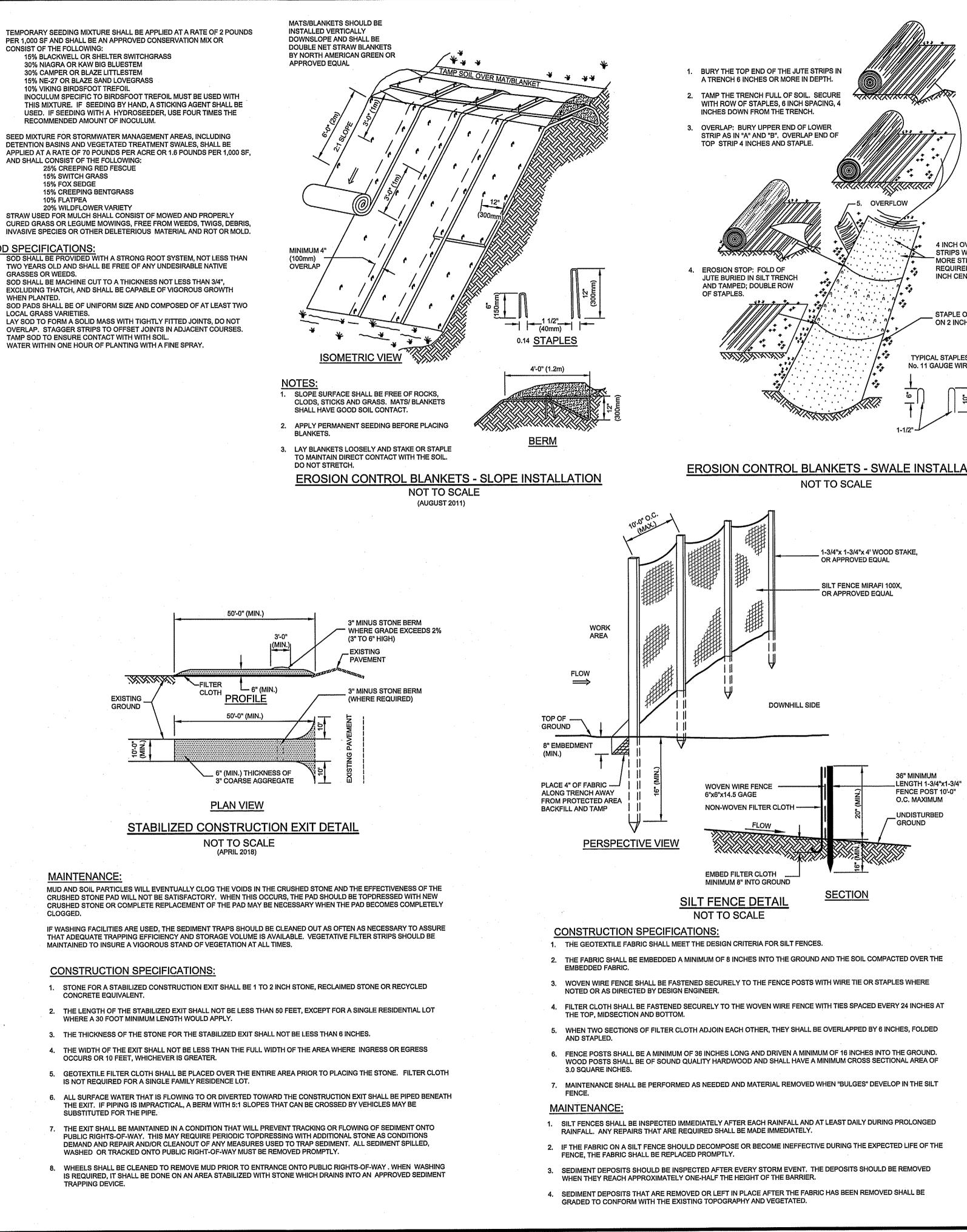
MEETING FINAL APPROVAL. FOR AN APPLICANT TO GAIN AN EXEMPTION FROM ALL SUBSEQUENT CHANGES IN SUBDIVISION REGULATIONS, SITE PLAN REGULATIONS AND CHANGES TO THE ZONING ORDINANCE, SEE NH RSA 674:39.

### TEMPORARY SEEDING MIXTURE SHALL BE APPLIED AT A RATE OF 2 POUNDS PER 1,000 SF AND SHALL BE AN APPROVED CONSERVATION MIX OR

- CONSIST OF THE FOLLOWING: 15% BLACKWELL OR SHELTER SWITCHGRASS
- 30% NIAGRA OR KAW BIG BLUESTEM 30% CAMPER OR BLAZE LITTLESTEM
- 15% NE-27 OR BLAZE SAND LOVEGRASS
- **10% VIKING BIRDSFOOT TREFOIL** INOCULUM SPECIFIC TO BIRDSFOOT TREFOIL MUST BE USED WITH THIS MIXTURE. IF SEEDING BY HAND, A STICKING AGENT SHALL BE
- RECOMMENDED AMOUNT OF INOCULUM.
- 8. SEED MIXTURE FOR STORMWATER MANAGEMENT AREAS, INCLUDING DETENTION BASINS AND VEGETATED TREATMENT SWALES, SHALL BE APPLIED AT A RATE OF 70 POUNDS PER ACRE OR 1.6 POUNDS PER 1,000 SF, AND SHALL CONSIST OF THE FOLLOWING
  - 25% CREEPING RED FESCUE 15% SWITCH GRASS
  - 15% FOX SEDGE
  - **15% CREEPING BENTGRASS** 10% FLATPEA
  - 20% WILDFLOWER VARIETY
- 9. STRAW USED FOR MULCH SHALL CONSIST OF MOWED AND PROPERLY CURED GRASS OR LEGUME MOWINGS, FREE FROM WEEDS, TWIGS, DEBRIS, INVASIVE SPECIES OR OTHER DELETERIOUS MATERIAL AND ROT OR MOLD.

### SOD SPECIFICATIONS:

- TWO YEARS OLD AND SHALL BE FREE OF ANY UNDESIRABLE NATIVE GRASSES OR WEEDS.
- 2. SOD SHALL BE MACHINE CUT TO A THICKNESS NOT LESS THAN 3/4", EXCLUDING THATCH, AND SHALL BE CAPABLE OF VIGOROUS GROWTH WHEN PLANTED.
- 3. SOD PADS SHALL BE OF UNIFORM SIZE AND COMPOSED OF AT LEAST TWO
- LOCAL GRASS VARIETIES. 4. LAY SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS, DO NOT
- TAMP SOD TO ENSURE CONTACT WITH WITH SOIL.
- WATER WITHIN ONE HOUR OF PLANTING WITH A FINE SPRAY. 5.



### MAINTENANCE:

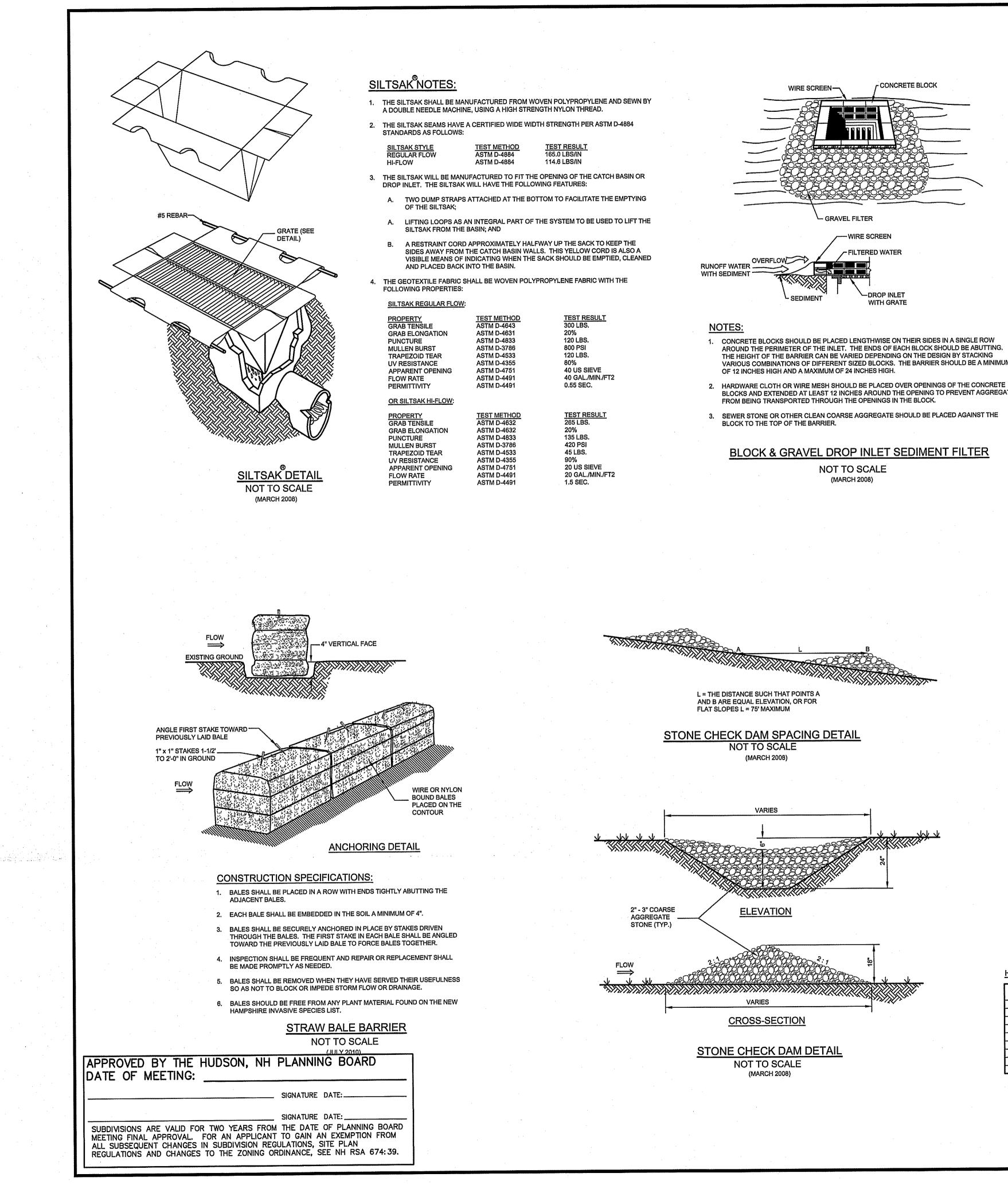
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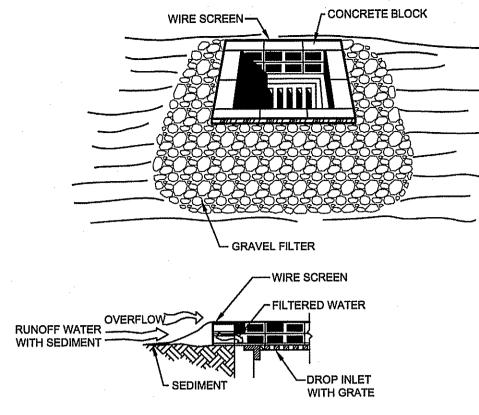
### CONSTRUCTION SPECIFICATIONS:

- CONCRETE EQUIVALENT.

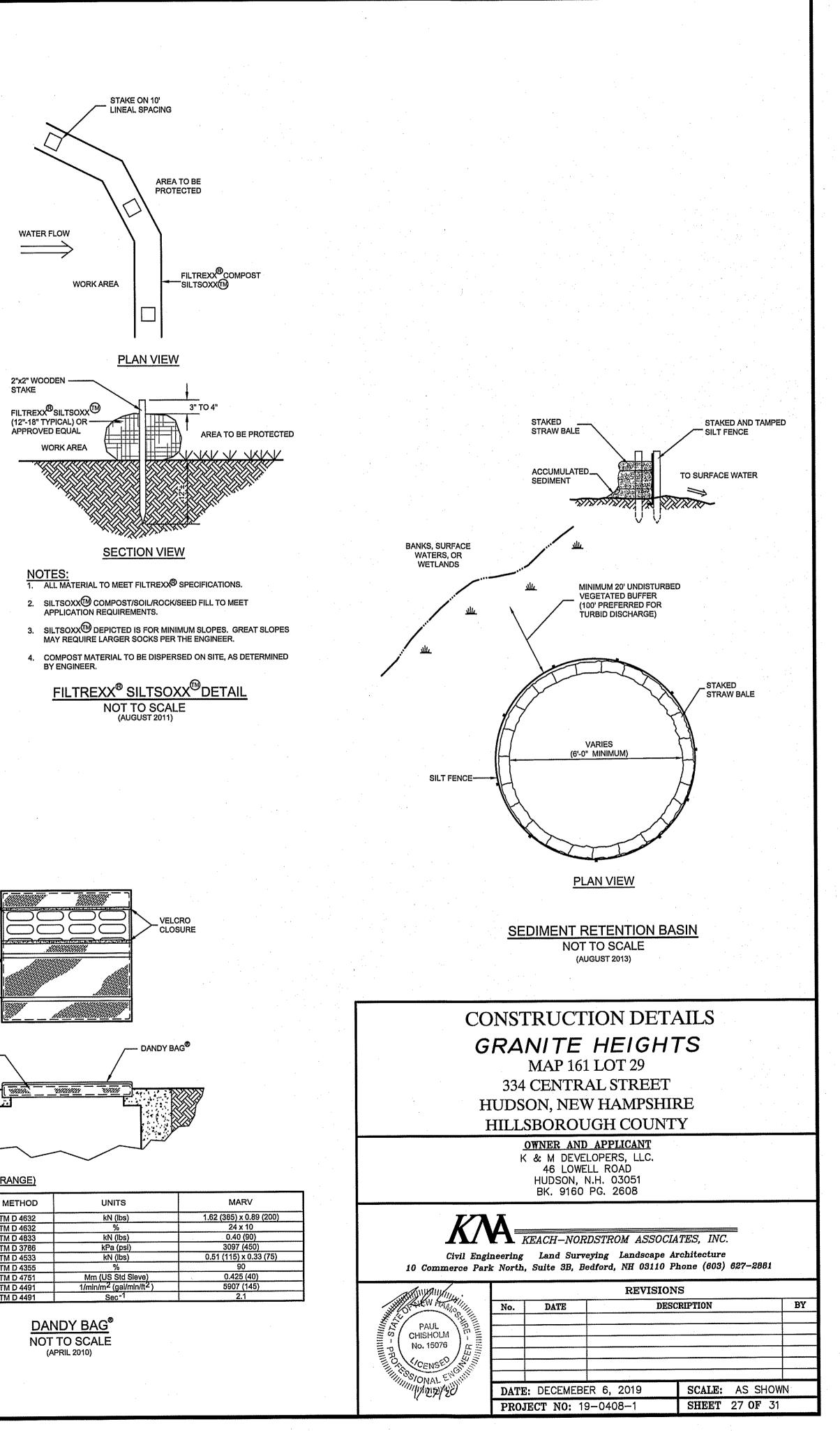
- SUBSTITUTED FOR THE PIPE.
- TRAPPING DEVICE.

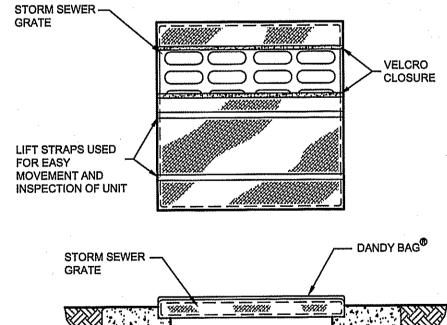
	CONSTRUCTION SE				
	1. CONTRACTOR TO NOTIFY DIG- 2. PRIOR TO GRUBBING OF CLEA EROSION CONTROL MEASURE	RED AREAS, ALL SILTATIO	N BARRIERS DESIGNED F		
	CONSTRUCTION EXIT AT LOCA PAVEMENT.	TION OF CONSTRUCTION	ACCESS AT LOCATION C	F INTERSECTION WITH EXISTING	
	3. CUT AND CLEAR TREES AND B BRANCHES, TOPS AND BRUSH TO MEET THE REQUIREMENTS	TO BE PROPERLY DISPO AND INTENT OF RSA 430:	SED OF BY CONTRACTOR	R. THIS PROJECT IS MANAGED	
	4. COMPLETE GRUBBING OPERA DEBRIS SHALL BE PROPERLY I TOPSOIL SHALL BE STOCKPILE	DISPOSED OF BY CONTRA	CTOR. ORGANIC MATER	IS . ALL STUMPS AND SIMILAR IAL SUITABLE FOR USE AS SEEDED WITH WINTER RYE AND,	
•	IF NECESSARY, SURROUNDED 5. CONSTRUCT TEMPORARY CUL	WITH HAY BALES IN ORDE	R TO PREVENT LOSS DU FACILITATE CONSTRUC	E TO EROSION. TION ACTIVITIES. ALL SUCH	
	CROSSINGS SHALL BE PROTE TO TEMPORARY PRACTICES U 6. DO NOT DIRECT RUNOFF TO TI	NTIL STORMWATER BEST	MANAGEMENT PRACTICE	ES ARE STABILIZED.	
	BEEN FULLY STABILIZED. 7. STABILIZE ALL DITCHLINES PR AND OTHER SUBSURFACE UTII	IOR TO DIRECTING FLOW			
	8. PONDS/SWALES MUST BE INST 9. COMMENCE CONSTRUCTION C	ALLED BEFORE ROUGH G	EXCAVATION ACTIVITIES		
	SUBGRADE ELEVATION. ALL E SHALL BE INSTALLED AND STA IMPLEMENTATION OF HAY BAL	BILIZED. ALL SWALES AN	D DITCHLINES SHALL BE	D ROADWAY CROSS CULVERTS PROTECTED FROM EROSION BY ANS, DIVERT STORMWATER	
	RUNOFF THROUGH THE USE O COMPLETIONS OF A FUNCTION STABILIZED BY TRACKING AND	IAL STORM DRAINAGE SY	STEM. SLOPES AND EMB	ESSARY PRIOR TO THE ANKMENTS SHALL BE TO TURF ESTABLISHMENT. ALL	
VERLAP OF JUTE	DITCHES AND SWALES SHALL 10. COMPLETE CONSTRUCTION O	BE STABILIZED PRIOR TO	HAVING RUNOFF DIRECT	ED TO THEM.	
/HERE TWO OR RIP WIDTHS ARE D (STAPLE ON 18	TO PROPER ELEVATION. 11. APPLY TOPSOIL TO ROADWAY BE NATIVE ORGANIC MATERIA	L SCREENED SO AS TO BI	E FREE OF ROOTS, BRAN	CHES, STONES AND OTHER	
ITÈRS)	AND MULCHED. CONSTRUCTION	ON COMPLETION OF TOPS	OILING, FINISHED SECTIO	DNS ARE TO BE LIMED, SEEDED	
UTSIDE EDGE	BASIS AND REMEDY ANY PROE 12. PERFORM FINE GRADING OF R 13. MAINTAIN, REPAIR AND REPLA	BLEM AREAS UNTIL A HEAI OADWAY BASE MATERIAL	.THY STAND OF GRASS H 3.	IAS BECOME ESTABLISHED.	
I CENTERS	AS THE ENTIRE CONSTRUCTION 14. AFTER STABILIZATION REMOV	N AREA HAS BEEN STABI E AND SUITABLY DISPOSE	IZED (A MINIMUM OF ON OF TEMPORARY EROSI	E WINTER SHALL HAVE PASSED). ON CONTROL MEASURES.	
B	15. MONITOR CONSTRUCTION ACT PERFORMED IN SUCH A WAY STORMWATER SYSTEMS AND	AS NOT TO ENDANGER TH	E INTEGRITY OF ROADW	AY EMBANKMENTS,	
S RE	INSTALLED IN ACCORDANCE W 16. LOT DISTURBANCE, OTHER TH THE ROADWAY HAS THE BASE	AN THAT SHOWN ON THE	APPROVED PLANS, SHA		
	AND STABLE.				
	EROSION CONTROL N EXPOSED EARTHWORK SHALL BE THROUGHOUT THE CONSTRUCTI	CONFINED TO AS LIMITE			
	AN UNSTABLE CONDITION. NO G PERIOD OF TIME EXCEEDING THI 2. TEMPORARY EROSION CONTROL	IVEN AREA OF THE SITE S RTY (30) CALENDAR DAYS.	HALL BE LEFT IN AN UNS	TABILIZED CONDITION FOR A	
	2. TEMPORARY EROSION CONTROL ADDITION, SIMILAR MEASURES S OF THE INDIVIDUAL SITE CONTR SHALL BE INSPECTED WEEKLY A	HALL BE INSTALLED WHEN ACTOR, MAY WARRANT.	RE AND WHEN THE FIELD	CONDITION, OR FIELD OPERATIO N CONTROL MEASURES USED	N
	AND MAINTAINED AND OTHERWIS PERIOD.	SE KEPT IN AN EFFECTIVE	OPERATING MANNER TH	ROUGHOUT THE CONSTRUCTION	
	<ol> <li>ALL DISTURBED AREAS DESIGNA (COMPACTED THICKNESS), PRIOI</li> <li>ALL SWALES AND DITCHLINES SH</li> </ol>	R TO FINAL SEEDING AND I ALL BE PERIODICALLY CL	MULCHING. EANED OF DEPOSITED S	EDIMENT SO AS TO MAINTAIN AN	
	EFFECTIVE GRADE AND CROSS S HAVING STORMWATER DIRECTED 5. IN THE EVENT THAT, DURING CO	D TOWARDS THEM. INSTRUCTION OF ANY POR	TION OF THIS PROJECT,	A WINTER SHUTDOWN IS	
	NECESSARY, THE CONTRACTOR OF DIVERTING RUNOFF IN ORDEI 6. AN AREA SHALL BE CONSIDERED	SHALL STABILIZE ALL INC R TO ELIMINATE SHEET FI	OMPLETE WORK AND PR OW ACROSS FROZEN SU	OVIDE FOR SUITABLE METHODS IRFACES.	
	A. BASE COURSE GRAVI B. A MINIMUM OF 85% VI	ELS ARE INSTALLED IN AR	EAS TO BE PAVED; BEEN ESTABLISHED;	RAP HAS BEEN INSTALLED; OR	
	D. EROSION CONTROL E 7. DUST SHALL BE CONTROLLED BY	LANKETS HAVE BEEN PRO	PERLY INSTALLED.		IN
· · · · · · · · · · · · · · · · · · ·	ACCORDANCE WITH ENV-A 1000. 8. IN NO WAY ARE THOSE TEMPORA ALL INCLUSIVE, THE CONTRACT	OR SHALL USE JUDGEMEN	IT IN INSTALLING SUPPLE	MENTARY EROSION CONTROL	ED
	MEASURES WHERE AND WHEN S WARRANT. 9. AREAS HAVING FINISH GRADE SL	OPES OF 3 : 1 OR STEEPE	R, SHALL BE STABILIZED	WITH JUTE MATTING WHEN AND	IF
	FIELD CONDITIONS WARRANT, O RECOMMENDED BEST MANAGEM MANUAL "EROSION AND SEDIMEN	ENT PRACTICE OUTLINED	IN VOLUME 3 OF THE NE	ONFORM WITH THE W HAMPSHIRE STORMWATER	
	<ol> <li>ALL DETENTION PONDS AND TRE ACTIVITIES THAT WILL INFLUENCE</li> <li>ALL ROADWAYS AND PARKING A</li> </ol>	ATMENT SWALES SHALL I E STORMWATER RUNOFF.	BE CONSTRUCTED PRIOF		
	12. ALL CUT AND FILL SLOPES SHAL	L BE STABILIZED WITHIN 7	2 HOURS OF ACHIEVING I	FINISHED GRADE.	
		MENT VEGETATED AREAS		A MINIMUM OF 85% VEGETATIVE	
	AND INSTALLING EROSION CON TONS OF MULCH PER ACRE, SE	TROL BLANKETS ON SLOF	ES GREATER THAN 4:1, A NETTING, ELSEWHERE, 1	SHALL BE STABILIZED BY SEEDING ND SEEDING AND PLACING 3 TO 4 THE PLACEMENT OF EROSION	4
	CONTROL BLANKETS OR MULCH GROUND AND SHALL BE COMPL 2. ALL DITCHES OR SWALES WHIC	ETED IN ADVANCE OF THA H DO NOT EXHIBIT A MININ	W OR SPRING MELT EVE NUM OF 85% VEGETATIVE	NTS. 2 GROWTH BY OCTOBER 15TH, OF	२.
	WHICH ARE DISTURBED AFTER APPROPRIATE FOR THE DESIGN 3. AFTER OCTOBER 15TH, INCOMP	OCTOBER 15TH, SHALL BE I FLOW CONDITIONS. LETE ROAD OR PARKING	STABILIZED WITH STON	E OR EROSION CONTROL BLANKE OTECTED WITH A MINIMUM OF 3	ETS
	INCHES OF CRUSHED GRAVEL F SEASON, BE CLEARED OF ANY A 4. AN AREA SHALL BE CONSIDERE	PER NHDOT ITEM 304.3 OR ACCUMULATED SNOW AFT	, IF CONSTRUCTION IS TO ER EACH STORM EVENT.	O CONTINUE THROUGH THE WINT	ER
	A. BASE COURSE GRAV B. A MINIMUM OF 85% V	/ELS ARE INSTALLED IN AF /EGETATED GROWTH HAS	REAS TO BE PAVED; BEEN ESTABLISHED;	RAP HAS BEEN INSTALLED; OR	
	D. EROSION CONTROL	BLANKETS HAVE BEEN PR	OPERLY INSTALLED.		
	CC	NSTRUCT	ION DETA	AILS	
	G	RANITE		TS .	
			LOT 29 AL STREET		
	Н	UDSON, NEV		RE	
		HILLSBOROU	JGH COUNT		
		K & M DEVE			
		HUDSON, I	LL ROAD N.H. 03051		
		BK. 9160	PG. 2608		
		KEACH-NOR	DSTROM ASSOCIA	TES, INC.	
		neering Land Surv	eying Landscape A		
		. norm, suite 38, B	REVISION		
	PAUL CHISHOLM No. 15076 PROCENSED SIONAL ELIMINIA	No. DATE			9Y
	PAUL CHISHOLM				
	PAONO. 15076			· · · · · · · · · · · · · · · · · · ·	
	HINSSIONAL ENGINITY	DATE: DECEMEBE	R 6, 2019	SCALE: AS SHOWN	
	1 - 1 - 1	PROJECT NO: 19		SHEET 26 OF 31	





- AROUND THE PERIMETER OF THE INLET. THE ENDS OF EACH BLOCK SHOULD BE ABUTTING. THE HEIGHT OF THE BARRIER CAN BE VARIED DEPENDING ON THE DESIGN BY STACKING VARIOUS COMBINATIONS OF DIFFERENT SIZED BLOCKS. THE BARRIER SHOULD BE A MINIMUM
- BLOCKS AND EXTENDED AT LEAST 12 INCHES AROUND THE OPENING TO PREVENT AGGREGATE
- 3. SEWER STONE OR OTHER CLEAN COARSE AGGREGATE SHOULD BE PLACED AGAINST THE





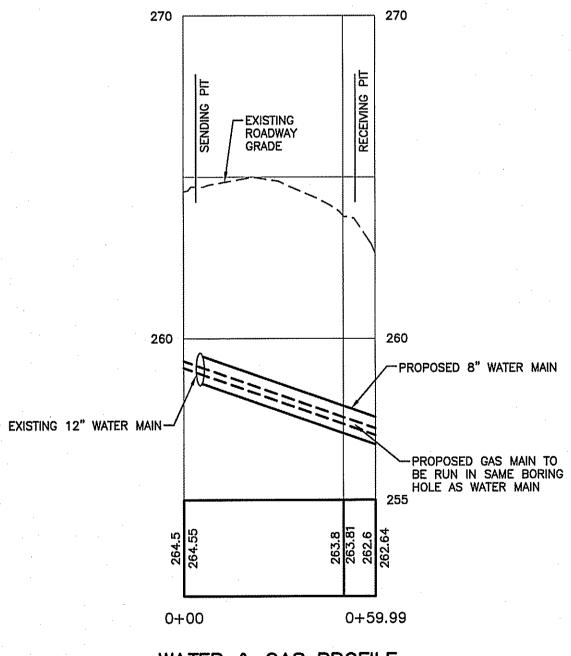
### HI-FLOW DANDY BAG® (SAFETY ORANGE)

MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAB TENSILE STRENGTH	ASTM D 4632	kN (lbs)	1.62 (365) x 0.89
GRAB TENSILE ELONGATION	ASTM D 4632	%	24 x 10
PUNCTURE STRENGTH	ASTM D 4833	kN (lbs)	0.40 (90)
MULLEN BURST STRENGTH	ASTM D 3786	kPa (psi)	3097 (450
TRAPEZOID TEAR STRENGTH	ASTM D 4533	kN (lbs)	0.51 (115) x 0.3
UV RESISTANCE	ASTM D 4355	%	90
APPARENT OPENING SIZE	ASTM D 4751	Mm (US Std Sleve)	0.425 (40
FLOW RATE	ASTM D 4491	1/min/m <sup>2</sup> (gai/min/ft <sup>2</sup> )	5907 (145
PERMITTIVITY	ASTM D 4491	Sec <sup>-1</sup>	2.1

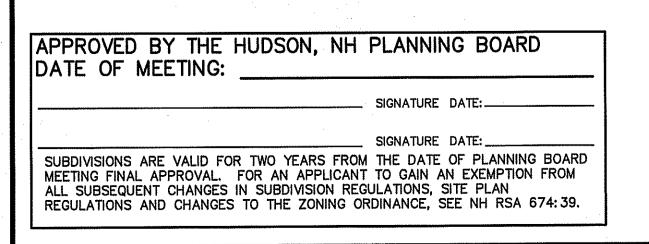
# <u>LEGEND</u>

<ul> <li>□ GB-F</li> <li>◎ IPIN-F</li> <li>● DH-F</li> <li>● IPP-F</li> <li>▲ RRS-F</li> <li>○.</li> <li>□ +</li> <li>∞</li> <li>⑤</li> <li>⑥</li> <li>∅</li> <li>Ⅲ</li> </ul>	GRANITE IRON PII DRILL H IRON PII RAILROA UTILITY SIGN LIGHT WELL SEWER DRAINAG CATCH
	ABUTTEI PROPER STREAM WETLAN OVERHE
	DRAINAG TREELIN 10' CON 2' CONT
	STONEW BUILDIN EASEME PROPOS PROPOS PROPOS PROPOS PROPOS PROPOS
UGU, GG WW W	PROPOS PROPOS PROPOS PROPOS PROPOS PROPOS
	PROPOS PROPOS
	H A 5 H M H

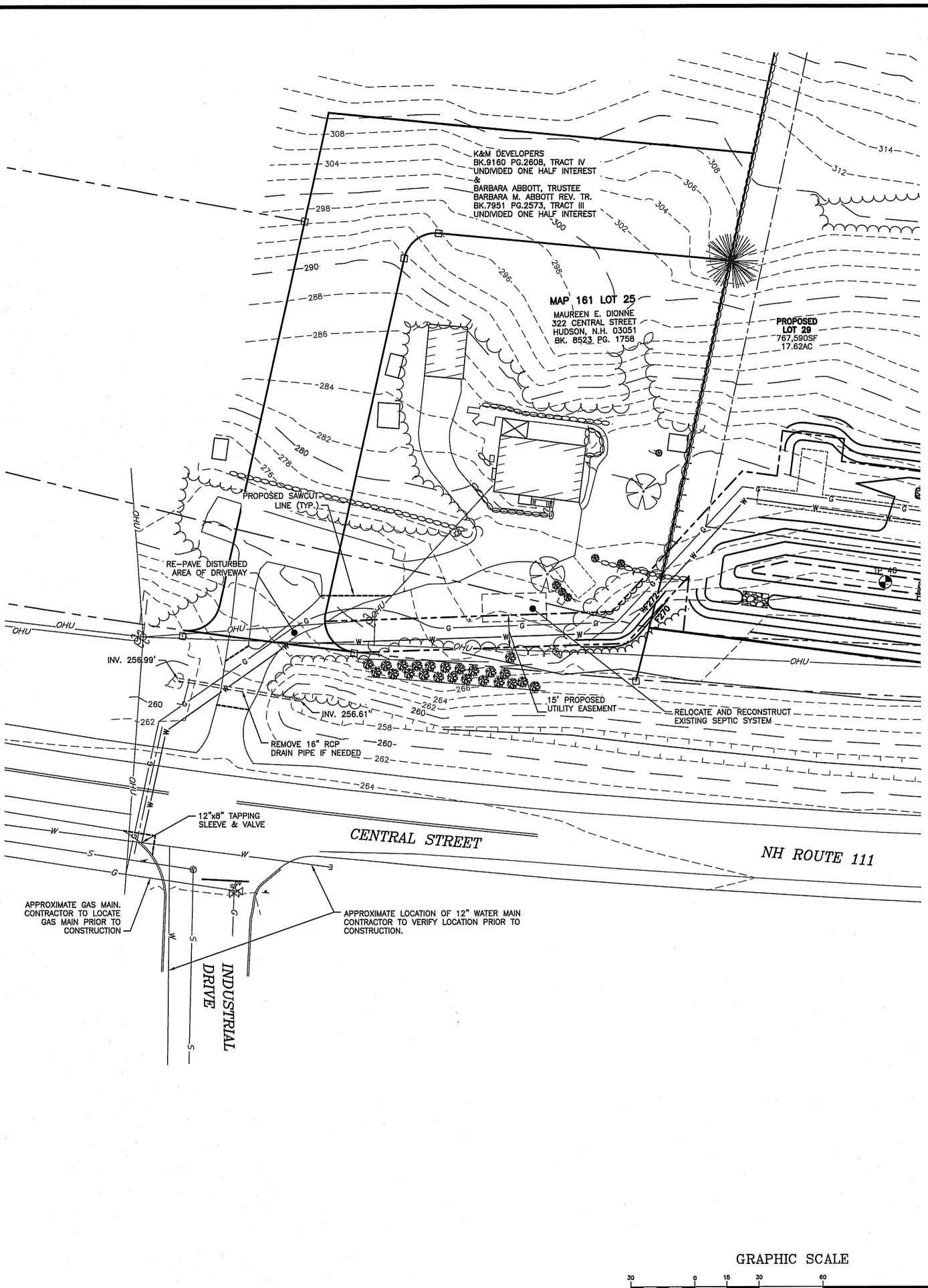
GRANITE BOUND FOUND PIN FOUND HOLE FOUND PIPE FOUND DAD SPIKE FOUND POLE MANHOLE AGE MANHOLE BASIN ER LINE RTY LINE ND EAD UTILITIES AGE LINE NTOUR NTOUR WALL ING SETBACK IENT SED WATER VALVE SED HYDRANT SED WELL SED DRAINAGE MANHOLE SED CATCH BASIN SED END SECTION SED PROPERTY LINE SED GUARDRAIL SED UNDERGROUND UTILITIES SED GAS LINE SED WATER LINE DSED DRAINAGE LINE DSED TREELINE SED EDGE OF PAVEMENT SED SLOPED GRANITE CURB SED 2' CONTOUR EASEMENT



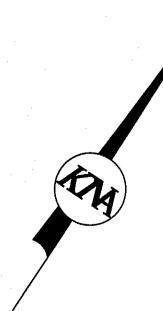
WATER & GAS PROFILE







	0	15 1	30	60 I
-			( IN FEET ) 1 inch = 30	



# CONSTRUCTION NOTES:

- THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED WATER AND GAS CONNECTIONS TO CENTRAL STREET.
- ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE TOWN OF HUDSON, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ALL WORK PERFORMED IN THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND
- ADOPTED 2016 ARE HEREBY INCORPORATED BY REFERENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.
- ALL PROPOSED GAS UTILITY WORK SHALL BE DESIGNED BY OTHERS AND COORDINATED WITH THE UTILITY COMPANY. 5. ALL WATER CONSTRUCTION SHALL CONFORM WITH THE TOWN OF HUDSON AND LOCAL UTILITY
- COMPANY. 6. THE SEPTIC SYSTEM RELOCATION SHALL OCCUR UNDER A SEPARATE CONTRACT.



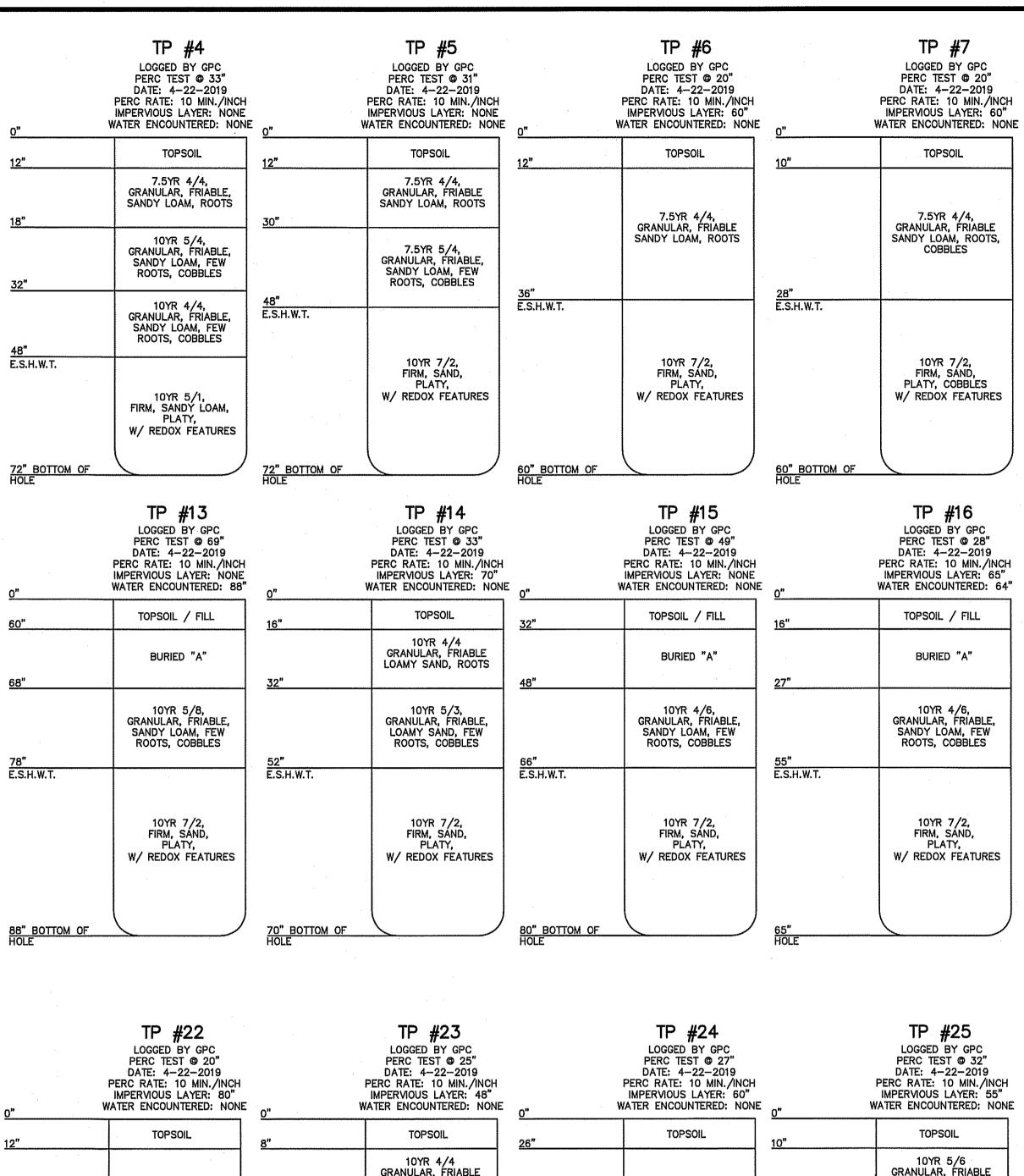
# OFFSITE UTILITY PLAN GRANITE HEIGHTS MAP 161 LOT 29 334 CENTRAL STREET HUDSON, NEW HAMPSHIRE HILLSBOROUGH COUNTY

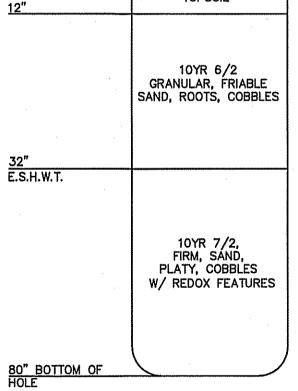
OWNER AND APPLICANT K & M DEVELOPERS, LLC. 46 LOWELL ROAD HUDSON, N.H. 03051 BK. 9160 PG. 2608

K KEACH-NORDSTROM ASSOCIATES. INC. **V** Civil Engineering Land Surveying Landscape Architecture 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

REVISIONS NHW HA DESCRIPTION DATE BY No. PAUL CHISHOLM No. 15076 CENSE S/ONAL 11/12/2 (VE DATE: DECEMBER 6, 2019 **SCALE:** 1" = 30'SHEET 28 OF 31 PROJECT NO: 19-0408-1

	TP #1 LOGGED BY GPC PERC TEST © 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH		TP #2 LOGGED BY GPC PERC TEST © 25" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH		TP #3 LOGGED BY G PERC TEST @ DATE: 4-22-2 PERC RATE: 10 M
0"	IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE	0 <b>"</b>	IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE	0"	IMPERVIOUS LAYER WATER ENCOUNTERE
14"	TOPSOIL / FOREST MAT	12"	TOPSOIL	8"	TOPSOIL
	7.5YR 4/4, GRANULAR, FRIABLE	£77	7.5YR 4/4, GRANULAR, FRIABLE		10YR 6/6, GRAI FRIABLE, LOAMY
32"	LOAMY SAND, ROOTS	24"	SANDY LOAM, ROOTS	16"	ROOTS
<u> </u>	7.5YR 5/6,	<u>4 1</u>	7.5YR 5/4,	<u></u>	10YR 6/4,
	GRANULAR, FRIABLE, FINE LOAMY SAND,		GRANULAR, FRIABLE, FINE LOAMY SAND,		GRANULAR, FRI
48 <b>"</b>	FEW ROOTS, COBBLES	42"	FEW ROOTS, COBBLES	40"	FEW ROOTS, COE
E.S.H.W.T.		E.S.H.W.T.		E.S.H.W.T.	
	7.5Y 7/2,		10YR 4/4,		10YR 6/1,
	FIRM, LOAMY SAND, PLATY,		FIRM, SAND, SINGLE GRAIN,		FIRM, LOAMÝ S PLATY,
.•	W/ REDOX FEATURES		W/ REDOX FEATURES		W/ REDOX FEA
72" BOTTOM OF		72" BOTTOM OF HOLE		70" BOTTOM OF	
HOLE		HOLE		HOLE	
	TP #10		TP #11		TP #12
	LOGGED BY GPC PERC TEST @ 33"		LOGGED BY GPC PERC TEST © 61" DATE: 4-22-2019		PERC TEST @ DATE: 4-22-2
	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH		PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE		PERC RATE: 10 M IMPERVIOUS LAYER WATER ENCOUNTER
<u>0"</u>	IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE		WATER ENCOUNTERED: NONE	<u>0</u> "	
18"	TOPSOIL / FILL	48"	TOPSOIL / FILL	36"	TOPSOIL / FI
	BURIED "A"		BURIED "A"		BURIED "A'
30"	BORIED	<u>60"</u>		48"	
<u>,</u>	10YR 5/8,		10YR 5/6,		10YR 5/8, GRANULAR, FRI
	GRANULAR, FRIABLE, SAND, FEW ROOTS, COBBLES		GRANULAR, FRIABLE, SANDY LOAM, FEW ROOTS, COBBLES		SANDY LOAM, ROOTS, COBB
52"	COBBLES	8'		<u>62"</u> E.S.H.W.T.	
E.S.H.W.T.		E.S.H.W.T.			
			10YR 7/2,		10YR 7/2,
	10YR 7/2, FIRM, SAND, PLATY,		FIRM, SÁND, PLATY,		FIRM, SÁNÍ PLATY, W/ REDOX FEA
	W/ REDOX FEATURES		W/ REDOX FEATURES		
		. •			
80" BOTTOM OF		9' BOTTOM OF		70" BOTTOM OF HOLE	
HOLE		HOLE			
	TP #19		TP #20		TP #2
			LOGGED BY GPC		LOGGED BY O PERC TEST @
	LOGGED BY GPC		PERC TEST @ 33"		DATE: 4-22-
	LOGGED BY GPC PERC TEST © 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH		PERC TEST © 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH	1	IMPERVIOUS LAY
· · ·	LOGGED BY GPC PERC TEST @ 33"	<u>o</u> "	DATE: 4-22-2019		IMPERVIOUS LAYE
	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE	<u>o"</u> 10"	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60"		IMPERVIOUS LAYE WATER ENCOUNTER TOPSOIL
	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4	<u>0</u>	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL	ie <u>o"</u>	IMPERVIOUS LAYE WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FRI
<b>p</b>	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL	<u>0"</u>	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL	ie <u>o"</u>	IMPERVIOUS LAYE WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FRI
<b>p</b>	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS	<u>0</u>	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS	IE <u>0"</u>	IMPERVIOUS LAYE WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FRI SANDY LOAM, F
<b>p</b>	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SAND, FEW ROOTS,	<u>0"</u>	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SANDY LOAM, FEW	IE <u>0"</u>	PERC RATE: 10 M IMPERVIOUS LAYE WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FRI SANDY LOAM, F 10YR 6/4, GRANULAR, FRI SANDY LOAM, ROOTS, COBB
<u>,"</u> )"	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS	<u>0"</u> <u>10"</u> <u>24"</u> 40"	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS	IE <u>0"</u> <u>12"</u> <u>24"</u> 42"	IMPERVIOUS LAYE WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FRI SANDY LOAM, F 10YR 6/4, GRANULAR, FRI SANDY LOAM,
2"	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SAND, FEW ROOTS,	<u>0"</u> 10" 24"	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SANDY LOAM, FEW	IE <u>0"</u>	IMPERVIOUS LAYE WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FRI SANDY LOAM, F 10YR 6/4, GRANULAR, FRI SANDY LOAM,
<u>,"</u> )" 2"	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SAND, FEW ROOTS, COBBLES	<u>0"</u> <u>10"</u> <u>24"</u> 40"	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SANDY LOAM, FEW ROOTS, COBBLES	IE <u>0"</u> <u>12"</u> <u>24"</u> 42"	IMPERVIOUS LAYE WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FRI SANDY LOAM, F GRANULAR, FRI SANDY LOAM, ROOTS, COBB
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2 <u>"</u> D" 2"	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SAND, FEW ROOTS, COBBLES	<u>0"</u> <u>10"</u> <u>24"</u> 40"	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SANDY LOAM, FEW ROOTS, COBBLES 10YR 4/4,	IE <u>0"</u> <u>12"</u> <u>24"</u> 42"	IMPERVIOUS LAYE WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FRI SANDY LOAM, F GRANULAR, FRI SANDY LOAM, ROOTS, COBB
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2" 2" .S.H.W.T.	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SAND, FEW ROOTS, COBBLES	0"	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SANDY LOAM, FEW ROOTS, COBBLES 10YR 4/4, SAND, FIRM	IE <u>0"</u> <u>12"</u> <u>24"</u> <u>42"</u> E.S.H.W.T.	IMPERVIOUS LAY WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FR SANDY LOAM, F GRANULAR, FRI SANDY LOAM, ROOTS, COBB
2" 0" .2" .S.H.W.T.	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SAND, FEW ROOTS, COBBLES	<u>0"</u> <u>10"</u> <u>24"</u> 40"	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SANDY LOAM, FEW ROOTS, COBBLES 10YR 4/4, SAND, FIRM	IE <u>0"</u> <u>12"</u> <u>24"</u> 42"	IMPERVIOUS LAY WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FR SANDY LOAM, F GRANULAR, FR SANDY LOAM, ROOTS, COBE
2" 2" .S.H.W.T.	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SAND, FEW ROOTS, COBBLES	0" 10" 24" <u>40"</u> E.S.H.W.T. 60" BOTTOM OF	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SANDY LOAM, FEW ROOTS, COBBLES 10YR 4/4, SAND, FIRM	IE <u>0"</u> <u>12"</u> <u>24"</u> <u>42"</u> E.S.H.W.T.	IMPERVIOUS LAY WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FR SANDY LOAM, F GRANULAR, FR SANDY LOAM, ROOTS, COBE
2" 2" .S.H.W.T.	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SAND, FEW ROOTS, COBBLES	0" 10" 24" <u>40"</u> E.S.H.W.T. 60" BOTTOM OF	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SANDY LOAM, FEW ROOTS, COBBLES 10YR 4/4, SAND, FIRM	IE <u>0"</u> <u>12"</u> <u>24"</u> <u>42"</u> E.S.H.W.T.	IMPERVIOUS LAYI WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FR SANDY LOAM, F GRANULAR, FRI SANDY LOAM, ROOTS, COBE
2"	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SAND, FEW ROOTS, COBBLES 10YR 7/4, GRAVELLY SAND, SINGLE GRAIN W/ REDOX FEATURES	0" 10" 24" <u>40"</u> E.S.H.W.T. <u>60" BOTTOM OF</u> HOLE	DATE: 4-22-2019 PERC RATE: 10 MIN./INCI- IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SANDY LOAM, FEW ROOTS, COBBLES 10YR 4/4, SAND, FIRM W/ REDOX FEATURES	IE <u>0"</u> <u>12"</u> <u>24"</u> <u>42"</u> E.S.H.W.T.	IMPERVIOUS LAY WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FR SANDY LOAM, F GRANULAR, FR SANDY LOAM, ROOTS, COBE
2" 0" 22" S.H.W.T. 0" BOTTOM OF OLE /ED BY THE	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SAND, FEW ROOTS, COBBLES 10YR 7/4, GRAVELLY SAND, SINGLE GRAIN W/ REDOX FEATURES	0" 10" 24" <u>40"</u> E.S.H.W.T. <u>60" BOTTOM OF</u> HOLE	DATE: 4-22-2019 PERC RATE: 10 MIN./INCI- IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SANDY LOAM, FEW ROOTS, COBBLES 10YR 4/4, SAND, FIRM W/ REDOX FEATURES	IE <u>0"</u> <u>12"</u> <u>24"</u> <u>42"</u> E.S.H.W.T.	IMPERVIOUS LAYI WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FR SANDY LOAM, F GRANULAR, FRI SANDY LOAM, ROOTS, COBE
2"	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SAND, FEW ROOTS, COBBLES 10YR 7/4, GRAVELLY SAND, SINGLE GRAIN W/ REDOX FEATURES	0" 10" 24" <u>40"</u> E.S.H.W.T. <u>60" BOTTOM OF</u> HOLE	DATE: 4-22-2019 PERC RATE: 10 MIN./INCI- IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SANDY LOAM, FEW ROOTS, COBBLES 10YR 4/4, SAND, FIRM W/ REDOX FEATURES	IE <u>0"</u> <u>12"</u> <u>24"</u> <u>42"</u> E.S.H.W.T.	IMPERVIOUS LAY WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FR SANDY LOAM, F GRANULAR, FRI SANDY LOAM, ROOTS, COBB
2" 0" 22" .S.H.W.T. 0" BOTTOM OF OLE 0LE /ED BY THE OF MEETING	LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SAND, FEW ROOTS, COBBLES 10YR 7/4, GRAVELLY SAND, SINGLE GRAIN W/ REDOX FEATURES	0" 10" 24" <u>40"</u> E.S.H.W.T. <u>60" BOTTOM OF</u> HOLE ANNING BOAI	DATE: 4-22-2019 PERC RATE: 10 MIN./INCI- IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: NON TOPSOIL 10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS 10YR 6/4, GRANULAR, FRIABLE, SANDY LOAM, FEW ROOTS, COBBLES 10YR 4/4, SAND, FIRM W/ REDOX FEATURES	IE <u>0"</u> <u>12"</u> <u>24"</u> <u>42"</u> E.S.H.W.T.	IMPERVIOUS LAYE WATER ENCOUNTER TOPSOIL 10YR 3/6 GRANULAR, FRI SANDY LOAM, F GRANULAR, FRI SANDY LOAM, ROOTS, COBB





	DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 48" (ATER ENCOUNTERED: NONE
8"	TOPSOIL
21"	10YR 4/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS
	10YR 6/6, GRANULAR, FRIABLE, SANDY LOAM, FEW ROOTS, COBBLES
<u>32"</u> E.S.H.W.T.	10YR 7/2, SAND, FIRM W/ REDOX FEATURES
48" BOTTOM OF HOLE	

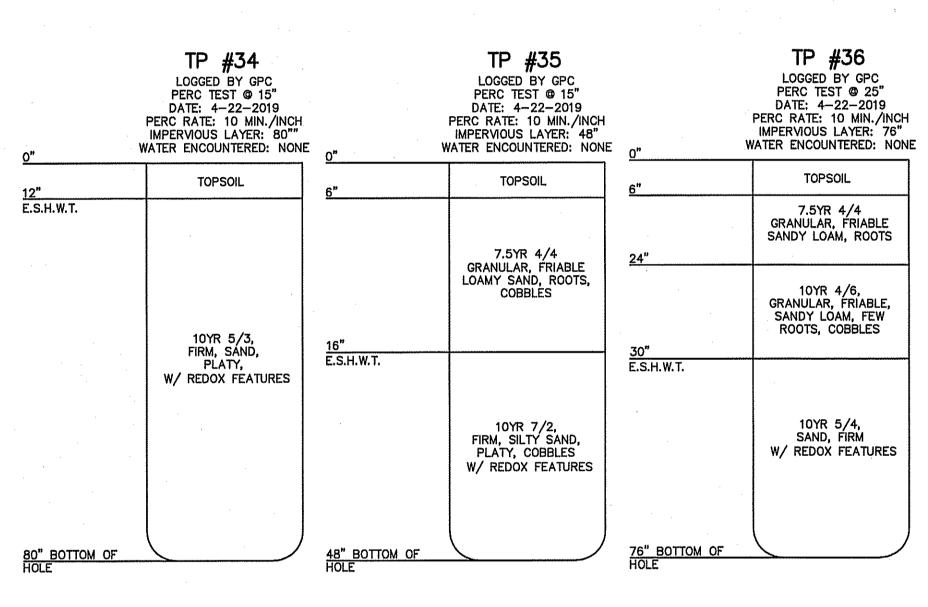
	LOGGED BY GPC PERC TEST © 27" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60" (ATER ENCOUNTERED: NONE
26"	TOPSOIL
54"	10YR 5/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS, COBBLES
E.S.H.W.T. 60" BOTTOM OF	10YR 7/2, FIRM, SAND, PLATY, COBBLES W/ REDOX FEATURES
HOLE	

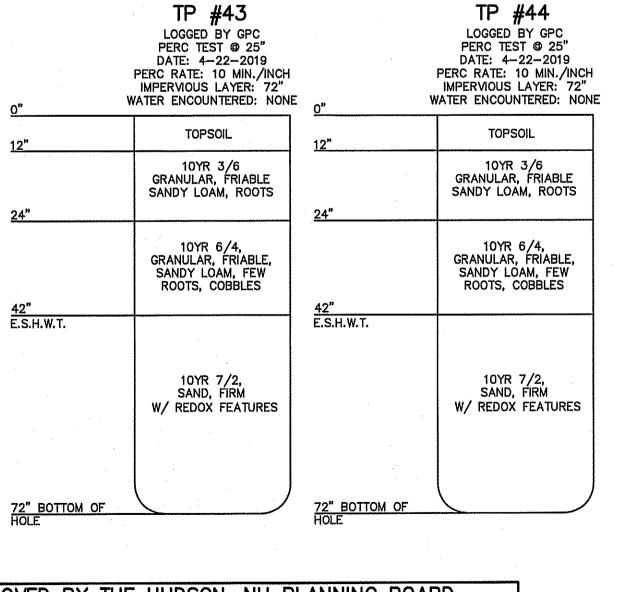
o" V	PERC TEST © 32" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 55" WATER ENCOUNTERED: NONE
10"	TOPSOIL
70"	10YR 5/6 GRANULAR, FRIABLE LOAMY SAND, ROOTS
<u>30"</u> 44"	10YR 6/6, GRANULAR, FRIABLE, LOAMY SAND, FEW ROOTS, COBBLES
E.S.H.W.T.	10YR 7/2, SAND, FIRM W/ REDOX FEATURES
55" BOTTOM OF HOLE	

· · · · · · · · · · · · · · · · · · ·			
0"	TP #8 LOGGED BY GPC PERC TEST © 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE	<u>-</u> o"	TP #9 LOGGED BY GPC PERC TEST © 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 70" WATER ENCOUNTERED: NONE
10"	TOPSOIL	10"	TOPSOIL
	7.5YR 4/4, GRANULAR, FRIABLE LOAMY SAND, ROOTS		10YR 4/6 GRANULAR, FRIABLE LOAMY SAND, ROOTS
<u>32"</u>	10YR 5/6, GRANULAR, FRIABLE, LOAMY SAND, FEW ROOTS, COBBLES	<u>32"</u>	10YR 4/4, GRANULAR, FRIABLE, SANDY LOAM, FEW ROOTS, COBBLES
<u>60"</u> E.S.H.W.T.		<u>52"</u> E.S.H.W.T.	
	10YR 7/2, FIRM, SAND, PLATY, W/ REDOX FEATURES		10YR 7/2, FIRM, SAND, PLATY, W/ REDOX FEATURES
80" BOTTOM OF		80" BOTTOM OF	
0"	TP #17 LOGGED BY GPC PERC TEST @ 33" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 70" WATER ENCOUNTERED: 68"	HOLE 0"	TP #18 LOGGED BY GPC PERC TEST © 20" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 60" WATER ENCOUNTERED: 58"
20"	TOPSOIL	12"	TOPSOIL
30"	10YR 4/4 GRANULAR, FRIABLE SANDY LOAM, ROOTS		10YR 6/6 GRANULAR, FRIABLE
42"	10YR 5/3, GRANULAR, FRIABLE, SANDY LOAM, FEW ROOTS, COBBLES	<u>36"</u> E.S.H.W.T.	LOAMY SAND, ROOTS, COBBLES
E.S.H.W.T.	10YR 7/2, FIRM, SAND, PLATY, W/ REDOX FEATURES		10YR 7/2, FIRM, SAND, PLATY, COBBLES W/ REDOX FEATURES
70" BOTTOM OF HOLE		60" BOTTOM OF HOLE	

TEST PIT LOGS						
GRANITE HEIGHTS MAP 161 LOT 29						
334 CENTRAL STREET HUDSON, NEW HAMPSHIRE						
HILLSBOROUGH COUNTY						
OWNER AND APPLICANT K & M DEVELOPERS, LLC. 46 LOWELL ROAD HUDSON, N.H. 03051 BK. 9160 PG. 2608						
KEACH-NORDSTROM ASSOCIATES, INC. Civil Engineering Land Surveying Landscape Architecture 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881						
The second			REVISION			
CON TRANS	No.	DATE	DESC	RIPTION	BY ·	
PAUL CHISHOLM No, 15076						
TO CONSEP S						
1111 SSIGNAL ENGINIT	DATE	: DECEMEBE	ER 6, 2019	SCALE: AS SHOW	V	
	PROJ	ECT NO: 19	19-0408-1 SHEET 29 OF 31			

0"	TP #26 LOGGED BY GPC PERC TEST © 32" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: 77" WATER ENCOUNTERED: NONE	0"	TP #27 LOGGED BY GPC PERC TEST @ 41" DATE: 4-22-2019 PERC RATE: 10 MIN./INCH IMPERVIOUS LAYER: NONE WATER ENCOUNTERED: NONE	0"	TP #28 LOGGED BY GPC PERC TEST © 59" DATE: 4-22-2019 PERC RATE: 10 MIN./IN IMPERVIOUS LAYER: NO WATER ENCOUNTERED: N
10"	TOPSOIL	16"	TOPSOIL	40"	TOPSOIL / FILL
	7.5YR 4/6 GRANULAR, FRIABLE SAND, ROOTS		7.5YR 3/2, GRANULAR, FRIABLE, LOAM, ROOTS		BURIED "A"
30"		<u>24"</u>		<u>44"</u>	
	10YR 6/6, GRANULAR, FRIABLE, SAND, FEW ROOTS, COBBLES	40"	7.5YR 5/6, GRANULAR, FRIABLE, LOAM, FEW ROOTS, COBBLES	58"	10YR 5/6, GRANULAR, FRIABLE, LOAMY SAND, FEW ROOTS, COBBLES
<u>52"</u> E.S.H.W.T.		60"	7.5YR 5/4, GRANULAR, FRIABLE, GRAVELY SANDY LOAM, FEW ROOTS, COBBLES	70"	10YR 4/6, GRANULAR, FRIABLE, GRAVELY SANDY LOAM FEW ROOTS, COBBLES
	10YR 7/2, SAND, FIRM W/ REDOX FEATURES	E.S.H.W.T.	10YR 5/1, FIRM, SANDY LOAM, PLATY, W/ REDOX FEATURES	E.S.H.W.T.	10YR 5/1, FIRM, SANDY LOAM, PLATY, W/ REDOX FEATURES
77" BOTTOM OF HOLE		68" BOTTOM OF HOLE		90" BOTTOM OF HOLE	



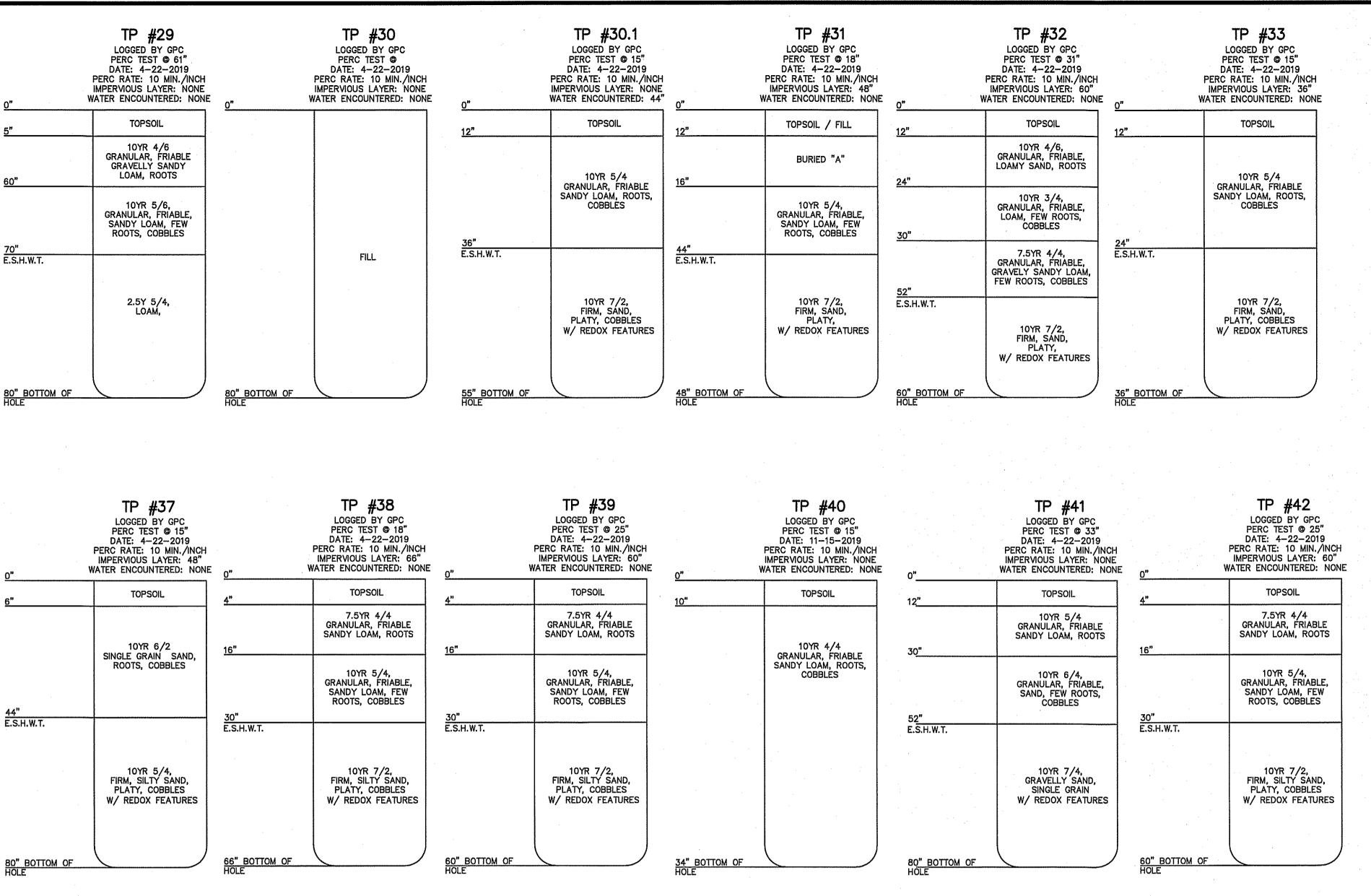


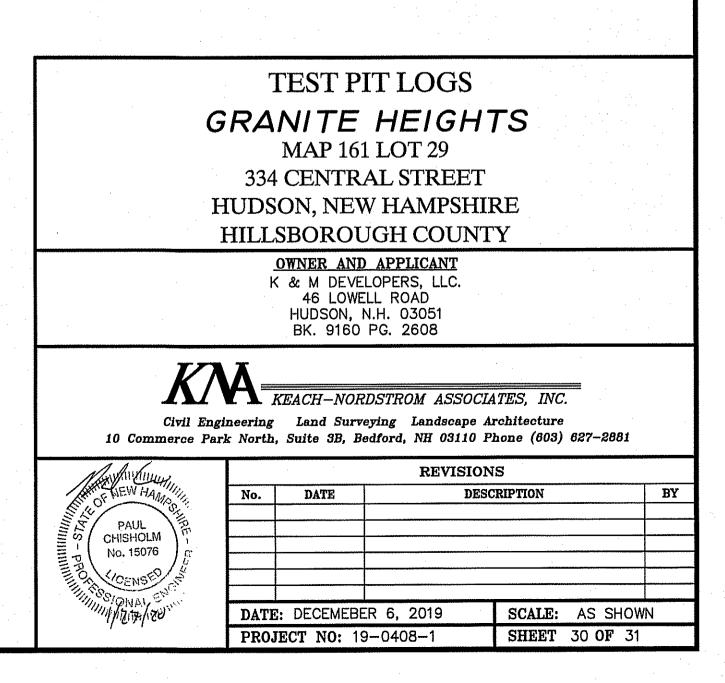
APPROVED BY THE HUDSON, NH PLANNING BOARD DATE OF MEETING:

SIGNATURE DATE: \_

SIGNATURE DATE:\_

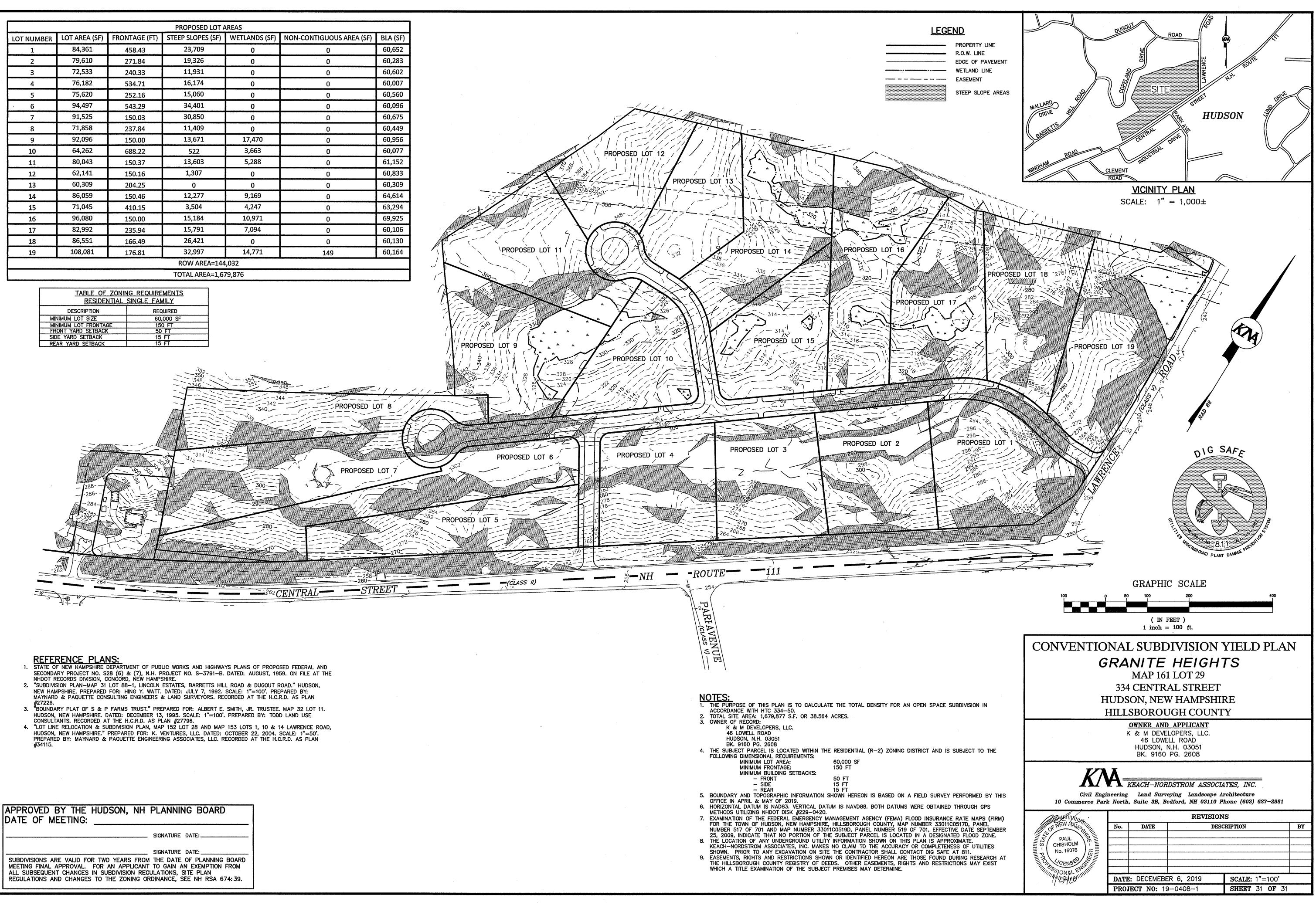
SUBDIVISIONS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FOR AN APPLICANT TO GAIN AN EXEMPTION FROM ALL SUBSEQUENT CHANGES IN SUBDIVISION REGULATIONS, SITE PLAN REGULATIONS AND CHANGES TO THE ZONING ORDINANCE, SEE NH RSA 674:39.





· · · · · · · · · · · · · · · · · · ·		<u></u>	PROPOSED LOT A	AREAS		
LOT NUMBER	LOT AREA (SF)	FRONTAGE (FT)	STEEP SLOPES (SF)	WETLANDS (SF)	NON-CONTIGUOUS AREA (SF)	BLA (SF
1	84,361	458.43	23,709	0	0	60,652
2	79,610	271.84	19,326	0	0	60,283
3	72,533	240.33	11,931	0	0	60,602
4	76,182	534.71	16,174	0	0	60,007
5	75,620	252.16	15,060	0	0	60,560
· 6	94,497	543.29	34,401	0	0	60,096
7	91,525	150.03	30,850	.0	0	60,675
8	71,858	237.84	11,409	0	0	60,449
9	92,096	150.00	13,671	17,470	0	60,956
10	64,262	688.22	522	3,663	0	60,077
11	80,043	150.37	13,603	5,288	0	61,152
12	62,141	150.16	1,307	0	0	60,833
13	60,309	204.25	0	0	0	60,309
14	86,059	150.46	12,277	9,169	0	64,614
15	71,045	410.15	3,504	4,247	0	63,294
16	96,080	150.00	15,184	10,971	0	69,925
17	82,992	235.94	15,791	7,094	0	60,106
18	86,551	166.49	26,421	0	0	60,130
19	108,081	176.81	32,997	14,771	149	60,164
			ROW AREA=144	,032		

TABLE OF ZONING REQUIREMENTS RESIDENTIAL SINGLE FAMILY					
	· · · · · · · · · · · · · · · · · · ·				
DESCRIPTION	REQUIRED				
MINIMUM LOT SIZE	60,000 SF				
MINIMUM LOT FRONTAGE	150 FT				
FRONT YARD SETBACK	50 FT				
SIDE YARD SETBACK	15 FT				
DEAD VADD CETDACK	15 FT				



- NEW HAMPSHIRE. PREPARED FOR: HING Y. WATT. DATED: JULY 7, 1992. SCALE: 1"=100'. PREPARED BY: MAYNARD & PAQUETTE CONSULTING ENGINEERS & LAND SURVEYORS. RECORDED AT THE H.C.R.D. AS PLAN
- HUDSON, NEW HAMPSHIRE. DATED: DECEMBER 13, 1995. SCALE: 1"=100'. PREPARED BY: TODD LAND USE

4. "LOT LINE RELOCATION & SUBDIVISION PLAN, MAP 152 LOT 28 AND MAP 153 LOTS 1, 10 & 14 LAWRENCE ROAD, HUDSON, NEW HAMPSHIRE." PREPARED FOR: K. VENTURES, LLC. DATED: OCTOBER 22, 2004. SCALE: 1"=50'. PREPARED BY: MAYNARD & PAQUETTE ENGINEERING ASSOCIATES, LLC. RECORDED AT THE H.C.R.D. AS PLAN #34115.

# DATE OF MEETING:

SUBDIVISIONS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FOR AN APPLICANT TO GAIN AN EXEMPTION FROM ALL SUBSEQUENT CHANGES IN SUBDIVISION REGULATIONS, SITE PLAN REGULATIONS AND CHANGES TO THE ZONING ORDINANCE, SEE NH RSA 674:39.

# HEARING ON AMENDMENT REGULATION AMENDMENT PUBLIC HEARING STAFF REPORT

February 12, 2020

### **PURPOSE:**

To consider revising the regulation, §276-5 Hearing on Amendments, in accordance with the state law for notification of public hearings and clarification of direct and indirect abutters.

**PROPOSED AMENDMENTS:** (Proposed amendment indicated by strikethrough text for wording to be deleted and **bold text** for wording to be added.)

Chapter 276 ADMINISTRATIVE REQUIREMENTS AND DEFINITIONS

§ 276-5. Hearing on Applications.

### **EXISTING LANGUAGE:**

### § 276-5 Hearings on Applications.

Prior to the PLANNING BOARD's approval of an application for a PERMIT or an application for an amended permit, a public hearing shall be held within 30 days on such application. A certified notice of said hearing shall be sent to all ABUTTERs within 150 feet (200 feet for EXCAVATION permits) of the parcel on which the activity for which the PERMIT requested is proposed to occur; said notice shall specify the grounds for the hearing as well as the date, time and place, and at least 14 days' notice of the time and place of such hearing shall be published in a paper of general circulation. A legal notice of the hearing shall also be posted in at least three public places within the Town (Note: The 14 days shall not include the day of publication nor the day of the hearing, but shall include any Saturdays, Sundays or legal holidays within said period.) Within 20 days of said hearing or any continuation thereof, the PLANNING BOARD shall render a decision approving or disapproving the application, giving reasons for disapproval.

[PROPOSED LANGUAGE ON THE FOLLOWING PAGE]

### **PROPOSED LANGUAGE:**

### § 276-5 Hearings on Applications.

Prior to the PLANNING BOARD's approval of an application for a PERMIT or an application for an amended permit, a public hearing shall be **held at the next regular meeting or within 30 days following the delivery of the application, for which notice can be given in accordance with the requirements below within 30** days on such application. A certified notice of said hearing shall be sent **by verified mail, as defined by RSA 451-C:1, VII,** to all **direct ABUTTERs and by first class mail to indirect ABUTTERS within 200 feet** within 150 feet (200 feet for EXCAVATION permits) of the parcel on which the activity for which the PERMIT requested is proposed to occur; said notice shall specify the grounds for the hearing as well as the date, time and place of the hearing., and at least 14 Notice shall be mailed at least 10 days<sup>2</sup> **prior to the hearing** notice of the time and place of such hearing shall be published in a paper of general circulation. A legal notice of the hearing shall also be posted in at least three public places within <del>the</del> Town **and on the Town's website.** (Note: The 14 10 days shall not include the day of the hearing, but shall include any Saturdays, Sundays or legal holidays within said period.) Within 20 days of said hearing or any continuation thereof, the PLANNING BOARD shall render a decision approving or disapproving the application, giving reasons for disapproval.

### **CLEAN VERSION:**

### § 276-5 Hearings on Applications.

Prior to the PLANNING BOARD's approval of an application for a PERMIT or an application for an amended permit, a public hearing shall be held at the next regular meeting or within 30 days following the delivery of the application, for which notice can be given in accordance with the requirements below. A notice of said hearing shall be sent by verified mail, as defined by RSA 451-C:1, VII, to all direct ABUTTERs and by first class mail to indirect ABUTTERS within 200 feet of the parcel on which the activity for which the PERMIT requested is proposed to occur; said notice shall specify the grounds for the hearing as well as the date, time and place of the hearing. Notice shall be mailed at least 10 days prior to the hearing. A notice of the hearing shall also be posted in at least three public places within Town and on the Town's website. (Note: The 10 days shall not include the day of the hearing, but shall include any Saturdays, Sundays or legal holidays within said period.)

### **DRAFT MOTIONS:**

I move to adopt the amendment, as presented, to §276-5 Hearings on Application of Administrative Requirements and Definitions of The Town of Hudson's Land Use Regulations.

Motion: \_\_\_\_\_\_ Second: \_\_\_\_\_\_ Carried/Failed: \_\_\_\_\_\_.

I move to continue the public hearing on these amendments to date certain, \_\_\_\_\_.

Motion:	Second:	Carried/Failed:
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Regulation Amendment Staff Report Page 2 of 2