

#### **BERRY SURVEYING & ENGINEERING**

335 Second Crown Point Road Barrington, NH 03825 Phone: (603) 332-2863

Fax: (603) 335-4623 www.BerrySurveying.Com

October 9, 2018

City of Rochester Planning Board 33 Wakefield Street Rochester, NH 03867

RE:

Proposed Major Subdivision

**Groen Construction** 

122 Meaderboro Road, Rochester, N.H.

Narrative - Tax Map 232, Lot 13

Mr. Chairman and Members of the City of Rochester Planning Board,

On behalf of Groen Construction, Berry Surveying & Engineering (BS&E) is filing a Major Subdivision Application to subdivide Tax Map 232, Lot 13 into eight separate lots.

Tax Map 232, Lot 13 is currently 2,647,824 SF, 60.78 Acres and is located in the AG zone. There is no existing structures on the site. The applicant is proposing to subdivide the lot into two lots. Under a separate application, the new lot will be in the easterly corner of the lot abutting Meaderboro Road, while the remaining land will be subdivided into 8 lots. The proposed lots meet the zoning requirements of the AG zone. Berry Surveying & Engineering has done a full boundary and topographical survey of the parcel. Fraggle Rock Environmental has been on site and flagged all the wetlands.

The applicant is proposing to subdivide the existing parcel into 8 lots. To access the buildable area for these lots, the applicant will also be constructing a 22' wide roadway with, 2' gravel shoulders and a cul-de-sac at the end. The roadway will be crowned in order to divert runoff to adjacent storm water management areas. The proposed houses will be serviced by onsite septic and wells.

Seven rain gardens will be constructed to capture and treat any runoff generated form the proposed roadway. These methods will be implemented and constructed as the road is developed, such that, untreated storm water generated from the proposed roadway will be minimized. Easements are proposed around each rain garden, so that maintenance and access can be maintained.

Proper erosion and sediment control measures will be taken throughout the project to ensure that there is no effect on any wetlands outside of the proposed construction zone. Silt soxx will be used along the perimeter of construction and along

the rain garden to ensure that no sediment gets into the abutting rain garden or wetlands.

Sight line DOT sheets are included with the submission to show that the minimum sightline could be met. An in depth traffic analysis was not done for this project due to the minimal generation of trips. Based on Trip Generation Manual Volume 3 9th Edition, it was determined that this proposed subdivision would generate 6.00 trips in the am peak hour (8 units x average rate of 0.75) and 8 trips in the pm peak hour (8 units x average rate of 1.0). Furthermore, the ADT on Meaderboro Road is roughly 1,000 vehicles per day (based on the NHDOT data management system).

The proposed subdivision will require four waiver requests. The first waiver request is in relation to subdivision regulation 6.2.1.4 for minimum side slopes of 3:1. The second waiver request is in relation to table 5-2 of the subdivision regulations for a maximum 2% road grade within 100' of an intersection. The third is to table 5-1 which requires 24' paved road with 3' shoulders where the applicant is proposing 22' road with 2' shoulders. The fourth is a waiver to 5.4.1 proposed drainage volume is increased over existing drainage volume but is compliant with the NHDES regulations. See attached waiver request narrative for waiver justification. In addition to waiver requests, a conditional use permit will be required because a portion of the proposed roadway disturbs land within a 50' wetland buffer.

Applications have been submitted to the NHDES for a subdivision permit and wetland permit. In addition, an application has been submitted to NHDOT District 6 for a driveway permit for the proposed roadway. These permits will be presented to the City upon completion.

Respectfully Submitted,

BERRY SURVEYING & ENGINEERING

James Hayden Project Engineer Christopher R. Berry Project Manager





### MAJOR SUBDIVISION APPLICATION

(a total of four or more lots)

### City of Rochester, New Hampshire

	[office use only. Check#_	Amount \$	Date paid ]
Date:10-9-18		ded? Yes: <u>x</u> No:_	
		ou to submit an application	as soon as possible.)
Property information			
Tax map #:; Lo			
Property address/location:	122 Meaderboro Road	l, Rochester NH 03867	
Name of project (if applica	ble): Leota Woods		
Size of site: 62 acres	s; Overlay zoning distr	rict(s)? N/A	
Property owner			
Name (include name of inc	lividual): Groen Constr	uction	
Mailing address: 120 Wash			
Telephone #: 1-603-817-9			
Applicant/developer (			
Name (include name of inc	lividual): Groen Constr	uction	
Mailing address: 120 Wash	ington Street, Suite	302, Rochester NH 038	39
Telephone #: 1-603-817-9			
Engineer/surveyor	Kenneth A. B	erry, PE, LLS	
Name (include name of ind	(hristopher)	Rerry Drojoot Managan	
Mailing address: 335 Secon			
Telephone #: 603-332-286 k.berry@be		Fax #:	
k.berry@be Email address: crberry@me	rrysurveying.com trocast.net		
Proposed project			
Number of proposed lots: _	; est	imated length of new road	1,289 feet ds: (around cul-de-sag
Number of cubic yard of ea			
City water? yes no _			
City sewer? yes no _>			
If city water, what are the e			
Where will stormwater be d	ischarged? Proposed	rain garden, then to na	atural flow pattern

(Continued <u>Major Subdivision Plan</u> application Tax Map:232	Lot:13ZoneAG	)
Wetlands: Is any fill proposed? Yes; area to be filled	d: _ 9,963 SF ; buffer impact? 25,13	<u>0</u> S
Comments Please feel free to add any comments, additional inform	mation, or requests for waivers here:	
See attached Narrative		
		_
Submission of application		_
This application must be signed by the property owner, property owner), <i>and/or</i> the agent.	, applicant/developer (if different from	
I(we) hereby submit this Subdivision application to the pursuant to the <u>City of Rochester Subdivision Regulation</u> knowledge all of the information on this application formaterials and documentation is true and accurate. As property owner)/as agent, I attest that I am duly authority	ons and attest that to the best of my mand in the accompanying application applicant/developer (if different from	n
Signature of property owner:	Ter	-
	Date: 10-9-18	
Signature of applicant/developer:		
Signature of agent:	Date: 10-9-18	_
	Date: 10-9-18	_
Authorization to enter subject property		
I hereby authorize members of the Rochester Planning Conservation Commission, Planning Department, and a boards and agencies to enter my property for the purpoincluding performing any appropriate inspections during post-approval phase, construction phase, and occupant specifically to those particular individuals legitimately in inspecting this specific application/project. It is understoreasonable care, courtesy, and diligence when entering Signature of property owner:	other pertinent City departments, ose of evaluating this application g the application phase, review phase, cy phase. This authorization applies avolved in evaluating, reviewing, or bood that these individuals must use all	
	Date: 10-9-18	

# Major Subdivision Checklist (Major subdivisions a total of 4 or more lots)

\*To be filled out by applicant/agent (with notes to be inserted by staff) See regulations for other specific requirements City of Rochester Planning & Development Department

Project Name: Leota Woods			232	Lot:13Da	ate: 10-1-18		
Applicant/agent: Christopher R. Berry  Berry Surveying & Engi	neerin	g Signa	ature:_				
(Staff review by:			Date:				
General items	Yes	No	N/A	Waiver Requested	Comments		
22 sets completed application	X						
Total application fee	X						
22 sets letter of intent	X						
3 sets of full-size plans	X						
22 sets of 11 X 17 reductions	X						
Completed abutters list	X						
Copy of existing covenants, easements,							
and deed restrictions							
<ul> <li>Plan Information</li> <li>Basic information including:</li> <li>Title sheet</li> <li>Name of project</li> <li>Date</li> <li>North arrow</li> <li>Scale</li> <li>Legend</li> <li>Revision block</li> <li>Vicinity sketch - no less than 1" = 1,000"</li> </ul>	X						
Approval block (for signature by staff attesting to Planning Board approval)							
Name and address of developer/applicant	X						
Name, stamp, and NH license # of							

General items Continued				Waiver	
Name, stamp, and NH license # of licensed engineer for streets, utilities and drainage	Yes	No	<b>N/A</b>	Requested	Comments
City tax map & lot #'s	X				
Subdivision approval	X				
statement (per regulations) Notation on plans: "For more information about this subdivision contact"	X				
References to neighboring plans and subdivisions	X				
Information on abutting properties:  owner name owner address tax map and lot # square footage of lots approximate building footprints use	X X X X X				
<b>Zoning</b> Zoning designations of subject tract	X				
and in vicinity of tract Zoning requirements for district:  • frontage  • lot dimensions/density  • all setbacks  • lot coverage Zoning overlay districts	X X X		X		
Existing Topographic Features  Contour lines and spot elevations  Soil types and boundaries  Soil test pit locations, profiles, and depth to water table and ledge	X X				
Percolation test locations and results	X				

Existing Topographic Features Continued Waiver						
Water features (ponds, streams)	Yes	No	N/A	Reque	ested	Comments
Wetlands including name of certified wetlands scientist & license # who delinea	X ted					
Statement whether located in flood area, and if so, 100 year flood elevation	X					
Delineation of treed and open areas	X					
Overview of types of trees and vegetation			X			
Location of rock outcroppings			X			
Stone walls and archaeological features	X					
Locations of trails and paths	X					
Other natural/cultural resources (productive farmland, habitats, scenic views, historic structures, etc.)			X			
Existing buildings/structures	X					
Existing driveways and access points	X				-	
Platting Surveyed property lines including:  existing and proposed bearings  existing and proposed distances  existing and proposed pins	X X					
<ul><li>Existing and proposed location of:</li><li>monuments</li><li>benchmarks</li></ul>	X					
Proposed square footage for each lot Subdivision # on each lot (1, 2, 3, etc.) Include error of closure statement	X					

<u>Streets</u>				Waiver		
Street plan (including utilities)	Yes	No	N/A	Reques	sted 	Comments
Street profiles including vertical data and street stations and utilities	X					
Street cross sections including (if appropriate):	X					
<ul> <li>width of pavement</li> <li>travel and parking lanes</li> <li>striping</li> <li>curbing</li> <li>lawn strips</li> <li>sidewalks</li> <li>street trees</li> <li>drainage</li> <li>structure of base and pavement</li> <li>all utilities</li> </ul>	X					
Curb, intersection, and cul de sac radii	X					
Limits of construction/ground disturbance	X					
Traffic control devices (stop signs, etc.)	X					
Street light locations and details	X					
Spacing, species, specifications for street trees	X					
Landscaped island in cul de sacs	X					
Proposed street names	X					
<u><b>Utilities</b></u> Show existing and proposed for all subject materials, and all appropriate details.	lots ar	nd withi	in right	of way.	Include pla	ans, profiles, sizes,
Water lines/well (with appropriate radius)	X					
Sewer lines/septic and leaching areas	X					

<u>Utilities Continued</u>	Voc	Ma	NI/A	Waive	
Pump stations	Yes	No X	N/A	Reque	ested Comments
Stormwater management system: pipes, culverts, catch basins, detention/ retention basins, swales, rip rap, etc.	X				
Fire hydrant locations and details			X		
Electric, telephone, cable TV (underground	) X				
Gas lines			X		
Other Elements					
Phasing plan, if appropriate			X		
Traffic study, if appropriate			X		See narrative
Drainage study with calculations, storm water impact analysis, and mitigation plan	X				
Grading plan	X				
Earth being removed from site(in cubic yards	s)		X		
Erosion and sedimentation plan	X				
Mitigation plan for environmental impacts during construction	X				
Proposed open space areas	X				
Proposed recreation facilities on site			X		
School bus pickup/drop off plan			X		
Proposed covenants, easements, and deed restrictions	X				
Fiscal impact study (if requested)			X		
Road Acceptance Policy and Procedure: ls there a public road proposed?	X				
If yes, Have you read and understand the Road acceptance procedure?	X				
Additional Comments:					
	7				
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October 9, 2018

City of Rochester Planning Department Attention Chief Planner Seth Creighton 33 Wakefield Street Rochester, NH 03867

RE: Proposed Major Subdivision

Groen Construction 122 Meaderboro Road, Rochester, N.H.

Tax Map 232, Lot 13

Mr. Chairman and Members of the Rochester Planning Board

In accordance with the City of Subdivision review Regulations, section 7.3, the applicant request the following waiver:

- 1. Identification of Waiver Request: 6.2.1.4 of the Subdivision regulations, side slope minimum of 3 feet horizontal to 1 foot vertical for roadways.
  - Proposed roadway steeper than 3:1 side slopes within wetland and wetland buffers.

The applicant is proposing to subdivide the existing lot into 8 separate residential lots. In order to access the buildable area of the existing parcel, the applicant is proposing to construct a 22' wide roadway with a cul-de-sac. This road will be crowned at 2% in order to allow for runoff to be diverted to adjacent rain gardens. Much of the road is in a fill section within wetlands. The side slopes within the wetland and wetland buffer will minimize the project impacts.

#### a. Waiver Justification:

## a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The purpose and intent of the roadway is to allow for proper drainage and stabilization of roadway shoulders in order to prevent washouts and to promote stabilization. Although the proposed roadway does have 1.75:1 side slopes within the wetland buffers, 3:1 side slopes are proposed to be used in the remaining areas outside the wetland buffer areas. Proper drainage and slope stabilization can still be achieved through rolled erosion control blankets and adjacent rain gardens. Given the close proximity of the wetlands, any additional cut or fills will only affect

more wetland and wetland buffer area. The intent of the steeper side slopes in this case is to allow for the proper drainage to occur while generating the least amount of wetland disturbance as possible. The guard rails are proposed where warrants are met.

### b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Requiring the applicant to grade out the roads at a 3:1 will pose an unnecessary hardship on the applicant. Because of the existing wetlands and topography of the site, the proposed location was deemed best as it would have the least effect on the wetlands and require the least amount of excavation and disturbance.

- **2. Identification of Waiver Request**: Table 5-2 of the subdivision regulations, maximum of 2% within 100 feet of intersection.
  - Proposed roadway with a -4.00% road grade for 40 feet and a -5.50% road grade for 60 feet.

The applicant is proposing to subdivide the existing lot into 8 separate residential lots. In order to access the buildable area towards the center of the existing parcel, the applicant is proposing to construct a 22' wide roadway with a cul-de-sac. This road will be crowned at 2% in order to allow for runoff to be diverted to adjacent rain gardens. Due to the existing topography and wetlands, the proposed road design was deemed the most optimal in order to construct the safest road possible while also disturbing the least amount of area around it.

#### a. Waiver Justification:

### a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The purpose and intent of the 2% maximum road grade within 100 feet of an intersection is to allow for a safe intersection for vehicular traffic. Given the limited amount of vehicular traffic entering and existing the proposed subdivision (due to the size) and the relatively low traffic volume of Meaderboro Road, the proposed road design was deemed appropriate. The proposed design was chosen in order to maximize drainage and constructability without compromising the safety of vehicular traffic. This design is required by NHDOT.

### b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity to the regulation would impose an unnecessary hardship on the applicant. By dropping the slope of the road to 2.00%, a significant amount of fill would be required to bring the proposed road to that desired grade. In addition to the increased fill



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required, the amount of disturbance to tie the road grade back into the existing topography would increase. The proposed road design was also chosen such that it would have the most minimal effect on the wetlands as possible. Any change in the grade would only require more land disturbance. Compliance with this requirement would not be permitted by NHDOT.

- **3. Identification of Waiver Request**: Table 5-1 of the subdivision regulations, minimum of 24' or paved surface on a minor road in the AG Zone.
  - The proposed road is 22' wide with curbing through wetland areas and 2' shoulders outside wetland areas.

The applicant is proposing a very small subdivision, 8 new homes, on a short cul-de-sac. To keep the total wetlands and wetland buffer impacts to a minimum the applicant is proposing 22' wide roadway. The road will contain curbing in areas where wetlands are being crossed and 2' shoulders outside of the wetland areas.

#### a. Waiver Justification:

a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The intent of the regulation is to provide an adequate clear open surface based on the total anticipated traffic volume proposed for the roadway while ensuring there is adequate clearance for fire apparatus to navigate the road.

b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity would force an applicant to construct an overly wide roadway not warranted for a subdivision of this size. Additional wetlands and buffer impacts are recognized with larger expanses of unutilized pavement.

- **4. Identification of Waiver Request**: 5.4.1 Drainage, requires the total volume to be kept equal to the pre-existing condition.
  - Proposed increase in discharge volume for Final Reach #500, which represents the entire project site (see attached drainage narrative).

The applicant is looking to subdivide the existing lot into 8 separate residential lots. In order to access the buildable area of the existing parcel, the applicant is proposing to construct a 22' wide roadway with a cul-de-sac. As part of the construction the applicant is proposing to build rain gardens to treat and attenuate flow prior to discharge into the wetlands. The project



#### **BERRY SURVEYING & ENGINEERING**

335 Second Crown Pt. Rd., Barrington, NH 03825 (603) 332-2863 / (603) 335-4623 FAX www.BerrySurveying.Com has been re-designed to include an infiltration pond, however the total volume from the project site is increasing by 0.032 acre feet at the 2 Yr./24Hr. storm event

#### a. Waiver Justification:

### a. Granting the waiver will properly carry out the purpose and intent of the regulations.

The intent of regulation 5.4.1, is to limit the overall impact a proposed development will have on the surrounding area and total watershed. This small increase in total volume meets the state Alteration of Terrain requirements, which would otherwise allow an increase of 0.1 acre feet. As can be seen in the drainage analysis, when the proposed volume curve is overlaid on the existing volume curve, there are no areas that are not evenly distributed in kind with the existing condition. Volumetric impacts are typically seen when the detention system releases flow well beyond the storm event and well beyond what the existing receiving waters would see for post peak flows. In this case the curves are in line with each other and therefore there is no anticipated impact from the increase in total storm volume.

Some arbitrary assumptions were made about Final Reach #500 in both the existing and proposed analysis. These assumptions are only for the purpose of evaluating the potential effects of the downstream wetlands. What this analysis found is that due to the attenuation taking place in the bio-media, and the increase in volume is so small, that the average depth of downstream wetlands would remain constant and the average flow rate would be reduced.

### b. Strict conformity to the regulations would pose an unnecessary hardship to the applicant.

Strict conformity with the regulation would require the applicant to construct additional infiltration ponds. Based on the soils found on site, this would require the road to be further lifted with constructed fill to list the bottom of the rain gardens. This fill would intern require larger fill extension into the buffers and wetlands, increasing the overall impact of the project. We would submit to the board that this project balances the environmental impact with the required storm water rules, whereas the volume increases are very small and efforts have been made to reduce the impacts to the extent practical.

Respectfully submitted,

BERRY SURVEYING & ENGINEERING

Christopher R Berry, ST

Principal, President





# <u>Conditional Use Permit Application</u> City of Rochester, New Hampshire

Date: 10-9-18
Property information
Tax map #: 232 ; Lot #('s): 13 ; Zoning district: Agricultural District Ad
Property address/location: 122 Meaderboro Road, Rochester NH 03867
Name of project (if applicable): Leota Woods
Property owner
Name (include name of individual): Groen Construction
Mailing address: 120 Washington Street, Suite 302, Rochester NH 03839
Telephone #: 1-603-817-9354 Fax
Applicant/developer (if different from property owner)  Name (include name of individual): Groen Construction  Mailing address: 120 Washington Street, Suite 302, Rochester NH 03839
Telephone #: 1-603-817-9354
Engineer/designer  Kenneth A. Berry, PE, LLS Christopher Berry, Project Manager  Berry Surveying & Engineering  Berry Surveying & Engineering
Mailing address: 335 Second Crown point Road, Barrington, NH 03825
Telephone #: 603-332-2863 Fax #: Fax #:
Email address: <a href="mailto:criterry@metrocast.net">criterry@metrocast.net</a> Professional license #: <a href="mailto:14243">14243</a>
Proposed Project Please describe the proposed project: See attached Conditional Use Narrative

Please describe the existing conditions:	See attached narrative
Submission of application	
This application must be signed by the from property owner), and/or the agent.	property owner, applicant/developer (if different
Board pursuant to the <u>City of Rochester Z</u> knowledge all of the information on the application materials and documentation	e application to the City of Rochester Planning Coning Ordinance and attest that to the best of my his application form and in the accompanying is true and accurate. As applicant/developer (if I attest that I am duly authorized to act in this Date: 10-1-18
Signature of applicant/developer:	
Signature of agent:	Date: 10-1-18
	Date: 10-1-18



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October 9, 2018

City of Rochester Planning Board Attention: Seth Creighton Chief Planner 33 Wakefield Street Rochester, NH 03867

RE: Proposed Minor Subdivision

**Groen Construction** 

122 Meaderboro Road, Rochester, N.H.

Narrative – Tax Map 232, Lot 13

Mr. Chairman and Members of the Rochester Planning Board,

Enclosed are the criteria laid out in Chapter 42.21 for a conditional use permit as it pertains to the Conservation Overlay District (COD) in Chapter 42.12.

- A. Roads and other access ways; drainage ways; pipelines, power lines and other transmission lines; docks, boat launches, and piers; domestic water wells (and associated ancillary pipes and equipment); replacement septic tanks and leach fields where evidence is submitted that no alternative location is available on the property; provided that all of the following conditions are found to exist.
  - a. Due to the existing location of the wetlands, there is no other way to access the buildable area of the lot. Two separate wetlands span across the property, separating Meaderboro road from the buildable area. An existing traveled way currently cuts across the wetland at the midpoint. The proposed roadway will be constructed over this existing path to minimize disturbance within the 50' wetland buffer.
- B. The proposed construction is essential to the productive use of land not within the CO District.
  - a. The whole parcel is currently underutilized. Constructing the roadway within the 50' wetland buffer will allow the parcel (which is not within the CO district), to be utilized and

#### developed. Residential development will take place outside of the wetland buffers.

- C. Design and construction methods will be such as to minimize impact upon the wetlands and will include restoration of the site consistent with the permitted use.
  - a. Plans are included with the CUP application to show the limits and extent of the roadway construction. It was designed so that there would be a minimal effect on the wetland buffer. In addition, erosion and sediment control measures will be taken during construction to ensure no sediment or debris runs off into the wetlands that are outside of the construction zone. Steeper side slopes with stabilization matting is used to minimize impact. Seven rain gardens are proposed throughout the site to capture, treat and re-infiltrate the runoff.
- D. There is no feasible alternative route on land controlled by the applicant that does not cross the CO District nor has less detrimental impact on the wetlands. Nothing in this Section shall limit the applicant from exploring alternatives with abutting property owners.
  - a. The applicant has no other possible options to access the buildable area in the center of the lot within their land holdings and the proposed roadway location was deemed to be the most effective and efficient way to achieve access. Although it will encroach on a wetland buffer it proposes the least amount of disturbance, as it is the most direct route from Meaderboro Road to the center of the lot.
- E. Economic advantage is not the sole reason for the proposed location of the construction.
  - a. Economic advantage is not the sole reason for the proposed location. The applicant wants to further utilize the land and needs access to do so.

Attached with this narrative are two plans and relating pictures that show the location of the proposed roadway through the wetland buffer and the total area that will be affected. The first wetland crossing will disturb approximately 10,321 SF of land within the buffer. The second wetland crossing will disturb approximately 14,808 SF of



#### **BERRY SURVEYING & ENGINEERING**

land within the buffer. A drainage analysis was done to determine the low points at each wetland crossing so that culverts could be installed at the proper locations in order to maintain the natural flow of water throughout the wetlands. In addition to this, various erosion and sediment control measures will be taken to ensure that no sediment goes into wetlands adjacent to the construction area. Rolled erosion control blankets will be used to stabilize the road side until grass has grown. Silt soxx will be placed on either side of the roadway to ensure that any sediment that comes the proposed roadway is trapped before it can into the adjacent wetlands.

Respectfully Submitted,

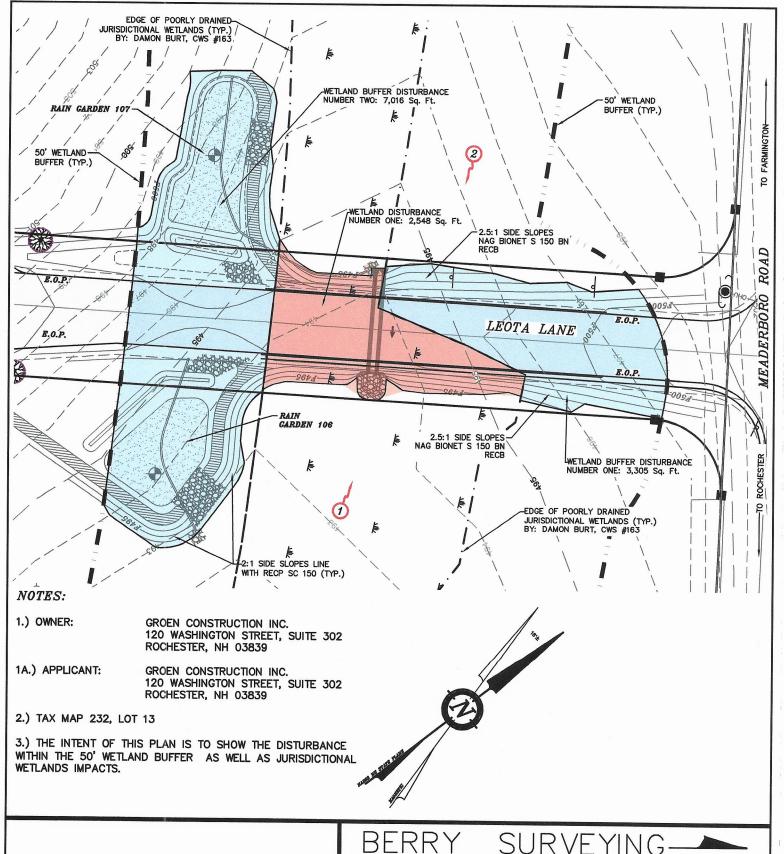
Berry Surveying & Engineering

Christopher R. Berry Principal, President



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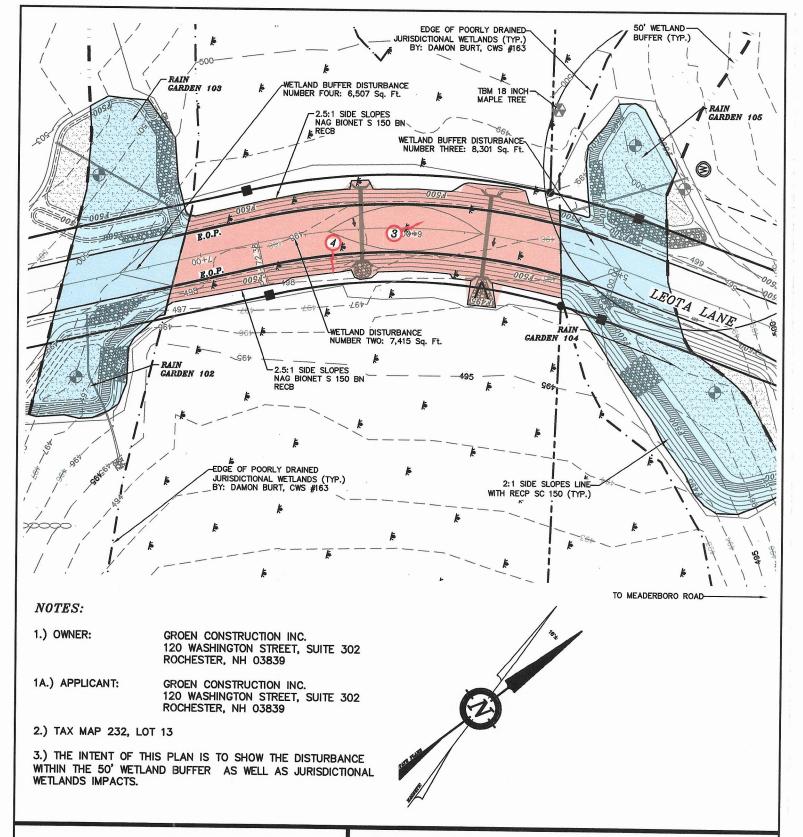
CONDITIONAL USE PERMIT CUT SHEET
WETLAND CROSSING ONE
LAND OF
GOREN CONSTRUCTION, INC.
122 MEADERBORO ROAD
ROCHESTER, NH 03839
TAX MAP 232 LOT 13

SHEET 2 OF 4

SCALE: 1 IN. EQUALS 30 FT.

DATE: OCTOBER 9, 2018

FILE NO.: DB 2018 - 085



CONDITIONAL USE PERMIT CUT SHEET
WETLAND CROSSING TWO
LAND OF
GOREN CONSTRUCTION, INC.
122 MEADERBORO ROAD
ROCHESTER, NH 03839
TAX MAP 232 LOT 13

SHEET 3 OF 4

SCALE: 1 IN. EQUALS 40 FT.

DATE: OCTOBER 9, 2018

FILE NO.: DB 2018 - 085

PHOTO #1



PHOTO #2



PHOTO #3



PHOTO #4



CONDITIONAL USE PERMIT CUT SHEET
PHOTOGRAPHS
LAND OF
GOREN CONSTRUCTION, INC.
122 MEADERBORO ROAD
ROCHESTER, NH 03839
TAX MAP 232 LOT 13

SHEET 4 OF 4

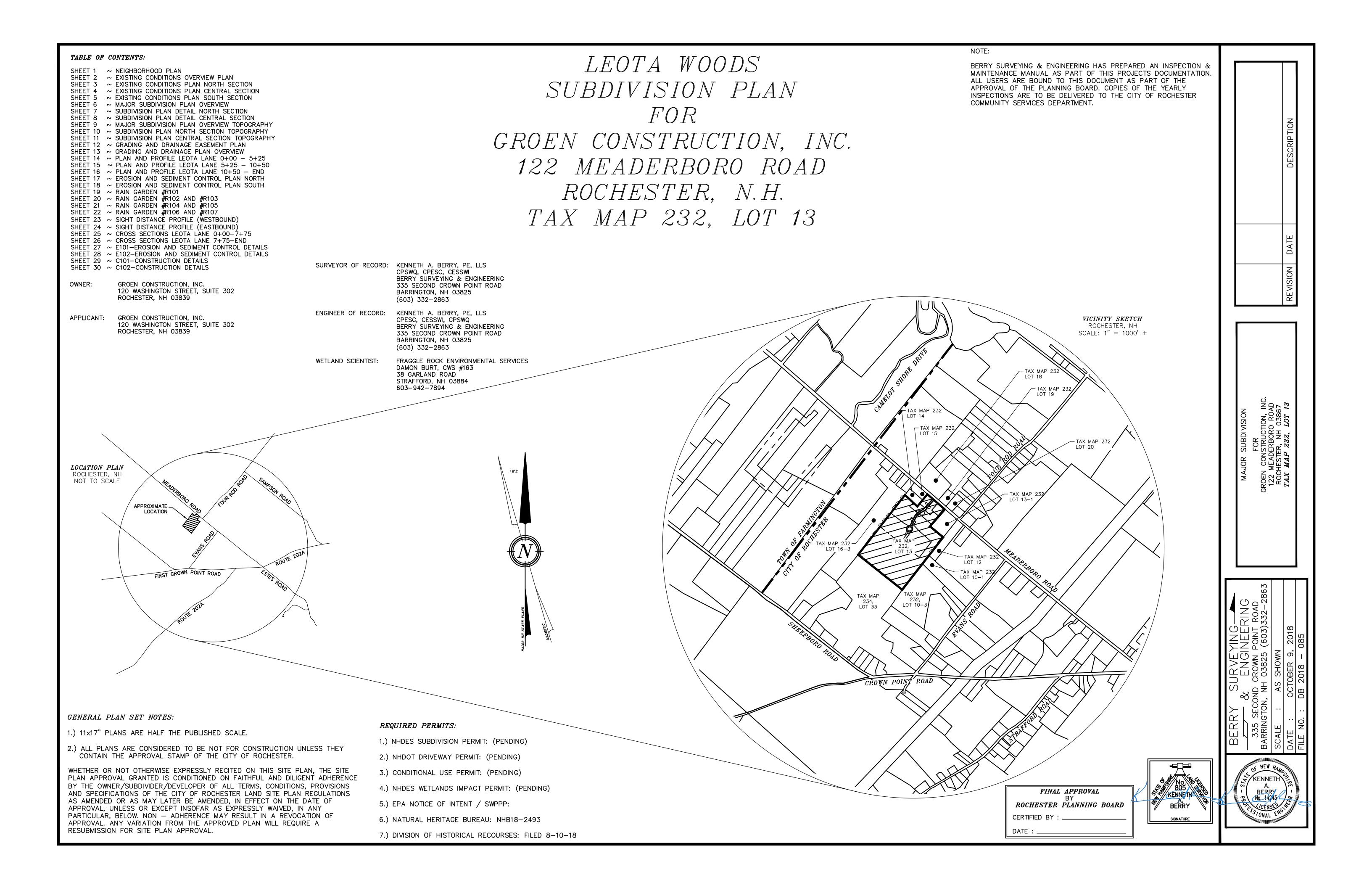
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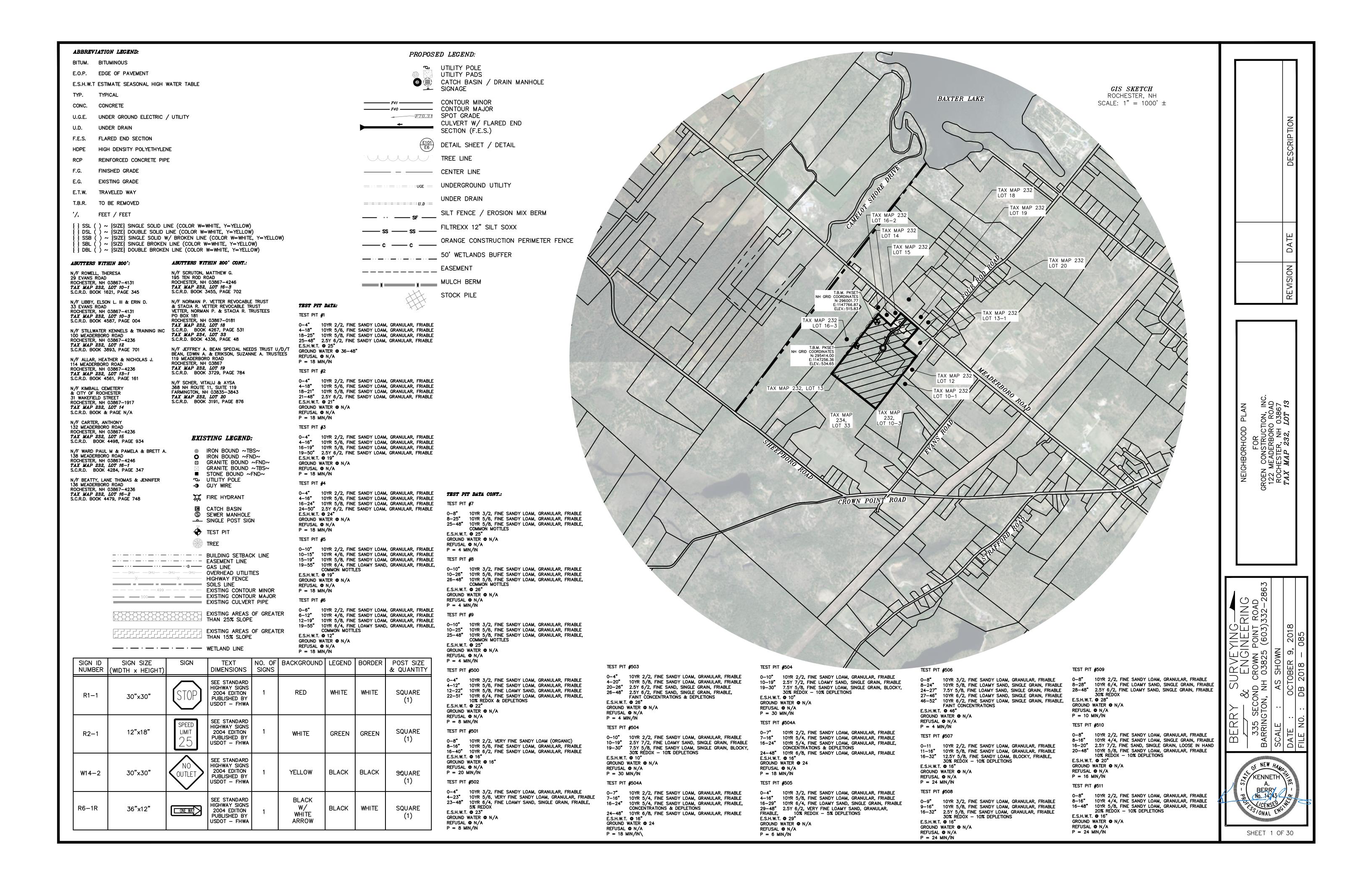
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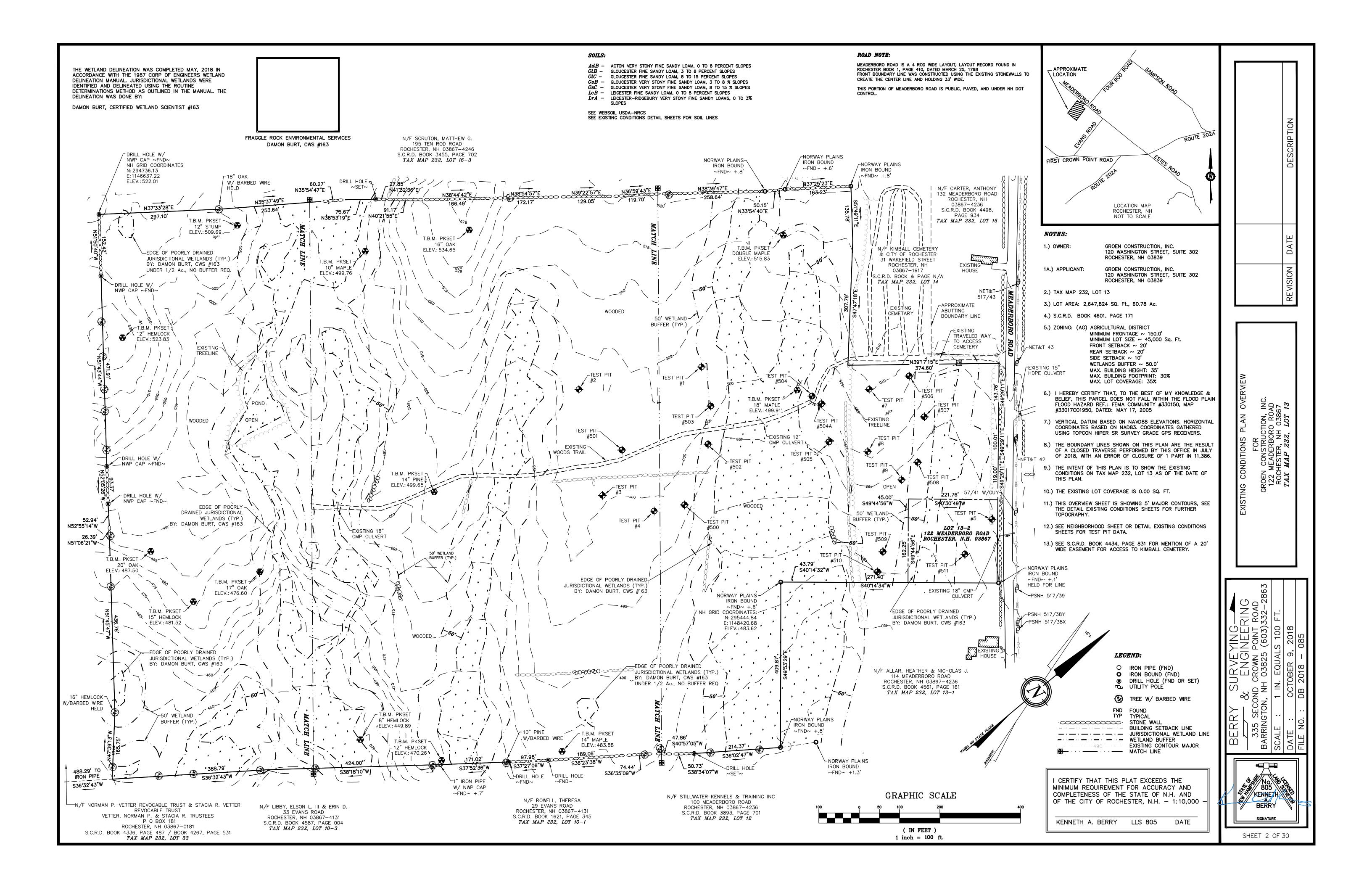
OCTOBER 9, 2018

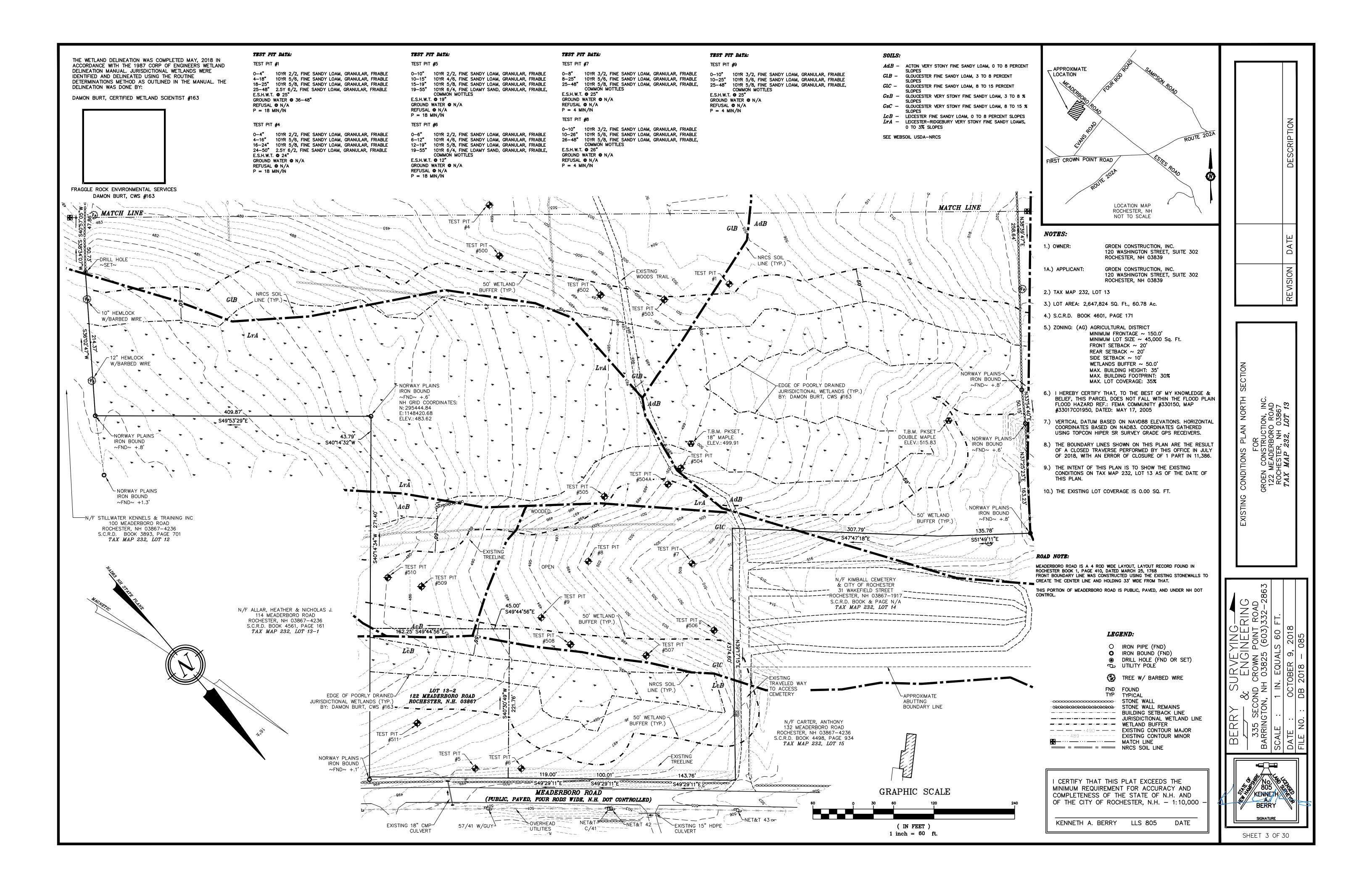
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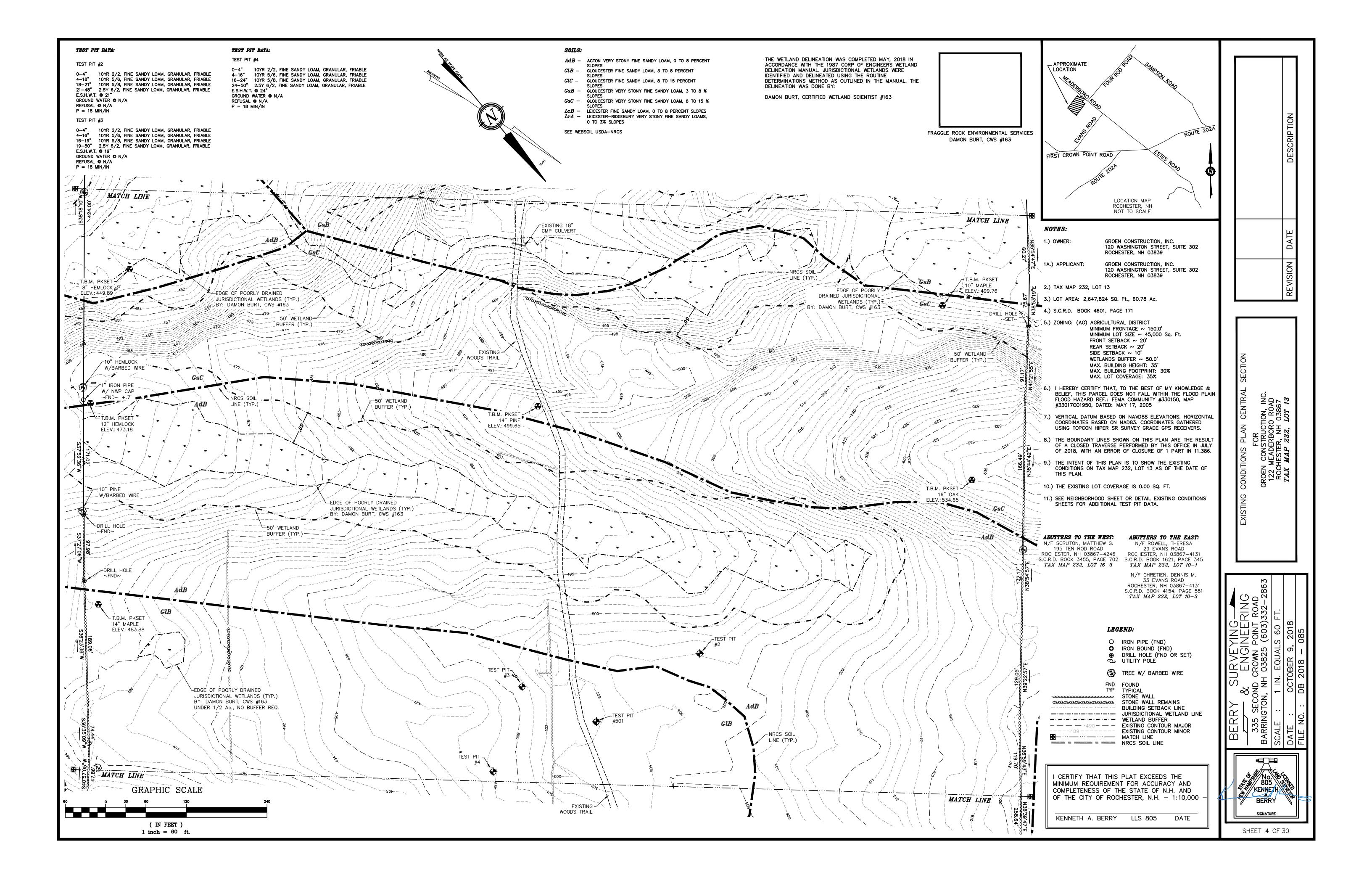
DB 2018 - 085



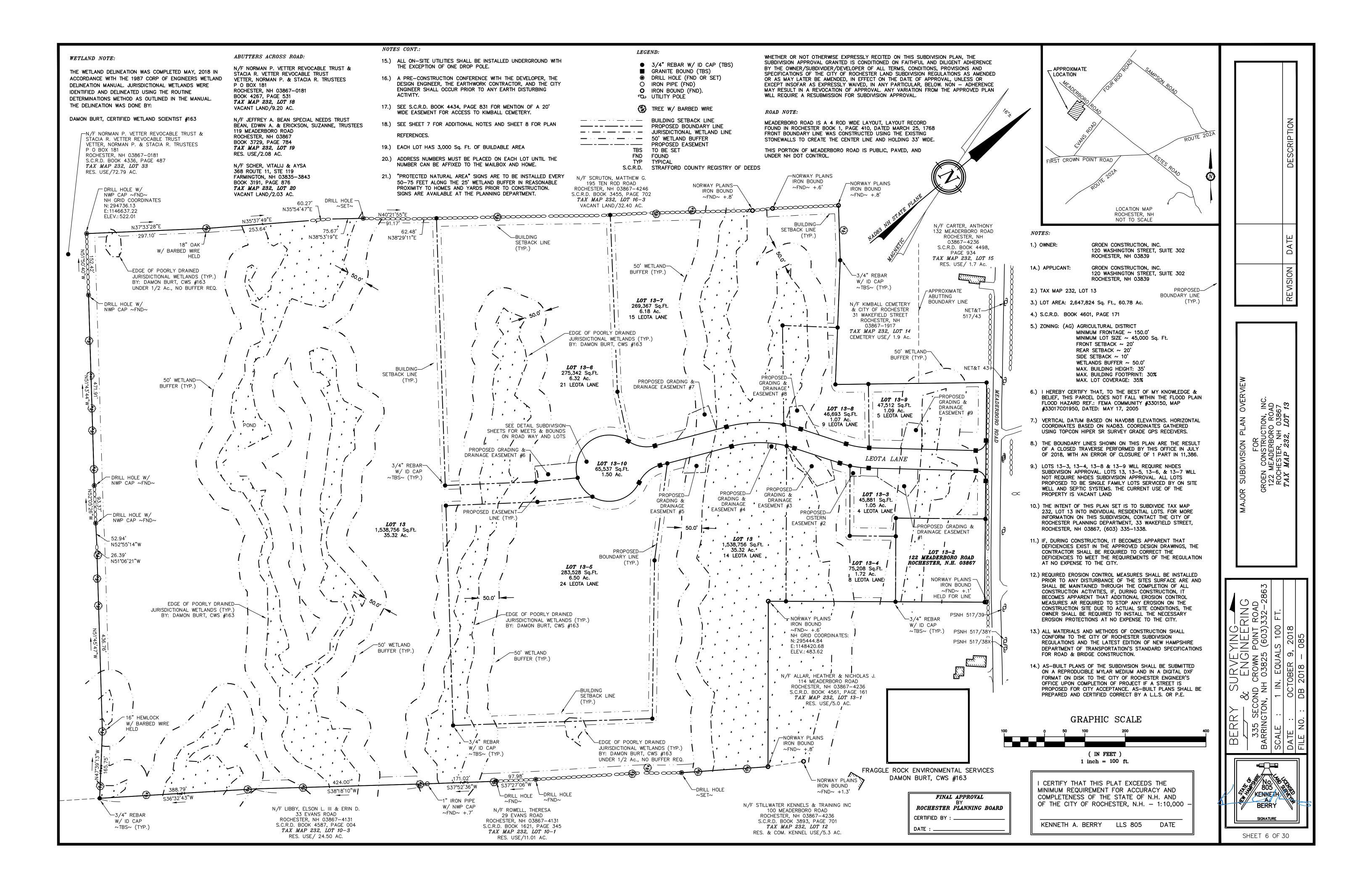


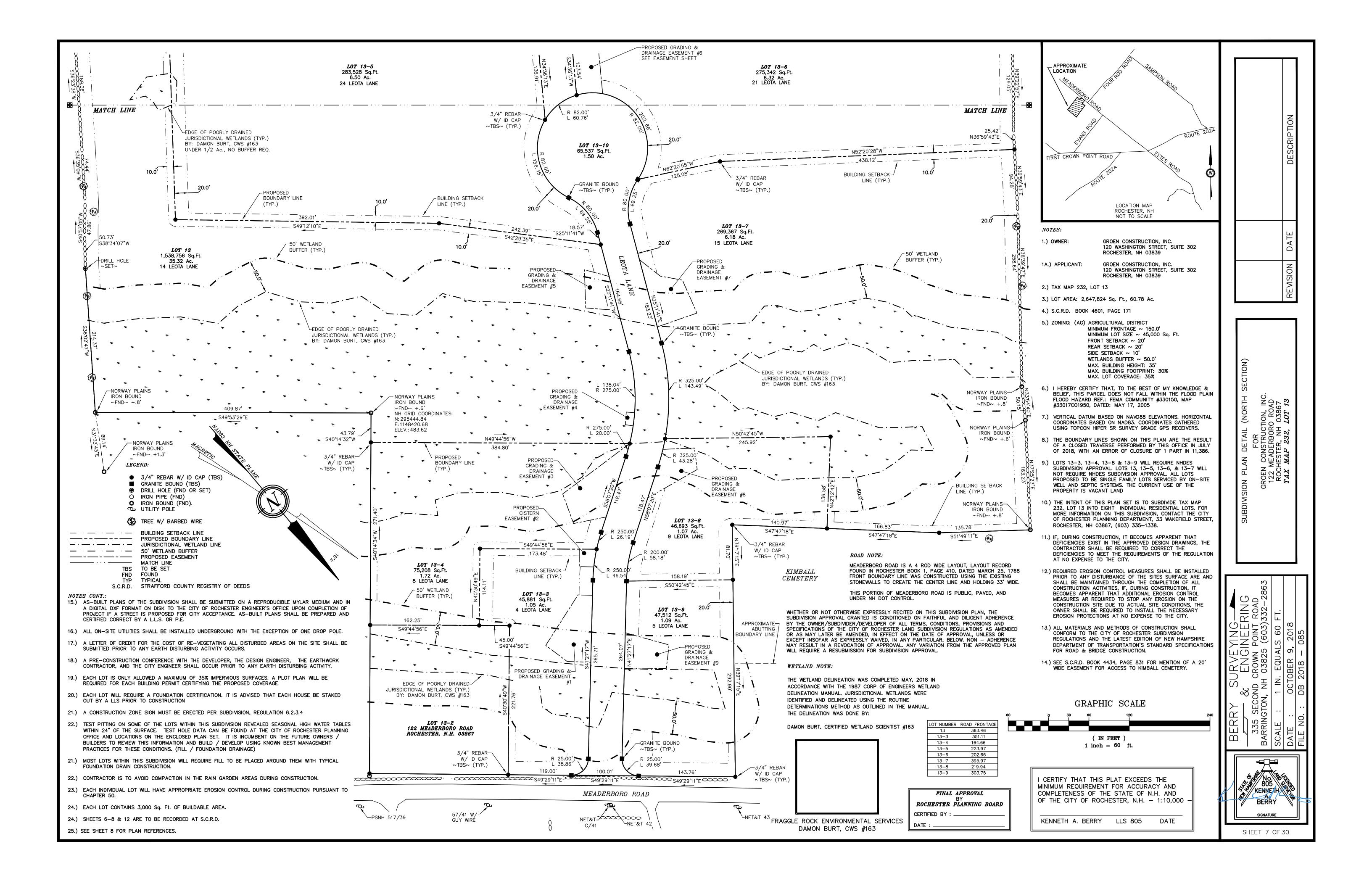


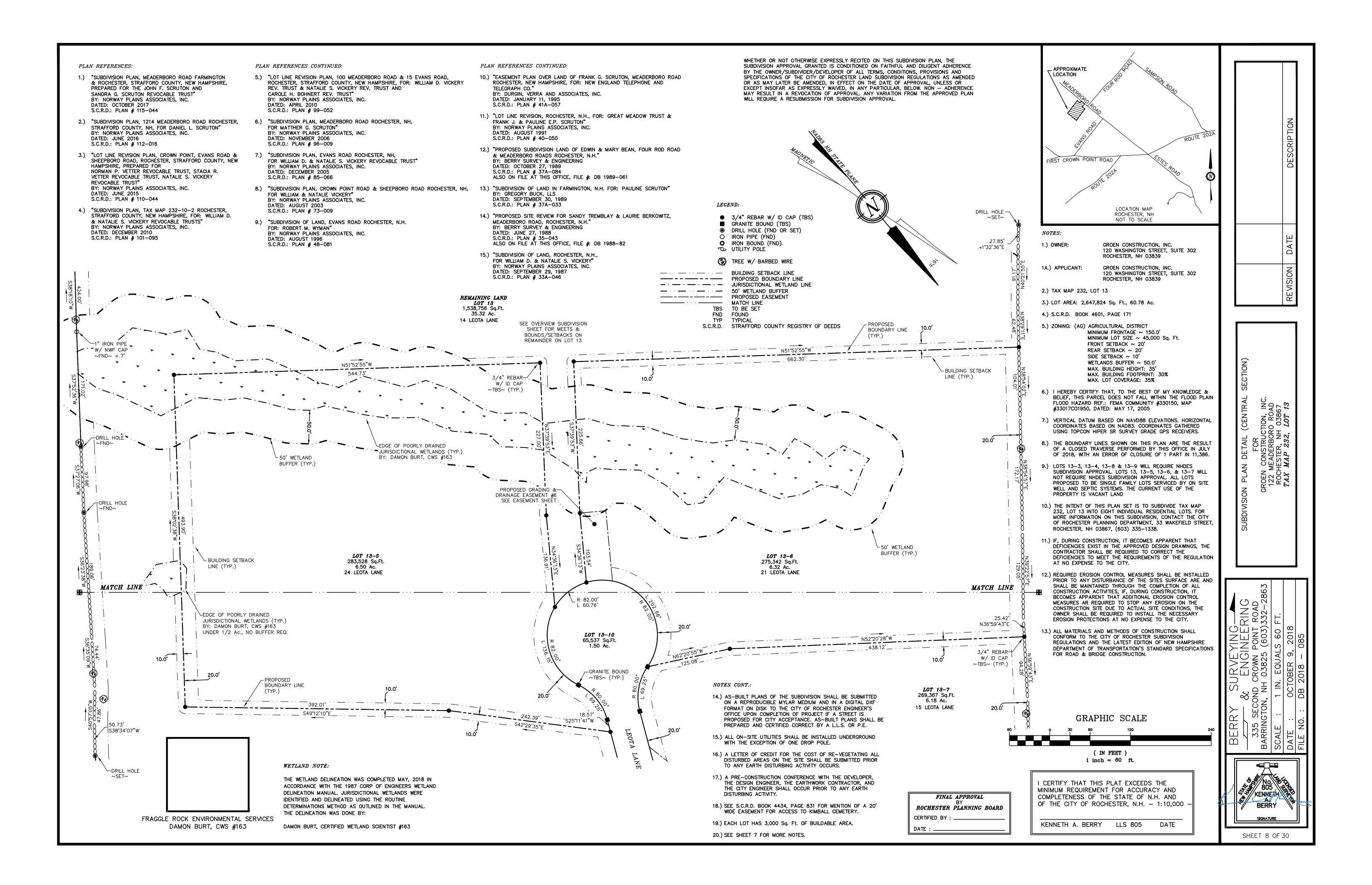


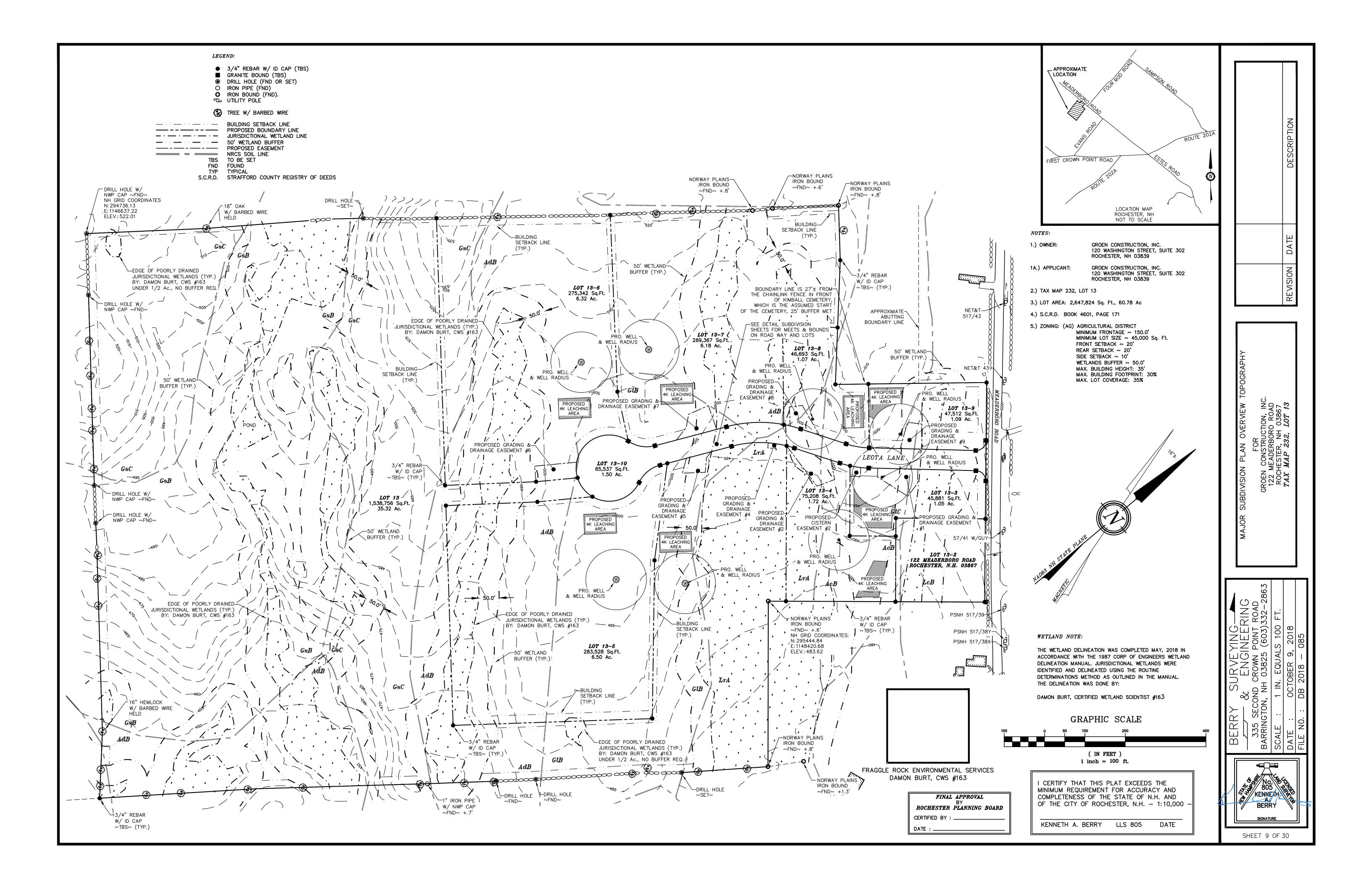


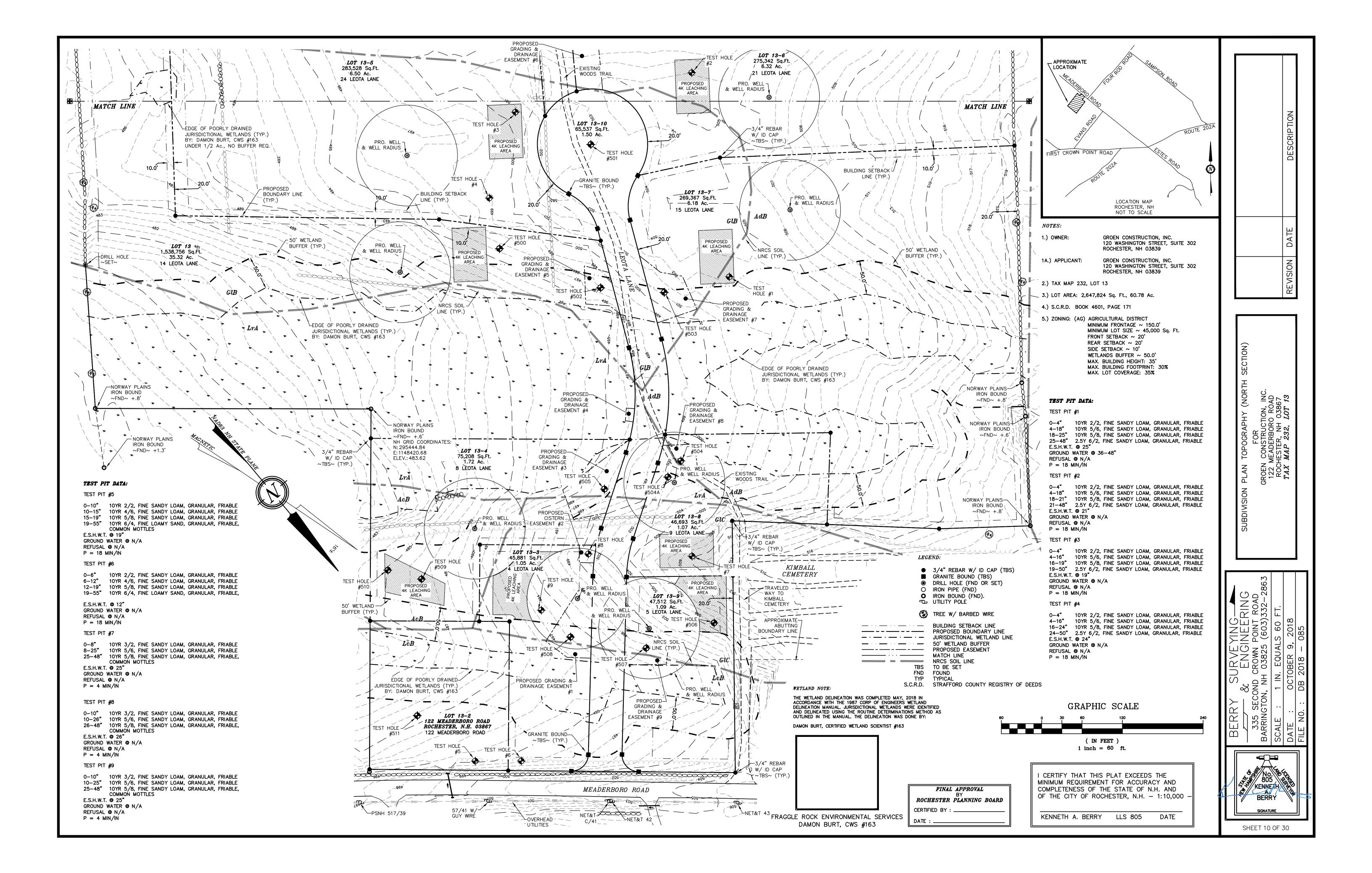
#### PLAN REFERENCES: PLAN REFERENCES CONTINUED: SOILS: THE WETLAND DELINEATION WAS COMPLETED MAY, 2018 IN APPROXIMATE ACCORDANCE WITH THE 1987 CORP OF ENGINEERS WETLAND LOCATION AdB - ACTON VERY STONY FINE SANDY LOAM, 0 TO 8 PERCENT 1.) "SUBDIVISION PLAN, MEADERBORO ROAD FARMINGTON 9.) "SUBDIVISION OF LAND, EVANS ROAD ROCHESTER, N.H. DELINEATION MANUAL. JURISDICTIONAL WETLANDS WERE & ROCHESTER, STRAFFORD COUNTY, NEW HAMPSHIRE FOR: ROBERT M. WYMAN" IDENTIFIED AND DELINEATED USING THE ROUTINE GLB - GLOUCESTER FINE SANDY LOAM, 3 TO 8 PERCENT PREPARED FOR THE JOHN F. SCRUTON AND BY: NORWAY PLAINS ASSOCIATES, INC. DETERMINATIONS METHOD AS OUTLINED IN THE MANUAL. THE SANDRA G. SCRUTON REVOCABLE TRUST" DATED: AUGUST 1996 DELINEATION WAS DONE BY: GLOUCESTER FINE SANDY LOAM, 8 TO 15 PERCENT BY: NORWAY PLAINS ASSOCIATES, INC. S.C.R.D.: PLAN # 48-081 DATED: OCTOBER 2017 GSB - GLOUCESTER VERY STONY FINE SANDY LOAM, 3 TO 8 % DAMON BURT, CERTIFIED WETLAND SCIENTIST #163 S.C. MATCH LINE -044 10.) "EASEMENT PLAN OVER LAND OF FRANK G. SCRUTON, MEADERBORO ROAD ROCHESTER, NEW HAMPSHIRE, FOR: NEW ENGLAND TELEPHONE AND TELEGRAPH CO." GSC - GLOUCESTER VERY STONY FINE SANDY LOAM, 8 TO 15 % 2.) "SUBDIVISION PLAN, 1214 MEADERBORO ROAD ROCHESTER. BY: DURGIN, VERRA AND ASSOCIATES, INC. LcB - LEICESTER FINE SANDY LOAM, 0 TO 8 PERCENT SLOPES STRAFFORD COUNTY, NH, FOR DANIEL L. SCRUTON" DATED: JANUARY 11, 1995 LTA - LEICESTER-RIDGEBURY VERY STONY FINE SANDY LOAMS, BY: NORWAY PLAINS ASSOCIATES, INC. S.C.R.D.: PLAN # 41A-057 FRAGGLE ROCK ENVIRONMENTAL SERVICES DATED: JUNE 2016 0 TO 3% SLOPES DAMON BURT, CWS #163 S.C.R.D.: PLAN # 112-016 11.) "LOT LINE REVISION, ROCHESTER, N.H., FOR: GREAT MEADOW TRUST & SEE WEBSOIL USDA-NRCS FRANK J. & PAULINE E.P. SCRUTON" 3.) "LOT LINE REVISION PLAN, CROWN POINT, EVANS ROAD & SHEEPBORO ROAD, BY: NORWAY PLAINS ASSOCIATES, INC. ROCHESTER, STRAFFORD COUNTY, NEW HAMPSHIRE. PREPARED FOR FIRST CROWN POINT ROAD DATED: AUGUST 1991 NORMAN P. VETTER REVOCABLE TRUST, STACIA R. VETTER REVOCABLE TRUST, S.C.R.D.: PLAN # 40-050 NATALIE S. VICKERY REVOCABLE TRUST" BY: NORWAY PLAINS ASSOCIATES, INC. 12.) "PROPOSED SUBDIVISION LAND OF EDWIN & MARY BEAN, FOUR ROD ROAD & DATED: JUNE 2015 MEADERBORO ROADS ROCHESTER, N.H." S.C.R.D.: PLAN # 110-044 BY: BERRY SURVEY & ENGINEERING DATED: OCTOBER 27, 1989 4.) "SUBDIVISION PLAN, TAX MAP 232-10-2 ROCHESTER, STRAFFORD COUNTY, S.C.R.D.: PLAN # 37A-084 NEW HAMPSHIRE, FOR: WILLIAM D. & NATALIE S. VICKERY REVOCABLE TRUSTS" ALSO ON FILE AT THIS OFFICE, FILE #: DB 1989-061 LOCATION MAP BY: NORWAY PLAINS ASSOCIATES, INC. ROCHESTER, NH DATED: DECEMBER 2010 13.) "SUBDIVISION OF LAND IN FARMINGTON, N.H. FOR: PAULINE SCRUTON" NOT TO SCALE S.C.R.D.: PLAN # 101-095 BY: GREGORY BUCK, LLS DATED: SEPTEMBER 30, 1989 5.) "LOT LINE REVISION PLAN, 100 MEADERBORO ROAD & 15 EVANS ROAD, ROCHESTER, STRAFFORD COUNTY, NEW HAMPSHIRE, FOR: WILLIAM D. VICKERY S.C.R.D.: PLAN # 37A-033 NOTES: REV. TRUST & NATALIE S. VICKERY REV. TRUST AND 14.) "PROPOSED SITE REVIEW FOR SANDY TREMBLAY & LAURIE BERKOWITZ, 1.) OWNER: GROEN CONSTRUCTION, INC. CAROLE H. BOHNERT REV. TRUST' MEADERBORO ROAD, ROCHESTER, N.H." 120 WASHINGTON STREET, SUITE 302 BY: NORWAY PLAINS ASSOCIATES, INC. BY: BERRY SURVEY & ENGINEERING DATED: JUNE 27, 1988 S.C.R.D.: PLAN # 35-043 ALSO ON FILE AT THIS OFFICE, FILE #: DB 1988-82 ROCHESTER, NH 03839 DATED: APRIL 2010 S.C.R.D.: PLAN # 99-052 1A.) APPLICANT: GROEN CONSTRUCTION, INC. 120 WASHINGTON STREET, SUITE 302 6.) "SUBDIVISION PLAN, MEADERBORO ROAD ROCHESTER, NH, ROCHESTER, NH 03839 FOR MATTHER G. SCRUTON" 15.) "SUBDIVISION OF LAND, ROCHESTER, N.H., BY: NORWAY PLAINS ASSOCIATES, INC. FOR WILLIAM D. & NATALIE S. VICKERY" DATED: NOVEMBER 2006 2.) TAX MAP 232, LOT 13 BY: NORWAY PLAINS ASSOCIATES, INC. DATED: SEPTEMBER 29, 1987 S.C.R.D.: PLAN # 96-009 S.C.R.D.: PLAN # 33A-046 3.) LOT AREA: 2,647,824 SQ. Ft., 60.78 Ac. 7.) "SUBDIVISION PLAN, EVANS ROAD ROCHESTER, NH, FOR WILLIAM D. & NATALIE S. VICKERY REVOCABLE TRUST" 4.) S.C.R.D. BOOK 4601, PAGE 171 BY: NORWAY PLAINS ASSOCIATES, INC. DATED: DECEMBER 2005 5.) ZONING: (AG) AGRICULTURAL DISTRICT S.C.R.D.: PLAN # 85-066 MINIMUM FRONTAGE ~ 150.0' MINIMUM LOT SIZE ~ 45,000 Sq. Ft. 8.) "SUBDIVISION PLAN, CROWN POINT ROAD & SHEEPBORO ROAD ROCHESTER, NH, FRONT SETBACK ~ 20' FOR WILLIAM & NATALIE VICKERY" REAR SETBACK ~ 20' BY: NORWAY PLAINS ASSOCIATES, INC. SIDE SETBACK ~ 10' DATED: AUGUST 2003 WETLANDS BUFFER ~ 50.0' S.C.R.D.: PLAN # 73-009 MAX. BUILDING HEIGHT: 35' MAX. BUILDING FOOTPRINT: 30% MAX. LOT COVERAGE: 35% DRILL HOLE W/-NWP CAP ~FND~ NH GRID COORDINATES 6.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE & 24" HEMLOCK-14" HEMLOCK-W/BARBED WIRE N: 294736.13 BELIEF, THIS PARCEL DOES NOT FALL WITHIN THE FLOOD PLAIN W/BARBED WIRE 14" BEECH-24" MAPLE--18" HEMLOCK W/BARBED WIRE E: 1146637.22 FLOOD HAZARD REF.: FEMA COMMUNITY #330150, MAP W/BARBED WIRE W/BARBED WIRE \_ W/BARBED WIRE W/BARBED WIRE 1 ELEV.: 522.01 #33017CO1950, DATED: MAY 17, 2005 N47°39'13"w N51°45'47"W `N52\*05'26"W - N51°43'4<sup>4</sup>″W`-N52°55'14"W 7.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL `N51°50'40"W COORDINATES BASED ON NAD83. COORDINATES GATHERED 52.94 93.37 471.91 152.42' 🔍 USING TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS. -DRILL HOLE W/ $^{\downarrow}$ DRILL HOLE W/ FOR CONSTRUMEADERBC HESTER, N ~DRILL HOLE W/ 26.39 8.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT NWP CAP ~FND~ NWP CAP ~FND~ NWP CAP ~FND~ GsB N51°06'21"W\_ T.B.M. PKSET-OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN JULY OF 2018, WITH AN ERROR OF CLOSURE OF 1 PART IN 11,386. 12" HEMLOCK ELEV.: 523.83 9.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING -EDGE OF POORLY DRAINED ⊱12" HEMLOCK CONDITIONS ON TAX MAP 232, LOT 13 AS OF THE DATE OF /JURISDICTIONAL WETLANDS (TYP.)/\_ GsB W/BARBED WIRE THIS PLAN. BY: DAMON BURT, CWS #163 T.B.M. PKSET 10.) THE EXISTING LOT COVERAGE IS 0.00 SQ. FT. BUFFER (TYP.) 11.) SEE NEIGHBORHOOD SHEET OR DETAIL EXISTING CONDITIONS JURISDICTIONAL WETLANDS (TYP.) BY: DAMON BURT, CWS #163 SHEETS FOR ADDITIONAL TEST PIT DATA. UNDER 1/2 Ac., NO BUFFER REQ. 18" HEMLOCK → W/BARBED WIRE 15" HEMLOCK ELEV.: 481.52 EDGE OF POORLY DRAINED W/ BARBED WIRE JURISDICTIONAL WETLANDS (TYP. BY: DAMON BURT, CWS #163 LEGEND: O IRON PIPE (FND) O IRON BOUND (FND) DRILL HOLE (FND OR SET) ELEV.: 509.69 UTILITY POLE TREE W/ BARBED WIRE T.B.M. PKSET 17" OAK FND FOUND TYP TYPICAL ELEV.: 476.60 STONE WALL OROROROROROROROROR STONE WALL REMAINS ----- BUILDING SETBACK LINE ----- JURISDICTIONAL WETLAND LINE ---- WETLAND BUFFER EXISTING CONTOUR MAJOR EXISTING CONTOUR MINOR —···-— MATCH LINE MATCH LINE NRCS SOIL LINE MATCH LINE CERTIFY THAT THIS PLAT EXCEEDS THE MINIMUM REQUIREMENT FOR ACCURACY AND COMPLETENESS OF THE STATE OF N.H. AND OF THE CITY OF ROCHESTER, N.H. - 1:10,000 KENNETH A. BERRY LLS 805 DATE ( IN FEET ) 1 inch = 60 ft.SHEET 5 OF 30

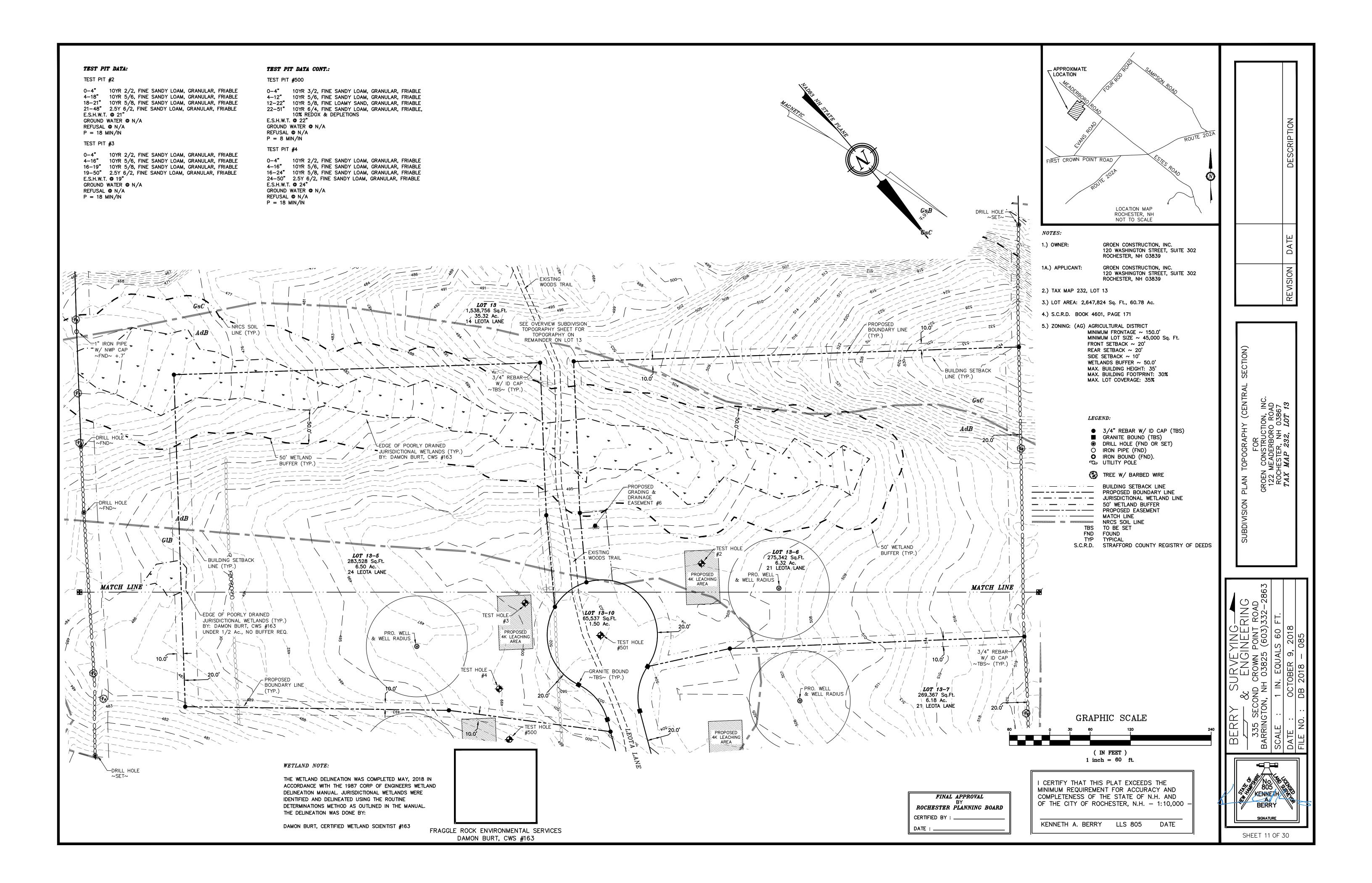


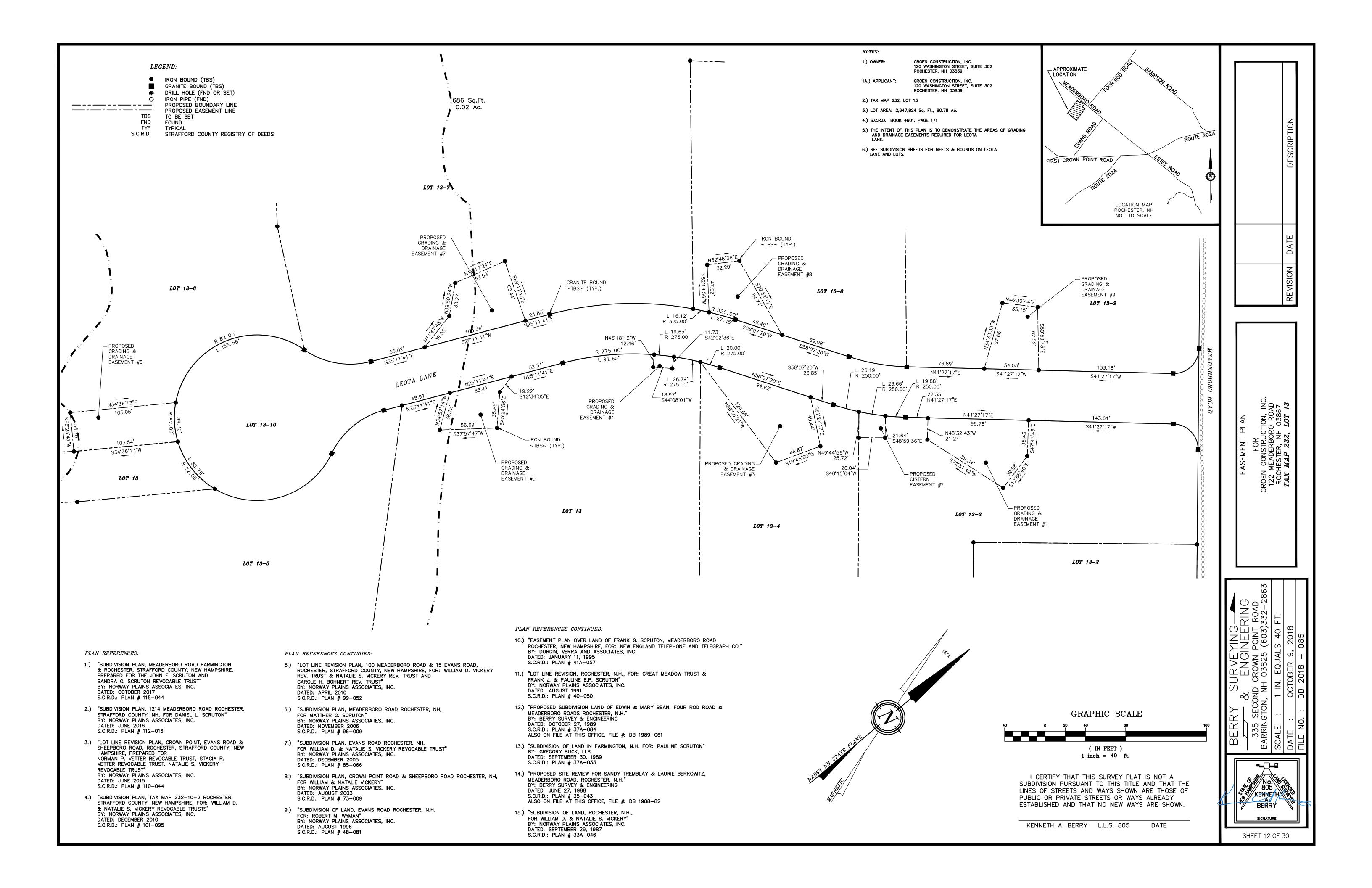


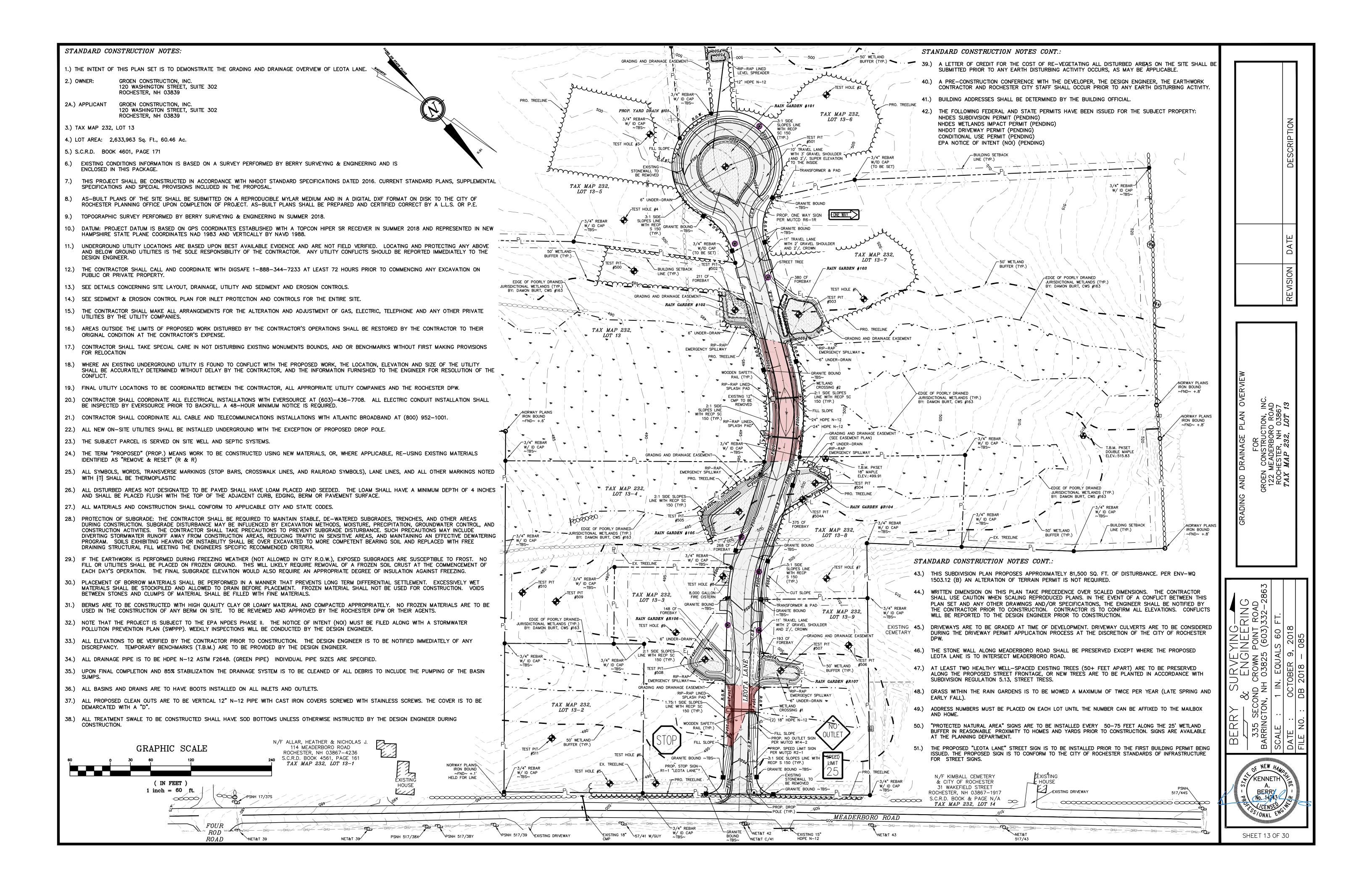


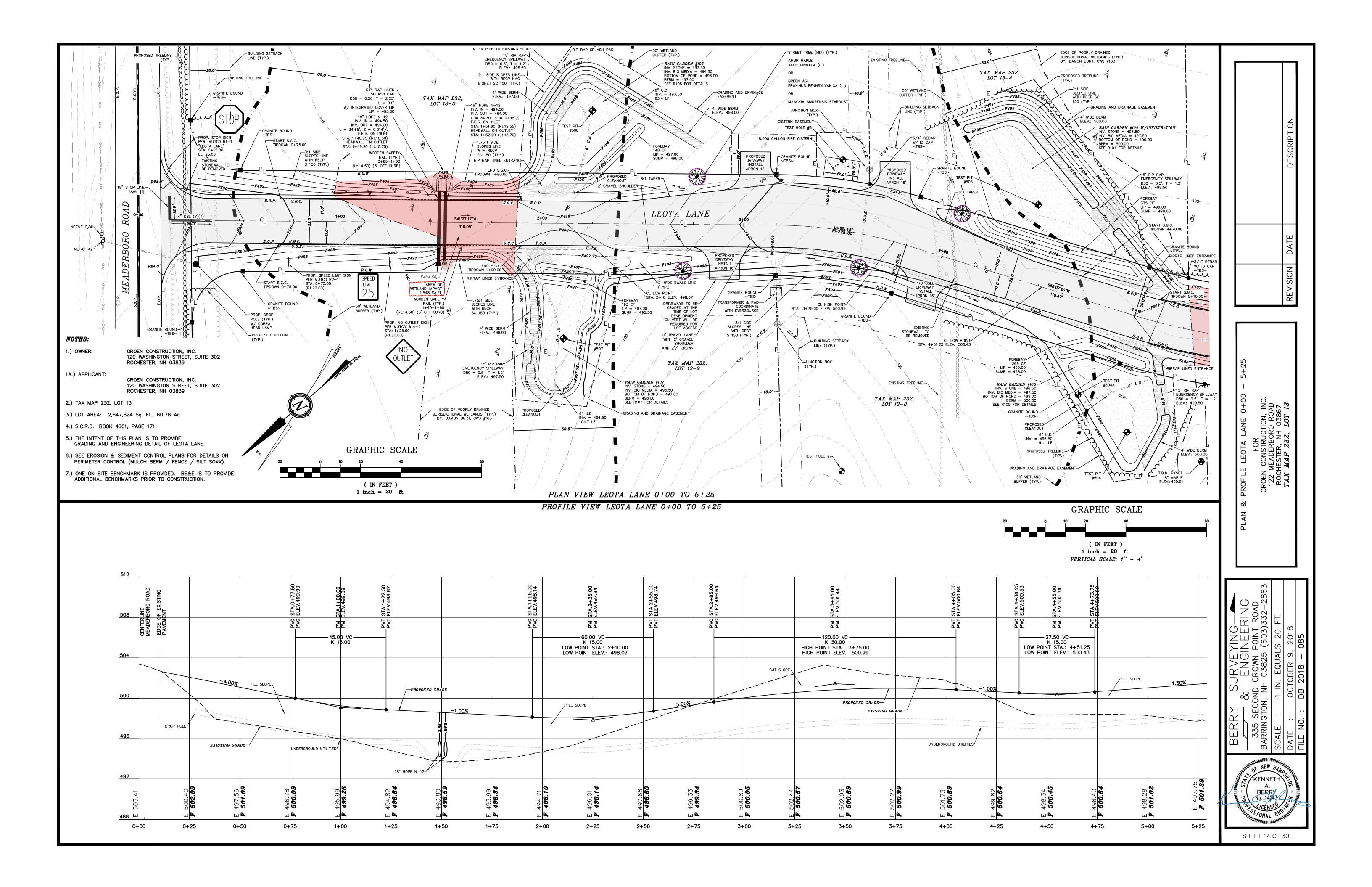


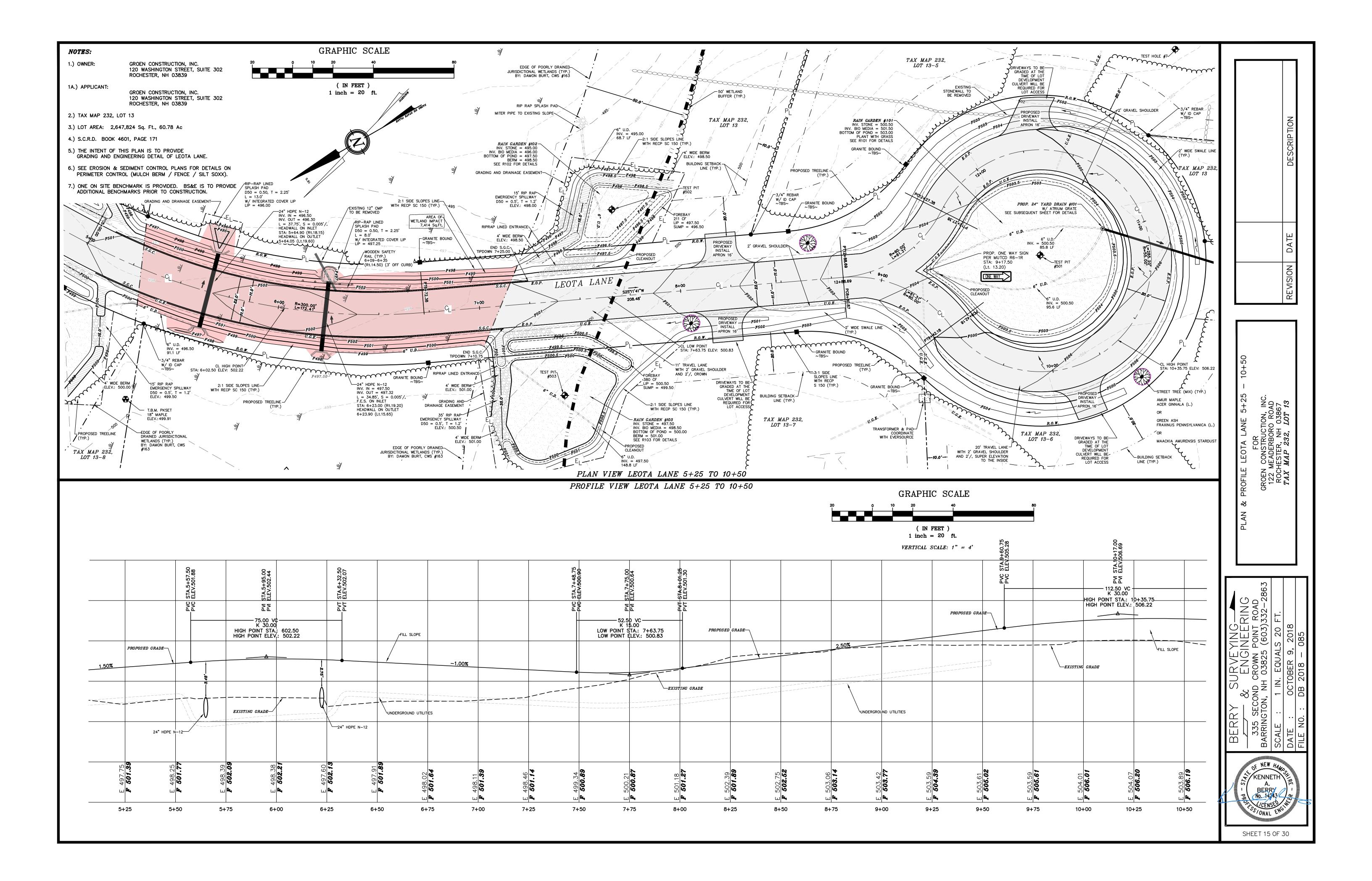


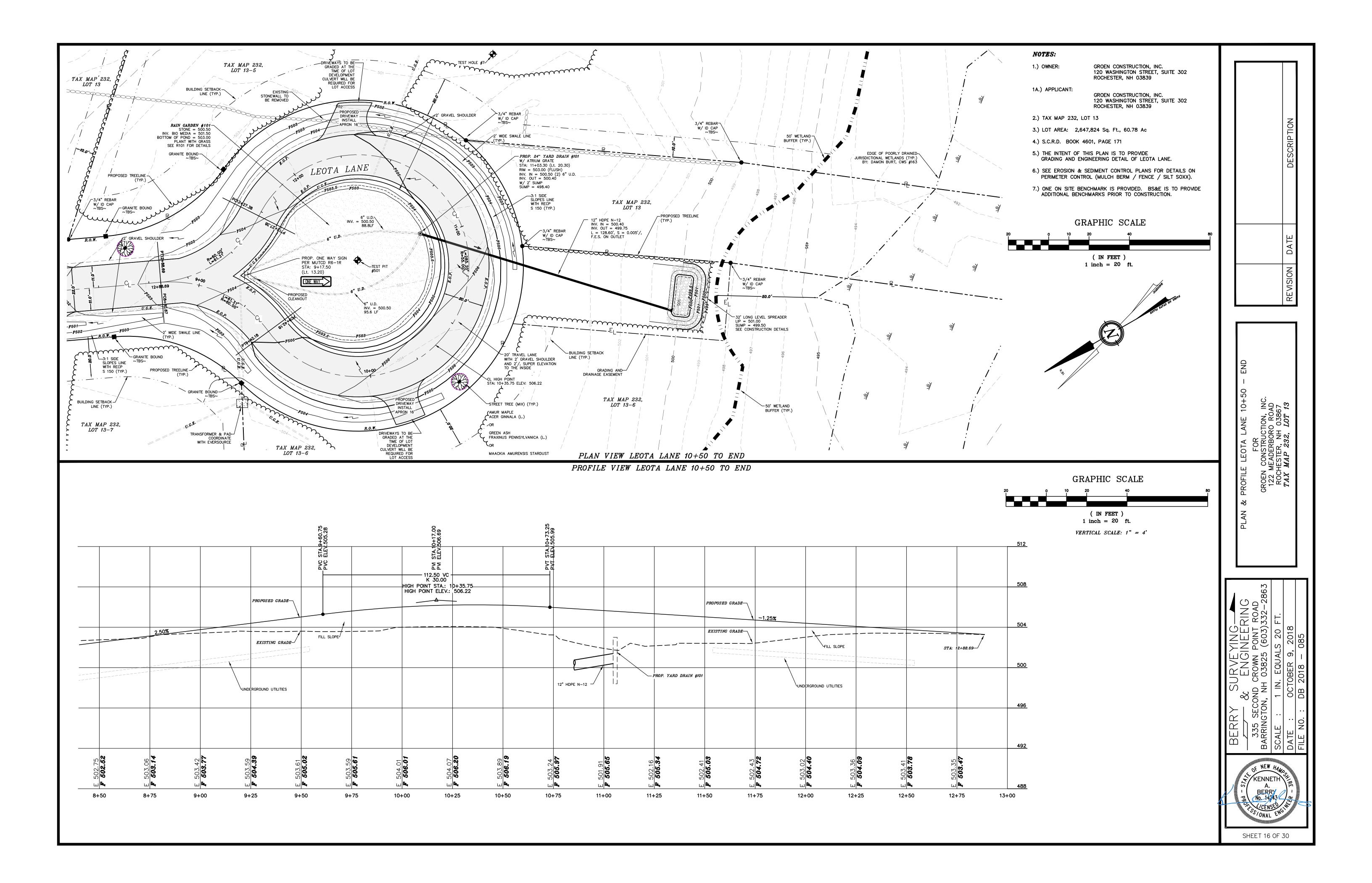


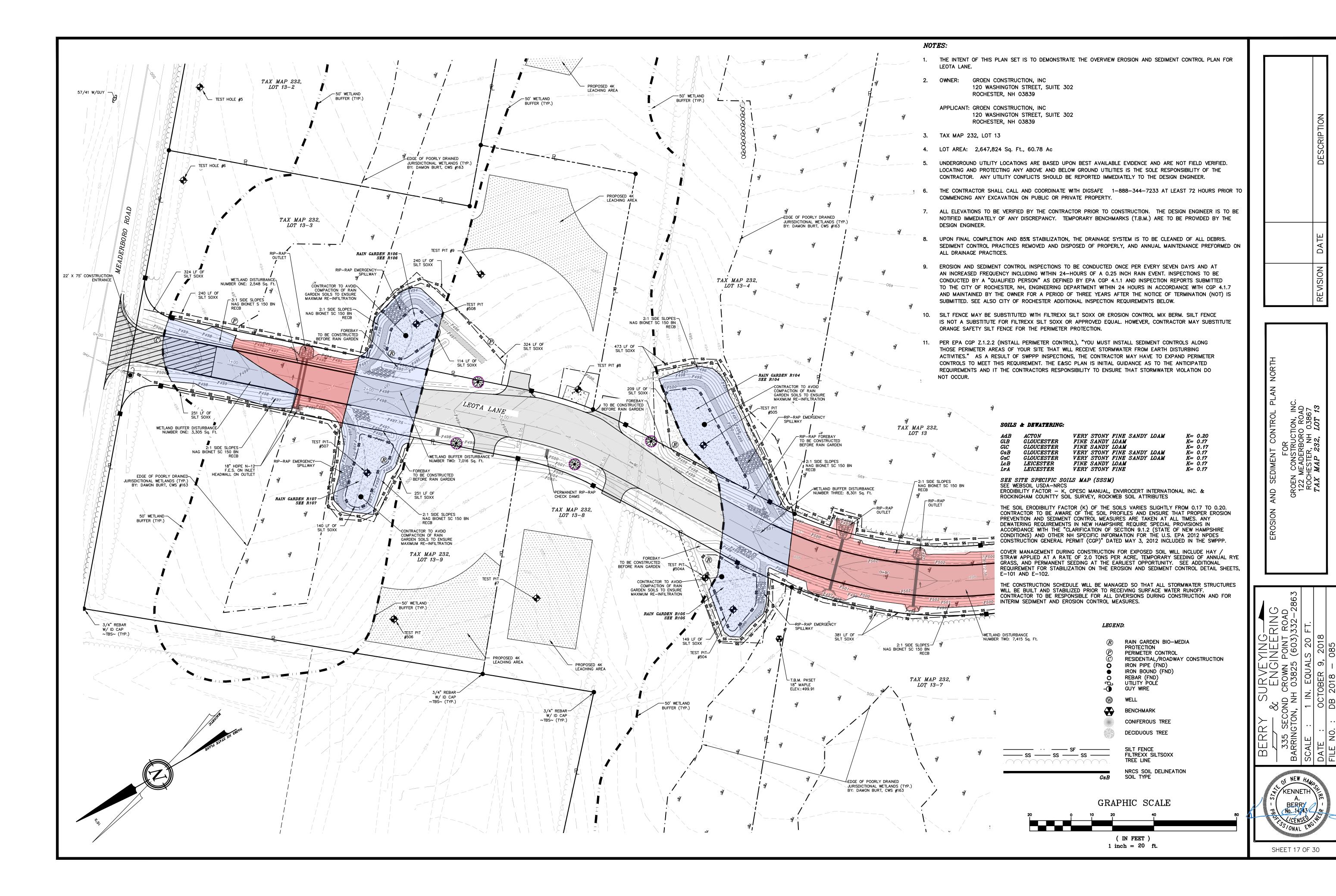


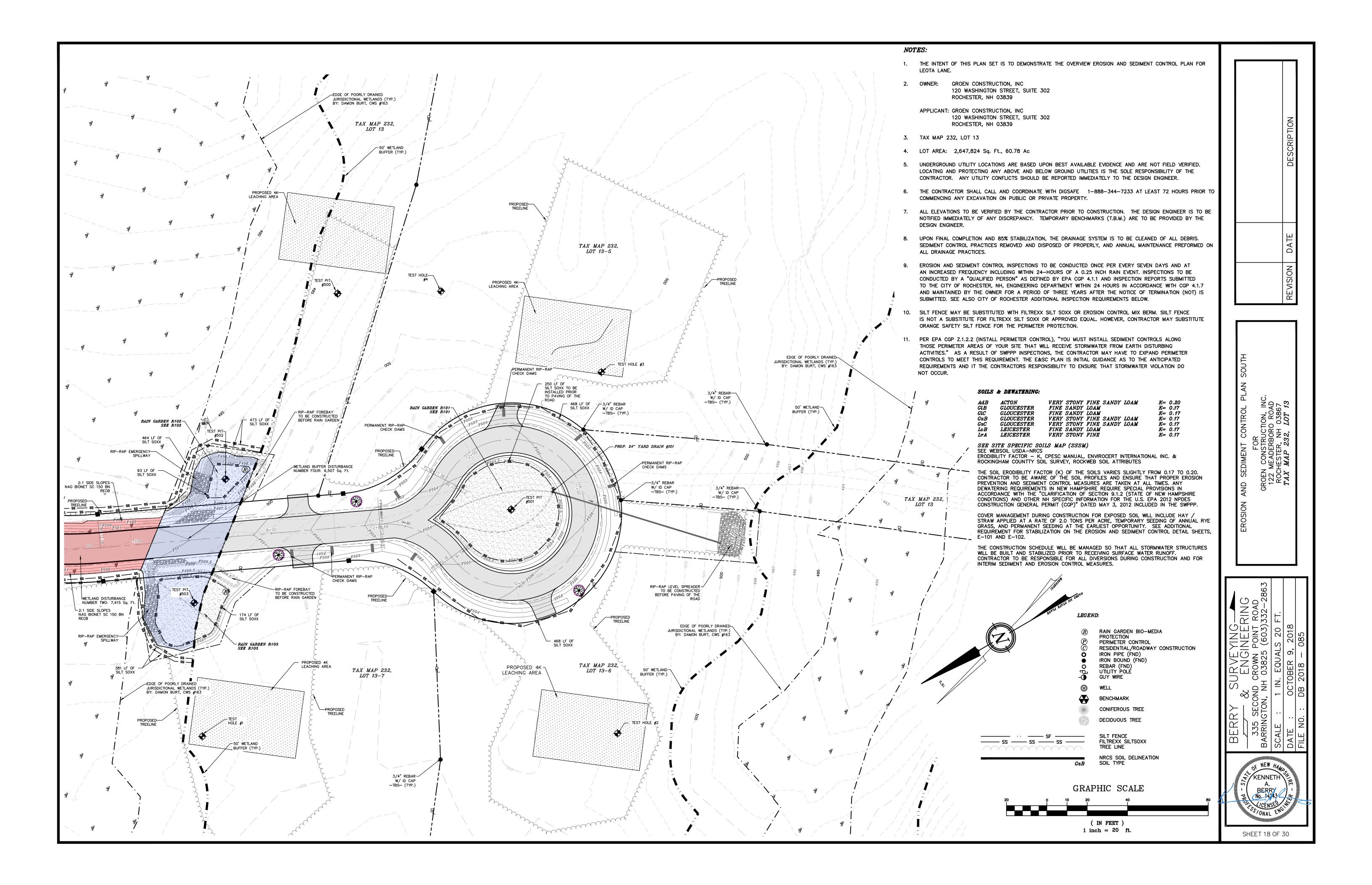


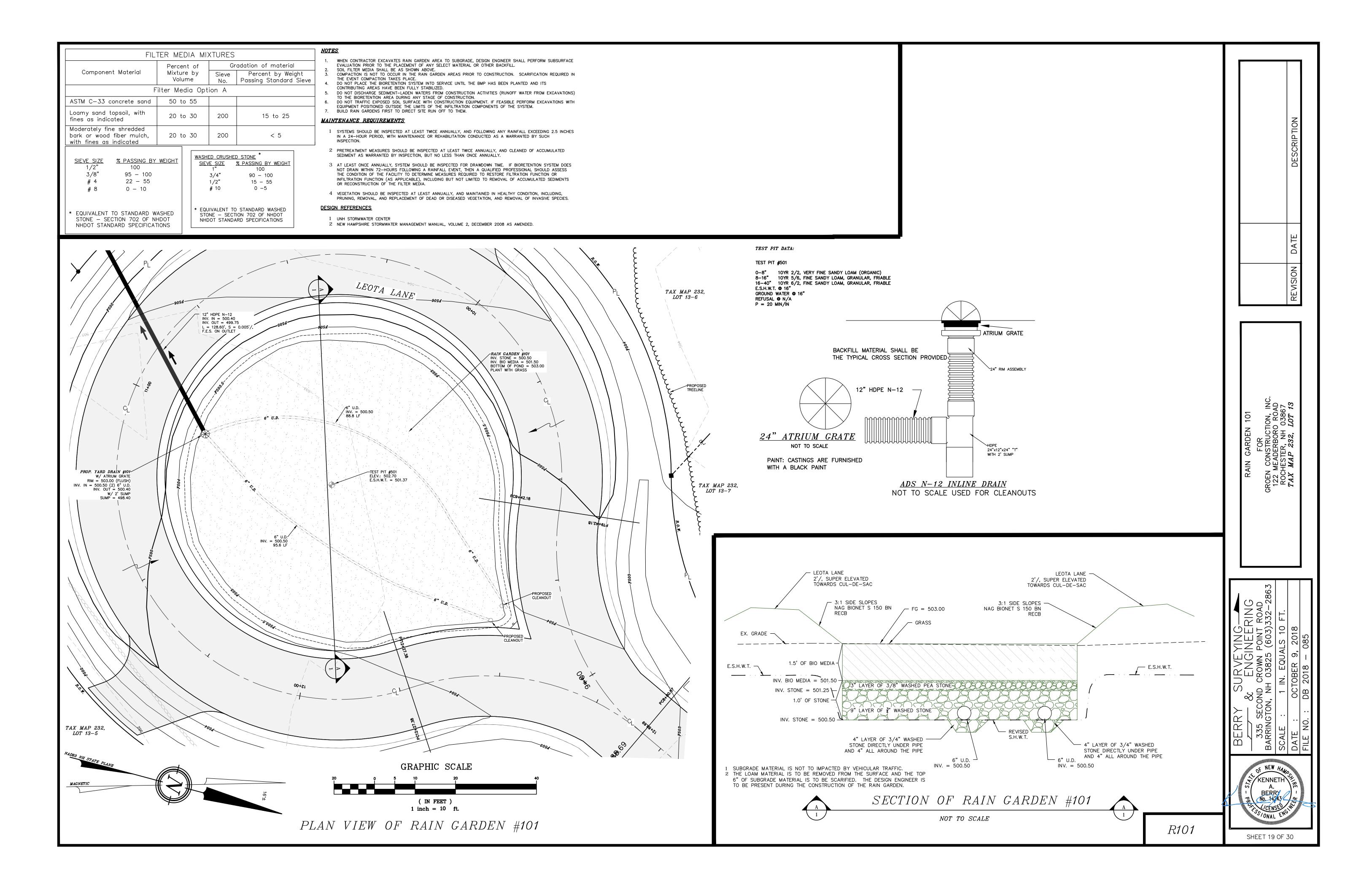


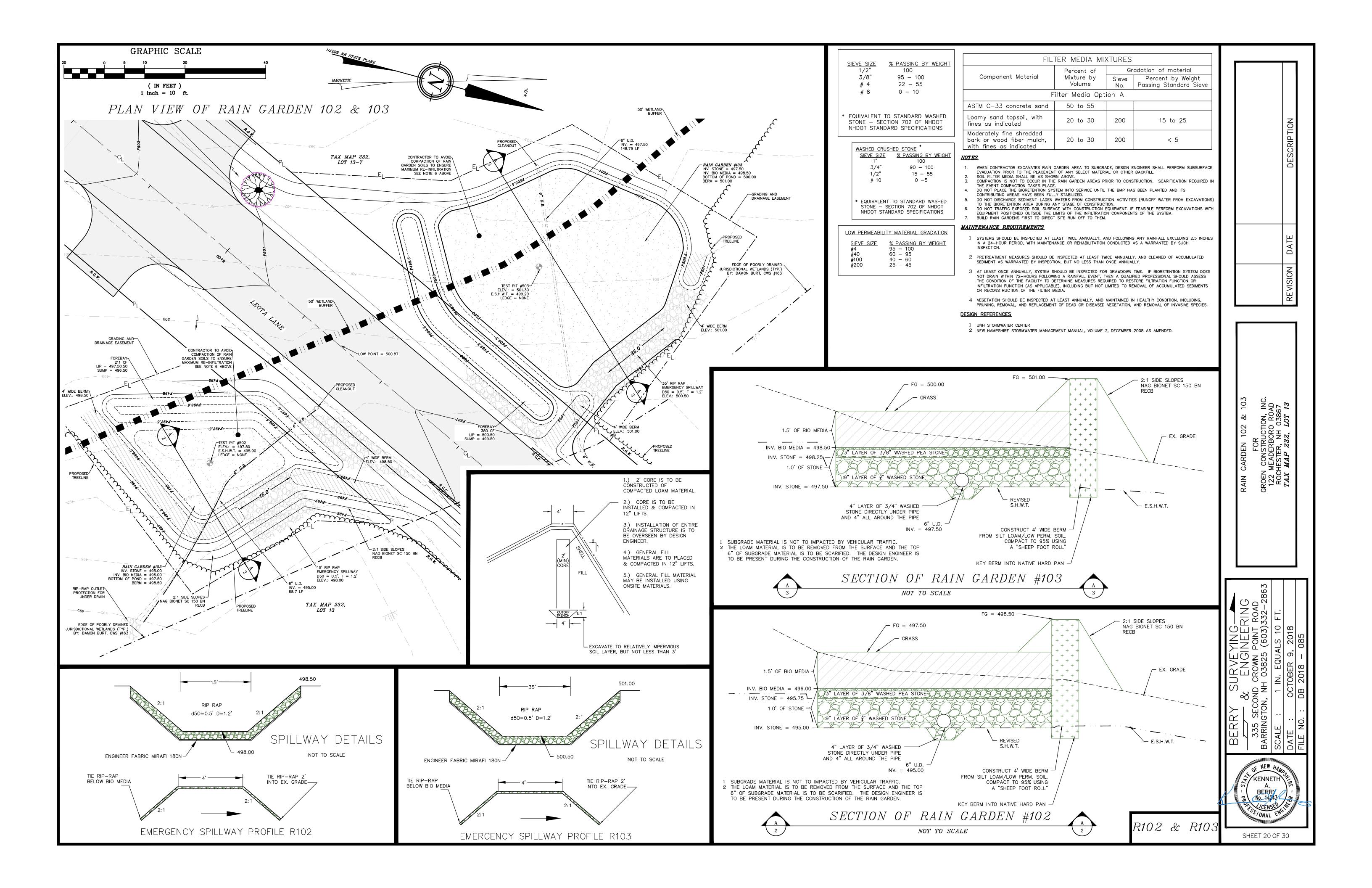


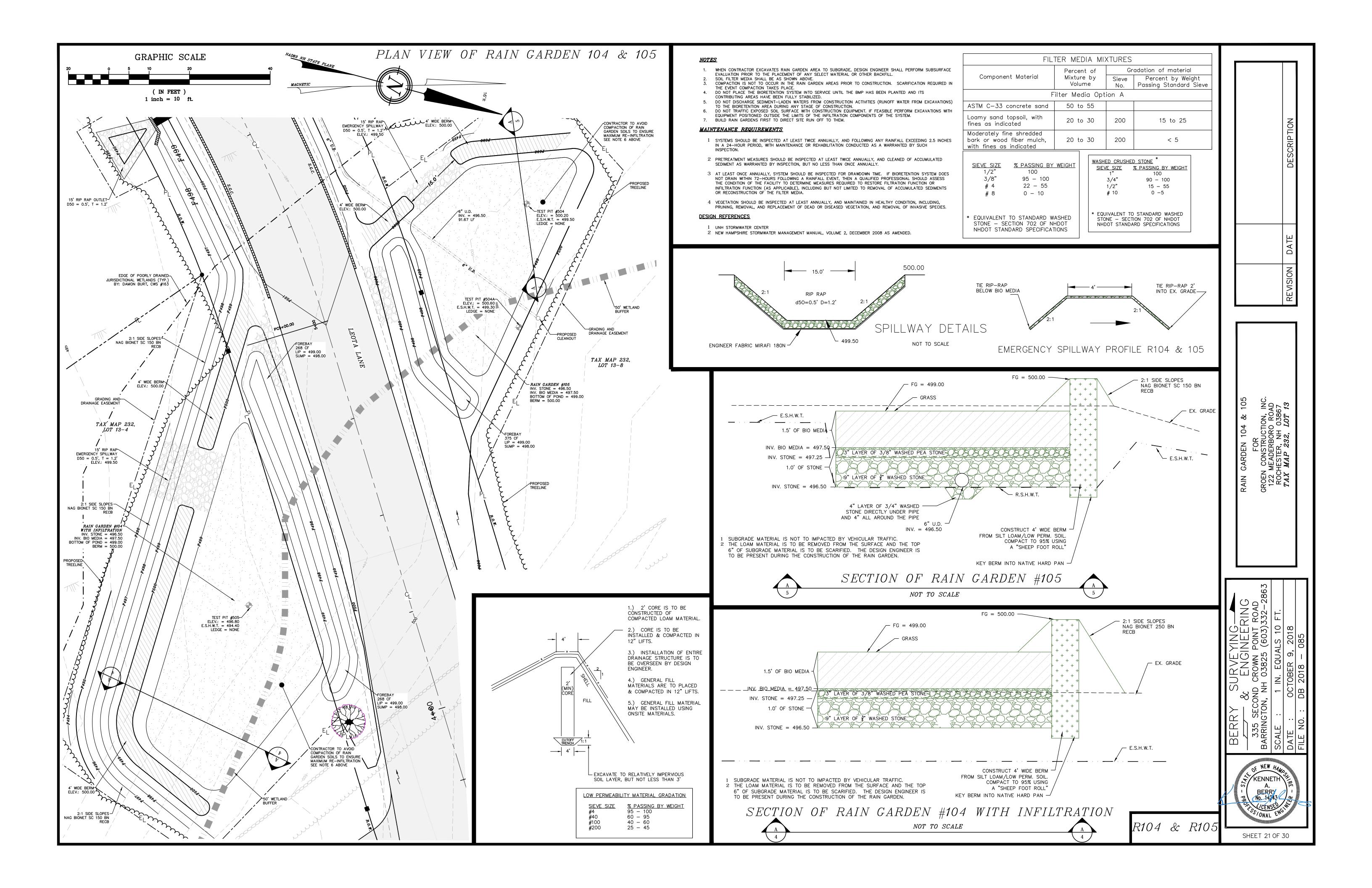


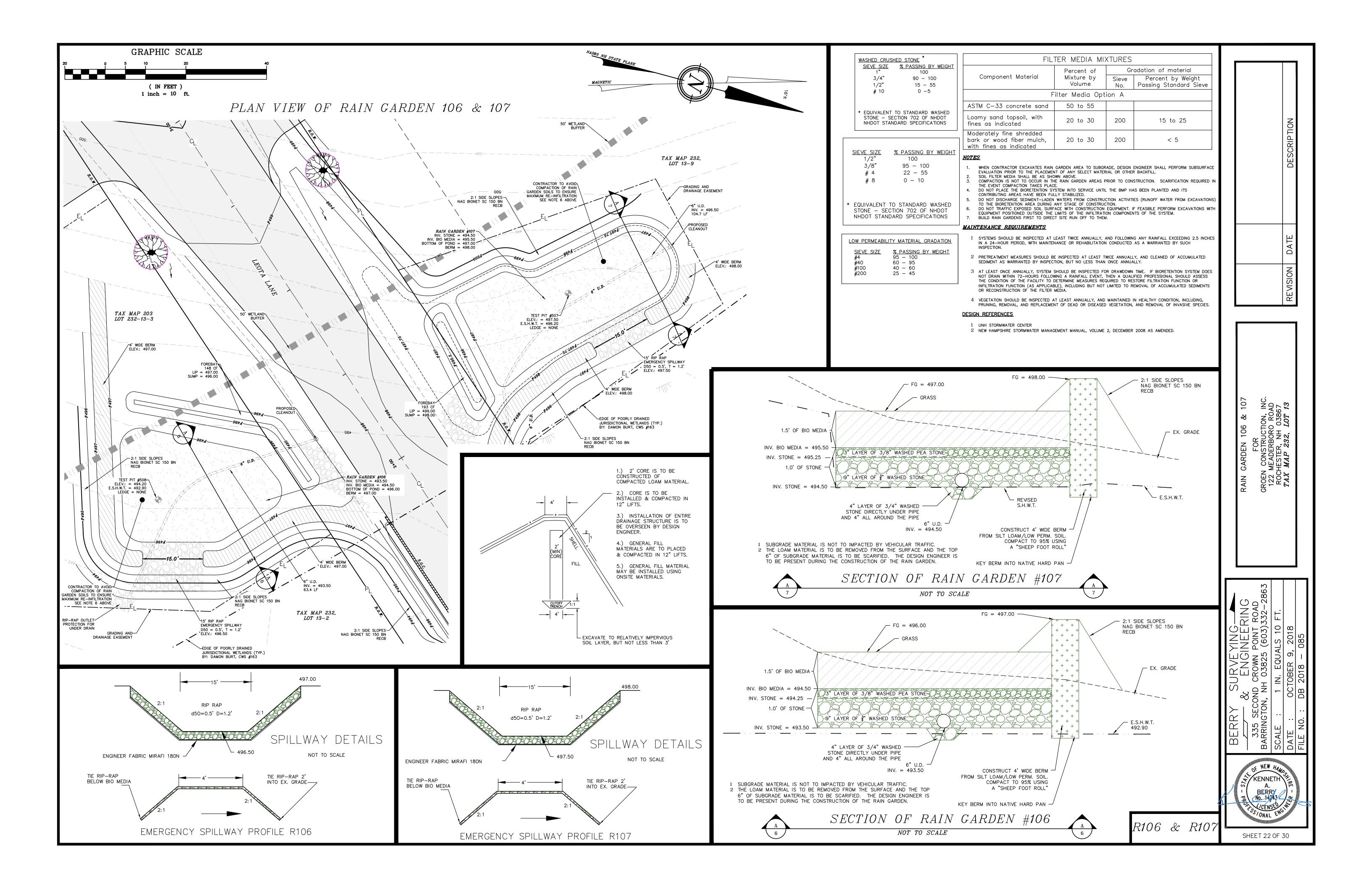


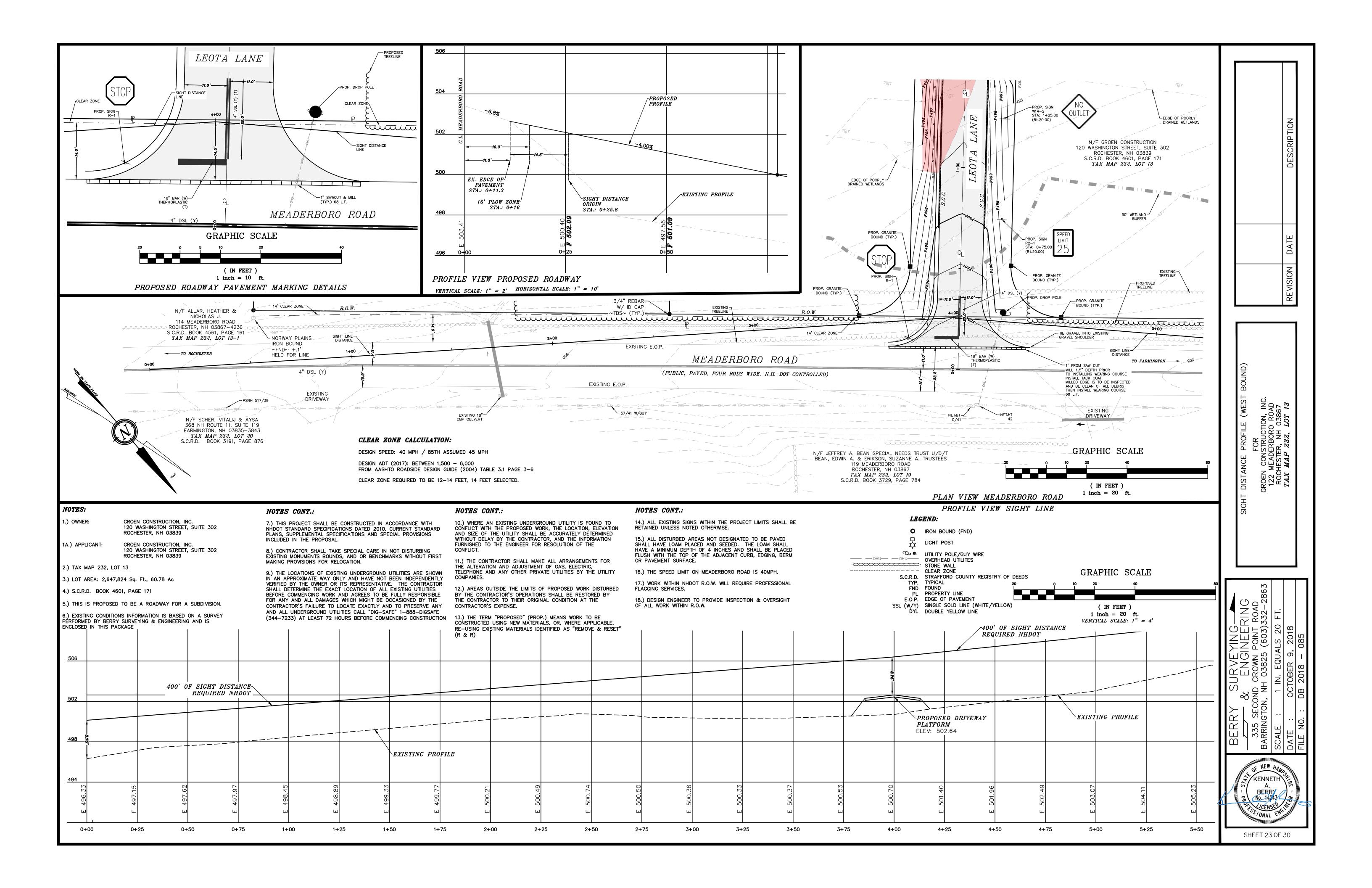


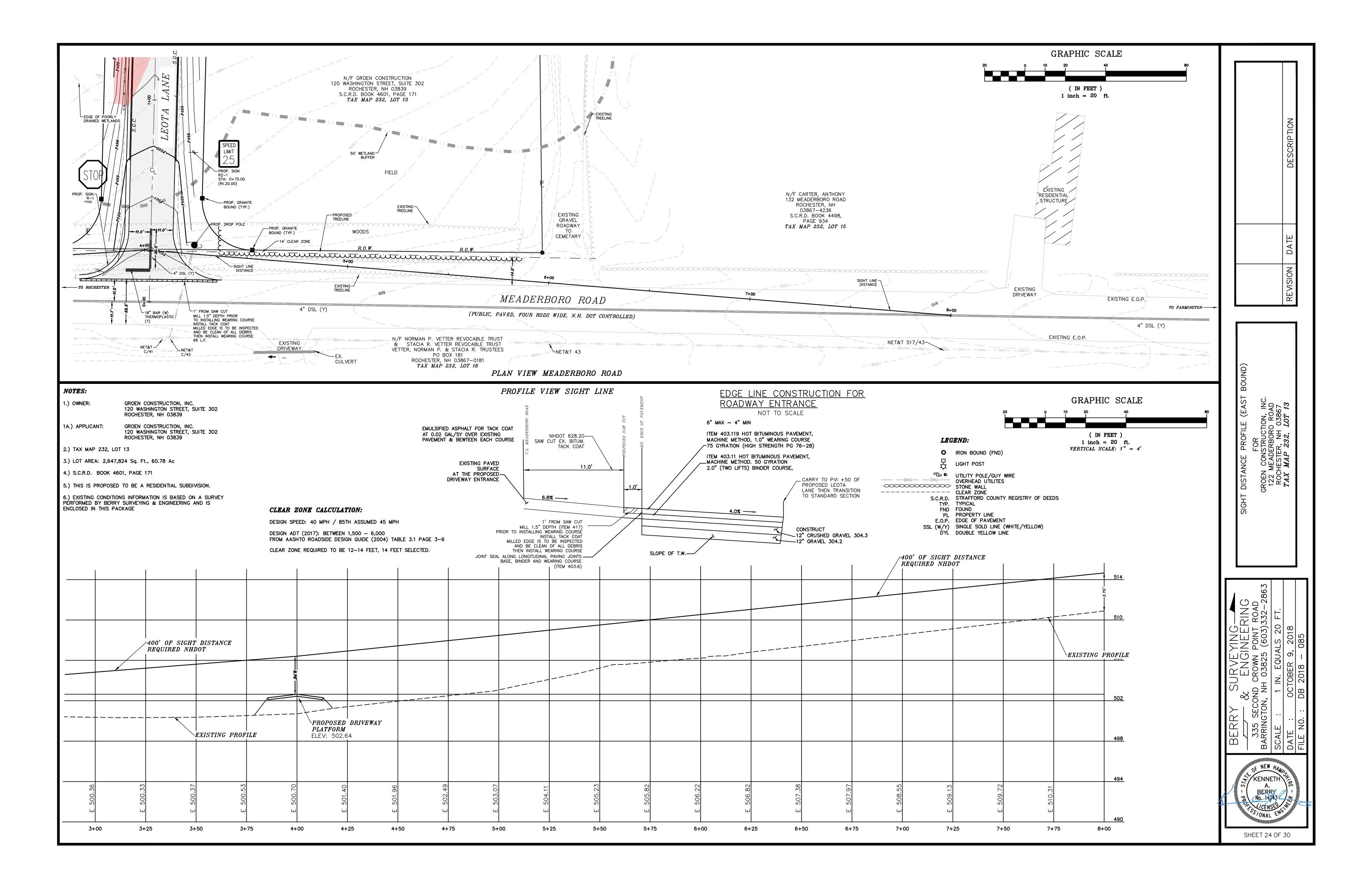


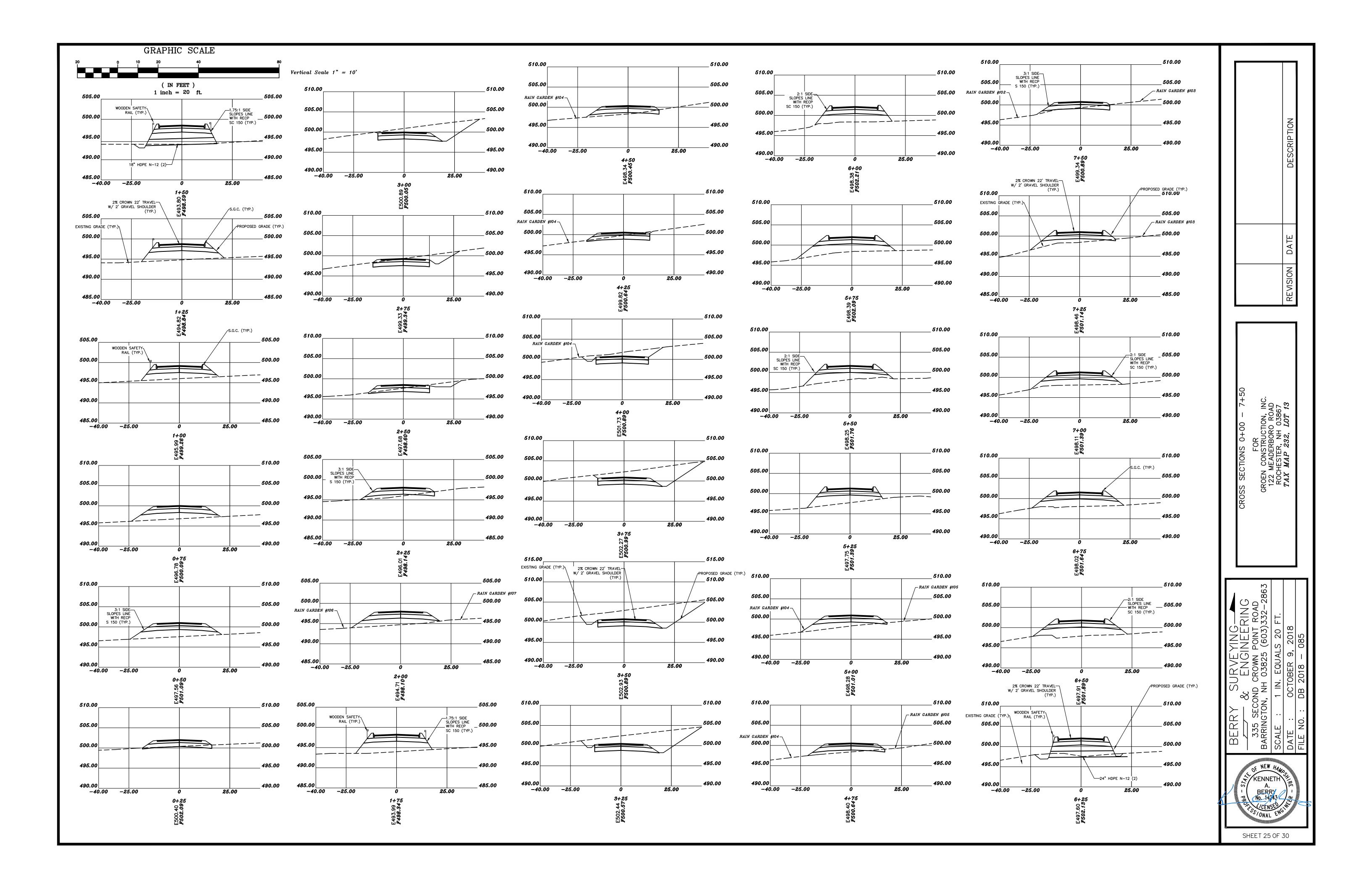


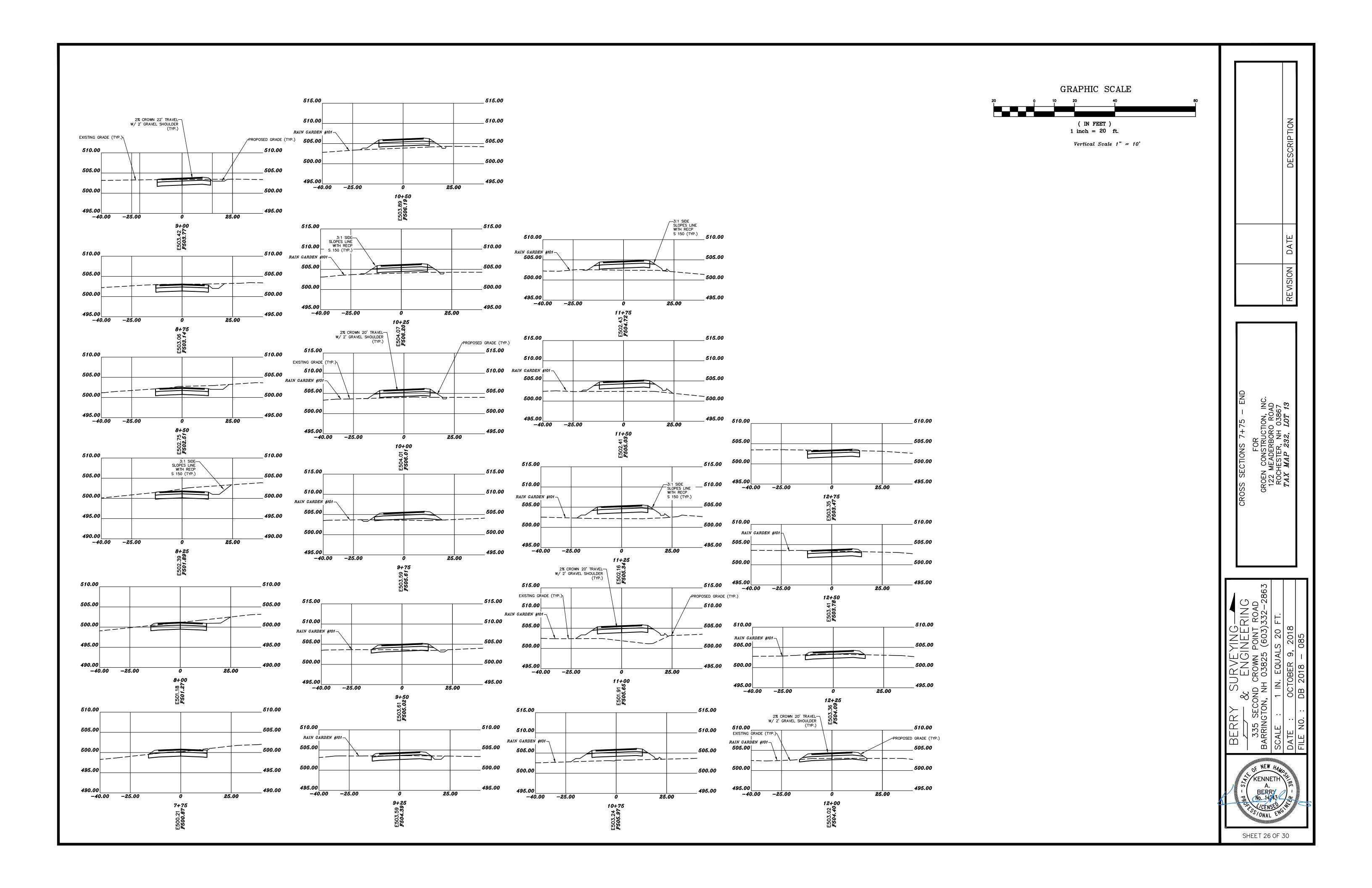


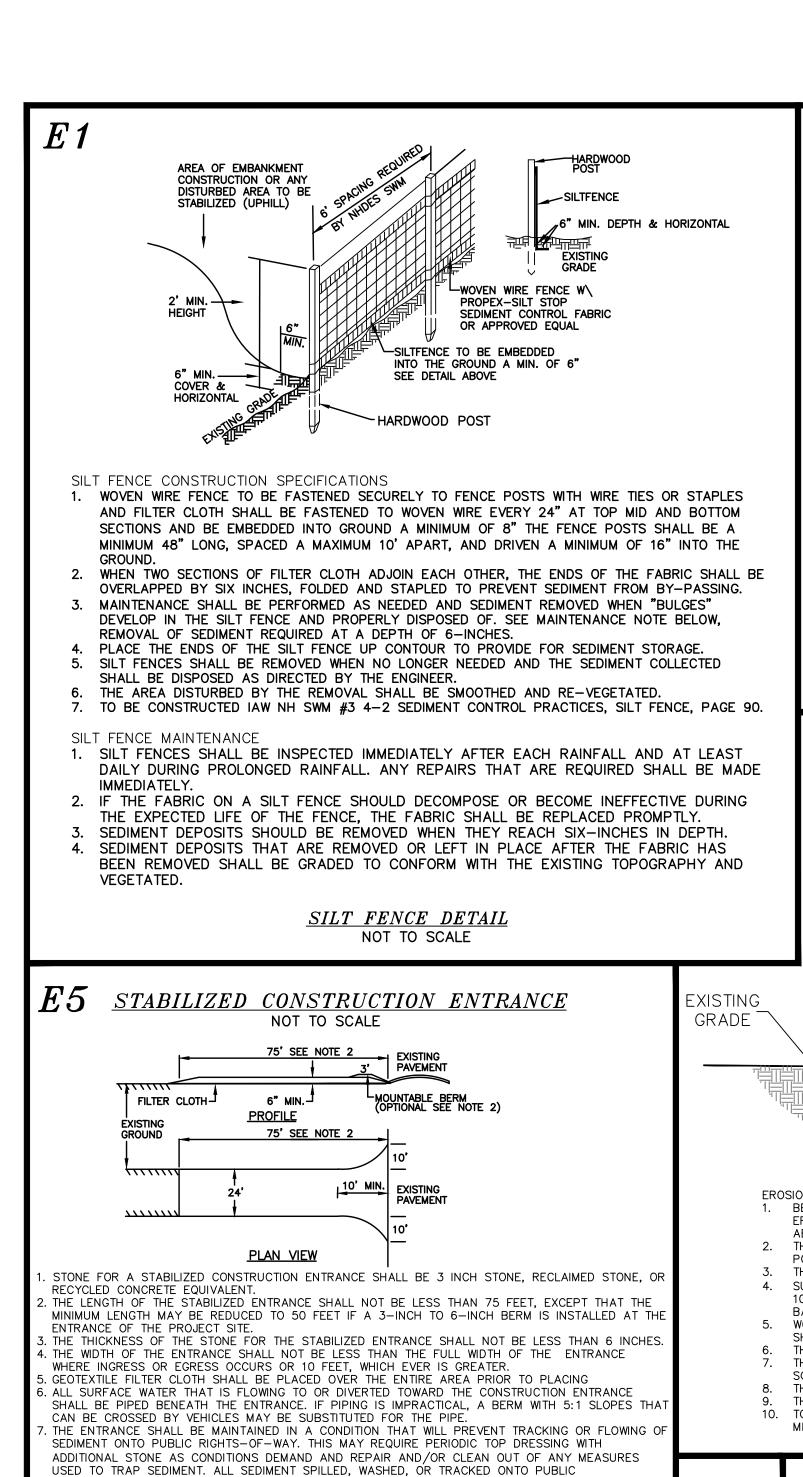


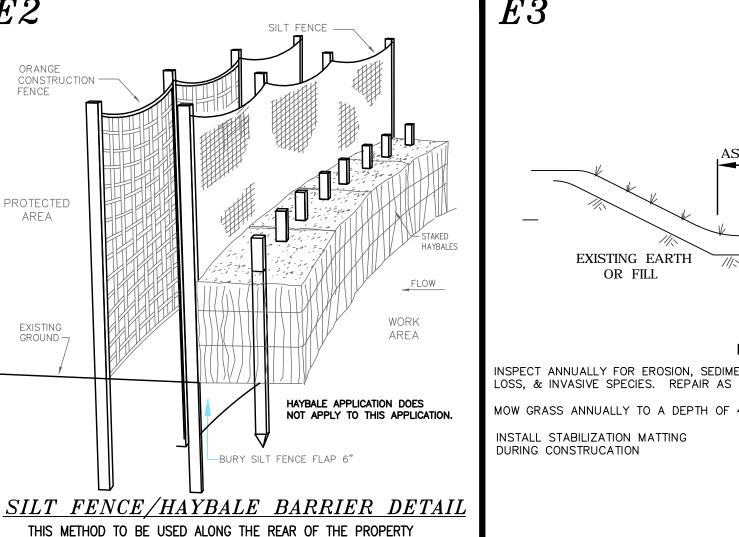




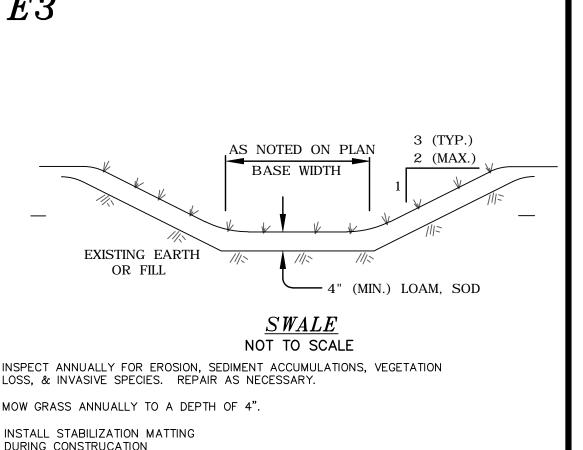








-EROSION CONTROL MIX



# CONSTRUCTION SAFETY FENCE NOT TO SCALE

**LEGEND** SAF12 48" ORANGE FENCE, 12 FEET O.C.
SAF11 48" ORANGE FENCE, 11 FEET O.C.. 48" ORANGE FENCE, 10 FEET O.C. 48" ORANGE FENCE, 9 FEET O.C. 48" ORANGE FENCE, 8 FEET O.C.. SAF7 48" ORANGE FENCE, 7 FEET O.C. SAF6 48" ORANGE FENCE, 6 FEET O.C. 48" HIGH DENSITY ORANGE POLYETHELENE SAFETY FENCE

1. ALL SENSITIVE AREAS SHALL BE PROTECTED AS PER PLAN.
2. ALL TREES IN THE CONSTRUCTION AREA NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PRESERVED AND PROTECTED WITH HIGH VISIBILITY FENCE AS PER PLAN.
3. WHEN PRACTICABLE, INSTALL HIGH VISIBILITY 3 FEET OUTSIDE OF THE DRIP LINE OF THE TREE.
4. SAFETY FENCE SHOULD BE FASTENED SECURELY TO THE T—POSTS. 5. THE FENCING MUST REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION; ANY CHANGE OF THE PROTECTIVE FENCING MUST BE APPROVED.

DEFINITION OF STABLE:

PER ENV-WQ 1500 ALTERATION OF TERRAIN

BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.

A MINIMUM OF 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR

RIP-RAP HAS BEEN INSTALLED. OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

ADDITION STABILIZATION NOTES:

TO BE CONSTRUCTED IAW NH SWM #2 CHAPTER 4, #5

FILTREXX SEDIMENT

TREATMENT SWALES, PAGE 123.

 $\bigcirc$ 

HAY MULCH OR OTHER APPROVED METHODS SHALL BE USED TO CONTROL EROSION OF NEWLY GRADED AREAS. ALL CUT AND FILL SLOPES SHALL BE

SEEDED AND MULCHED WITHIN 72 HOURS AFTER THEIR CONSTRUCTION. DISTURBED SOIL AREAS SHALL BE EITHER TEMPORARILY OR PERMANENTLY STABILIZED. IN AREAS WHERE FINAL GRADING HAS NOT OCCURRED, TEMPORARY STABILIZATION MEASURES SHOULD BE IN PLACE WITHIN SEVEN (7) CALENDAR DAYS FOR EXPOSED SOIL AREAS THAT ARE WITHIN FIFTY (50) FEET OF A SURFACE WATER BODY OR A WETLAND AND NO MORE THAN 14 CALENDAR DAYS FOR ALL OTHER AREAS. PERMANENT STABILIZATION SHOULD BE IN PLACE WITHIN THREE (3) CALENDAR DAYS FOLLOWING COMPLETION OF FINAL GRADING OF EXPOSED SOIL AREAS.

# TEMPORARY EROSION CONTROL MEASURES

THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.

EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED, DIRECTED BY THE ENGINEER.

48" Safety Fence, 72" T-Posts

ALL DISTURBED AREAS SHALL BE RETURNED TO ORIGINAL GRADES AND ELEVATIONS. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 4" OF LOAM AND SEEDED WITH NOT LESS THAN ONE POUND OF SEED PER 50 SQUARE YARDS OF AREA. (SEE SEED SPECIFICATIONS THIS SHEET)

ALL DISTURBED AREAS WILL BE RESTABILIZED WITHIN 45 DAYS. AT ANY ONE TIME, NO MORE THAN 5 ACRES, (217,800 Sq. Ft.) WILL BE DISTURBED.

SILT FENCES AND PERIMETER BARRIERS SHALL BE INSPECTED PERIODICALLY AND AFTER EVERY RAIN DURING THE LIFE OF THE PROJECT. ALL DAMAGED AREAS SHALL BE REPAIRED, SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.

AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED

PER THE EPA CGP REQUIREMENTS THERE WILL BE REPORTS OF THE EROSION CONTROL INSPECTIONS IAW SWPPP PREPARED BY BS&E. ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER 0.5" OR GREATER RAIN EVENT.

DITCHES, SWALES, AND BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.

DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION

10. DRIVEWAYS AND CUT AND FILL SPLOPES MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING

FINAL GRADE. 11. STABILIZATION MEANS:

> 11.1 BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED. 11.2 A MINIMUM OF 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED..

11.4 OR, EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

11.3 A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS

12. THIS PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF

RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

13. THE NHDES STORMWATER MANUAL, IN THREE VOLUMES, DATED DECEMBER 2008, IS A PART OF THIS PLAN SET AND THE MORE RESTRICTIVE WILL GOVERN. (NH SWM)

TABLE 7-24RE	ECOMMENDED	RIP RAP	GRADATIO	N RANGES
d50 SIZE=	0.5	FEET	6	INCHES
% OF WEIGHT SMATHAN THE GIVEN		SIZE FROM	OF STONE	(INCHES) TO
100%		9		12
85%		8		11
50%		6		9
15%		2		3

# E11

 $\mathbf{m}$ OF NEW HAW KENNETH BERRY No. 14743 SHEET 27 OF 30

E-101

JRVEYING-ENGINEEF CROWN POINT 03825 (603)3 Z E

FOR I CONSTRUCT MEADERBORC HESTER, NH MAP 232,

1'-0" MIN 2'-0" MIN. EROSION CONTROL MIX BERMS SHALL BE USED ONLY AS FOLLOWS: BERMS SHALL BE USED IN AREAS WHERE EROSION WILL OCCUR ONLY IN THE FORM OF SHEET EROSION AND THERE IS NO CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY ABOVE THE BERM. THE BERMS SHALL BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSLY AS THE BERMS SHALL BE INSTALLED ON SLOPES LESS THAN 5%. SUBJECT TO (E), BELOW, THE MIX SHALL HAVE AN ORGANIC PORTION BETWEEN 80 AND 100%, DRY WEIGHT BASIS, AND BE FIBROUS AND ELONGATED SUCH AS FROM SHREDDED BARK, STUMP GRINDINGS, COMPOSED BARK, OR EQUIVALENT MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS, OR REPROCESSED WOOD PRODUCTS SHALL NOT BE USED AS ORGANIC MATERIAL. THE MIX SHALL NOT CONTAIN SILTS, CLAY, OR FINE SANDS.

NOT TO SCALE

CONSTRUCT AT

ANGLE OF REPOSE

EROSION CONTROL MIX BERM

NOT TO SCALE

THE MIX SHALL HAVE A PARTICLE SIZE BY WEIGHT OF 70 TO 85% PASSING A 6-INCH SCREEN AND A MAXIMUM OF 85% PASSING THE 0.75-INCH SCREEN.

THE MIX PH SHALL BE BETWEEN 5.0 AND 8.0. THE BERM SHALL BE AT LEAST 12 INCHES HIGH AND AT LEAST 2 FEET WIDE. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, EROSION CONTROL MIX BERMS, PAGE 106.

USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY. 3. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY

CONSTRUCTION EXIT, PAGE 124.

STONE CHECK DAM THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION. SPACING BETWEEN STRUCTURES

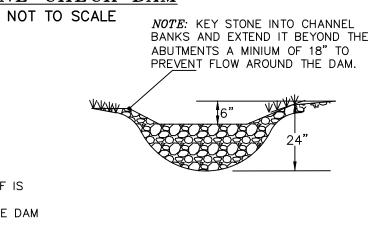
1.) CHECK DAMS SHOULD BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE OR DRAINAGE DITCH.

2.) THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE DAM SHOULD BE LESS THEN ONE ACRE. 3.) THE MAXIMUM HEIGHT OF THE DAM SHOULD BE TWO FEET. 4.) THE CENTER OF THE DAM SHOULD BE AT LEAST SIX INCHES

LOWER THAN THE OUTER EDGES. 5.) THE MAXIMUM SPACING IS AS SHOWN ON THE PROJECT SITE

6.) CHECK DAMS WILL NOT BE USED IN A FLOWING STREAM. 7.) TEMPORARY CHECK DAMS WILL BE REMOVED ONCE THE

SWALE OR DITCH IS DETERMINED STABLE. 8.) TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY CHECK DAMS, PAGE 114.



ANGULAR STONE FLOW STONE GRADE STABILIZATION STRUCTURE

PLACED 10' O.C. (SEE SECTION) - FILTREXX SOXX (12" TYPICAL) AREA TO BE PROTECTED WATER FLOW WORK AREA  $\underline{PLAN}$  not to scale

2"X2"X36" WOODEN STAKES

ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS. FILTER MEDIA FILL TO MEET APPLICATION REQUIRMENTS. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

SUBSTITUTION TO BE APPROVED.

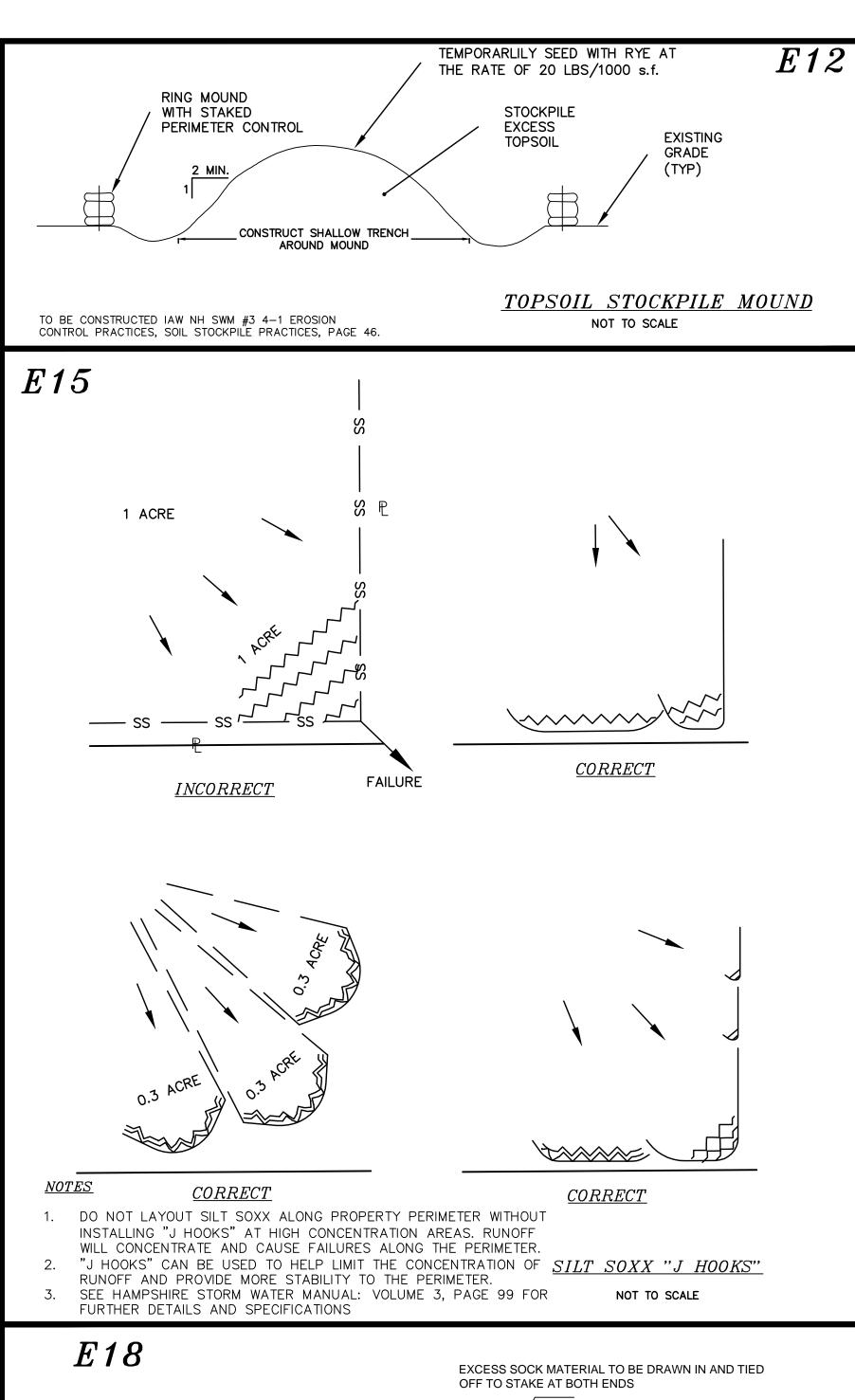
SILTSOXX MAY BE USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT SILTSOXX COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIRMENTS OF THE SPECIFIC APPLICATION. FILTREXX SOXX IS A REGISTERED TRADEMARK OF FILTREXXIN TERNATIONAL, LLC. SILT FENCE IS NOT A SUBSTITUTION FOR SILT SOXX AND ANY EQUAL

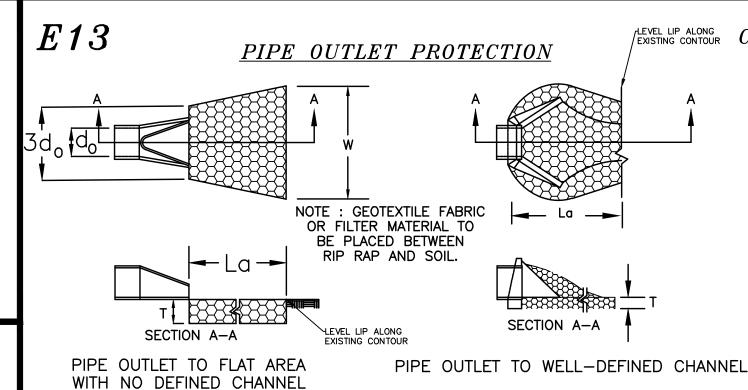
TO BE CONSTRUCTED IAW FILTREXX, SECTION 1: EROSION & SEDIMENT CONTROL (PAGE 323) - CONSTRUCTION ACTIVITIES, SWPPP CUT SHEET: FILTREXX SEDIMENT CONTROL

 $\underline{CONTROL}$ NOT TO SCALE 2"X2"X36" WOODEN STAKES PLACED 10' O.C. — FILTREXX SOXX (8" OR 12" SILT FENCE-BLOWN/PLACED FILTER MEDIA -AS NOTED) AREA TO BE PROTECTED WORK AREA VLIDA DA HARANIA MARANIA MARAN Filtrexx International, LLC 35481 Grafton Eastern Rd | Grafton, Oh 44044

440-926-2607 | fax: 440-926-4021 WWW.FILTREXX.COM OR APPROVED EQUAL NOTE: FOR AREAS REQUIRING DOUBLE PERIMETER CONTROL WITHIN 50' OF JURISDICTIONAL WETLANDS AND NOT FOR ALL SILT SOXX APPLICATIONS. THIS DUPLICATION MAY BE SPECIFIED AS 12" SILT SOXX OR ORANGE CONSTRUCTION FENCE AS NOTED.

 $\underline{SECTION}$  not to scale





PIPE OUTLET PROTECTION LEVEL LIP ALONG EXISTING CONTOUR CONSTRUCTION SPECIFICATIONS

> FABRIC, AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS SPECIFIED GRADATION.

2. THE ROCK OR GRAVEL USED FOR FILTER OF RIP RAP SHALL CONFORM TO NHDOT SECTION 583.

3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE 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.

5. TO BE CONSTRUCTED IAW NH SWM #2 4-6 CONVEYANCE PRACTICES, 6. OUTLET PROTECTION, PAGE 172.

STONE BERM LEVEL SPREADER ISOMETRIC VIEW WATER THE PARTY OF SIEVE DESIGNATION SIZE OF STONE (INCHES) 12 84-100% 68-83% 42-55% 8-12% NO. 4

NOTE: THIS PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

NOTE: Temporary seed mix for stabilization of turf shall be winter rye or oats at a rate of 2.5 lbs. per 1000 s.f. and shall be placed prior to OCT. 15, if permanent

SEEDING SPECIFICATIONS

SEEDBED PREPARATION

ESTABLISHING A STAND

A. SLOPES SHALL NOT BE STEEPER THAN 2:1; 3:1 SLOPES OR FLATTER ARE

THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.

WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.

A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM

B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE

THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE

OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.

AND INCORPORATED INTO THE SOIL KINDS AND AMOUNTS OF LIME AND FERTILIZER

(NOTE: THIS IS THE EQUIVALENT OF 500LBS. PER ACRE OF 10-20-20 FERTILIZER

SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT

A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF

AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100LBS. PER 1,000 SQ.FT.

THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:

OR 1,000LBS. PER ACRE OF 5-10-10.)

NITROGEN(N), 50LBS. PER ACRE OR 1.1LBS. PER 1,000 SQ.FT.

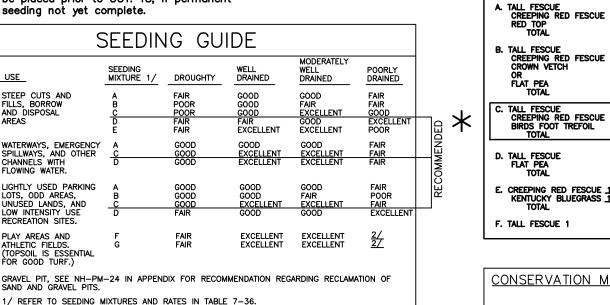
POTASH(K20), 100LBS. PER ACRE OR 2.2LBS. PER 1,000 SQ.FT.

PHOSPHATE(P205), 100LBS. PER ACRE OR 2.2LBS. PER 1,000 SQ.FT.

PREPARE A SEED BED AND MIX FERTILIZER AND LIME INTO THE SOIL. THE SEEDBED

SHOULD BE LEFT IN REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE 4. MULCH

FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO



TALL FESCUE CREEPING RED FESCUE CROWN VETCH

1000 S.F.

WEED GROWTH.

5. MAINTENANCE TO ESTABLISH A STAND

SEEDING RATES

POUNDS PER PER ACRE 1.000 Sq. Ft.

CONSERVATION MIX POUNDS POUNDS PER PER ACRE 1,000 S.F. RED FESCUE (35%) 1.75 TALL FESCUE (25%) 1.25 ANNUAL RYEGRASS (12%) 0.75 PERENNIAL RYEGRASS (10%) 26 0.60 KENTUCKY BLUEGRASS (10%) 22 0.50 0.15 WHITE CLOVER (3%)

B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE.

SHEET) FOR RATES OF SEEDING. ALL LEGUMES (CROWNVETCH, BIRDSFOOT TREFOIL, AND

USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.

FLATPEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT.

EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1

METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS

C. REFER TO TABLE(G-E1 THIS SHEET) FOR APPROPRIATE SEED MIXTURES AND TABLE(H-E1 THIS

D. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY

B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT

A. PLANTED AREA SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE

PRACTICE FOR MULCHING, HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90LBS PER

OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM

A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER

B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL

BECAUSE MOST PERENNIAL STAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.

FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND

C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED,

OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

TO BE CONSTRUCTED IAW NH SWM #3 4-1 EROSION CONTROL PRACTICES, PERMANENT

1. CONSTRUCT THE LEVEL SPREADER LIP ON A 0% GRADE TO INSURE UNIFORM SPREADING OF RUNOFF.

2. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL AND NOT ON FILL 3. THE ENTIRE LEVEL LIP AREA SHALL BE PROTECTED BY PLACING EXCELSIOR ENFORCER MATTING

BENEATH THE STONE. EACH STRIP SHALL OVERLAP BY AT LEAST SIX INCHES. 4. THE FLOW FROM THE LEVEL SPREADER SHALL OUTLET ONTO STABILIZED AREAS. WATER SHOULD NOT

RE-CONCENTRATE IMMEDIATELY BELOW THE SPREADER. 5. MAINTENANCE: THE LEVEL SPREADER SHOULD BE CHECKED PERIODICALLY AND AFTER EVERY MAJOR STORM TO DETERMINE IF THE LIP HAS BEEN DAMAGED AND THE DESIGN CONDITIONS HAVE

NOT CHANGED. ANY DETRIMENTAL SEDIMENT ACCUMULATION SHOULD BE REMOVED. IF STONE REMOVAL HAS TAKEN PLACE ON THE LIP, THEN THE DAMAGE SHOULD BE REPAIRED

REFERENCE IS MADE TO NHDES SWM VOL. 2, 4-6, STONE BERM LEVEL SPREADERS, PAGE 162

# WINTER STABILIZATION NOTES

1. ALL DISTURBED AREAS THAT DO NOT HAVE AT LEAST 85% VEGETATIVE COVERAGE PRIOR TO OCTOBER 15TH SHALL BE STABILIZED BY APPLYING MULCH AT A RATE OF 3-4 TONS PER ACRE. ALL SIDE SLOPES, STEEPER THAN 4:1, THAT ARE NOT DIRECTED TO SWALES OR DETENTION BASINS, SHALL BE LINED WITH BIODEGRADABLE / PHOTODEGRADABLE "JUTE MATTING" (EXCELSIOR'S CURLEX II OR EQUAL). ALL OTHER SLOPES SHALL BE MULCHED AND TACKED AT A RATE OF 3-4 TONS PER ACRE. THE APPLICATION OF MULCH AND/OR JUTE MATTING SHALL NOT OCCUR OVER EXISTING SNOW COVER. IF THE SITE IS ACTIVE AFTER NOVEMBER 15TH, ANY SNOW THAT ACCUMULATES ON DISTURBED AREAS SHALL BE REMOVED. PRIOR TO SPRING THAW ALL AREAS WILL BE STABILIZED, AS DIRECTED

ALL SWALES THAT DO NOT HAVE FULLY ESTABLISHED VEGETATION SHALL BE EITHER LINED WITH TEMPORARY JUTE MATTING OR TEMPORARY STONE CHECK DAMS (APPROPRIATELY SPACED). STONE CHECK DAMS WILL BE MAINTAINED THROUGHOUT THE WINTER MONTHS. IF THE SWALES ARE TO BE MATTED WITH PERMANENT LINERS OR RIPRAP WITH ENGINEERING FABRIC, THIS SHALL BE COMPLETED PRIOR TO WINTER SHUTDOWN OR AS SOON AS THEY ARE PROPERLY

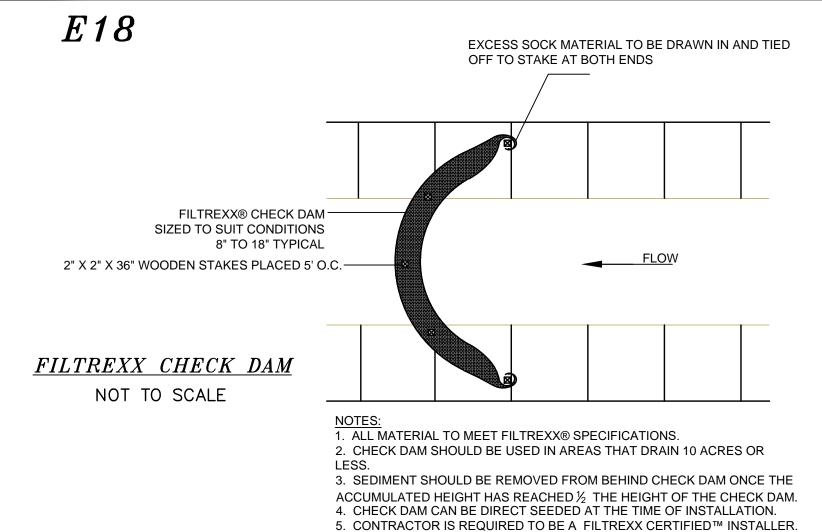
PRIOR TO NOV. 15TH ALL ROADWAY AND PARKING AREAS SHALL BE BROUGHT UP TO AND THROUGH THE BANK RUN GRAVEL APPLICATION. IF THESE AREAS' ELEVATION, THE SUBGRADE MATERIAL SHALL BE ROUGHLY CROWNED AND A 3" LAYER OF CRUSHED GRAVEL SHALL BE PLACED AND COMPACTED. THIS WILL ALLOW THE SUBGRADE TO SHED RUNOFF AND WILL REDUCE ROADWAY EROSION. THIS CRUSHED GRAVEL DOES NOT HAVE TO CONFORM TO NH DOT 304.3. BUT SIZE SHALL BE 2". IF THE SITE IS ACTIVE AFTER NOVEMBER 15TH, ANY ACCUMULATED SNOW SHALL BE REMOVED FROM ALL ROADWAY AND PARKING

4. AFTER OCTOBER 15TH, THE END OF NEW HAMPSHIRE'S AVERAGE GROWING SEASON, NO ADDITIONAL LOAM SHALL BE SPREAD ON SIDE SLOPES AND SWALES. THE STOCKPILES THAT WILL BE LEFT UNDISTURBED UNTIL SPRING SHALL BE SEEDED BY THIS DATE. AFTER OCTOBER 15TH, ANY NEW OR DISTURBED PILES SHALL BE MULCHED AT A RATE OF 3-4 TONS PER ACRE. ALL STOCKPILES THAT

GRADED AND SHAPED.

SHALL HAVE BETWEEN 15-25% PASSING THE #200 SIEVE AND THE LARGEST STONE

WILL REMAIN THROUGHOUT THE WINTER SHALL BE SURROUNDED WITH SILT FENCING.



## 4" TOPSOIL (MIN.) AND SEED TO ESTABLISH INSTALL ROLLED EROSION CONTROL BLANKET WITH ANCHOR HOOKS AS PER MANUFACTURES PRODUCT EXAMPLES REQUIREMENTS. SUBMIT SHOP DRAWINGS FOR 1.) NAG BIONET S 150 BN 3:1 TO 2:1 SLOPE APPROVAL. 2.) NAG BIONET SC 150 BN 2:1 TO 1:1 SLOPE 3.) NAG BIONET SC 125 BN 1:1 AND GREATER ANCHOR HOOK PER 4.) AEC CURLEX II 1,5H TO 1V MANUFACTURER'S REQUIREMENTS 5.) VMAX SC 250 1:1 AND GREATER 1. TO BE CONSTRUCTED IAW NH SWM #3 4-1 EROSION CONTROL PRACTICES, TEMPORARY EROSION CONTROL BLANKET, PAGE 68. 2. ANCHOR PATTERN AND INSTALLATION INSTRUCTIONS FROM NORTH AMERICAN GREEN (NAG) AND AMERICAN EROSION COMPANY (AEC) WILL BE FOLLOWED FOR EACH APPLICATION AND SLOPE CONDITIONS WILL APPLY.

ROLLED EROSION CONTROL BLANKET (RECB) SLOPE STABILIZATION DETAIL

NOT TO SCALE

# CONSTRUCTION SEQUENCE:

- 1.) CUT AND REMOVE TREES IN CONSTRUCTION AREA ONLY AS REQUIRED, RELOCATE ANY PROJECT T.B.M.
- 2.) CONSTRUCT AND/OR INSTALL TEMPORARY AND PERMANENT SEDIMENT EROSION AND DETENTION CONTROL FACILITIES AS SPECIFIED. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL LAND DISTURBANCE AND MUST BE REVIEWED AND APPROVED BY THE COMMUNITY SERVICES DEPARTMENT.
- NGIN ROWN P 03825 OTED 18 18 3.) EROSION, SEDIMENT AND DETENTION CONTROL FACILITY SHALL BE INSTALLED & STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.TEMPORARY DIVERSIONS MAY BE REQUIRED. POST CONSTRUCTION STORM WATER MANAGEMENT PRACTICES MUST BE INITIATED AND STABILIZED EARLY IN THE PROCESS.
- 4.) CLEAR, CUT AND DISPOSE OF DEBRIS IN APPROVED FACILITY
- 5.) CONSTRUCT TEMPORARY CULVERTS AS REQUIRED, OR DIRECTED
- 6.) CONSTRUCT ROADWAYS FOR ACCESS TO DESIRED CONSTRUCTION AREAS. ALL ROADS SHALL BE STABILIZED IMMEDIATELY
- 7.) START BUILDING CONSTRUCTION
- 8.) INSTALL PIPE AND CONSTRUCTION ASSOCIATED APPURTENANCES AS REQUIRED OR DIRECTED. INSTALL RAIN GARDENS. ALL DISTURBED AREAS SHALL STABILIZED IMMEDIATELY AFTER GRADING.
- 9.) BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES AND DISTURBED AREAS SHALL BE SEEDED OR MULCHED AS REQUIRED, OR DIRECTED. NO AREA IS ALLOWED TO BE DISTURBED FOR A LENGTH OF TIME THAT EXCEEDS 60 DAYS BEFORE BEING STABILIZED. DAILY, OR AS REQUIRED. ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADES. ALL CUT AND FILL SLOPES SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADES.
- 10.) CONSTRUCT TEMPORARY BERMS, DRAINS DITCHES, SILT FENCES, SEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED.
- 11.) INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION. ALL SWPPP INSPECTIONS MUST BE CONDUCTED BY A QUALIFIED PROFESSIONAL SUCH AS A PROFESSIONAL ENGINEER (PE), A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC), A CERTIFIED EROSION SEDIMENT AND STORM WATER INSPECTOR (CESSW), OR A CERTIFIED PROFESSIONAL IN STORM WATER QUALITY (CPSWQ). INSPECTION REPORTS SHALL BE SUBMITTED TO THE COMMUNITY SERVICES DEPARTMENT.
- 12.) COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- 13.) REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDING AREAS HAVE ESTABLISHED THEMSELVES AND SITE IMPROVEMENTS ARE
- 14.) SMOOTH AND REVEGETATE ALL DISTURBED AREAS.

15.) FINISH PAVING ALL ROADWAYS.

KENNETH BERRY No. 14243/ CCENSED & E-102

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