CITY OF DOVER

PLANNING TECHNICAL REVIEW COMMITTEE –AGENDA

Meeting Type: Regular Meeting
Meeting Location: 2nd Floor Conference Room – City Hall, Dover NH
Meeting Date: **Thursday, February 08, 2018**
Meeting Time: **10:30 am**

1. 10:30 AM – 11:15 AM: Site Plan Amendment for 6 Grove Street Residences LLC, (Owners: 6 Grove Street Residences & Gotham Holdings LLC.) Assessor's Map 31, Lot 14, zoned CBD-TOD, and located at 6 Grove Street. (Proposal is to convert an existing building into 32 residential rental units, 6 townhouse units and 8,967 sq. ft. of commercial space. The proposal will also include 39 on-site parking spaces. A related lot line adjustment application and CUP application will also appear before the Planning Board). (P16-31C)

2. 11:15 AM – 12:00 PM: Site Plan Review for TDAK & Company LLC, Assessor's Map 35, Lot 57, zoned R-12, located at 99 Sixth Street. (Proposal is to construct an 18 ft. wide private access way to the existing two-unit dwelling and build four new single family dwellings which are proposed as condominiums). (4 lots) (P18-07)

City of Dover, New Hampshire
SITE REVIEW APPLICATION

[Revision Date: August 02, 2017]

Office Use Only	Project #:		Date Received:	
	Amount Paid:		Time Received:	

APPLICANT AND OWNER INFORMATION

Name of Applicant: 6 Grove Street Residences LLC Telephone # 603-742-5300

Address of Applicant: 35 Third St., Dover, NH 03820

E-Mail Address: Billtgolds@aol.com

Name of Property Owner (*if different from applicant*): _____ Telephone #_____

Address of Property Owner: _____

PROPERTY INFORMATION

Address of Property: 6 Grove Street

Assessor's Map # 31 Lot(s) # 14

Zoning District(s) CBD Overlay District(s) _____

Size of Parcel: 40,821 sq. ft. .93 ac. Property Deed: Book 4495 Page: 589

Existing Use of Property: Business/Residential

SITE PLAN INFORMATION

Describe Proposed Use: mixed use project. modification to existing site approval

Area of Parcel to be Developed: 35,000 sq. ft.

If Multi-family Residential, Specify Number of Units & Buildings Proposed: 32 in mixed use building
6 townhouse units

Number of Parking Spaces: Existing 0 Proposed 39 plus on street

Highway Access (check where applicable): X City Street ____ State Highway

Number of Employees Total: unknown In Maximum Shift: _____

Disposition of Parcel: Townhouses = 3855

Building Footprint 10,671 sq. ft.

Total Building Area 14526 sq. ft.

Paved Area 13,873 sq. ft.

Building Setbacks:

Front Yard 0 ft.

Rear Yard 0 ft.

Side Yard: Right 10 ft. Left 10 ft.

City Water? X Yes ___ No How far is city water from the property? _____

City Sewer? X Yes ___ No How far is city sewer from the property? _____

BUILDING INFORMATION

Type of Building to be Built: EXISTING TO REMAIN, 6 TOWN HOUSES
TOWNHOUSE = 28'
Height of Building: EXISTING TO REMAIN Finished Floor Elevation: TOWNHOUSES 76.20

Number of Seats (where applicable) _____

WAIVER REQUESTS

Site Review Regulations section(s) to be waived: 5' TO BOUNDARY WITH PAVEMENT & LIGHTING

Justification for waiver request(s) (*attach additional sheets as needed*): _____

_____

_____

_____

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kenneth A Berry, PE, LLS
Berry Surveying & Engineering

Address 335 Second Crown Point Rd, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: 805 E-mail address: K.Berry@Berrysurveying.com

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Kenneth A Berry, PE, LLS
Berry Surveying & Engineering

Address 335 Second Crown Point Rd, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: 14243 E-mail address: K.Berry@Berrysurveying.com

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. Furthermore, I/we submit that the existing conditions sheet of the plan represents the lot in question, and that no alteration of the site shall take place during Planning Board review up to and including the pre-construction meeting. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: _____

Signature of Applicant (*if different from owner*): _____ Date: _____

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: 1/17/18

AUTHORIZATION TO COMPLETE THE PROJECT ON SUBJECT PROPERTY

I, and my successors, hereby the City of Dover or its assigns to enter my property for the purpose of completing the site work as required by the approved plan should the letter or credit or other surety be called. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: 1/17/18

Signature of Applicant (*if different from owner*): _____ Date: _____

CERTIFICATION OF FEES

I, and my successors, hereby certify that I understand that the City of Dover collects impact fees, utility investment fees and inspection fees for projects developed in Dover. Said fees must be paid before a Certificate of Occupancy can be obtained for a structure, unless a different payment schedule is agreed to by the applicant and the City prior to approvals being issued by the Dover Planning Board. Additionally, should the property be in "Current Use" it will be subject to the Land Use Change Tax.

Signature of Property Owner: _____ Date: 1/17/18

Signature of Applicant (*if different from owner*): _____ Date: _____

City of Dover, New Hampshire
SITE PLAN REVIEW SUBMISSION CHECKLIST

[Revision Date: May 15, 2017]

This site plan review checklist, as required by Chapter 149-6-B(2), should be completed by the applicant. It is intended to assist the applicant in the planning process of preparing a Site Plan Review application for Planning Board action. The size of the project will determine the types of information required for review, therefore, a **pre-application conference** with the Planning Department to determine the list of items that must be completed is strongly encouraged.

Fees will be invoiced and are due along with fifteen (15), folded, copies of the plan set and materials, including response to TRC comments, will be due 3 weeks prior to the Planning Board meeting.

The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all site plan review requirements. Please refer to the Site Plan Review Regulations for full details.

APPLICANT: 6 Crowe Street File Number: _____

PROJECT TITLE: 6 Crowe Street

PROPERTY LOCATION: 6 Crowe Street Tax Map: 31 Lot: 14

	Explain How Provided	Reviewed
1. Completed and signed Application form	✓	
2. Electronic copy of the engineered/surveyed plan layout	✓	
3. Electronic copy of supplementary materials and application	✓	
4. Traffic Impact Assessment and Analysis (Standard or Advanced)	✓	
5. Fiscal Impact Analysis (For more than 10 units)	✓	
6. Waiver requests to the Site Plan Review Regulations, with written justification	✓	
7. Conditional Use Permit applications	✓	
8. A colored rendering of the streetscape that will be created along the existing public right-of-way	✓	
9. A colored architectural plan showing all sides of buildings	✓	
10. List of all professional agents to be notified for Planning Board	✓	
11. Eight copies of site plan w/scale of not less than 1"=50' or 1"=100' for larger site plans, for TRC. Plans shall contain the following items as appropriate:	✓	
Location map at appropriate scale	✓	
Proposed Project name and title and Planning File #	✓	
Date, north arrow and scale	✓	
Names of all abutting property owners	✓	
Name and address of owners and/or applicants	✓	
Signature & stamp of NH licensed land surveyor and/or engineer	✓	
Zoning District boundaries, including any special or overlay districts	✓	
Location of Conservation District areas	✓	
Location, names and widths of existing and proposed streets, including pavement widths, grades, curbs and crosswalks	✓	
Location and widths of existing & proposed easements & right of ways	✓	
Depict pedestrian walkways and accessible access	✓	
Location and width of existing and proposed access/egress ways	✓	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	✓	
Existing and proposed topographic information at two foot intervals	✓	

	Explain How Provided	Reviewed
Existing and proposed buildings and structure locations	✓	
Minimum building setbacks or build to lines on all lots	✓	
Location and size of existing and proposed electric, telephone, gas cable and other underground utilities	✓	
Existing and proposed water lines and fire hydrants, including materials and capacity needed	✓	
Location and materials of sanitary sewage facilities within project site and projected additional peak hour sewer load	✓	
Existing and proposed stormwater lines and facilities	✓	
Lighting plan depicting all existing and proposed exterior light fixtures and a lighting level analysis for parking lots	✓	
Location of Flood Hazard Zone	✓	
Location of all bodies of water and watercourses	✓	
Location of wetlands and buffers	✓	
Neighborhood plan with aerial underlay showing how project relates to abutting uses	✓	
Existing natural features and/or significant vegetation on property	✓	
Depict existing contours up to 100 ft. beyond project limits	✓	
Landscape plan depicting existing and proposed landscaping, prepared by a licensed Professional Landscape Architect	✓	
Location of parking layout delineating spaces and arrangement; note addressing maximum required spaces	✓	
Location, material and size of existing and proposed pavement area	✓	
Location of proposed fire lanes	✓	
Specify finished floor elevations of buildings	✓	
Location of solid waste disposal facilities (dumpster, pad and screening, etc.), including required screening	✓	
Depict all service, storage, loading bays and utility areas	✓	
All applicable Dover Common Site Plan notes	✓	
12. Additional Information if appropriate		
Stormwater Management Plan depicting the existing & proposed storm drainage system and engineered drainage analysis	✓	
Stormwater Management System Operation and Maintenance Plan	✓	
Erosion and Sedimentation Control Plan	✓	
Landscape Operation and Maintenance Plan	✓	
Proposed restrictive covenants or homeowners association documents	N/A ✓	
Dates and permit numbers of all required state and federal permits	✓	
If wetland buffer, indicate placards locations, as applicable	N/A	
Depict test boring locations, groundwater elevations and soil profiles and/or soils types call-outs	N/A	
Location of proposed drive-in facilities	N/A	
Provide additional exhibits/technical data determined appropriate by the Planning Board or its staff as required	✓	

REVIEWED BY: _____ DATE_____ TRC DATE_____

CITY OF DOVER PLANNING DEPARTMENT
(Revision Date: May 15, 2017)

APPLICANT: _____ FILE NUMBER: _____

List of Common Site Plan Notes

The following list of commonly required notes is intended to be used as a guide to applicants and should not be construed as a comprehensive note requirement list for all projects. A preapplication conference with the Planning Department is suggested to help determine the actual notes that may be required.

1. The intent of this site plan is _____.

2. Current Owner: *Name and address*

   _____
   Authorized Signature

3. The project parcel(*s*) is (*are*) shown as Lot No. _____, Map ____ of the City of Dover Tax Assessor's Maps.

4. The project parcel(*s*) contains ____ acres or _____ square feet area of land.

5. Title reference for the project parcel(*s*) is the Strafford County Registry of Deeds, Book No. ___, Page No. ___.

6. Project Plan References: *(List all reference plans and their SCRD #)*

7. All applicable right-of-way, conservation, slope, construction, utility, access, or other easements shall be referenced in a note and shown on the plan and shown on the plan.

8. Zoning dimensional and density requirements are as follows:

   a. zoning district _____ subdistrict _____
   b. minimum lot size: _____ acres (sq. ft.)
   c. minimum lot frontage: _____ ft.
   d. minimum yard setbacks/build-to-lines:
      Front _____ft.
      Side _____ft.
      Rear _____ft.
      Abut-a-street _____ ft.

   Maximum/minimum lot coverage _____ %
   Minimum/maximum bldg. height _____ ft./stories

   This property falls within the following zoning overlay districts: *(List districts)*

9. Property line information has been obtained from a survey performed by *(surveyor)* on (*date*) with an error not greater than 1 in 10,000 (*or has been obtained from* _____ *Plan, prepared by (surveyor)*).

10. Subject parcel is (*is not*) located within a Federally designated flood hazard area (Community panel number 33017C0xxxD, Effective Date: September 30, 2015).

11. Wetlands were delineated by _____, Certified Wetlands Scientist, Certification Number ____, in accordance with Chapter 170-27.1 of the Zoning Ordinance, on _____, 20__ .

12. The maximum parking space calculation is _____(broken down) and ____ spaces are provided.

13. As-built plans of the site shall be submitted on paper and in a digital format in pdf and AutoCAD DWG, AutoCAD DXF or an ESRI format to the City of Dover Engineer's Office upon completion of project. As-built plans shall be prepared and certified correct by a L.L.S. or P.E. Digital files shall be geo-referenced to New Hampshire State Plane Coordinates NAD83 and shall be expressed in feet.

14. Exterior lighting shall be cut-off type fixtures per Chapter 149-14-E and shall provide lighting directed on-site only.

15. Topographic survey performed by _____ on *(dates)*.

16. Elevations are based on U.S.G.S. datum. (**or** Elevations depicted are based on information obtained from the City Engineer's Office and was derived from coordinates for control stations _____ and _____. These coordinates have not been adjusted to 1983 datum).

17. A security system shall be installed as required by Chapter 58, Article I, section 58-2 of the Code of the City of Dover. (*If a business establishment or multi-family dwelling contained in a new, altered or repaired structure*)

18. Commercial vehicle route during construction shall conform with Dover City Code or be coordinated with the Community Services Director.

19. The installation of electric power, cable television and telephone lines shall be underground throughout the site for which development is proposed. Site plans shall show any easements for these services.

20. The subject parcel(s) is (are) served by municipal water and sewer *(or is served by on-site well and septic system).*

21. All erosion control notes shall include provisions for construction sequencing, temporary erosion control measures, and permanent standards such as loam spread rate for disturbed areas, rates of lime, type and rates for fertilizer, and seed and mulch mixture with rates of application.

22. The owner of record shall record at the Registry of Deeds documentation sufficient to provide notice to all persons that may acquire any property subject to the requirements and responsibilities described in the approved STORMWATER Management Plan. The notice shall comply with the applicable requirements for recording contained in RSA 477 and 478. The notice need not set forth the requirements at length, so long as it is sufficient to provide notice to prospective purchasers to the requirements for maintenance and reporting.

23. The limits of construction disturbance that are located in or within the 50 ft. of Conservation and Wetland Districts shall be staked, flagged and clearly identified prior to any earth disturbing activity occurs.

24. All treatment swales to be constructed shall have sod bottoms.

25. A letter of credit for the cost of revegetating all disturbed areas on the site and approved construction sign shall be in place prior to any earth disturbing activity.

26. Site Construction hours shall be limited to *Monday-Friday 7 AM-6 PM, Saturday and Sunday 9 AM-4 PM.* Hours of construction must be documented on a site construction sign along with the contact information for the general contractor. Said signage must be located and approved by the City Engineer or Assistant City Manager.

27. A pre-construction conference with the developer, the design engineer, the earthwork contractor and the City Engineer shall occur prior to any earth disturbing activity.

28. All construction shall conform with the State of New Hampshire Department of Transportation (NHDOT) "Standard Specifications for Road and Bridge Construction" and with the City of Dover Community Services Regulations and standard specification for construction. The more stringent specification shall apply.

29. Approved backflow preventors shall be provided for both fire and domestic water lines.

30. The (*existing or proposed*) structure shall be served by a sprinkler system as required under Chapter 109-30 of the Code of the City of Dover and the 2015 State Building Codes.

31. Sprinkler connections must be flushed in accordance with NFPA 24 and a Contractor's Material and Test Certificate for Underground Piping form must be completed.

32. Fire department connections shall be located on the street side of the building per NFPA 13.

33. Building addresses shall be assigned by the Building Official at the time of issuance of a building permit.

34. The site layout is designed in compliance with applicable accessibility regulations. The proposed structure will be also be designed in accordance with applicable accessibility regulations.

35. The proposed use for the site (*structure*) is _____. (*More specific uses are encouraged, such as restaurant, hotel, doctor's office, etc. Should more than one use be proposed, an indication of the percentage of each use is suggested.)*

36. The following federal and state permits have been issued for the subject property: (*List permit type, number and date of issuance.)*

37. List any variances or special exceptions granted by the Zoning Board of Adjustment or Conditional Use Permits granted by the Planning Board for the proposed use or structure, including the case number and date of decision and any conditions.

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January 18, 2018

City of Dover Planning Board
288 Central Ave
Dover, NH 03820

RE: Proposed mixed-use development
6 Grove Street Residences, LLC
35 Third Street
Conditional Use Permits

Mr. Chairman and Members of the Dover Planning Board,

Pursuant to Zoning Regulations (Chapter 170-20 B,) Berry Surveying & Engineering (BS&E,) on behalf of 6 Grove Street Residences, LLC, respectfully requests the City of Dover Planning Board to approve the following Conditional Use Permits:

- Minimum Lot Coverage less than 75%

1. Identification of Conditional Use Permits

Dimensional regulations in the Transportation Oriented Design (TOD) sub-district of the Central Business District (CBD) state that lot coverage must be 75-100% We ask that Conditional Use Permit be granted to allow building lot coverage of 35.58%. The original design of this project allowed for parking against the building and therefore a covered car port was feasible. This design however, the car port would not be covering anything and therefore is not part of the project design. Additionally the lot area has increased, and due to neighboring concerns, the allowed parking on site has been increased, and thus the building coverage ratio has gone down. The existing building coverage is 39%

Below we show the project's compliance with the standards required to grant a Conditional Use Permit, and we provide justification for its approval.

2. Compliance with the following standards

a) That both public and private buildings and landscaping shall contribute to the physical definition of rights of way as civic spaces.

- **The existing building is constructed within approximately 10' of Grove Street and approximately 5' of Third Street,**

and the addition on the Grove Street side of the building will also be constructed within about 10′ of the right of way. Along with the proposed streetscape, the building will contribute nicely to the physical definition of the right of way as a welcoming civic space.

b) That development shall adequately accommodate automobiles, while respecting the pedestrian and the spatial form of public areas.
   - **The shape of the proposed building allows safe and ample pedestrian access, while also accommodating vehicles with parking in the back of the building.**

c) That the design of streets and buildings shall reinforce safe environments.
   - **The design proposes vertical granite curb along both Third and Grove Streets, and will also provide sidewalks that vary in width from 11.9′ to 14.5′, providing safe access for pedestrians.**

d) That architecture and landscape design shall grow from local climate, topography, history, and building practice.
   - **Using a large portion of the existing building ensures the design will grow from the local climate in an authentic way. The continuance of the feel from Francis Drive is a big part of this projects re-design.**

e) That buildings shall provide their inhabitants with a clear sense of geography and climate through energy efficient methods.
   - **Although the existing building will be used in this project, it is proposed to be completely rehabilitated and reconstructed on the interior, with updated energy and lighting practices. The new buildings are to be built to the current energy code.**

f) That civic buildings and public gathering places shall be provided as locations that reinforce community identity and activity.
   - **Being the rehabilitation of an existing building, its community identity is upheld in addition to the flow created while carrying the architectural theme from Francis Drive**

g) That civic buildings shall be distinctive and appropriate to a role more important than the other buildings that constitute the fabric of the city.
   - **An updated and rehabilitated version of the existing building will clearly be distinctive, and cement its place as a prominent civic building.**

h) That the preservation and renewal of historic buildings shall be facilitated.
   - **Although the existing building is not a historic building, its rehabilitation is in line with the City's vision of preservation and renewal.**

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i) That the harmonious and orderly evolution of urban areas shall be secured through the adoption of these regulations.

- **The harmonious and orderly evolution of the urban area is secured in a profound way through the rehabilitation of 6 Grove Street, by giving it the look and feel of a premium downtown civic space.**

3. Justification for approval of Conditional Use Permits

Given the existing state of the buildings on site at 6 Grove Street and the City's preference for the rehabilitation of existing buildings, along with meeting all site plan criteria, we feel that the proposed design is the best use of space in this area. The project has been modified to remove the 5th floor original contemplated due to structural concerns. To aid in the economics of taking a building like this to a finished state the applicant has purchased additional land from the abutting land owner to construct single family attached townhouses to the rear of the site. In doing so this ties the architecture of the existing building to the architecture created along Francis Drive. This proposal also addresses the parking concern, which was a major conversation point during the initial hearing of this project. This proposal contains enough spaces to service the residential units on site without the need for off-site leasing, while creating off-site public parking to serve its commercial tenants as well as others in the area.

The existing principal building covers 39% of the lot, which is more than our proposed 35.58%, but it does so in a very inefficient manner which makes parking and fire safety into account where that does not exist in the existing condition. Increasing building coverage above 39% is not practical, especially when considering the odd shape of the lot, and the need for on-site parking for the residential units on the upper floors. This proposal, though lacking in coverage, does provide all of the parking to either the side or rear of the lot which is a theme to strive for in the urban zone.

Thank you for your time and attention to this matter, and we hope you look favorably upon the request.

Respectfully Submitted,

BERRY SURVEYING & ENGINEERING

Christopher R. Berry
Principal, President

BERRY SURVEYING & ENGINEERING

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January 17, 2018

City of Dover Planning Board
288 Central Ave
Dover, NH 03820

RE: Proposed mixed-use development
6 Grove Street Residences, LLC
35 Third Street
Waiver Requests

Pursuant to Site Review Regulations 149-19 (Waivers,) Berry Surveying & Engineering (BS&E,) on behalf of 6 Grove Street Residences, LLC, respectfully requests the City of Dover Planning Board waive the following project specific items:

- 149-14 E.(1)(e) All outdoor light fixtures shall be designed, oriented, or shielded to prevent light or glare onto adjacent property or streets.
- 149-15 C. All paving and/or storage shall not be permitted within five (5) feet of any side or rear property line.

Mr. Chairman and Members of the Dover Planning Board,

1. Identification of Waiver Request & Explanation.

149-14 E.(1)(e) requires lighting to be designed and installed in such a way that no light spills onto adjacent properties or streets. Although the submitted lighting design meets the first part of the requirement by limiting any spillover onto adjacent properties, the proposed lighting on the building will create some minor light on both Third and Grove Streets.

149-15 C. requires all pavement to be five (5) feet from any side or rear property lines. In the proposed site plan, there are a few areas where the proposed pavement will be less than 5 feet from the property line in order to accommodate Dover's fire truck turning template.

We are requesting waivers to these items based on the following:

2. Waiver Justification:

- **Specific circumstances relative to the subdivision, or conditions of the land in such site plan, indicate that the waiver will properly carry out the spirit and intent of the regulations.**

  Regarding 149-14 E.(1)(e), based on the location of the existing building, and the requirements of the CBD Transit Oriented Development Sub-District regulations, some light spillover onto the adjacent streets is inevitable with the lighting proposed on the building. However, given that there are existing street lights on Third Street and Grove Street, the proposed lighting on the building will not cause a nuisance, and for that reason it is our opinion that this waiver can be comfortably granted.

  Regarding 149-15 C., the location of the pavement is within 5 feet of the property lines so the proposed site can accommodate Dover's fire truck turning template. If it were to be determined that Dover's ladder truck did not need to be able to traverse the site, the aisle widths could be narrower, and pavement would not be within 5' of the property line. As it stands, however, we would require a waiver to this rule.

Thank you for your time and attention to this matter and we hope you look favorably upon the request.

Respectfully Submitted,

BERRY SURVEYING & ENGINEERING

Christopher R. Berry
Principal, President

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January 17, 2018

City of Dover Planning Department
Attention: Assistant City Planner Donna Benton
288 Central Ave
Dover, NH 03820

RE: Traffic Impact Analysis & Distribution
6 Grove Street Residences
35 Third Street
Dover, NH

Dear Mrs. Benton:

On behalf of 6 Grove Street Residences, LLC, Berry Surveying & Engineering (BS&E) has prepared a Standard Traffic Impact Analysis for the development of 32 Mid-Rise apartment units, 6 Condominium Units and 8,967 square feet of commercial office space at 6 Grove Street.

Proposal & Introduction:

The proposal is to convert an existing building into 32 residential rental units, 6 condominium units and commercial space by removing a portion of it and redeveloping the surrounding site. Commercial space will be on the first floor, and the condo units will be on the second, third, and fourth floors.

The purpose of this analysis is to determine the maximum number of trips coming to and leaving from the proposed site during certain peak periods of the day and week. This information is then used in determining the impact on safety as it relates to the existing roadway infrastructure. The following will be discussed as part of the analysis and is typical for a project of this size pursuant to the Institute of Traffic Engineers (ITE) manual.

- Existing Site Description
- Grove Street and Third Street Descriptions
- Surrounding Roadway Infrastructure
- Existing Trip Generation Potential
- Existing Vehicle Speeds
- Trip Generation
- Trip Distribution
- Sight Distances & Safety Analysis

Specialty Retail Center Peak Hour of Adjacent Street Traffic Peak Hour Saturday

Total Trips	50% Entering	50% Exiting
29.75T	14.88T	14.88T

Warehousing (33,012 Sq.Ft. between 4 Floors) Existing Trip Generation Potential:

Warehousing Peak Hour of Adjacent Street Traffic Peak Hour of Generator AM Weekday

Total Trips	79% Entering	21% Exiting
9.9T	7.82T	2.08T

Warehousing Peak Hour of Adjacent Street Traffic Peak Hour of Generator PM Weekday

Total Trips	25% Entering	75% Exiting
10.56T	2.64T	7.92T

Warehousing Peak Hour of Adjacent Street Traffic Peak Hour Saturday

Total Trips	64% Entering	36% Exiting
4.29T	2.75T	1.54T

General Light Industrial (3 Employees) Existing Trip Generation:

General Light Industrial Peak Hour of Adjacent Street Traffic Peak Hour of Generator AM Weekday

Total Trips	83% Entering	17% Exiting
1.32T	1.10T	0.22T

General Light Industrial Peak Hour of Adjacent Street Traffic Peak Hour of Generator PM Weekday

Total Trips	21% Entering	79% Exiting
1.26T	0.26T	1.00T

General Light Industrial Peak Hour of Adjacent Street Traffic Peak Hour Saturday

Total Trips	47% Entering	53% Exiting
0.15T	0.07T	0.08T

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Existing Site Description:

The existing site has frontage on Grove Street and Third Streets, and contains 31,775 square feet of land (see lot line revision) with a 15,927 square foot, four-story building, as well as a 2,376 square foot garage. There are existing paved driveways off of Grove Street and Third Street, with paved parking areas on the south and west sides of the main building.

Grove Street and Third Street Descriptions:

Grove and Third Streets are both classified as local roads. Grove Street runs north and south between Chestnut Street and a dead end past Third Street. It has a paved width of approximately 37 feet with no curbing or sidewalks in the area of the proposed project. Curbing and sidewalks do exist on both sides on the portion of Grove Street that is north of Third Street.

Third Street runs east and west between Central Ave and Frances Drive, where for all intents and purposes, Third Street becomes a dead end, as travel on to Frances Drive from Third Street is restricted. In the area of the project site, its paved width is approximately 35 feet, and it has curbing and sidewalks on both sides of the street.

Existing Trip Generation Potential:

Using the 9th Edition ITE Trip Generation Manual, we determined the following trip generation potential for the existing site. Land Use Codes (826) Specialty Retail Center, (150) Warehousing, and (110) General Light Industrial were used in deriving the trip generation potential for the existing site. The General Light Industrial Code applies exclusively to the existing 2,376 square foot garage on site.

Specialty Retail Center (5,927 Sq.Ft.) Existing Trip Generation:

Specialty Retail Center Peak Hour of Adjacent Street Traffic Peak Hour of Generator AM Weekday

Total Trips	% Entering	% Exiting
-	-	-

Specialty Retail Center Peak Hour of Adjacent Street Traffic Peak Hour of Generator PM Weekday

Total Trips	44% Entering	56% Exiting
16.06T	7.07T	8.99T

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(603) 332-2863 / (603) 335-4623 FAX
www.BerrySurveying.Com

Combined Existing Trip Generation Potential:

(Combined Volumes) Peak Hour of Adjacent Street Traffic Peak Hour of Generator AM Weekday

Total Trips	79.5% Entering	20.5% Exiting
11.22T	8.92T	2.3T

(Combined Volumes) Peak Hour of Adjacent Street Traffic Peak Hour of Generator PM Weekday

Total Trips	35.8% Entering	64.2% Exiting
27.88T	9.97T	17.91T

(Combined Volumes) Peak Hour of Adjacent Street Traffic Peak Hour Saturday

Total Trips	51.8% Entering	48.2% Exiting
34.19T	17.7T	16.5T

It is assumed that there is a fairly even split between trips going north on Grove Street, and east on Third Street. Grove and Third Streets have dead ends to the south and west respectively, and therefore see little to no traffic coming from the existing site.

Existing Vehicular Speeds:

Grove Street and Third Street are both governed by the city-wide speed limit of 30 MPH. It has been observed by Berry Surveying & Engineering that speeds in the area of the project site are not excessive, and for the purposes of this study it is assumed that the majority of operators obey speed limits.

Trip Generation:

The 9th Edition ITE Trip Generation Manual was used to determine the volume of trips, as well as the percentage of entrance-to-exit traffic experienced at the AM & PM Peak hour between 7 and 9 AM and 4 and 6 PM. In addition, Saturday peak hours of the generator are estimated with ADV provided in the foot notes for all. Land Use Codes (223) Mid-Rise Apartment, (230) Residential Condominium/Townhouse, and (814) Specialty Retail Center were used in deriving the trip generation for the project development. Trip generation for residential uses were then modified based on the Transportation Research Board's Transit Cooperative Research Program Report 128 entitled *Effects of TOD on Housing, Parking, and Travel,* which states that for a community with access to a small transit system, 72% of commuters are commuters by automobile. Therefore, 72% of the calculated ITE trip generation was used in each case for residential units.

- Coast Bus is available at the intersection of Third Street & Chestnut

- The Transportation Lot and public train system is also at the intersection of Third Street and Chestnut.

Residential Trip Generation (38 Units Total):

Mid-Rise Apartment Peak Hour of Adjacent Street Traffic Peak Hour of Generator AM Weekday **(32 Units)**

Total Trips	31% Entering	69% Exiting
6.91T	2.14T	4.77T

Mid-Rise Apartment Peak Hour of Adjacent Street Traffic Peak Hour of Generator PM Weekday **(32 Units)**

Total Trips	58% Entering	42% Exiting
8.99T	5.21T	3.78T

Mid-Rise Apartment Peak Hour of Adjacent Street Traffic Peak Hour Saturday **(32 Units)**

Total Trips	57% Entering	43% Exiting
9.22T	5.26	3.96

Residential Condominium/Townhouse Peak Hour of Adjacent Street Traffic Peak Hour of Generator AM Weekday **(6 Units)**

Total Trips	17% Entering	83% Exiting
2.64T	0.45T	2.19T

Residential Condominium/Townhouse Peak Hour of Adjacent Street Traffic Peak Hour of Generator PM Weekday **(6 Units)**

Total Trips	67% Entering	33% Exiting
3.12T	2.09T	1.03T

Residential Condominium/Townhouse Peak Hour of Generator Peak Hour Saturday **(6 Units)**

Total Trips	54% Entering	46% Exiting
2.82T	1.52	1.30

Specialty Retail Center (8,967.05 Sq. Ft.) Trip Generation:

Specialty Retail Center Peak Hour of Adjacent Street Traffic Peak Hour of Generator AM Weekday

Total Trips	% Entering	% Exiting
-	-	-

Specialty Retail Center Peak Hour of Adjacent Street Traffic Peak Hour of Generator PM Weekday

Total Trips	44% Entering	56% Exiting
24.30T	10.69T	13.61T

Specialty Retail Center Peak Hour of Adjacent Street Traffic Peak Hour Saturday

Total Trips	50% Entering	50% Exiting
35.00T	17.50T	17.50T

Combined Trip Generation:

(Combined Volumes) Peak Hour of Adjacent Street Traffic Peak Hour of Generator AM Weekday

Total Trips	28% Entering	72% Exiting
10.03T	2.81T	7.22T

(Combined Volumes) Peak Hour of Adjacent Street Traffic Peak Hour of Generator PM Weekday

Total Trips	51% Entering	49% Exiting
36.41T	18.57T	17.84T

(Combined Volumes) Peak Hour of Adjacent Street Traffic Peak Hour Saturday

Total Trips	52% Entering	48% Exiting
47.04T	24.46T	22.58T

Compared to the potential trip generation for the existing site, the proposed project will generate roughly the same amount of traffic during weekday peak hours. Weekend peak hours will experience a higher volume than the existing potential by about 13 trips per hour, which is to be expected, based on the construction of residential units.

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Trip Distribution Analysis:

For this analysis it is assumed that the project is a one hundred percent generator. There are no other businesses within the area or other traffic draws of any kind that would create any linking of trips. Additionally this proposed project has minimal pass by draw. All trips coming to and leaving the site are dedicated for this project development. For this reason distribution of the generated traffic at the project entrance is isolated from the volume of pass by trips, and are all turning into or out of the project site. The entering / exiting distribution is provided by the ITE land use code tables formerly mentioned.

Sight Distance & Safety Analysis:

The proposed driveways will be constructed in the same location as the existing driveways. Sight distance and driveway alignment are the two determining factors in placement. From the Grove Street driveway, sight distance to the north is unobstructed for well over 400 feet, and from the Third Street Driveway, sight distance to the east is unobstructed for well over 400 feet. The standard sight distance required by NHDOT is 400 feet in cases where the Geometric Design Manual would not require more. In this instance both sight distances meet the design required warrant as well as the standard practice of NHDOT of 400 feet. There are no improvements required to maintain this site distance.

Sight distances to the south on Grove Street and the west on Third Street were not analyzed, as both driveways are less than 400 feet from dead ends.

Respectfully Submitted,

BERRY SURVEYING & ENGINEERING

Christopher R. Berry SIT
Principal, President

Kenneth A. Berry, PE, LLS,
CPSWQ, CPESC, CESSWI
Principal, VP-Technical Operations

BERRY SURVEYING & ENGINEERING

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www.BerrySurveying.Com

Fiscal Impact Analysis

For

6 Grove Street
Tax Map 31, Lot 14

6 Grove Street Residences, LLC
35 Third Street
Dover, NH

Prepared By

Berry Surveying & Engineering
335 Second Crown Point Road
Barrington, NH 03825
603-332-2863

File Number
DB2016-090

Introduction

6 Grove Street Residences, LLC has submitted a mixed-use site plan for 32 residential rental units in one building on Tax Map 31, Lot 14. Six separate town house units are also proposed. The design proposes the use of an existing building, with associated parking and site improvements.

With respect to Chapter 149, we submit the following:

Attendance at Public Schools: In a study published in 2012 by New Hampshire Housing Finance Authority (NHHFA) the average rate derived for students per unit with 2 bedrooms or less in multi-family buildings is 0.05. 6 Grove Street Residences, LLC is proposing 38 residential units which fall into the multi-family category, all of which will have 2 or fewer bedrooms. As noted in a study submitted by the Housing Authority in March 2012, student enrollment is on the rise in Dover compared to the average around the state.

There are no outside forces due to marketing, demographic or the surrounding neighborhood to influence a higher or lower rate than provided in the NHHFA study.

Given the anticipated end user as mentioned above, offset by the known increase in enrollment specific to Dover, a rate of .08 was used in this analysis.

$$0.08 \times 38 = 3.04 \sim (3)$$

It should be noted that this number would be dispersed over entire school age system.

Increase in Vehicular Traffic: Based on the Transportation Research Board's Transit Cooperative Research Program Report 128 entitled *Effects of TOD on Housing, Parking, and Travel,* residential developments in a TOD are made up of 72% automobile commuters. In calculating trip generation for the residential portion of this development, ITE Code 223 (Mid-rise Apartment) and ITE Code 230 (Residential Condominium/Townhouse) were used, and 72% of the trips calculated were used for the purposes of this project's trip generation. For trip generation for the commercial portion of this development, ITE Code 826 (Specialty Retail Center) was used.

Total AM Peak Rate ~ **10.03T.** 28% entering and 72% exiting.
Residential PM Peak Rate ~ **12.11T.** 58% entering, 42% exiting.
Commercial PM Peak Rate ~ **24.30T.** 61% entering, 39% exiting.
Total PM Peak Rate ~ **36.41T.** 51% entering, 49% exiting.

Change in Number of Legal Residents: It is assumed that all occupants would be residents with two people per unit. 76 resident increases. (79 if children are included)

Increases in Municipal Costs: This project is proposed to be a served by a private driveway. The Department of Public Works will not have the responsibility of winter or summer maintenance, or general maintenance typically required as long term expense. Expenses related to the Fire department and Police department are proposed to be the same as any typical development

project. The project site will be on public sewer and water system. It should be noted that there are impact and investment fees associated with each residential structure built within the project.

Load on Public Utilities or future demand for them: As noted above, the public utilities are limited to city sewer and water. The proposed units are to be built using the current building and energy code. The load generated by these new units is anticipated to be less demand on the system than comparable units within the neighborhood's existing housing stock.

Public Safety: The project will not have an adverse effect on public safety. Normal residential uses, similar to those of the surrounding neighborhood, are anticipated. Auto traffic safety is enhanced through the installation of additional stop signs at the intersection of Third and Grove, making it a four-way stop. Restoration of existing and creation of additional sidewalks along Third and Grove Streets will improve pedestrian safety.

Changes in Tax Revenue: The existing tax rate is 26.29 dollars per thousand of value. The estimated cost of improvements is approximately $2,000,000, generating tax revenue of at least $52,000. Currently the assessment of the property is limited two buildings in need of rehabilitation.

Changes in Surface Drainage: Please find drainage analysis submitted and presently under review by the Dover Engineering Dept. Flows and discharge points are not proposed to change under the post development build out.

Increased Consumption of Ground Water: There is no proposed increase in ground water consumption given the public water supply system.

Increased Refuse Disposal: Refuse disposal is to be handled at through private trash pickup.

Pollution of Water or Air: Given the current lack of a stormwater treatment system, the proposed underground sand filter treatment system will make an improvement by removing pollutants from the water. There are no known air quality issues related with normal multi-family uses. Uses will be similar to those currently found in the area.

Land Erosion and Loss of Tree Cover: This project proposes to increase impervious area by only 11,059 square feet. Reducing the size of the building footprint offsets most of the increase in paved impervious areas. Additionally, landscaping is proposed throughout the project site and on the City's ROW in the form of street trees. An erosion control plan and an operation and maintenance plan have been developed and are being reviewed by the Engineering Department. Much of the general character of the existing site will remain the same, preventing any major changes in the landscape, thus minimizing the risk of land erosion.

Disturbance to other aspects of the natural ecology: This project is being developed in a way that minimizes its impact to local natural ecology. By using the existing building and offsetting the increased paved area by removing a large portion of the existing building, we are ensuring the natural ecology of the area remains unscathed.

Blocking Views: The project is to use the existing building on site, and although one story is proposed to be added, the height difference will not change the view of any abutting buildings.

Harmony with Surrounding Developments: The surrounding properties are a mix of commercial, single family, multi-family, and duplex units. The proposed project would keep with the development style of the surrounding area.

Location of Utilities: All utilities required for this project are either at Third and/or Maple Streets, or are proposed to be private. No utilities are required to be brought to the site. All utilities will be underground to the proposed structures.

Respectfully submitted,

Berry Surveying & Engineering

terrain
planning & design llc

General Plant Maintenance Guide

General Plant Bed Maintenance:

- All plant maintenance should be performed by a qualified horticulturalist or licensed arborist. Cleaning the dead material out of the planting bed in the fall helps keep litter from building up around the plants and in some cases killing the plants. Watering the first year during dry periods will help get the plants established. Mulching every year is not necessary. Raking the old mulch and turning it over is all that is needed. When necessary only install one inch of mulch and do not place the mulch closer than 3" to the trunks or stems of woody plants.

Trees

- The first year watering during dry periods will be necessary.
- 3" inches of mulch maybe used. The mulch should be kept 3 inches from the trunk.
- Fertilizing is not necessary for the first year. Fertilizing in subsequent years only when and if the foliage is looking weak.
- Fertilization should occur prior to Mat 31st or after trees have dropped their leaves for the year.
- Prune dead wood once a year.
- Depending on the amount of compaction the bed area receives, deep root aeration may be needed over time

Woody Shrubs

- The first year watering during dry periods will be necessary.
- 3" inches of mulch maybe used. The mulch should be kept 3 inches from the stems.
- Fertilizing is not necessary for the first year. Fertilizing in subsequent years only when and if the foliage is looking weak.
- Fertilization should occur prior to Mat 31st or after shrubs have dropped their leaves or gone dormant for the year.
- Prune dead wood once a year.

Grasses

- Grasses only need to be clipped back at the end of the growing season and all the clippings removed from the area.
- Do not over mulch. Too much mulch will prohibit the grass from developing into a strong clump.

Perennials

- All perennials need to be pruned back after the first or second hard frost. A two-step method; first dead head all the flower heads and let drop to the ground for re-seeding. Second cut the stems back to 3" above the ground and remove the stem and leaf litter and place in compost. Do not over mulch. Too much mulch will prohibit the growth and development
- Fertilizing perennials once in the spring with a low phosphate fertilizer will help the plants to get started in the spring.

RECEIVED
Planning Office
JAN 18 2018
Dover, New Hampshir

www.terrainplanning.com 311 kast hill road hopkinton nh 03229 T:603-491-2322

MIXED USE SITE PLAN
FOR
6 GROVE STREET RESIDENCES, LLC
6 GROVE STREET
DOVER, N.H.
TAX MAP 31, LOT 14

TABLE OF CONTENTS:

SHEET 1 ~ NEIGHBORHOOD PLAN
SHEET 2 ~ EXISTING CONDITIONS PLAN
SHEET 3 ~ DEMOLITION PLAN AND PAVEMENT EXTENTS PLAN
SHEET 4 ~ SITE PLAN
SHEET 5 ~ GRADING PLAN
SHEET 6 ~ DRAINAGE PLAN
SHEET 7 ~ P-101 SAND FILTER DETAILS
SHEET 8 ~ EROSION & SEDIMENT CONTROL PLAN
SHEET 9 ~ UTILITY PLAN
SHEET 10 ~ UTILITY PLAN & PROFILE
SHEET 11 ~ LANDSCAPING PLAN
SHEET 12 ~ LIGHTING PLAN
SHEET 13 ~ E101-SEDIMENT & EROSION DETAILS
SHEET 14 ~ E102-SEDIMENT & EROSION DETAILS
SHEET 15 ~ D101 DRAINAGE DETAILS
SHEET 16 ~ C101-CONSTRUCTION DETAILS
SHEET 17 ~ C102-CONSTRUCTION DETAILS
SHEET 18 ~ C103-CONSTRUCTION DETAILS
SHEET 19 ~ L101-LANDSCAPING DETAILS
SHEET 20 ~ U101-UTILITY DETAILS
SHEET 21 ~ U102-UTILITY DETAILS

NOTE:

BERRY SURVEYING & ENGINEERING HAS PREPARED AN INSPECTION & MAINTENANCE MANUAL AS PART OF THIS PROJECTS DOCUMENTATION. ALL USERS ARE BOUND TO THIS DOCUMENT AS PART OF THE APPROVAL OF THE PLANNING BOARD. COPIES OF THE YEARLY INSPECTIONS ARE TO BE DELIVERED TO THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT.

OWNER: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

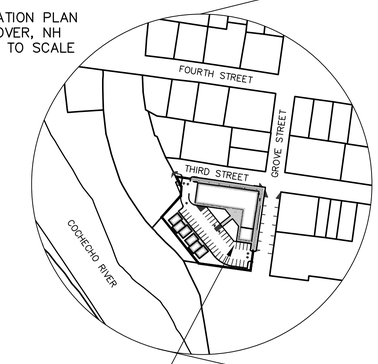
APPLICANT: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

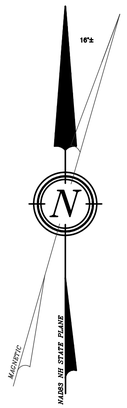
SURVEYOR OF RECORD: KENNETH A. BERRY, PE, LLS
CPESC, CESSWI, CPSWQ
BERRY SURVEYING & ENGINEERING
335 CROWN POINT ROAD
BARRINGTON, NH 03825
(603) 332-2863

ENGINEER OF RECORD: KENNETH A. BERRY, PE, LLS
CPESC, CESSWI, CPSWQ
BERRY SURVEYING & ENGINEERING
335 CROWN POINT ROAD
BARRINGTON, NH 03825
(603) 332-2863

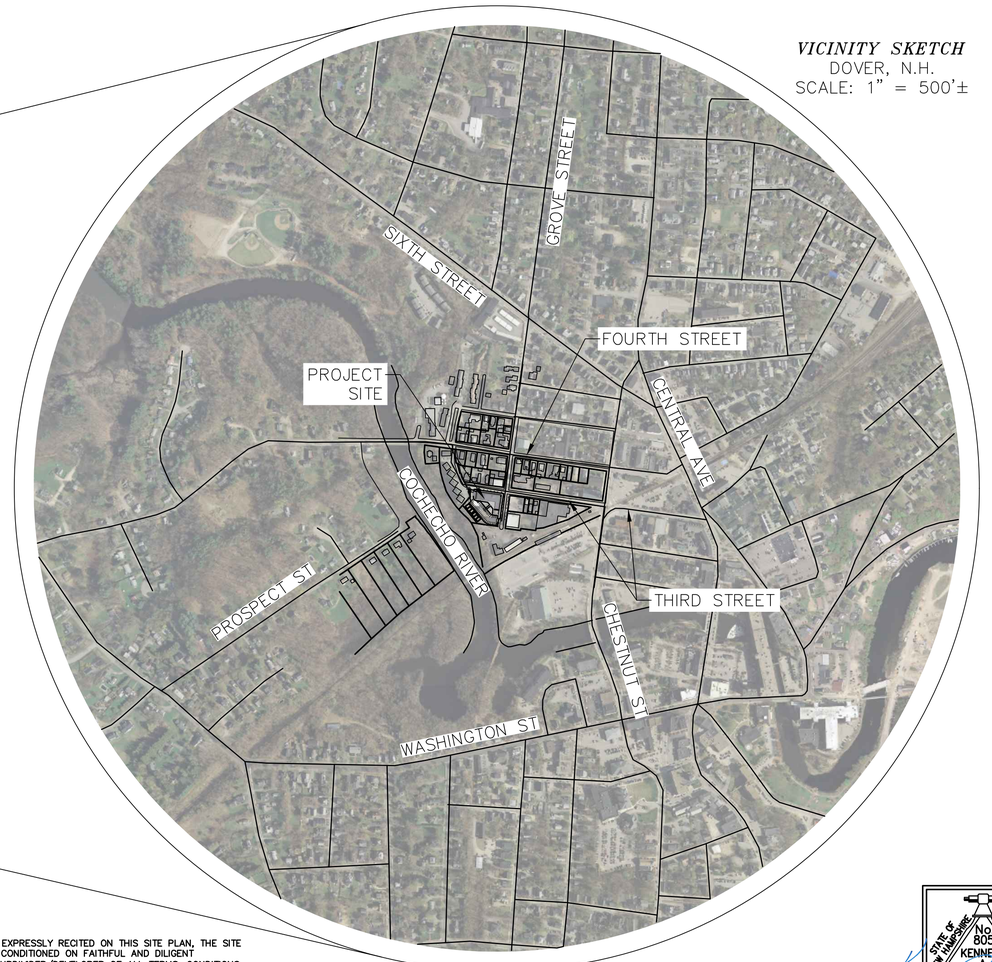
WETLAND SCIENTIST: STONEY RIDGE ENVIRONMENTAL
CYNTHIA M. BALCIUS, CSS, CWS, CPESC
229 PARKER MOUNTAIN ROAD
ALTON, NH 03809
603-776-5825

LOCATION PLAN
DOVER, NH
NOT TO SCALE





VICINITY SKETCH
DOVER, N.H.
SCALE: 1" = 500'±



REQUIRED PERMITS:

1.) NHDES SHORELAND IMPACT PERMIT.
2.) SEWER DISCHARGE PERMIT.

GENERAL PLAN SET NOTES:

1.) 11x17" PLANS ARE HALF THE PUBLISHED SCALE.

2.) ALL PLANS ARE CONSIDERED TO BE NOT FOR CONSTRUCTION UNLESS THEY CONTAIN THE APPROVAL STAMP OF THE CITY OF DOVER.

WHETHER OR NOT OTHERWISE EXPRESSLY RECITED ON THIS SITE PLAN, THE SITE PLAN APPROVAL GRANTED IS CONDITIONED ON FAITHFUL AND DILIGENT ADHERENCE BY THE OWNER/SUBDIVIDER/DEVELOPER OF ALL TERMS, CONDITIONS, PROVISIONS AND SPECIFICATIONS OF THE CITY OF DOVER LAND SITE PLAN REGULATIONS AS AMENDED OR AS MAY LATER BE AMENDED, IN EFFECT ON THE DATE OF APPROVAL, UNLESS OR EXCEPT INSOFAR AS EXPRESSLY WAIVED, IN ANY PARTICULAR, BELOW. NON - ADHERENCE MAY RESULT IN A REVOCATION OF APPROVAL. ANY VARIATION FROM THE APPROVED PLAN WILL REQUIRE A RESUBMISSION FOR SITE PLAN APPROVAL.

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 805 KENNETH A. BERRY SIGNATURE

STATE OF NEW HAMPSHIRE KENNETH A. BERRY No. 14241 LICENSED PROFESSIONAL ENGINEER

DOVER PLANNING #16-31C

REVISION	DATE	DESCRIPTION

SITE PLAN
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 - 090

EXISTING LEGEND:

- IRON BOUND ~TBS~
- IRON BOUND ~FND~
- GRANITE BOUND ~FND~
- STONE BOUND ~FND~
- UTILITY POLE
- GUY WIRE
- CURB STOP
- GATE VALVE
- GAS VALVE
- FIRE HYDRANT
- CATCH BASIN
- SEWER MANHOLE
- SINGLE POST SIGN
- TEST PIT
- TREE
- BUILDING SETBACK LINE
- EASEMENT LINE
- GAS LINE
- WATER LINE
- SEWER LINE
- OVERHEAD UTILITIES
- HIGHWAY FENCE
- SOILS LINE
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- EXISTING CULVERT PIPE
- FLOOD ZONE
- 100' CONSERVATION DISTRICT
- 50' PRIMARY BUILDING SETBACK
- 150' NATURAL WOODLAND BUFFER
- 250' SHORELAND PROTECTION

PROPOSED LEGEND:

- UTILITY POLE
- UTILITY PADS
- SEWER MANHOLE
- WATER SHUT OFF / VALVE
- HYDRANT
- THRUST BLOCK
- LIGHTING
- CATCH BASIN / DRAIN MANHOLE
- SIGNAGE
- LAMP
- CONTOUR MINOR
- CONTOUR MAJOR
- SPOT GRADE
- CULVERT W/ FLARED END
- SECTION (F.E.S.)
- DETAIL SHEET / DETAIL
- TREE LINE
- CENTER LINE
- UNDERGROUND UTILITY
- TRANSFORMER / J.BOX
- UNDER DRAIN
- WATER LINE
- SEWER LINE
- GAS LINE
- SILT FENCE / EROSION MIX BERM
- FILTREXX SILT SOXX (8" or 12" AS NOTED)
- ORANGE CONSTRUCTION PERIMETER FENCE

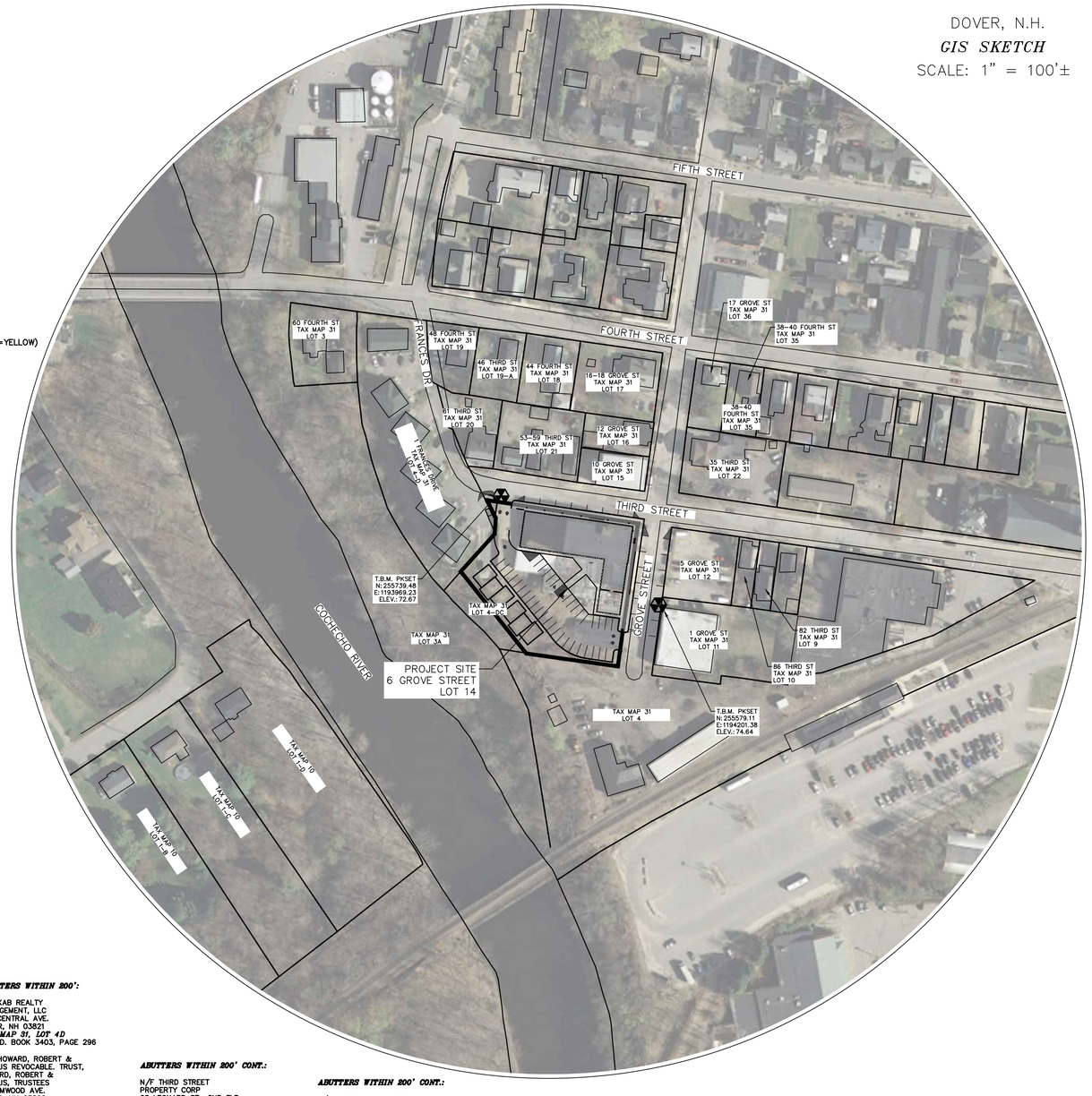
ABBREVIATION LEGEND:

S.G.C.	SLOPED GRANITE CURB
V.G.C.	VERTICAL GRANITE CURB
E.O.P.	EDGE OF PAVEMENT
B.C.C.	BITUMINOUS CONCRETE CURB
BITUM.	BITUMINOUS
E.O.P.	EDGE OF PAVEMENT
E.S.H.W.T	ESTIMATE SEASONAL HIGH WATER TABLE
TYP.	TYPICAL
T. BLOCK	THRUST BLOCK
CONC.	CONCRETE
U.G.E.	UNDER GROUND ELECTRIC / UTILITY
U.D.	UNDER DRAIN
HDPE	HIGH DENSITY POLYETHYLENE
RCP	REINFORCED CONCRETE PIPE
F.G.	FINISHED GRADE
E.G.	EXISTING GRADE
T.W.	TRAVELED WAY
T.B.R.	TO BE REMOVED
'/,	FEET / FEET

{ } SSL ( ) ~ {SIZE} SINGLE SOLID LINE (COLOR W=WHITE, Y=YELLOW)
{ } DSL ( ) ~ {SIZE} DOUBLE SOLID LINE (COLOR W=WHITE, Y=YELLOW)
{ } SSB ( ) ~ {SIZE} SINGLE SOLID W/ BROKEN LINE (COLOR W=WHITE, Y=YELLOW)
{ } SBL ( ) ~ {SIZE} SINGLE BROKEN LINE (COLOR W=WHITE, Y=YELLOW)
{ } DBL ( ) ~ {SIZE} DOUBLE BROKEN LINE (COLOR W=WHITE, Y=YELLOW)

SIGN ID NUMBER	SIGN SIZE (WIDTH x HEIGHT)	SIGN	TEXT DIMENSIONS	NO. OF SIGNS	BACKGROUND	LEGEND	BORDER	POST SIZE & QUANTITY
R1-1	30"x30"	STOP	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT - FHWA	4	RED	WHITE	WHITE	SQUARE (4)
R7-8	12"x18"	RESERVED PARKING	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT - FHWA	2	WHITE	GREEN W/ WHITE SYMBOL ON BLUE	RED	SQUARE (2)
R7-8a	12"x6"	VAN ACCESSIBLE	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT - FHWA	1	WHITE	GREEN	GREEN	SQUARE (1)
R5-1	30"x30"	DO NOT ENTER	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT - FHWA	2	WHITE W/ RED SYMBOL	WHITE	WHITE	SQUARE (2)
R6-1L	36"x12"	ONE WAY	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT - FHWA	1	BLACK W/ WHITE ARROW	BLACK	WHITE	SQUARE (2)
R8-31	12"x18"	NO PARKING FIRE LANE	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT - FHWA	1	WHITE	RED	RED	SQUARE (1)
R3-5R	30"x36"	ONLY	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT - FHWA	1	WHITE	BLACK	BLACK	SQUARE (1)

DOVER, N.H.
GIS SKETCH
SCALE: 1" = 100'±



ABUTTERS WITHIN 200':

N/F KAB REALTY MANAGEMENT, LLC
686 CENTRAL AVE.
DOVER, NH 03821
TAX MAP 31, LOT 4D
S.C.R.D. BOOK 3403, PAGE 296

N/F HOWARD, ROBERT & PHYLLIS REVOCABLE. TRUST, HOWARD, ROBERT & PHYLLIS, TRUSTEES
18 ELMWOOD AVE.
DOVER, NH 03820
TAX MAP 31, LOT 20
S.C.R.D. BOOK 3288, PAGE 441

N/F THIRD STREET TERRACE CONDOMINIUMS, 53 THIRD STREET, LLC
277 MAIN STREET
DURHAM, NH 03824
TAX MAP 31, LOT 21
S.C.R.D. BOOK 3446, PAGE 119

N/F 10 GROVE STREET, LLC
10 GROVE STREET, UNIT A
DOVER, NH 03820
TAX MAP 31, LOT 15
S.C.R.D. BOOK 4388, PAGE 911

N/F ABK REALTY MANAGEMENT, LLC
35 THIRD STREET
DOVER, NH 03820-3316
TAX MAP 31, LOT 22
S.C.R.D. BOOK, 3689, PAGE 49

ABUTTERS WITHIN 200' CONT.:

N/F THIRD STREET PROPERTY CORP
68 LEONARD ST., 2ND FLR
BELMONT, MA 02178
TAX MAP 31, LOT 12
S.C.R.D. BOOK 1897, PAGE 715

N/F ONE GROVE STREET, LLC
P.O. BOX 516
DOVER, NH 03821-0516
TAX MAP 31, LOT 11
S.C.R.D. BOOK 3684, PAGE 740

N/F SPRINT COMMUNICATIONS CO.
C/O PROP TAX DEPT.
P.O. BOX 12913
SHAWNEE MISSION, KS 66282-2913
TAX MAP 31, LOT 4LSE
S.C.R.D. BOOK 1703, PAGE 537

N/F EBERT, JOSEPH ARTHUR & MARINA A.
3 FRANCES DRIVE
DOVER, NH 03820
TAX MAP 31, LOT 4DC
S.C.R.D. BOOK 3496, PAGE 707

ABUTTERS WITHIN 200' CONT.:

N/F ERNEST 39 HOLDING, LLC
26 TIDEWATER FARM ROAD
DOVER, NH 03821
TAX MAP 31, LOT 10-1
S.C.R.D. BOOK 4055, PAGE 992

N/F GRASS, ARTHUR
82 THIRD STREET
DOVER, NH 03820
TAX MAP 31, LOT 9
S.C.R.D. BOOK 1271, PAGE 604

N/F RIELLY, BERNARD R.
38 FOURTH ST
DOVER, NH 03820
TAX MAP 31, LOT 35
S.C.R.D. BOOK 1893, PAGE 13

N/F MIZENER, MICHAEL W.
17 GROVE STREET
DOVER, NH 03820
TAX MAP 31, LOT 36
S.C.R.D. BOOK 4271, PAGE 18

ABUTTERS WITHIN 200' CONT.:

N/F EMERY, THOMAS H.
2726 SHELTER ISLAND #279
SAN DIEGO, CA 92106
TAX MAP 31, LOT 17
S.C.R.D. BOOK 3190, PAGE 451

N/F BOHAN, RICHARD P. & K. KATHERINE TRUSTEES
R & K BOHAN FAMILY REV. TRUST
125 PERKINS ROAD
MADBURY, NH 03823
TAX MAP 31, LOT 18
S.C.R.D. BOOK 4078, PAGE 103

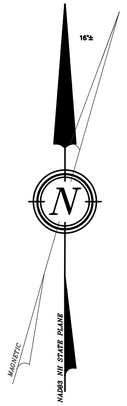
N/F BUNGERT, ADAM E.
46 FOURTH STREET
DOVER, NH 03820
TAX MAP 31, LOT 19A
S.C.R.D. BOOK 4028, PAGE 155

ABUTTERS WITHIN 200' CONT.:

N/F DECEW, JUDSON & HUSSEY, SEAN
P.O. BOX 178
DOVER, NH 03821
TAX MAP 31, LOT 16
S.C.R.D. BOOK 3028, PAGE 781

N/F BENKOSKY, MATTHEW
459 PACKERS FALLS ROAD
LEE, NH 03861
TAX MAP 31, LOT 19
S.C.R.D. BOOK 4412, PAGE 962

N/F CITY OF DOVER
288 CENTRAL AVE.
DOVER, NH 03820-4169
TAX MAP 31, LOT 3A
S.C.R.D. BOOK 1714, PAGE 396



DOVER PLANNING #16-31C

REVISION	DATE	DESCRIPTION

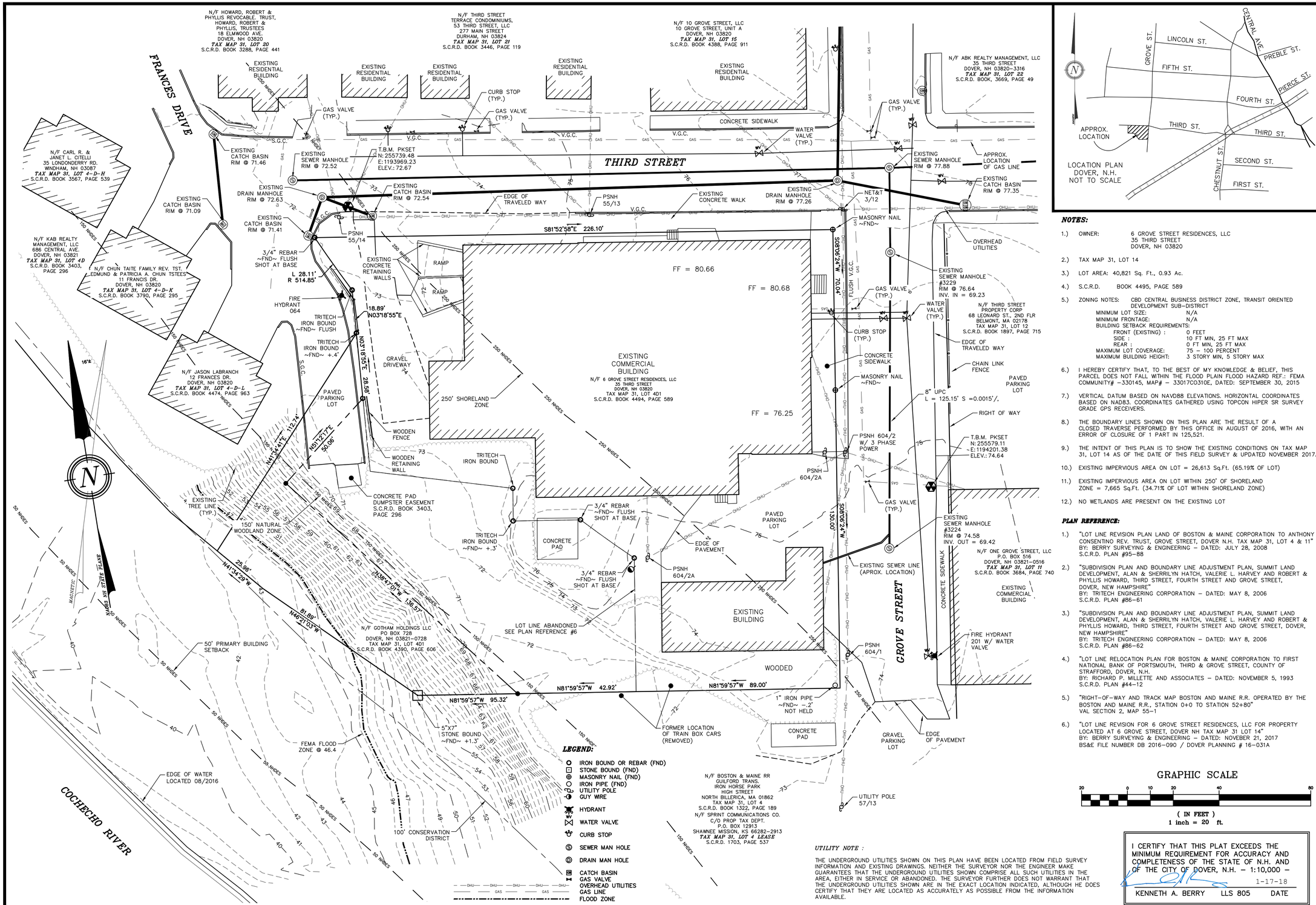
NEIGHBORHOOD PLAN
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 - 090

STATE OF NEW HAMPSHIRE — NO. 805 — LICENSED LAND SURVEYOR — KENNETH A. BERRY — SIGNATURE

SHEET 1 OF 21



NOTES:

1.) OWNER: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

2.) TAX MAP 31, LOT 14

3.) LOT AREA: 40,821 Sq. Ft., 0.93 Ac.

4.) S.C.R.D. BOOK 4495, PAGE 589

5.) ZONING NOTES: CBD CENTRAL BUSINESS DISTRICT ZONE, TRANSIT ORIENTED DEVELOPMENT SUB-DISTRICT

MINIMUM LOT SIZE:	N/A
MINIMUM FRONTAGE:	N/A
BUILDING SETBACK REQUIREMENTS:	TAX MAP 31, LOT 12
FRONT (EXISTING) :	0 FEET
SIDE :	10 FT MIN, 25 FT MAX
REAR :	0 FT MIN, 25 FT MAX
MAXIMUM LOT COVERAGE:	75 – 100 PERCENT
MAXIMUM BUILDING HEIGHT:	3 STORY MIN, 5 STORY MAX

6.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE & BELIEF, THIS PARCEL DOES NOT FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF.: FEMA COMMUNITY# –330145, MAP# – 33017C0310E, DATED: SEPTEMBER 30, 2015

7.) VERTICAL DATUM BASED ON NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD83. COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

8.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN AUGUST OF 2016, WITH AN ERROR OF CLOSURE OF 1 PART IN 125,521.

9.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS ON TAX MAP 31, LOT 14 AS OF THE DATE OF THIS FIELD SURVEY & UPDATED NOVEMBER 2017.

10.) EXISTING IMPERVIOUS AREA ON LOT = 26,613 Sq.Ft. (65.19% OF LOT)

11.) EXISTING IMPERVIOUS AREA ON LOT WITHIN 250' OF SHORELAND ZONE = 7,665 Sq.Ft. (34.71% OF LOT WITHIN SHORELAND ZONE)

12.) NO WETLANDS ARE PRESENT ON THE EXISTING LOT

PLAN REFERENCE:

1.) "LOT LINE REVISION PLAN LAND OF BOSTON & MAINE CORPORATION TO ANTHONY CONSENTINO REV. TRUST, GROVE STREET, DOVER N.H. TAX MAP 31, LOT 4 & 11" BY: BERRY SURVEYING & ENGINEERING – DATED: JULY 28, 2008 S.C.R.D. PLAN #95–88

2.) "SUBDIVISION PLAN AND BOUNDARY LINE ADJUSTMENT PLAN, SUMMIT LAND DEVELOPMENT, ALAN & SHERRILYN HATCH, VALERIE L. HARVEY AND ROBERT & PHYLLIS HOWARD, THIRD STREET, FOURTH STREET AND GROVE STREET, DOVER, NEW HAMPSHIRE" BY: TRITECH ENGINEERING CORPORATION – DATED: MAY 8, 2006 S.C.R.D. PLAN #86–61

3.) "SUBDIVISION PLAN AND BOUNDARY LINE ADJUSTMENT PLAN, SUMMIT LAND DEVELOPMENT, ALAN & SHERRILYN HATCH, VALERIE L. HARVEY AND ROBERT & PHYLLIS HOWARD, THIRD STREET, FOURTH STREET AND GROVE STREET, DOVER, NEW HAMPSHIRE" BY: TRITECH ENGINEERING CORPORATION – DATED: MAY 8, 2006 S.C.R.D. PLAN #86–62

4.) "LOT LINE RELOCATION PLAN FOR BOSTON & MAINE CORPORATION TO FIRST NATIONAL BANK OF PORTSMOUTH, THIRD & GROVE STREET, COUNTY OF STRAFFORD, DOVER, N.H. BY: RICHARD P. MILLETTE AND ASSOCIATES – DATED: NOVEMBER 5, 1993 S.C.R.D. PLAN #44–12

5.) "RIGHT–OF–WAY AND TRACK MAP BOSTON AND MAINE R.R. OPERATED BY THE BOSTON AND MAINE R.R., STATION 0+0 TO STATION 52+80" VAL SECTION 2, MAP 55–1

6.) "LOT LINE REVISION FOR 6 GROVE STREET RESIDENCES, LLC FOR PROPERTY LOCATED AT 6 GROVE STREET, DOVER NH TAX MAP 31 LOT 14" BY: BERRY SURVEYING & ENGINEERING – DATED: NOVEBER 21, 2017 BS&E FILE NUMBER DB 2016–090 / DOVER PLANNING # 16–031A

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

UTILITY NOTE :

THE UNDERGROUND UTILITIES SHOWN ON THIS PLAN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. NEITHER THE SURVEYOR NOR THE ENGINEER MAKE GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

I CERTIFY THAT THIS PLAT EXCEEDS THE MINIMUM REQUIREMENT FOR ACCURACY AND COMPLETENESS OF THE STATE OF N.H. AND OF THE CITY OF DOVER, N.H. – 1:10,000 –

1-17-18

KENNETH A. BERRY LLS 805 DATE

DOVER PLANNING #16–31C

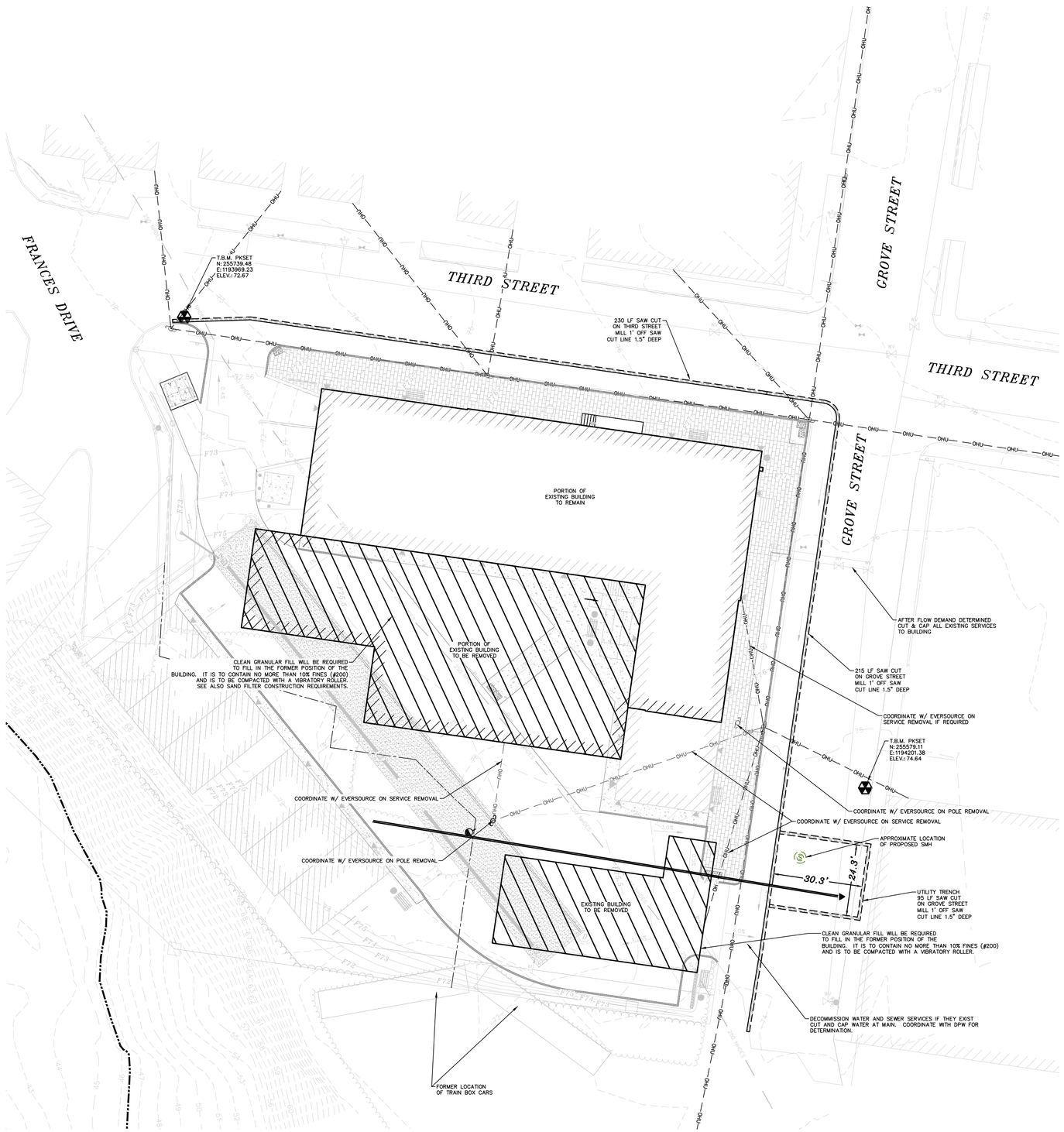
REVISION	DATE	DESCRIPTION

EXISTING CONDITIONS PLAN
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 – 090

STATE OF NEW HAMPSHIRE NO. 805 KENNETH A. BERRY LICENSED LAND SURVEYOR
SIGNATURE



NOTES:

1.) THE INTENT OF THIS PLAN SET IS TO DEMONSTRATE THE LIMITS OF CONSTRUCTION FOR THE PROPOSED SITE PLAN.

2.) CURRENT OWNER: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

3.) APPLICANT: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

4.) TAX MAP 31, LOT 14 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS.

5.) LOT AREA: 46,238 Sq. Ft., 1.06 Ac.

6.) S.C.R.D. BOOK 4199, PAGE 508

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

DOVER PLANNING #16-31C

REVISION	DATE	DESCRIPTION

DEMO PLAN AND PAVEMENT EXTENTS
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 - 090

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

SHEET 3 OF 21

GRAPHIC SCALE

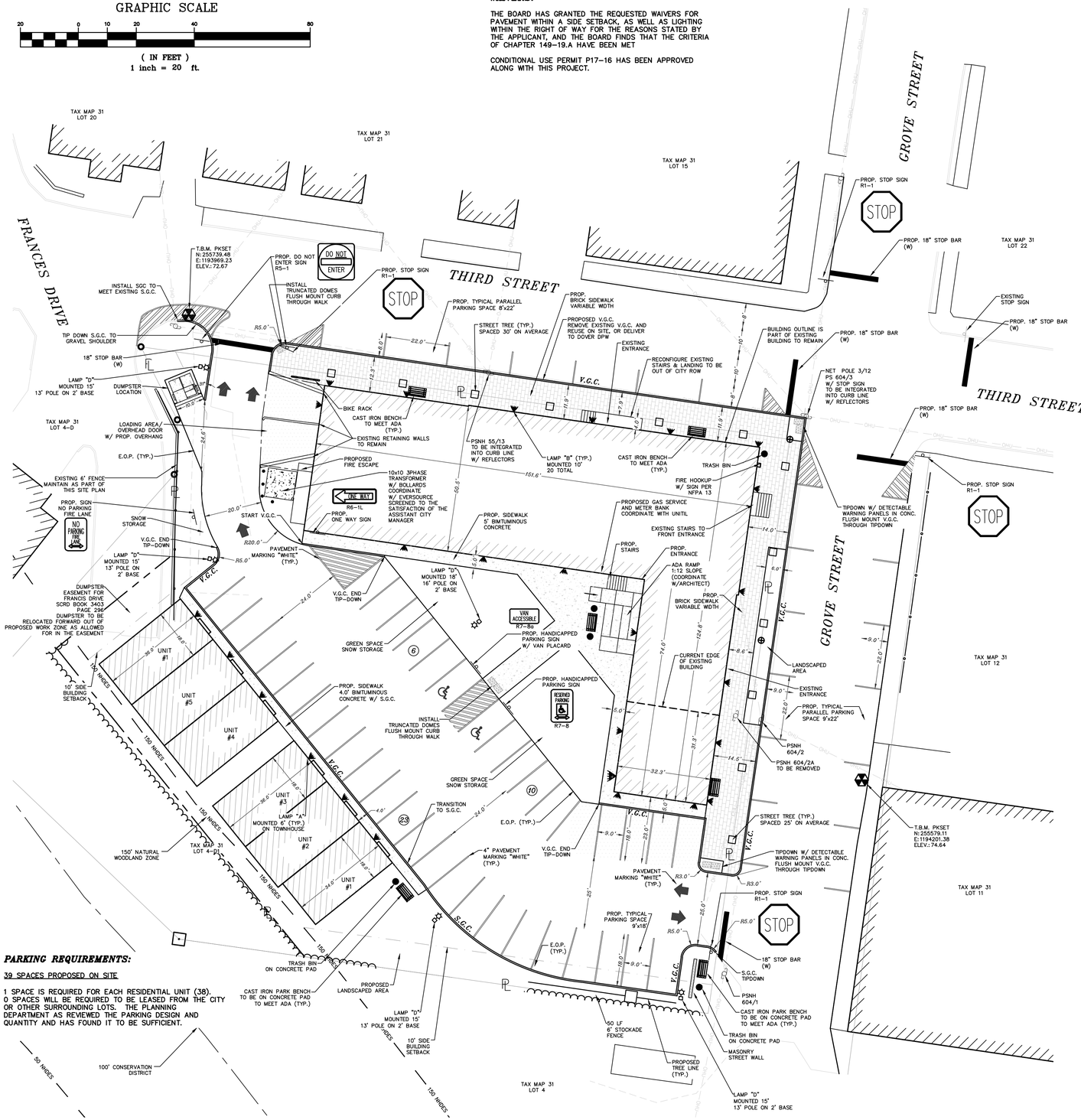
20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

WAIVERS:

THE BOARD HAS GRANTED THE REQUESTED WAIVERS FOR PAVEMENT WITHIN A SIDE SETBACK, AS WELL AS LIGHTING WITHIN THE RIGHT OF WAY FOR THE REASONS STATED BY THE APPLICANT, AND THE BOARD FINDS THAT THE CRITERIA OF CHAPTER 149-19.A HAVE BEEN MET

CONDITIONAL USE PERMIT P17-16 HAS BEEN APPROVED ALONG WITH THIS PROJECT.



PARKING REQUIREMENTS:

39 SPACES PROPOSED ON SITE

1 SPACE IS REQUIRED FOR EACH RESIDENTIAL UNIT (38).
0 SPACES WILL BE REQUIRED TO BE LEASED FROM THE CITY OR OTHER SURROUNDING LOTS. THE PLANNING DEPARTMENT AS REVIEWED THE PARKING DESIGN AND QUANTITY AND HAS FOUND IT TO BE SUFFICIENT.

NOTES:

1.) THE INTENT OF THIS PLAN SET IS TO DEMONSTRATE THE SITE PLAN DESIGN OF A MIXED USE BUILDING AT 6 GROVE STREET WITH COMMERCIAL SPACE ON THE FIRST FLOOR, 32 RESIDENTIAL UNITS ON THE SECOND, THIRD, AND FOURTH FLOORS, AND 6 PROPOSED TOWNHOUSES. 38 TOTAL RESIDENTIAL UNITS.

2.) CURRENT OWNER: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

3.) APPLICANT: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

4.) THE PROJECT PARCEL IS SHOWN AS LOT NO. 14, MAP 31 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS.

5.) THE PROJECT PARCEL CONTAINS 0.93 ACRES OR 40,821 SQURE FEET AREA OF LAND.

6.) PROJECT PLAN REFERENCES: S.C.R.D. BOOK 4199, PAGE 508

7.) EXISTING IMPERVIOUS AREA ON LOT = 25,255 Sq.Ft. (61.9% OF LOT)
PROPOSED IMPERVIOUS AREA ON LOT = 36,063 Sq.Ft. (88.3% OF LOT)

8.) EXISTING IMPERVIOUS AREA ON LOT WITHIN 250' OF SHORELAND ZONE = 7,665 Sq.Ft.
(34.7% OF LOT WITHIN SHORELAND ZONE)
PROPOSED IMPERVIOUS AREA ON LOT WITHIN 250' OF SHORELAND ZONE = 17,436 Sq.Ft.
(79.0% OF LOT WITHIN SHORELAND ZONE)

9.) EXISTING PRINCIPAL BUILDING LOT COVERAGE = 15,927 Sq.Ft. (39.0% OF LOT)
PROPOSED PRINCIPAL BUILDING LOT COVERAGE = 13,927 Sq.Ft. (34.1% OF LOT)

10.) EXISTING PRINCIPAL BUILDING FRONTAGE BUILD-OUT (GROVE STREET) = 93.49' (46.7%)
PROPOSED PRINCIPAL BUILDING FRONTAGE BUILD-OUT (GROVE STREET) = 147.75' (73.7%)
EXISTING PRINCIPAL BUILDING FRONTAGE BUILD-OUT (THIRD STREET) = 151.60' (67.1%)
PROPOSED PRINCIPAL BUILDING FRONTAGE BUILD-OUT (THIRD STREET) = 171.39' (75.8%)

11.) ZONING NOTES: CBD CENTRAL BUSINESS DISTRICT ZONE, TRANSIT ORIENTED DEVELOPMENT SUB-DISTRICT

MINIMUM LOT SIZE:	N/A
MINIMUM FRONTAGE:	N/A
BUILDING SETBACK REQUIREMENTS:	
FRONT (EXISTING) :	0 FEET
SIDE :	10 FT MIN, 25 FT MAX
REAR :	0 FT MIN, 25 FT MAX
LOT COVERAGE:	75 PERCENT MIN
FRONTAGE BUILD-OUT:	80 PERCENT MIN
MAXIMUM BUILDING HEIGHT:	3 STORY MIN, 5 STORY MAX

12.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE & BELIEF, THIS PARCEL DOES NOT FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF.: FEMA COMMUNITY #330145, MAP #33017C0103, DATED SEPTEMBER 30, 2015.

13.) VERTICAL DATUM IS BASED ON NAVD88 (USGS) ELEVATIONS. HORIZONTAL COORDINATES ARE BASED ON NAD83. COORDINATES WERE GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

14.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING IN APRIL OF 2016, WITH AN ERROR NOT GREATER THAN 1 IN 125,521 & UPDATED IN NOVEMBER 2017.

15.) TOPOGRAPHIC SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING IN APRIL OF 2016 & UPDATED IN NOVEMBER 2017.

16.) AS-BUILT PLANS OF THE SITE SHALL BE SUBMITTED ON A REPRODUCIBLE MYLAR MEDIUM AND IN A DIGITAL DXF FORMAT ON DISK TO THE CITY OF DOVER ENGINEER'S OFFICE UPON COMPLETION OF PROJECT. AS-BUILT PLANS SHALL BE PREPARED AND CERTIFIED CORRECT BY A L.L.S. OR P.E.

17.) EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 149-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.

18.) THE PROPOSED STRUCTURES SHALL BE SERVED BY SPRINKLER SYSTEMS AS REQUIRED UNDER CHAPTER 109-30 OF THE CODE OF THE CITY OF DOVER AND THE 2009 STATE BUILDING CODES.

19.) SPRINKLER CONNECTIONS MUST BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND A CONTRACTOR'S MATERIALS AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM MUST BE COMPLETED.

20.) FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13.

21.) A SECURITY SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 58, ARTICLE I, SECTION 58-2 OF THE CODE OF THE CITY OF DOVER.

22.) ALL NEW ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND, UNLESS OVERHEAD UTILITIES ALREADY EXIST

23.) THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER.

24.) ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.

25.) BACKFLOW PREVENTORS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.

26.) ALL EROSION CONTROL NOTES SHALL INCLUDE PROVISIONS FOR CONSTRUCTION SEQUENCING, TEMPORARY EROSION CONTROL MEASURES, AND PERMANENT STANDARDS SUCH AS LOAM SPREAD RATE FOR DISTURBED AREAS, RATES OF LIME, TYPE AND RATES FOR FERTILIZER, AND SEED AND MULCH MIXTURE WITH RATES OF APPLICATION.

27.) THE LIMITS OF CONSTRUCTION DISTURBANCE THAT ARE LOCATED IN OR WITHIN 50' OF CONSERVATION AND WETLAND DISTRICTS SHALL BE STAKED, FLAGGED, AND CLEARLY IDENTIFIED PRIOR TO THE COMMENCEMENT OF SITE WORK.

28.) A LETTER OF CREDIT FOR THE COST OF REVEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS. COORDINATE WITH CITY OF DOVER, COMMUNITY SERVICES AND ENGINEERING DEPARTMENT.

29.) A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE CITY ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.

30.) BUILDING ADDRESSES SHALL BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.

31.) THE PROPOSED USE FOR THE SITE IS MIXED USE COMMERCIAL/RESIDENTIAL.

32.) THIS PLAN PROPOSES APPROXIMATELY 32,126 SQ. FT. OF DISTURBANCE.

33.) CALL DIG SAFE PRIOR TO BEGINNING WORK (1-888-344-7233)

34.) ALL CONSTRUCTION SHALL CONFORM TO THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. CONSTRUCTION SHALL ALSO CONFORM TO THE CITY OF DOVER POLICIES AND PRACTICES.

35.) WRITTEN DIMENSION ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR IS TO CONFIRM ALL ELEVATIONS. CONFLICTS WILL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

36.) SNOW STORAGE AREAS ARE AS SHOWN ON THIS SITE PLAN. EXCESS SNOW WILL BE REMOVED FROM THIS SITE AND DISPOSED OF IN A QUALIFIED LOCATION.

37.) CONDITIONAL USE PERMITS HAVE BEEN REQUESTED FOR THE FOLLOWING:
PRINCIPAL BUILDING COVERAGE LESS THAN 75%
PRINCIPAL BUILDING FRONTAGE BUILD-OUT LESS THAN 80%

38.) THE OWNER OF RECORD SHALL RECORD AT THE REGISTRY OF DEEDS DOCUMENTATION SUFFICIENT TO PROVIDE NOTICE TO ALL PERSONS THAT MAY ACQUIRE ANY PROPERTY SUBJECT TO THE REQUIREMENTS AND RESPONSIBILITIES DESCRIBED IN THE APPROVED STORMWATER MANAGEMENT PLAN. THE NOTICE SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS FOR RECORDING CONTAINED IN RSA 477 AND 478. THE NOTICE NEED NOT SET FORTH THE REQUIREMENTS AT LENGTH, SO LONG AS IT IS SUFFICIENT TO PROVIDE NOTICE TO PROSPECTIVE PURCHASERS TO THE REQUIREMENTS FOR MAINTENANCE AND REPORTING.

39.) SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY-FRIDAY 7 AM – 6 PM, SATURDAY 9 AM – 4 PM, WITH NO SUNDAY HOURS. HOURS OF CONSTRUCTION MUST BE DOCUMENTED ON A SITE CONSTRUCTION SIGN ALONG WITH THE CONTACT INFORMATION FOR THE GENERAL CONTRACTOR. SAID SIGNAGE MUST BE LOCATED AND APPROVED BY THE CITY ENGINEER OR ASSISTANT CITY MANAGER.

DOVER PLANNING #16-31C

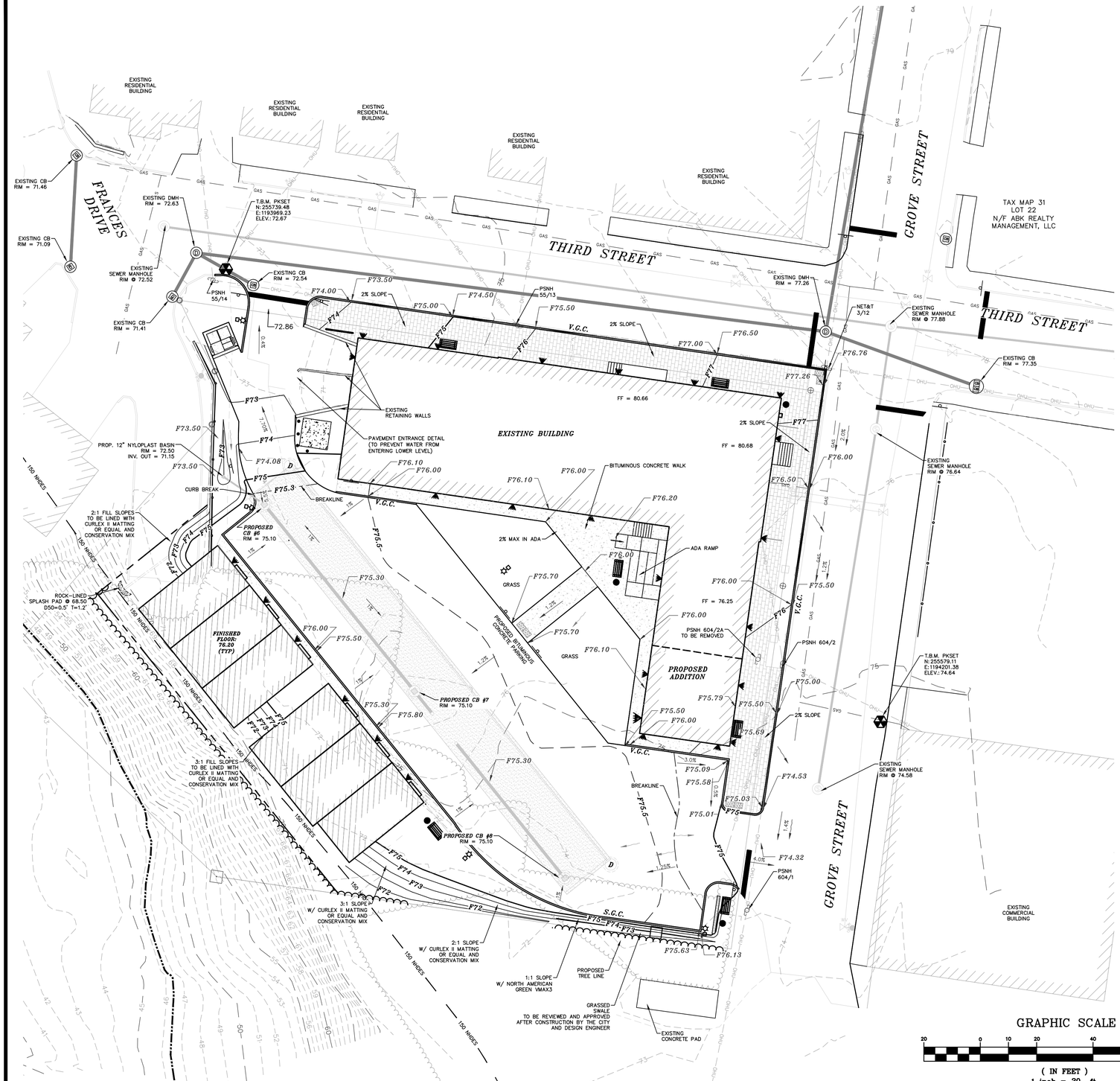
REVISION	DATE	DESCRIPTION

PROPOSED SITE PLAN
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 – 090

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14143
LICENSED PROFESSIONAL ENGINEER



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NOTES:

1.) THE INTENT OF THIS PLAN SET IS TO DEMONSTRATE THE GRADING DESIGN OF THE SITE AT 6 GROVE STREET.

2.) CURRENT OWNER: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

3.) APPLICANT: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

4.) TAX MAP 31, LOT 14 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS.

5.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

6.) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

7.) SEE DETAILS CONCERNING SITE LAYOUT, DRAINAGE, UTILITY, AND SEDIMENT AND EROSION CONTROLS.

8.) ALL DRAINAGE PIPE IS TO BE HDPE N-12. INDIVIDUAL PIPE SIZES ARE SPECIFIED, RECYCLED PIPE IS APPROVED FOR PROJECT SITE. RECYCLED HDPE PIPE "GREEN PIPE" IS ACCEPTABLE FOR THIS PROJECT SITE.

9.) ALL ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER IS TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY. TEMPORARY BENCHMARKS (T.B.M.) ARE TO BE PROVIDED BY THE DESIGN ENGINEER.

10.) UPON FINAL COMPLETION AND 85% STABILIZATION, THE EXISTING CATCH BASIN ON THE THIRD STREET SIDE OF THE PROPERTY IS TO BE CLEANED OF ALL DEBRIS, INCLUDING THE PUMPING OF THE BASIN SUMP.

11.) ALL UNPAVED AREAS ARE TO RECEIVE 4" QUALITY LOAM AND SEED.

12.) ALL BASINS AND DRAINS ARE TO HAVE BOOTS INSTALLED ON ALL INLETS AND OUTLETS.

13.) ARCHITECT TO WORK OUT ALL GRADING AT THRESHOLDS WITH BS&E FOR ADA & BUILDING CODE COMPLIANCE PRIOR TO BUILDING OF PROJECT.

DOVER PLANNING #16-31C

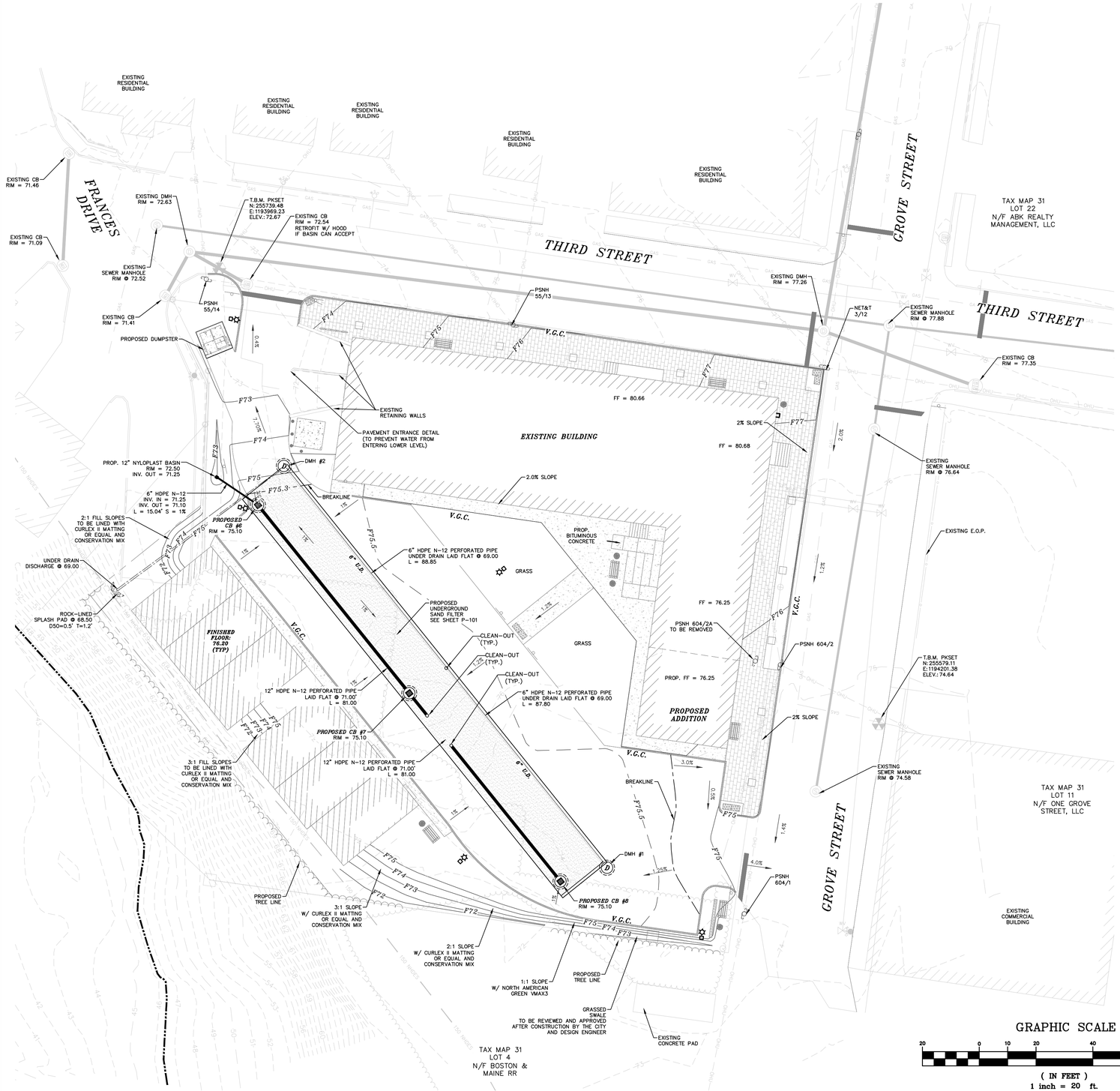
REVISION	DATE	DESCRIPTION

GRADING PLAN
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 - 090

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 7243
LICENSED PROFESSIONAL ENGINEER



NOTES:

1.) THE INTENT OF THIS PLAN SET IS TO DEMONSTRATE THE DRAINAGE DESIGN OF THE SITE AT 6 GROVE STREET.

2.) CURRENT OWNER: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

3.) APPLICANT: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

4.) TAX MAP 31, LOT 14 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS.

5.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

6.) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

7.) SEE DETAILS CONCERNING SITE LAYOUT, DRAINAGE, UTILITY, AND SEDIMENT AND EROSION CONTROLS.

8.) ALL DRAINAGE PIPE IS TO BE HDPE N-12. INDIVIDUAL PIPE SIZES ARE SPECIFIED, RECYCLED PIPE IS APPROVED FOR PROJECT SITE. RECYCLED HDPE PIPE "GREEN PIPE" IS ACCEPTABLE FOR THIS PROJECT SITE.

9.) ALL ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER IS TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY. TEMPORARY BENCHMARKS (T.B.M.) ARE TO BE PROVIDED BY THE DESIGN ENGINEER.

10.) UPON FINAL COMPLETION AND 85% STABILIZATION, THE EXISTING CATCH BASIN ON THE THIRD STREET SIDE OF THE PROPERTY IS TO BE CLEANED OF ALL DEBRIS, INCLUDING THE PUMPING OF THE BASIN SUMP.

11.) ALL UNPAVED AREAS ARE TO RECEIVE 4" QUALITY LOAM AND SEED.

12.) ALL BASINS AND DRAINS ARE TO HAVE BOOTS INSTALLED ON ALL INLETS AND OUTLETS.

13.) ALL CATCH BASINS SHALL BE PRE-CAST H-20 LOADING AND SHALL BE EQUIPPED WITH DEEP SUMPS (4' MIN.) AND HOODS (SEE DETAILS) HOODS ARE TO BE "THE ELIMINATOR" BY KLEANSTREAM. RIMS ARE TO BE REXUS STYLE AND SHALL BE SET FLUSH WITH FINISH GRADE, UNLESS OTHERWISE INSTRUCTED DURING CONSTRUCTION BY ROCHESTER DPW. RIMS ABOVE FINISH GRADE WILL BE NOT BE ACCEPTED. ALL RIMS, GRATES AND COVERS ARE TO BE U.S.A MADE.

14.) ARCHITECT TO COORDINATE ROOF DRAINS WITH BS&E PRIOR TO BID.

STRUCTURE CHART

CB #6
4'ø WITH REXUS GRATE
RIM = 75.10 (FLUSH)
INV. OUT = 71.00 12" HDPE N-12 PERFORATED
W/ 4' SUMP & HOOD
SUMP ELEV. = 67.00

CB #7
4'ø WITH REXUS GRATE
RIM = 75.10 (FLUSH)
INV. OUT = 71.00 12" HDPE N-12 PERFORATED
W/ 4' SUMP & HOOD
SUMP ELEV. = 67.00

CB #8
4'ø WITH REXUS GRATE
RIM = 75.10 (FLUSH)
INV. OUT = 71.00 12" HDPE N-12 PERFORATED
W/ 4' SUMP & HOOD
SUMP ELEV. = 67.00

DRAIN MANHOLE #1
5'ø W/PAMREX
RIM = 75.29 (FLUSH)
INV. OUT = 69.00
W/ 2' SUMP
SUMP ELEV. = 67.00

DRAIN MANHOLE #2
5'ø W/PAMREX
RIM = 74.84 (FLUSH)
INV. IN = 69.00
INV. OUT = 69.00
W/ 2' SUMP
SUMP ELEV. = 66.00

CLEANOUT #1
RIM = 75.28 (FLUSH)
INV. = 69.00
W/ 2' SUMP
SUMP ELEV. = 67.00

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

DOVER PLANNING #16-31C

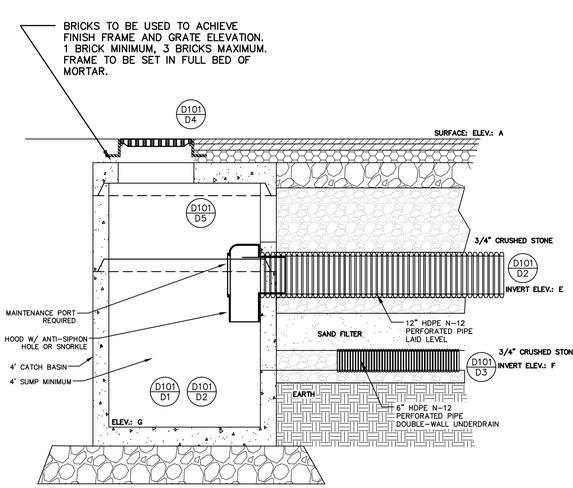
REVISION	DATE	DESCRIPTION

DRAINAGE PLAN
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

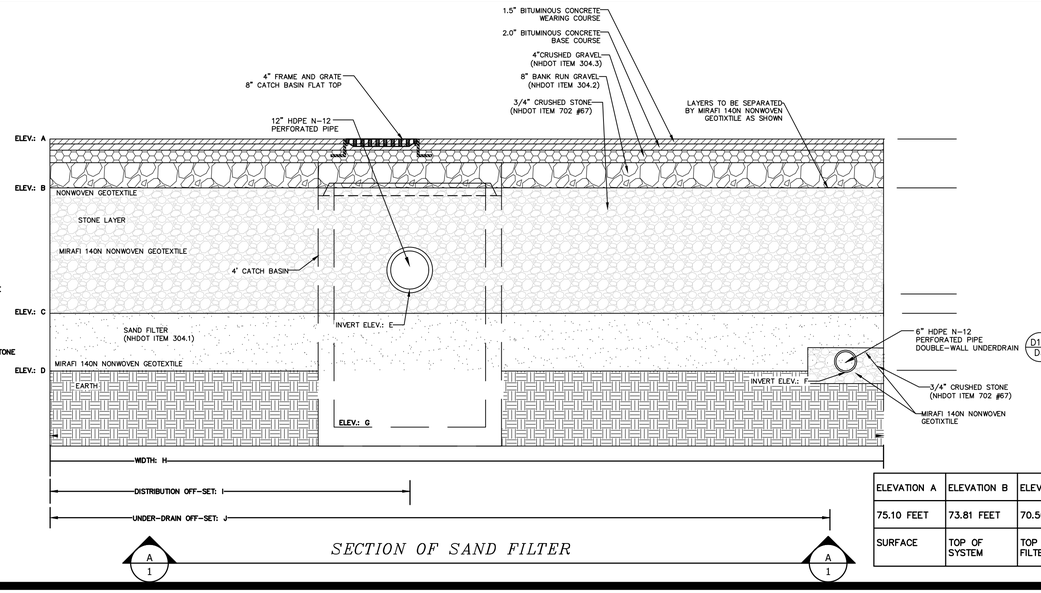
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 - 090

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14143
LICENSED PROFESSIONAL ENGINEER



PROFILE OF SAND FILTER & CATCH BASIN



SECTION OF SAND FILTER

NOTES:

1.) THE INTENT OF THIS PLAN SET IS TO SHOW THE DETAIL OF THE SAND FILTER DRAINAGE DESIGN OF THE SITE AT 6 GROVE STREET.

2.) CURRENT OWNER: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

3.) APPLICANT: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

4.) TAX MAP 31, LOT 14 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS.

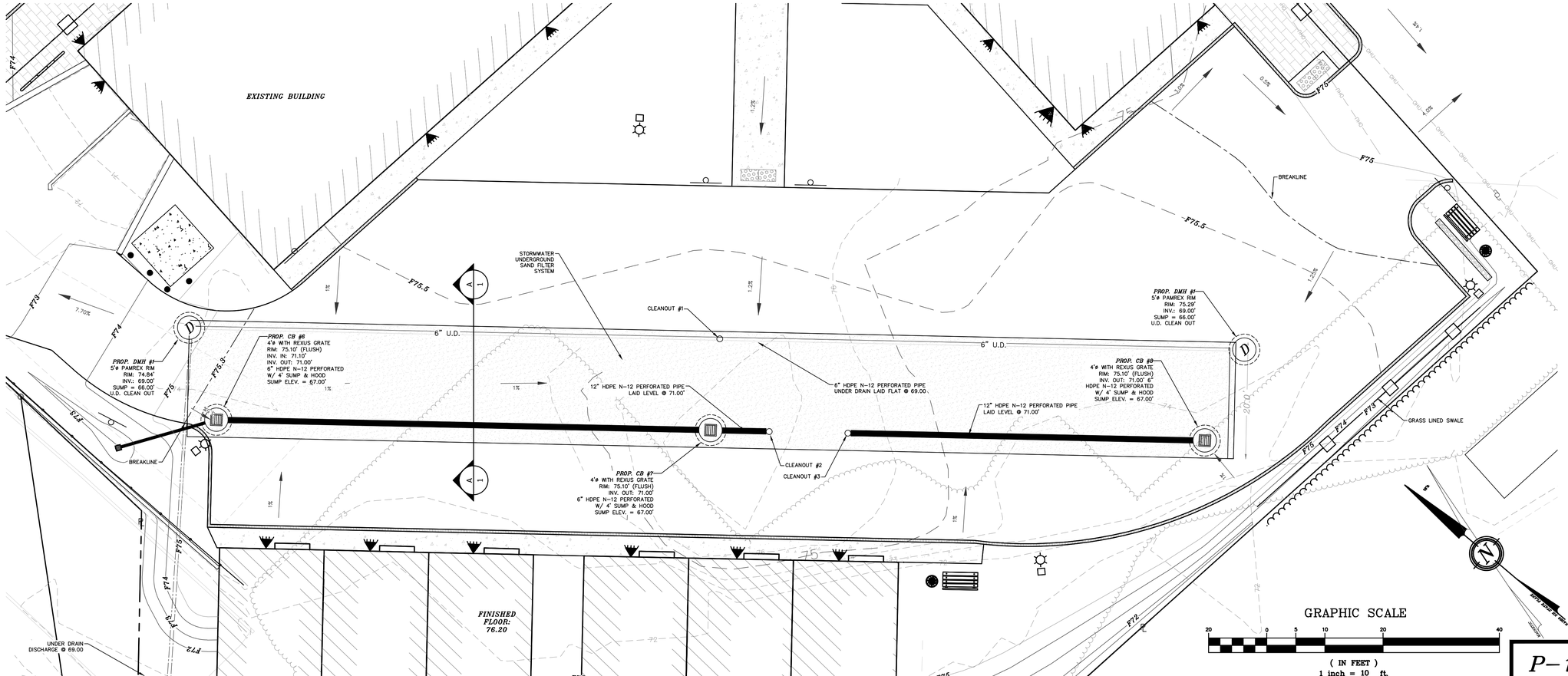
CRUSHED STONE BEDDING *	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 – 100
3/8"	20 – 55
# 4	0 –10
# 8	0 – 5

* EQUIVALENT TO STANDARD STONE SIZE #67 – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

SAND FILTER DRAINAGE SYSTEM

NOT TO SCALE

ELEVATION A	ELEVATION B	ELEVATION C	ELEVATION D	ELEVATION E	ELEVATION F	ELEVATION G	DISTANCE H	DISTANCE I	DISTANCE J
75.10 FEET	73.81 FEET	70.50 FEET	69.00 FEET	71.00 FEET	69.00 FEET	67.00 FEET	20.0 FEET	3.00 FEET	18.50 FEET
SURFACE	TOP OF SYSTEM	TOP OF SAND FILTER	BOTTOM OF SYSTEM	DISTRIBUTION CULVERT	UNDER DRAIN	SUMP ELEVATION	SYSTEM WIDTH	DISTRIBUTION OFF-SET	UNDER-DRAIN OFF-SET



P–101

DOVER PLANNING #16–31C

REVISION	DATE	DESCRIPTION

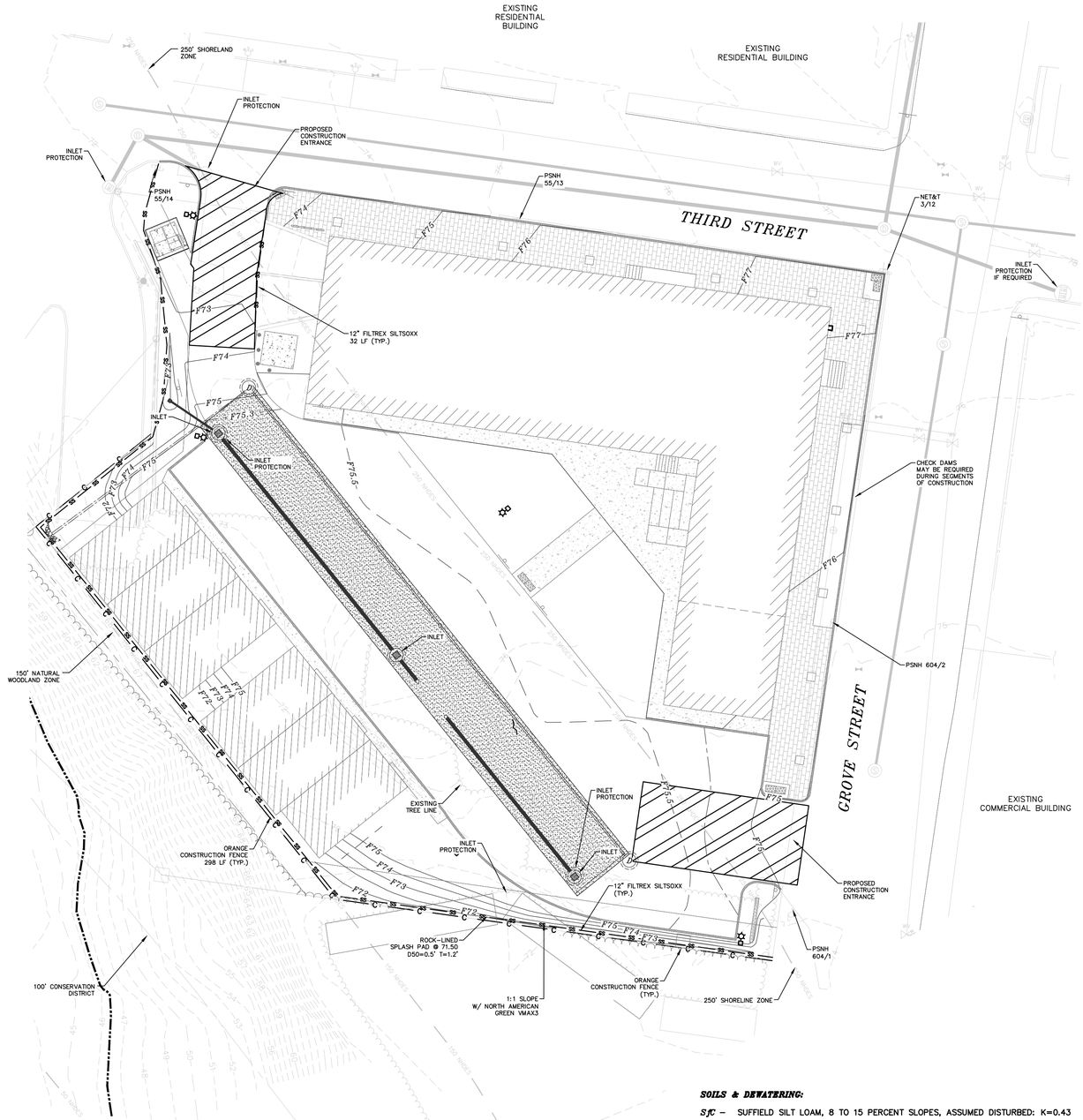
UNDERGROUND SAND FILTER DETAILS
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY & SURVEYING ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE : 1 IN. EQUALS 10 FT.
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 – 090

STATE OF NEW HAMPSHIRE – KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER

SHEET 7 OF 21



NOTES:

1.) OWNER: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

APPLICANT: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

2.) TAX MAP 31, LOT 14 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS

3.) THE PURPOSE OF THIS PLAN IS TO DEMONSTRATE PROPER SEDIMENT AND EROSION CONTROL DURING CONSTRUCTION.

4.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

5.) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

6.) SEE DETAILS CONCERNING SITE LAYOUT, DRAINAGE, UTILITY AND SEDIMENT AND EROSION CONTROLS.

7.) ALL ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER IS TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY. TEMPORARY BENCHMARKS (T.B.M.) ARE TO BE PROVIDED BY THE DESIGN ENGINEER.

8.) UPON FINAL COMPLETION AND 85% STABILIZATION THE DRAINAGE SYSTEM IS TO BE CLEANED OF ALL DEBRIS TO INCLUDE THE PUMPING OF THE BASIN SUMPS.

9.) ALL UNPAVED AREAS ARE TO RECEIVE 4" QUALITY LOAM AND SEED.

10.) ALL DRAINAGE PIPE IS TO BE HDPE N-12. INDIVIDUAL PIPE SIZES ARE SPECIFIED, RECYCLED PIPE IS APPROVED FOR PROJECT SITE. RECYCLED HDPE PIPE "GREEN PIPE" IS ACCEPTABLE FOR THIS PROJECT SITE.

11.) SEE ALSO "STORMWATER SYSTEM OPERATIONS AND MAINTENANCE PLAN & INSPECTION AND MAINTENANCE MANUAL" DATED 1-23-17 WITH BMP PLAN WHICH REQUIRES INSPECTION AND MAINTENANCE RECORDS BE SUPPLIED TO CITY OF DOVER, NH COMMUNITY SERVICES DEPARTMENT.

12.) INSPECTIONS TO BE CONDUCTED ONCE PER EVERY SEVEN DAYS AND AT AN INCREASED FREQUENCY INCLUDING WITHIN 24-HOURS OF A 0.25 INCH RAIN EVENT. INSPECTIONS TO BE CONDUCTED BY A "QUALIFIED PERSON" AS DEFINED BY EPA CGP 4.1.1 AND INSPECTION REPORTS SUBMITTED TO THE CITY OF DOVER, NH, ENGINEERING DEPARTMENT WITHIN 24 HOURS IN ACCORDANCE WITH CGP 4.1.7 AND MAINTAINED BY THE OWNER FOR A PERIOD OF THREE YEARS AFTER THE NOTICE OF TERMINATION (NOT) IS SUBMITTED. SEE ALSO CITY OF DOVER ADDITIONAL INSPECTION REQUIREMENTS BELOW.

13.) PER EPA CGP 2.1.2.2 (INSTALL PERIMETER CONTROL), "YOU MUST INSTALL SEDIMENT CONTROLS ALONG THOSE PERIMETER AREAS OF YOUR SITE THAT WILL RECEIVE STORMWATER FROM EARTH DISTURBING ACTIVITIES." AS A RESULT OF SWPPP INSPECTIONS, THE CONTRACTOR MAY HAVE TO EXPAND PERIMETER CONTROLS TO MEET THIS REQUIREMENT. THE E&SC PLAN IS INITIAL GUIDANCE AS TO THE ANTICIPATED REQUIREMENTS AND IT THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT STORMWATER VIOLATION DO NOT OCCUR.

14.) CITY OF DOVER: IN ACCORDANCE WITH SITE PLAN REVIEW REGULATIONS (149-14) THE FOLLOWING STORMWATER MEASURES ARE REQUIRED. THIS SITE DEVELOPMENT QUALIFIES AS A REDEVELOPMNET PROJECT. THE EXISTING IMPERVIOUS AREA IS 73.7% AND PROPOSED IMPERVIOUS AREA IS 69.1%. THE CONTIGUOUS LAND DISTURBANCE IS 16,855 SQUARE FEET.

A.) ALL PROPOSED BMSs WILL CONFORM TO THE NH STORMWATER MANUAL VOLUME 3.
B.) EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL LAND DISTURBANCE AND MUST BE REVIEWED AND APPROVED BY COMMUNITY SERVICE.
C.) TEMPORARY STABILIZATION MEASURES SHOULD BE IN PLACE WITHIN SEVEN CALENDAR DAYS FOR EXPOSED SOILS AREAS THAT ARE WITHIN ONN HUNDER FEET OF A SURFACE WATER BODY OR A WETLAND AND NO MORE THAN 14 CALENDAR DAYS FOR ALL OTHER AREAS. PERMANENT STABILIZTAION SHOULD BE IN PLACE WITHIN THREE CALENDAR DAYS FOLLOWING COMPLETION OF FINAL GRADING OF EXPOSED SOKL AREAS.
D.) ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL STABILIZATION IS ACCOMPLISHED.
E.) COMMUNITY SERVICES DEPARTMENT OR THEIR DESIGNATED AGENT SHALL HAVE ACCESS TO THE SITE TO COMPLETE ROUTINE INSPECTIONS AND SHALL BE NOTIFIED 24-HOURS PRIOR TO INSTALLATION OF A STORMWATER BMP IN ORDER TO SCHEDULE AN INSPECTION, DURING NORMAL WORKING HOURS.
F.) THE PLANNING BOARD OR COMMUNITY SERVICES MAY REQUIRE THE DESIGN ENGINEER AND/OR AN INDEPENDENT, THIRD-PARTY INSPECTION AND OVERSIGHT OF THE CONSTRUCTION OF STORMWATER MANAGEMENT FACILITIES AND EROSION AND SEDIMENT CONTROL AT THEIR DISCRETION. THE OWNER / APPLICANT IS RESPONSIBLE FOR ALL FEES ASSOCIATED WITH INSPECTIONS.
G.) 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 STORMWATER INSPECTOR (CESSW), OR A CERTIFIED PROFESSIONAL IN STORMWATER QUALITY (CPSWQ). INSPECTION REPORTS WILL BE SUBMITTED TO THE COMMUNITY SERVICES DEPARTMENT.

LEGEND:

- IRON PIPE (FND)
- IRON BOUND (FND)
- REBAR (FND)
- UTILITY POLE
- 12" FILTREXX SILTSOXX ORANGE CONSTRUCTION FENCE
- TREE LINE
- CHECK DAM

SOILS & DEWATERING:

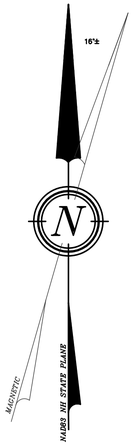
SfC – SUFFIELD SILT LOAM, 8 TO 15 PERCENT SLOPES, ASSUMED DISTURBED: K=0.43

SEE WEBSOIL USDA-NRCS
ERODIBILITY FACTOR – K, CPESC MANUAL, ENVIROCERT INTERNATIONAL INC.

THE SOIL ERODIBILITY FACTOR (K) OF THE SOIL IS RELATIVELY HIGH (K=.43).
CONTRACTOR TO BE AWARE OF THE SOIL PROFILES AND ENSURE THAT PROPER EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE TAKEN AT ALL TIMES. ANY DEWATERING REQUIREMENTS IN NEW HAMPSHIRE REQUIRE SPECIAL PROVISIONS IN ACCORDANCE WITH THE "CLARIFICATION OF SECTION 9.1.2 (STATE OF NEW HAMPSHIRE CONDITIONS) AND OTHER NH SPECIFIC INFORMATION FOR THE U.S. EPA 2012 NPDES CONSTRUCTION GENERAL PERMIT (CGP)" DATED MAY 3, 2012 INCLUDED IN THE SWPPP.

COVER MANAGEMENT DURING CONSTRUCTION FOR EXPOSED SOIL WILL INCLUDE HAY / STRAW APPLIED AT A RATE OF 2.0 TONS PER ACRE, TEMPORARY SEEDING OF ANNUAL RYE GRASS, AND PERMANENT SEEDING AT THE EARLIES OPPORTUNITY. SEE ADDITIONAL REQUIREMENT FOR STABILIZATION ON THE EROSION AND SEDIMENT CONTROL DETAIL SHEETS, E-101 AND E-102.

THE CONSTRUCTION SCHEDULE WILL BE MANAGED SO THAT ALL STORMWATER STRUCTURES WILL BE BUILT AND STABILIZED PRIOR TO RECEIVING SURFACE WATER RUNOFF. CONTRACTOR TO BE RESPONSIBLE FOR ALL DIVERSIONS DURING CONSTRUCTION AND FOR INTERIM SEDIMENT AND EROSION CONTROL MEASURES.



GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

DOVER PLANNING #16-31C

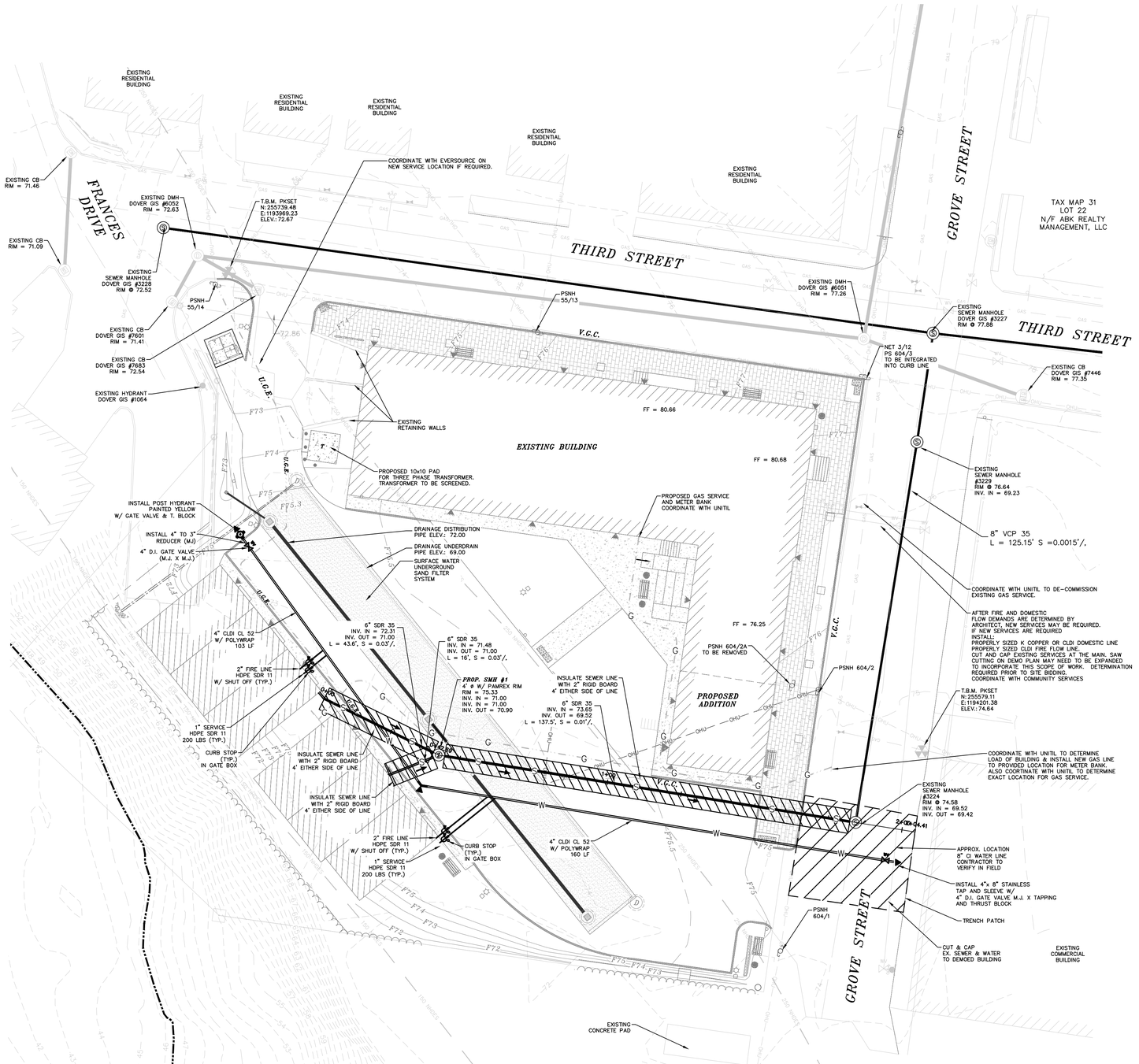
REVISION	DATE	DESCRIPTION

EROSION AND SEDIMENT CONTROL PLAN
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 - 090

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

1 inch = 20 ft.

NOTES:

1.) THE PURPOSE OF THIS PLAN IS TO DEMONSTRATE THE OVERVIEW PUBLIC UTILITIES WITHIN THE SITEPLAN.

2.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

3.) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

4.) PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES, TRENCHES, AND OTHER AREAS DURING CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL, AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOFF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAFFIC IN SENSITIVE AREAS, AND MAINTAINING AN EFFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL MEETING THE ENGINEERS SPECIFIC RECOMMENDED CRITERIA.

5.) IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER (NOT ALLOWED IN CITY R.O.W.), EXPOSED SUBGRADES ARE SUSCEPTIBLE TO FROST. NO FILL OR UTILITIES SHALL BE PLACED ON FROZEN GROUND. THIS WILL LIKELY REQUIRE REMOVAL OF A FROZEN SOIL CRUST AT THE COMMENCEMENT OF EACH DAY'S OPERATION. THE FINAL SUBGRADE ELEVATION WOULD ALSO REQUIRE AN APPROPRIATE DEGREE OF INSULATION AGAINST FREEZING.

6.) PLACEMENT OF BORROW MATERIALS SHALL BE PERFORMED IN A MANNER THAT PREVENTS LONG TERM DIFFERENTIAL SETTLEMENT. EXCESSIVELY WET MATERIALS SHALL BE STOCKPILED AND ALLOWED TO DRAIN BEFORE PLACEMENT. FROZEN MATERIAL SHALL NOT BE USED FOR CONSTRUCTION. VOIDS BETWEEN STONES AND CLUMPS OF MATERIAL SHALL BE FILLED WITH FINE MATERIALS.

7.) FINAL UTILITY LOCATIONS TO BE COORDINATED BETWEEN THE CONTRACTOR, ALL APPROPRIATE UTILITY COMPANIES AND THE DOVER DPW.

8.) CONTRACTOR TO CONTACT DOVER DPW A MINIMUM OF TWO WEEKS PRIOR TO ANY CONSTRUCTION TO COORDINATE ALL WORK CONCERNING INSTALLATION OF ANY PROPOSED WATER LINE IMPROVEMENTS.

9.) ALL WATER MAIN AND SERVICE INSTALLATIONS SHALL CONFORM TO CITY OF DOVER STANDARDS. ALL HIGHWAY CONSTRUCTION WILL MEET THE CITY OF DOVER STANDARDS AS MODIFIED BY WAIVER REQUEST AT THE PLANNING BOARD.

10.) CONTRACTOR SHALL COORDINATE ALL ELECTRICAL INSTALLATIONS WITH EVERSOURCE AT (800) 662-7764. ALL ELECTRIC CONDUIT INSTALLATION SHALL BE INSPECTED BY EVERSOURCE PRIOR TO BACKFILL. A 48-HOUR MINIMUM NOTICE IS REQUIRED.

11.) ALL SEWER INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF NHDES & DOVER DPW SEWER DIVISION STANDARDS.

12.) CONTRACTOR SHALL COORDINATE ALL TELECOMMUNICATIONS INSTALLATIONS WITH FAIRPOINT COMMUNICATIONS AT (603) 427-5525.

13.) CONTRACTOR SHALL COORDINATE ALL CABLE INSTALLATIONS WITH COMCAST.

14.) ALL SEWER MAN HOLE RIMS & COVERS ARE TO BE PAMREX.

15.) ALL WATER SERVICES ARE TO BE WITNESSED WITH A 2"X4" PAINTED BLUE. ALL SEWER SERVICES ARE TO BE WITNESSED WITH A 2"X4" PAINTED YELLOW, IS STUBBED PRIOR TO BUILDING CONSTRUCTION.

16.) THE EXISTING SEWER SERVICE LOCATION, SIZE AND TYPE IS UNKNOWN AT THIS TIME. IF A NEW SERVICE IS DETERMINED TO BE REQUIRED IT WILL BE A 6" SDR 35 PIPE FROM THE BUILDING TO THE SEWER MAIN IN THE STREET ON GROVE STREET. TYPICAL SEWER CONSTRUCTION DETAILS ARE PROVIDED ON U101 WITHIN THE PLAN SET IF REQUIRED. COORDINATE WITH DPW. THE SAW CUTTING PROVIDED ON THE DEMO PLAN MAY NEED TO BE EXPANDED AS PART OF THIS CONSTRUCTION. DETERMINATION IS TO BE MADE PRIOR TO BIDDING.

DOVER PLANNING #16-31C

REVISION	DATE	DESCRIPTION

UTILITY PLAN
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 - 090

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

NOTES:

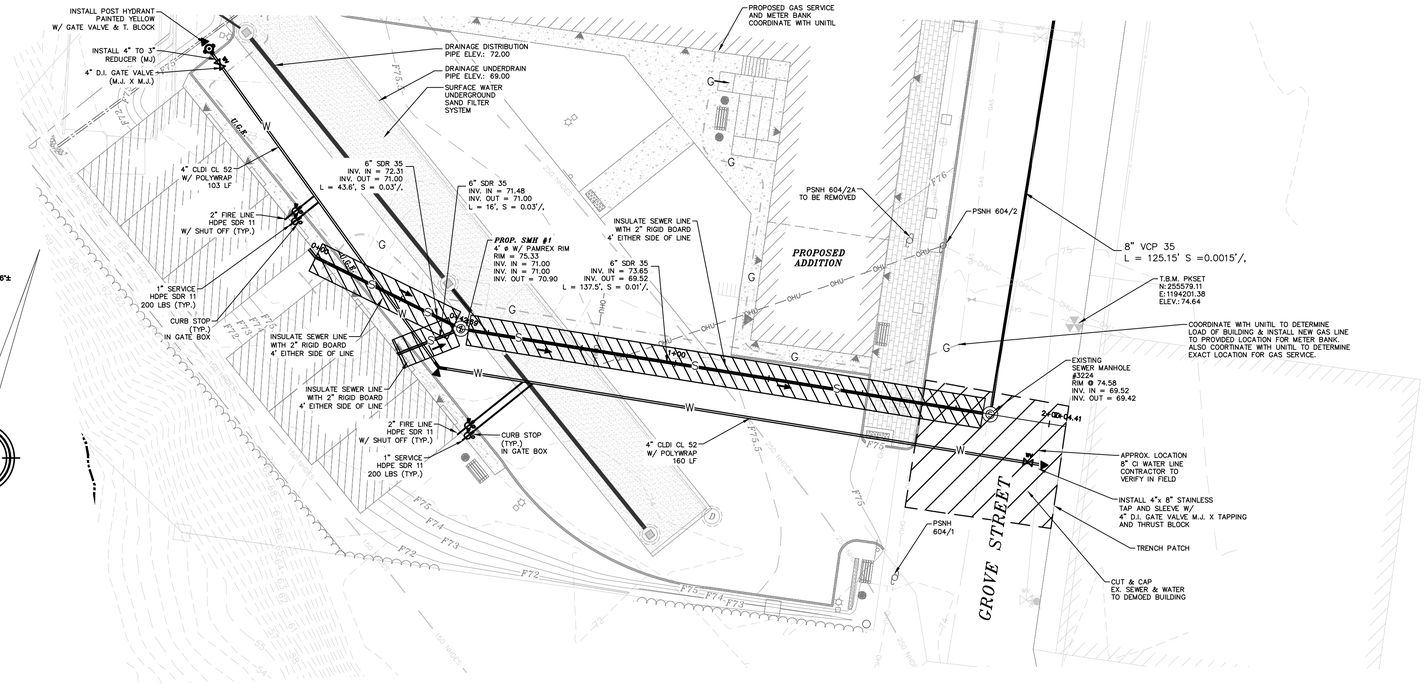
1.) THE INTENT OF THIS PLAN SET IS TO DEMONSTRATE THE UTILITY DESIGN OF THE SITE AT 6 GROVE STREET.

2.) CURRENT OWNER: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

3.) APPLICANT: 6 GROVE STREET RESIDENCES, LLC
35 THIRD STREET
DOVER, NH 03820

4.) TAX MAP 31, LOT 14 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS.

5.) THE PURPOSE OF THIS PLAN IS TO DEMONSTRATE THE OVERVIEW AND PROFILE OF PROPSED PUBLIC UTILITIES WITHIN THE SITEPLAN.



GRAPHIC SCALE

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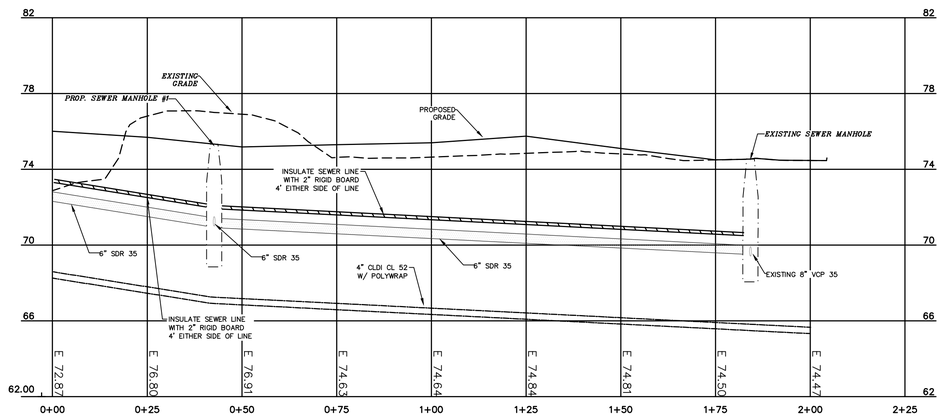
(IN FEET)
1 inch = 20 ft.



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

VERTICAL SCALE: 1" = 4'

DOVER PLANNING #16-31C

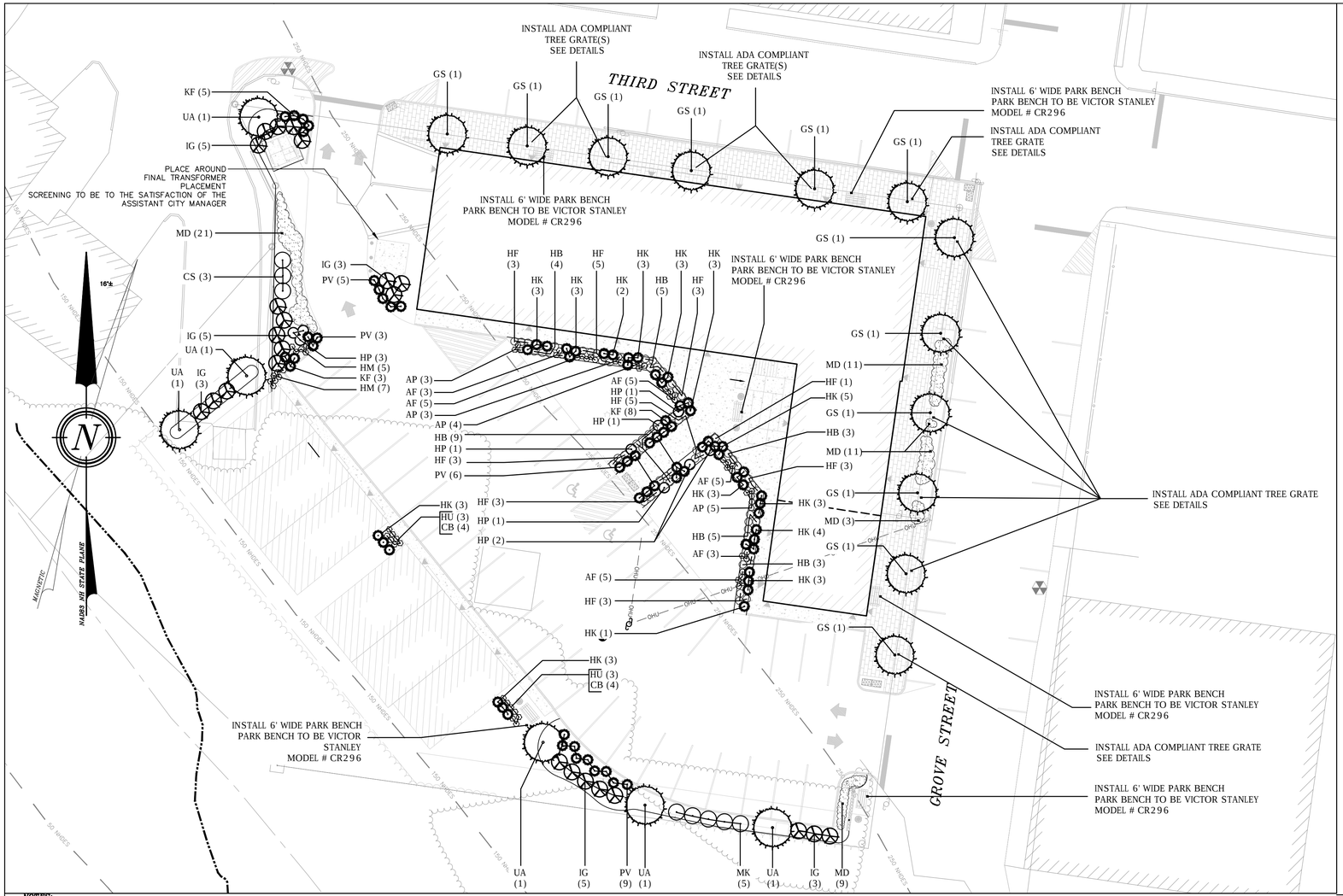
REVISION	DATE	DESCRIPTION

UTILITY PROFILE PLAN
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY & SURVEYING ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 - 090

STATE OF NEW HAMPSHIRE - KENNETH A. BERRY No. 14143 LICENSED PROFESSIONAL ENGINEER -



PLANTING NOTES

1. CONTRACTOR SHALL OBTAIN APPROVAL FROM L.A. PRIOR TO PURCHASING &/OR INSTALLING SUBSTITUTE PLANT MATERIAL PRIOR TO PURCHASE OF ANY SUBSTITUTE MATERIALS.

2. CONSTRUCTION ACCESS WILL BE AS DIRECTED BY L.A. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ACCESS ROUTE AND ALL AREAS DISTURBED BY PLANTING OPERATIONS UPON COMPLETION OF CONSTRUCTION OPERATIONS, AT NO ADDITIONAL COST TO THE OWNER.

3. LAYOUT OF ALL PLANTING BEDS AND LOCATION OF PLANTS TO BE APPROVED BY L.A. ON SITE PRIOR TO CONSTRUCTION AND INSTALLATION.

4. CONTRACTOR TO REMOVE ALL DEBRIS GENERATED BY PLANT INSTALLATION. DEBRIS TO BE DISPOSED OF IN A LEGAL MANNER.

5. ALL PLANT MATERIAL SHALL BE GUARANTEED TO BE IN GOOD, HEALTHY & FLOURISHING CONDITION FOR ONE YEAR FROM THE DATE OF FINAL INSTALLATION APPROVAL BY L.A. CONTRACTOR SHALL REPLACE, WITHOUT COST TO OWNER, AND AS SOON AS WEATHER CONDITIONS PERMIT, ALL DEAD AND NON-FLOURISHING PLANTS AS DETERMINED BY THE L.A. REPLACEMENT PLANTS SHALL BE BE GUARANTEED IDENTICALLY TO ORIGINAL PLANTS, TIME PERIOD COMMENCING FROM DATE OF REPLACEMENT PLANTING APPROVAL BY L.A.

6. ALL BEDS TO BE MULCHED WITH 3" DEPTH SHREDDED BARK MULCH UNLESS NOTED OTHERWISE.

7. CONTRACTOR TO PROVIDE NECESSARY TEMPORARY IRRIGATION IF NEEDED BASED ON TIME OF YEAR THE PROJECT IS IMPLEMENTED.

8. ALL PLANT MATERIAL TO COMPLY WITH THE CITY OF DOVER'S SITE REVIEW REGULATIONS, 149-14(G), SUCH THAT THERE SHALL BE DECIDUOUS SHADE TREES PLANTED 40 FEET O.C. ALONG THE PERIMTERE OF THE PARKING LOTS AND SHRUBS PLANTED 5 FEET O.C. WITHIN THE PERIMETER BUFFER. SEE PLANT LIST FOR SPECIES AND SIZE OF PLANTS.

TEMPORARY WATERING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR MAKING SURE ALL PLANT MATERIAL HAS ADEQUATE WATER DURING THE ESTABLISHMENT PERIOD.

2. THE USE OF GATOR BAGS, SOAKER HOSE, HAND WATERING AND OTHER TECHNIQUES SHOULD BE USED TO ASSURE PROPER HYDRATION OF THE PLANTINGS IS MAINTAINED.

3. TEMPORARY IRRIGATION SYSTEMS CAN BE SET UP TO ASSIST IN WATERING ACTIVITIES.

Plant List
Grove St. Dover, NH

Botanical Name / Common Name	Size	Qty.	Label
Trees			
Gleditsia 'Shademaster' / Shademaster Honeylocust	2.5-3" C	12	GS
Ulmus americana 'Princeton' / Princeton American Elm	2.5-3" C	6	UA
Shrubs			
Cornus sanguinea 'Winter Flame' / Winter Flame Dogwood	#3	3	CS
Hydrangea paniculata 'Little Lime' / Little Lime Panicle Hydrangea	#3	9	HP
Ilex glabra 'Compacta' / Compact Inkberry	#3	24	IG
Syringa patula 'Miss Kim' / Miss Kim Lilac	#3	5	MK
Grasses			
Calamagrostis a. 'Karl Foerster' / Karl Foerster Feather Reed Grass	#2	16	KF
Panicum virgatum 'Ruby Ribbons' / Ruby Ribbons Switchgrass	#2	23	PV
Hakonechloa macra 'All Gold'/ All Gold Japenese Forest Grass	#2	34	HK
Perennials			
Huechra 'Citronelle' / Citonelle Coral Bells	#1	6	HU
Huechra 'Licorice / Licorice Coral Bells	#1	8	CB
Hemerocallis 'Pardon Me' / Pardon Me Daylily	#1	12	HM
Astilbe 'Visions in Pink'/Visions in Pink Astilbe	#1	15	AP
Astilbe 'Bridal Veil' / White Astilbe	#1	26	AF
Hosta 'Blue Cadet'/ Blue Cadet Plantain Lily	#1	29	HB
Hosta 'First Frost' / First Frost Plantain Lily	#1	29	HF
Ground Cover			
Microbiota decussata / Russian Cypress	#1	55	MD

NOTES:

1. CALL DIG SAFE PRIOR TO BEGINNING WORK. (1-888-344-7233). THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF THE SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES, PAVING, WALKS, CURBING, ETC DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO THE OWNER OR GENERAL CONTRACTOR.
2. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING.
3. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTINGS SHOWN ON THE DRAWINGS. VARIATIONS IN QUANTITIES ARE TO BE APPROVED BY THE DESIGN ENGINEER.
4. PROVIDED SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.
5. ALL PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN
6. ALL PLANT MATERIALS SHALL BE FREE FROM INSECTS AND DISEASE.
7. ALL PLANTINGS SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING STAKING OR GUYING, WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM OWNER.
8. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
9. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING AND NEWLY PLANTED TREES AND SHRUBS DURING THE CONSTRUCTION PROCESS. WHERE REQUIRED, THE CONTRACTOR SHALL INSTALL TEMPORARY FENCING (SNOW OR EQUAL) AROUND EXISTING TREES AND SHRUBS THAT COULD BE IMPACTED BY THE CONSTRUCTION PROCESS. STORAGE OF CONSTRUCTION EQUIPMENT, CONSTRUCTION MATERIALS, SNOW STORAGE AND OR VEHICLE PARKING SHALL NOT BE PERMITTED WITHIN THE DRIP LINE OF TREES OR TWENTY FEET WHICH EVER IS GREATER.
10. NEW PLANTINGS SHALL BE INSTALLED PER PROJECT DRAWINGS AND SPECIFICATION THAT INCLUDE FERTILIZATION AND MULCHING AS REQUIRED.
11. ALL SHRUB BEDS AND TREE PITS SHALL BE MULCHED WITH 3" CLEAN SHREDDED BLACK MULCH
12. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
13. MAINTENANCE OF NEW PLANTINGS AND LAWNS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND OR LANDSCAPE SUBCONTRACTOR UNTIL ACCEPTANCE BY THE OWNER. RESPONSIBILITIES SHALL INCLUDE WATERING WEEDING AND MOWING AS NECESSARY. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE, REPLACEMENT MATERIAL SHALL BE GUARANTEED FOR AND ADDITIONAL YEAR FROM TIME OF INSTALLATION.
14. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY EROSION CONTROL MEASURES DURING THE CONSTRUCTION PHASE AND UNTIL ALL AREAS HAVE BEEN STABILIZED AND ACCEPTED BY THE OWNER. THE GENERAL CONTRACTOR SHALL PROVIDE WEEKLY INSPECTIONS OF EROSION MEASURE AND IMMEDIATELY AFTER STORM EVENTS AND REPAIR AS NECESSARY.
15. THE GENERAL CONTRACTOR AND OR THE LANDSCAPE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL THREE GUYING MATERIAL ONCE PLANT MATERIAL HAS BEEN ESTABLISHED. (MINIMUM OF ONE GROWING SEASON). ALL TEMPORARY EROSION CONTROL MEASURE SHALL BE REMOVED ONCE STABILIZATION OF DISTURBANCE HAS BEEN ACCEPTED BY OWNER.
16. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR A MINIMUM OF TWO MOWINGS FOR ALL TURF AREAS OR UNTIL ACCEPTANCE BY THE OWNER. A MINIMUM UNIFORM 75% CATCH OF TURF IS REQUIRED FOR ACCEPTANCE.
17. ALL PLANTINGS SHALL BE WATERED REGULARLY DURING THEIR FIRST YEAR AND MAINTAINED PERMANENTLY IN GOOD GROWING CONDITION AS AN EFFECTIVE VISUAL SCREEN.
18. SHRUBS OR TREES WHICH DIE SHALL BE REPLACED WITHIN ONE GROWING SEASON WITH NEW SHRUBS OR TREES TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE LANDSCAPING REQUIREMENTS.
19. ALL REQUIRED LANDSCAPING SHALL BE INSTALLED BEFORE OCCUPANCY, OR WITHIN SIX MONTHS IF OCCUPANCY OCCURS DURING WINTER CONDITIONS.
20. TREES ARE TO BE 6' TALL AT PLANTING.
21. ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 – NURSERY STOCK, LATEST EDITIONS (AMERICAN ASSOCIATION OF NURSERYMEN, INC.)
22. 4" AGED PINEBARK MULCH AND A WEED BARRIER (TY-PAR FABRIC OR APPROVED EQUAL) SHALL BE APPLIED TO ALL SHRUB AND GROUND COVER BEDS. INSTALL WEED BARRIER AS PER MANUFACTURERS RECOMMENDATIONS.
23. PLANT-PIT BACK-FILL SHALL BE MIXED AT A RATE OF 7 PARTS OF TOPSOIL TO 2 PARTS OF DEHYDRATED COW MANURE. SLOW RELEASE FERTILIZER SHALL BE APPLIED AS PER MANUFACTURERS RECOMMENDATIONS. USE EXISTING ON-SITE TOPSOIL AS PART OF BACK FILL WHEN AVAILABLE.
24. ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE RESTORED WITH SEED OR SOD AS INDICATED ON PLANS.
25. TOPSOIL WILL BE TESTED FOR FERTILIZATION REQUIREMENTS, AND SLOW RELEASE ENVIRONMENTALLY FRIENDLY FERTILIZER WILL BE APPLIED AT THE RECOMMENDED RATES.
26. ALL DISTURBED WETLAND BUFFER AREAS, EXCEPT FOR AREAS THAT ARE PART OF THE DRAINAGE SYSTEM, ARE TO BE RESEEDED WITH A CONSERVATION SEED MIX AND ONLY MOWED TWICE PER YEAR.
27. ALL PLANT SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER.
28. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, UPON DELIVERY OR AT THE JOB SITE WHILE WORK IS ONGOING TO CONFORMITY TO SPECIFIED QUALITY, SIZE AND VARIETY.
29. PLANTS FURNISHED IN CONTAINERS SHALL HAVE THE ROOTS WELL ESTABLISHED IN THE SOIL MASS AND SHALL HAVE AT LEAST ONE (1) GROWING SEASON. ROOT-BOUND PLANTS OR INADEQUATELY SIZED CONTAINERS TO SUPPORT THE PLANT MAY BE DEEMED UNACCEPTABLE.
30. ALL PLANTS SHALL BE GUARANTEED BY THE CONTRACTOR FOR NO LESS THAN ONE FULL YEAR FROM THE TIME OF INSTALLATION. DURING THIS TIME, THE OWNER SHALL MAINTAIN ALL PLANT MATERIALS IN THE ABOVE MANNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE PLANTS TO ENSURE PROPER CARE. IF THE CONTRACTOR IS DISSATISFIED WITH THE CARE GIVEN, HE SHALL IMMEDIATELY, AND IN SUFFICIENT TIME TO PERMIT THE CONDITION TO BE RECTIFIED, NOTIFY THE OWNER IN WRITING OR OTHERWISE FORFEIT HIS CLAIM.
31. BY THE END OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL HAVE REPLACED ANY PLANT MATERIAL THAT IS MISSING, NOT TRUE TO SIZE AS SPECIFIED, THAT HAS DIED, THAT HAS LOST NATURAL SHAPE DUE TO DEAD BRANCHES, EXCESS PRUNING OR INADEQUATE OR IMPROPER CARE, OR IS, IN THE OPINION OF THE OWNER, IN UNHEALTHY OR UNSIGHTLY CONDITION.
32. THE CONTRACTOR IS TO USE TEMPORARY MEASURES FOR WATERING PLANTS DURING THE ESTABLISHMENT PERIOD. INCLUDING CONNECTING TEMPORARY HOSES TO THE STRUCTURE WATER SUPPLY LINE AND UTILIZING SPRINKLERS UNTIL 85% GROWTH OCCURS.

0 10 20 40 60 100

terrain
planning & design llc
311 kast hill road
hopkinton, nh 03229
603. 491. 2322
terrainplanning.com

GROVE STREET

Site Location:
6 Grove Street
Dover, NH
Tax Map: 31

Prepared For:
Berry Surveying & Engineering
335 Second Crown Point Rd
Barrington, NH 03825

LANDSCAPE PLAN

DATE: 10-14-16

SCALE: 1" = 20'

PROJECT #: 1677

Drawn By: LAW
Revised By: BG

Checked By: ERB

REVISIONS: DATE:
Issued for Client Review 04-06-16
Revised 10-14-16, 12-06-17

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SHEET 11 OF 21

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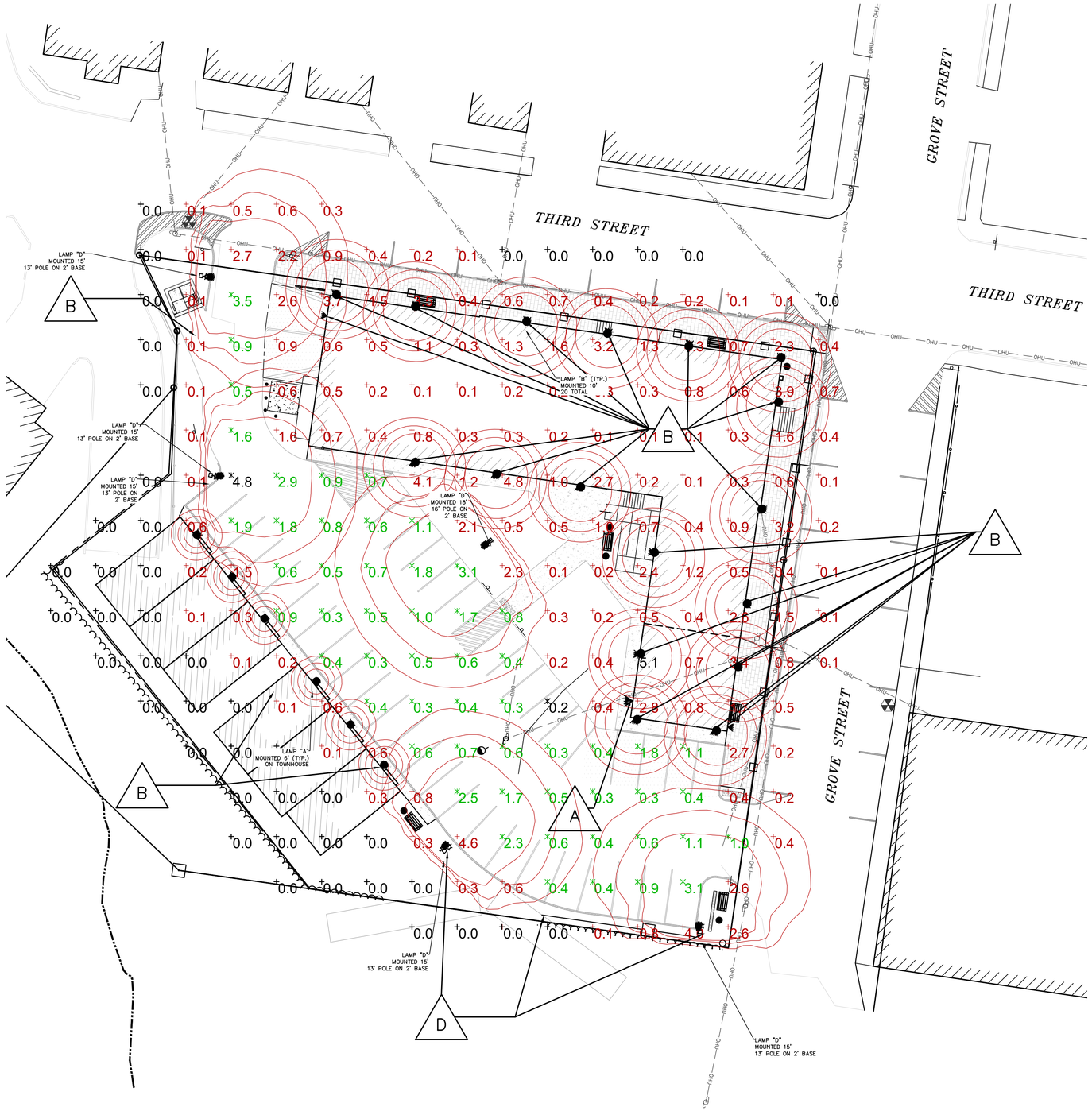


Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
◯	A	6	Lithonia Lighting	ODSL10 SRC	CRAFTSTON WALL MOUNTED SMALL DECORATIVE LANTERN. ONE LAMP 13W SPIRAL COMPACT FLUORESCENT, WHITE GLASS DIFFUSER 4.25" DIA. X 6.85" HIGH, ELECTRONIC BALLAST	ONE 13-WATT T4 SPIRAL COMPACT FLUORESCENT, VERTICAL BASE UP POSITION.	1	ODSL10□SRC.ies	900	1	12.6
□	B	17		WSTM LED 2A-40K 120 DIFS	WSTM LED WITH 2 BOARDS, 4000K CCT, 120 VOLT, DIFFUSE GLASS LENS	SAMSUNG 2323	1	WSTM□LED□2A□40K□120□DIFS.ies	1277	1	16.2
□	D	5		KSF1 175M R4SC (PROBE)	Specification Area Luminaire, 175W Metal Halide, R4SC Sharp Cutoff Reflector, Full Cutoff MEETS THE "NIGHTTIME FRIENDLY" CRITERIA	ONE 175-WATT CLEAR BT-28 METAL HALIDE, HORIZONTAL POSITION.	1	KSF1□175M□R4SC□(PROBE).ies	12000	1	213

Statistics

Description	Symbol	Avg	Max	Min	Max:Min	Avg:Min
Calc Zone □1	+	0.8 fc	5.1 fc	0.0 fc	N/A	N/A
Stat Zone □1	×	1.0 fc	4.8 fc	0.2 fc	24.0:1	5.0:1

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

DOVER PLANNING #16-31C

REVISION	DATE	DESCRIPTION

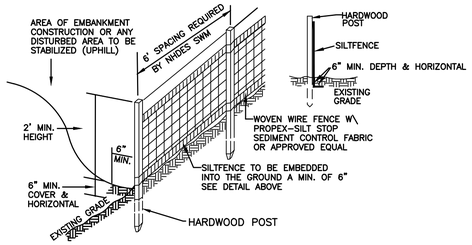
PROPOSED LIGHTING PLAN
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 - 090

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14143
LICENSED PROFESSIONAL ENGINEER

E1



SILT FENCE CONSTRUCTION SPECIFICATIONS

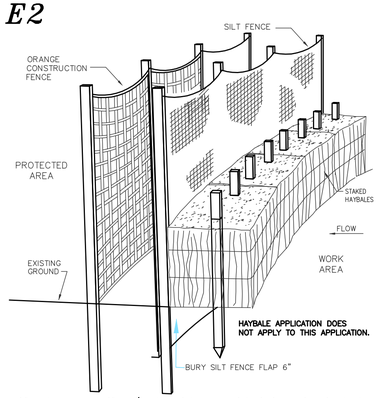
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES AND FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP MID AND BOTTOM SECTIONS AND BE EMBEDDED INTO GROUND A MINIMUM OF 8" THE FENCE POSTS SHALL BE A MINIMUM 48" LONG, SPACED A MAXIMUM 10' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED BY SIX INCHES, FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BY-PASSING.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND PROPERLY DISPOSED OF. SEE MAINTENANCE NOTE BELOW, REMOVAL OF SEDIMENT REQUIRED AT A DEPTH OF 6-INCHES.
4. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.
5. SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER.
6. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND RE-VEGETATED.
7. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, SILT FENCE, PAGE 90.

SILT FENCE MAINTENANCE

1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH SIX-INCHES IN DEPTH.
4. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

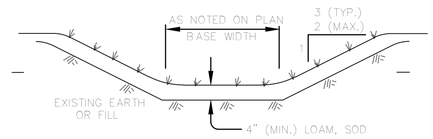
SILT FENCE DETAIL
NOT TO SCALE

E2



SILT FENCE/HAYBALE BARRIER DETAIL
THIS METHOD TO BE USED ALONG THE REAR OF THE PROPERTY
NOT TO SCALE

E3



GRASS TREATMENT SWALE
NOT TO SCALE

INSPECT ANNUALLY FOR EROSION, SEDIMENT ACCUMULATIONS, VEGETATION LOSS, & INVASIVE SPECIES. REPAIR AS NECESSARY.

MOW GRASS ANNUALLY TO A DEPTH OF 4".

INSTALL STABILIZATION MATTING DURING CONSTRUCATION

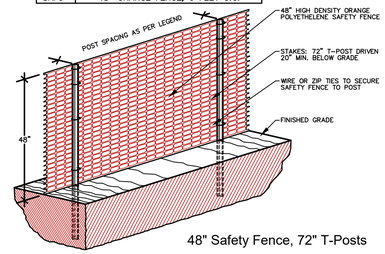
TO BE CONSTRUCTED IAW NH SWM #2 CHAPTER 4, #5 TREATMENT SWALES, PAGE 123.

E4

CONSTRUCTION SAFETY FENCE
NOT TO SCALE

LEGEND

SAF12	48" ORANGE FENCE, 12 FEET O.C.
SAF11	48" ORANGE FENCE, 11 FEET O.C..
SAF10	48" ORANGE FENCE, 10 FEET O.C.
SAF9	48" ORANGE FENCE, 9 FEET O.C.
SAF8	48" ORANGE FENCE, 8 FEET O.C..
SAF7	48" ORANGE FENCE, 7 FEET O.C.
SAF6	48" ORANGE FENCE, 6 FEET O.C.

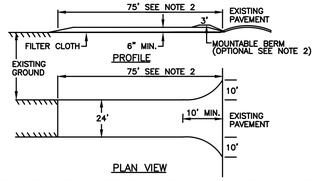


48" Safety Fence, 72" T-Posts

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.

E5

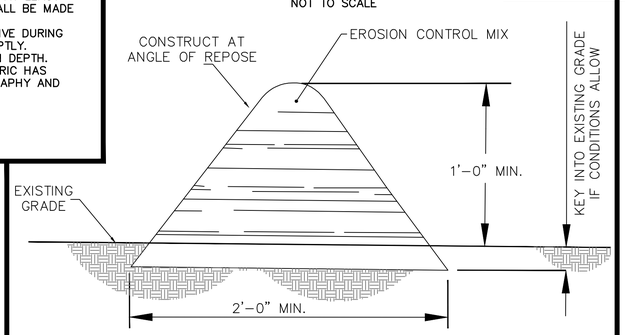
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



1. STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER.
5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.
8. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY CONSTRUCTION EXIT, PAGE 124.

E6

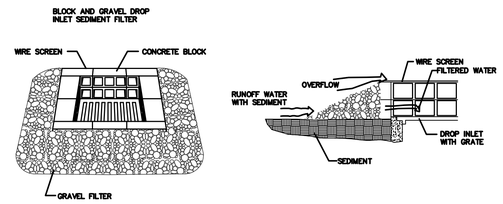
EROSION CONTROL MIX BERM
NOT TO SCALE



EROSION CONTROL MIX BERMS SHALL BE USED ONLY AS FOLLOWS:

1. 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.
2. THE BERMS SHALL BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSLY AS POSSIBLE.
3. THE BERMS SHALL BE INSTALLED ON SLOPES LESS THAN 5%.
4. 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.
5. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS, OR REPROCESSED WOOD PRODUCTS SHALL NOT BE USED AS ORGANIC MATERIAL.
6. THE MIX SHALL NOT CONTAIN SILTS, CLAY, OR FINE SANDS.
7. 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.
8. THE MIX PH SHALL BE BETWEEN 5.0 AND 8.0.
9. THE BERM SHALL BE AT LEAST 12 INCHES HIGH AND AT LEAST 2 FEET WIDE.
10. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, EROSION CONTROL MIX BERMS, PAGE 106.

E7



MAINTENANCE

ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAIN STORM AND REPAIRS MADE AS NECESSARY. SEDIMENT SHOULD BE REMOVED FROM TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED OF IN A SUITABLE AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURE OR VEGETATIVE MEANS. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.

BLOCK & GRAVEL DROP INLET SEDIMENT FILTER
NOT TO SCALE

TO BE USED IN ALL AREAS WHERE THERE WILL BE NO TRAFFIC.

TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY STORM DRAIN INLET PROTECTION, PAGE 118.

E8

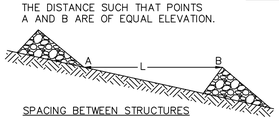
TEMPORARY EROSION CONTROL MEASURES

1. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.
2. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED, DIRECTED BY THE ENGINEER.
3. 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)
4. 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.
5. 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.
6. 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 AND RE-VEGETATED.
7. 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.
8. DITCHES, SWALES, AND BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
9. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
10. DRIVEWAYS AND CUT AND FILL SPLOPES MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINAL GRADE.
11. STABILIZATION MEANS:
    - 11.1. A MINIMUM OF 85% OF VEGETATIVE COVER HAS BEEN ESTABLISHED.
    - 11.2. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED, OR
    - 11.3. EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
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)

E9

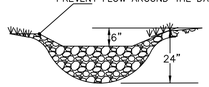
STONE CHECK DAM
NOT TO SCALE

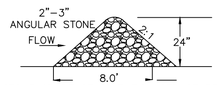
THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION.



SPACING BETWEEN STRUCTURES

NOTE: KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIUM OF 18" TO PREVENT FLOW AROUND THE DAM.

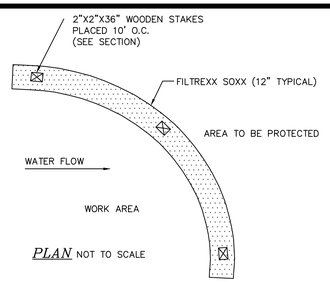




STONE GRADE STABILIZATION STRUCTURE

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 PLANS.
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.

E10

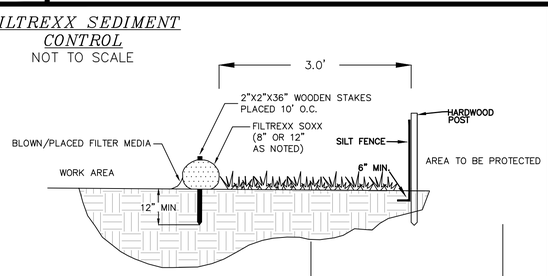


PLAN NOT TO SCALE

NOTES

1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. FILTER MEDIA FILL TO MEET APPLICATION REQUIRMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.
4. SILTSOXX MAY BE USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
5. SILTSOXX COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIRMENTS OF THE SPECIFIC APPLICATION.
6. FILTREXX SOXX IS A REGISTERED TRADEMARK OF FILTREXXIN TERNATIONAL, LLC.
7. SILT FENCE IS NOT A SUBSTITUTION FOR SILT SOXX AND ANY EQUAL SUBSTITUTION TO BE APPROVED.
8. TO BE CONSTRUCTED IAW FILTREXX, SECTION 1:EROSION & SEDIMENT CONTROL (PAGE 323) - CONSTRUCTION ACTIVITIES, SWPPP CUT SHEET: FILTREXX SEDIMENT CONTROL

FILTREXX SEDIMENT CONTROL
NOT TO SCALE

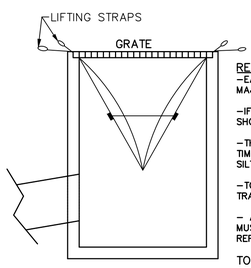


SECTION NOT TO SCALE

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.

E11



RECOMMENDED MAINTENANCE SCHEDULE

-EACH SILTSACK SHOULD BE INSPECTED AFTER EVERY MAJOR RAIN EVENT, AND MUST BE MAINTAINED.

-IF THERE HAVE BEEN NO MAJOR EVENTS, SILTSACK SHOULD BE INSPECTED EVERY 2-3 WEEKS.

-THE RESTRAINT CORD SHOULD BE VISIBLE AT ALL TIMES. IF CORD IS COVERED WITH SEDIMENT, THE SILTSACK SHOULD BE EMPTIED.

-TO BE USED IN ALL AREAS WHERE THERE WILL BE TRAFFIC.

- ARE SUBJECT TO DAMAGE BY SNOW PLOWS, AND MUST BE INSPECTED AFTER ANY SNOW EVENT AND REPLACED AS REQUIRED.

TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY STORM DRAIN INLET PROTECTION, PAGE 118.

SILTSACK DETAIL
NOT TO SCALE

E-101

DOVER PLANNING #16-31C

REVISION	DATE	DESCRIPTION

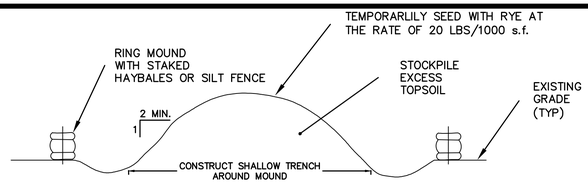
EROSION & SEDIMENT CONTROL DETAILS
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 - 090

STATE OF NEW HAMPSHIRE - KENNETH A. BERRY No. 14248 LICENSED PROFESSIONAL ENGINEER

E12



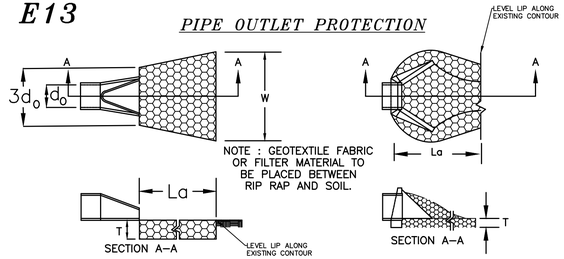
TOPSOIL STOCKPILE MOUND

NOT TO SCALE

TO BE CONSTRUCTED IAW NH SWM #3 4–1 EROSION CONTROL PRACTICES, SOIL STOCKPILE PRACTICES, PAGE 46.

E13

PIPE OUTLET PROTECTION



PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL

PIPE OUTLET TO WELL–DEFINED CHANNEL

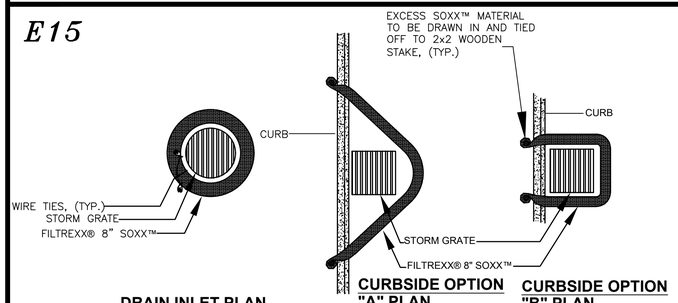
PIPE OUTLET PROTECTION CONSTRUCTION SPECIFICATIONS

1. THE SUB GRADE FOR THE FILTER MATERIAL, GEOTEXTILE 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 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.
5. TO BE CONSTRUCTED IAW NH SWM #2 4–6 CONVEYANCE PRACTICES, 6. OUTLET PROTECTION, PAGE 172.

E14

TABLE 7–24––RECOMMENDED RIP RAP GRADATION RANGES			
d50 SIZE=	0.5	FEET 6	INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE		SIZE OF STONE (INCHES) FROM	TO
100%		9	12
85%		8	11
50%		6	9
15%		2	3

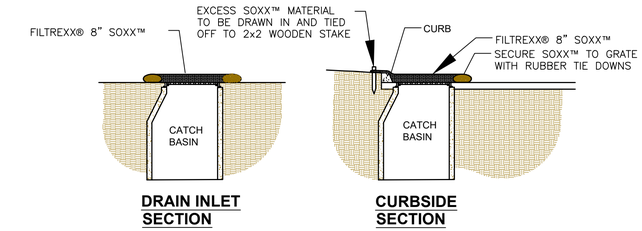
E15



DRAIN INLET PLAN

CURBSIDE OPTION "A" PLAN

CURBSIDE OPTION "B" PLAN



DRAIN INLET SECTION

CURBSIDE SECTION

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. FILTER MEDIA™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

FILTREXX INLET PROTECTION

NOT TO SCALE

E16

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 not yet complete.

SEEDING GUIDE

USE	SEEDING MIXTURE 1/	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED	POORLY DRAINED
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	FAIR	FAIR
	C	POOR	GOOD	EXCELLENT	GOOD
	D	FAIR	FAIR	GOOD	EXCELLENT
	E	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD	FAIR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
	D	GOOD	EXCELLENT	EXCELLENT	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	GOOD	FAIR	POOR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
	D	FAIR	GOOD	GOOD	EXCELLENT
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	F	FAIR	EXCELLENT	EXCELLENT	2/
	G	FAIR	EXCELLENT	EXCELLENT	2/

GRAVEL PIT, SEE NH–PM–24 IN APPENDIX FOR RECOMMENDATION REGARDING RECLAMATION OF SAND AND GRAVEL PITS.

1/ REFER TO SEEDING MIXTURES AND RATES IN TABLE 7–36.
2/ POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.

* RECOMMENDED

SEEDING RATES

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.
A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREEPING RED FESCUE	10	0.25
CROWN VETCH OR	15	0.35
FLAT PEA	30	0.70
TOTAL	40 OR 55	0.95 OR 1.35
C. TALL FESCUE	24	0.55
CREEPING RED FESCUE	24	0.55
BIRDS FOOT TREFOIL	REMOVED	REMOVED
TOTAL	48	1.10
D. TALL FESCUE	20	0.45
FLAT PEA	30	0.75
TOTAL	50	1.20
E. CREEPING RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 2/	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.80

CONSERVATION MIX	POUNDS PER ACRE	POUNDS PER 1,000 S.F.
RED FESCUE (35%)	75	1.75
TALL FESCUE (25%)	55	1.25
ANNUAL RYEGRASS (12%)	33	0.75
PERENNIAL RYEGRASS (10%)	26	0.60
KENTUCKY BLUEGRASS (10%)	22	0.50
WHITE CLOVER (3%)	7	0.15

SEEDING SPECIFICATIONS

1. GRADING AND SHAPING
   A. SLOPES SHALL NOT BE STEEPER THAN 2:1; 3:1 SLOPES OR FLATTER ARE PREFERRED.
   WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION
   A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
   B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO 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 OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
3. ESTABLISHING A STAND
   A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING
   AND INCORPORATED INTO THE SOIL KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE,
   THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:
   AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100LBS. PER 1,000 SQ.FT.
   NITROGEN(N), 50LBS. PER ACRE OR 1.1LBS. PER 1,000 SQ.FT.
   PHOSPHATE(P2O5), 100LBS. PER ACRE OR 2.2LBS. PER 1,000 SQ.FT.
   POTASH(K2O), 100LBS. PER ACRE OR 2.2LBS. PER 1,000 SQ.FT.
   (NOTE: THIS IS THE EQUIVALENT OF 500LBS. PER ACRE OF 10–20–20 FERTILIZER OR 1,000LBS. PER ACRE OF 5–10–10.)
   B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
   C. REFER TO TABLE(G–E1 THIS SHEET) FOR APPROPRIATE SEED MIXTURES AND TABLE(H–E1 THIS SHEET) FOR RATES OF SEEDING. ALL LEGUMES (CROWNVETCH, BIRDSFOOT TREFOIL, AND FLATPEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT.
   D. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.
4. MULCH
   A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
   B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90LBS PER 1000 S.F.
5. MAINTENANCE TO ESTABLISH A STAND
   A. PLANTED AREA SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
   B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIAL STAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.
   C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.
6. TO BE CONSTRUCTED IAW NH SWM #3 4–1 EROSION CONTROL PRACTICES, PERMANENT VEGETATION, PAGE 60.

E17

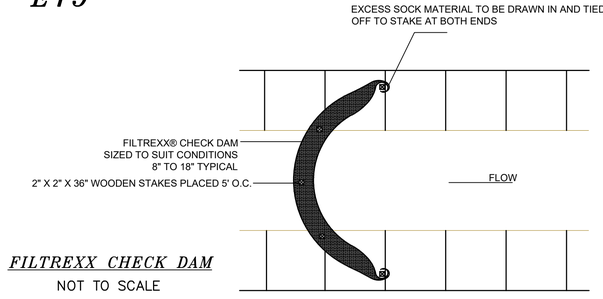
WINTER STABILIZATION NOTES

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 ABOVE.
2. 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 GRADED AND SHAPED.
3. PRIOR TO NOV. 15TH ALL ROADWAY AND PARKING AREAS SHALL BE BROUGHT UP TO AND THROUGH THE BANK RUN GRAVEL APPLICATION. IF THESE AREAS' ELEVATIONS ARE PROPOSED TO REMAIN BELOW THE PROPOSED SUBGRADE 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 SHALL HAVE BETWEEN 15–25% PASSING THE #200 SIEVE AND THE LARGEST STONE SIZE SHALL BE 2". IF THE SITE IS ACTIVE AFTER NOVEMBER 15TH, ANY ACCUMULATED SNOW SHALL BE REMOVED FROM ALL ROADWAY AND PARKING AREAS.
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 WILL REMAIN THROUGHOUT THE WINTER SHALL BE SURROUNDED WITH SILT FENCING.

E18 *DEFINITION OF STABLE:*

1. WHEN A BASE COURSE GRAVEL HAS BEEN INSTALLED IN AN AREA TO BE PAVED
2. WHEN A MINIMUM OF 85% VEGITATIVE GROWTH OCCURS.
3. WHEN A MINIMUM OF 3" OF NON–EROSIVE MATERIAL,SUCH AS STONE OR RIP–RAP HAS BEEN INSTALLED.
4. WHEN PROPER EROSION CONTROL BLANKETS, SUCH AS CURLEX II, C350 OR OTHER DOT APPROVED MATTING, HAS BEEN INSTALLED PROPERLY.
5. 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.
6. CITY OF DOVER CHAPTER 149–14 A: 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 ONE HUNDRED (100) 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.

E19



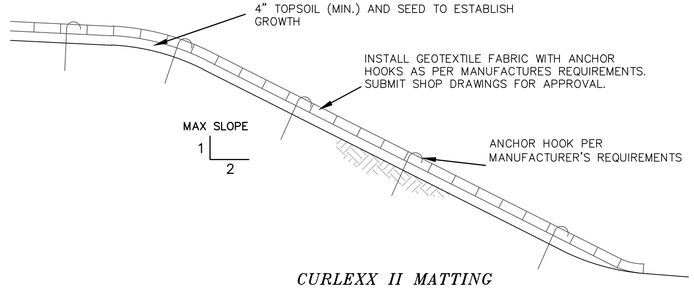
FILTREXX CHECK DAM

NOT TO SCALE

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. CHECK DAM SHOULD BE USED IN AREAS THAT DRAIN 10 ACRES OR LESS.
3. SEDIMENT SHOULD BE REMOVED FROM BEHIND CHECK DAM ONCE THE ACCUMULATED HEIGHT HAS REACHED ½ THE HEIGHT OF THE CHECK DAM.
4. CHECK DAM CAN BE DIRECT SEEDED AT THE TIME OF INSTALLATION.
5. CONTRACTOR IS REQUIRED TO BE A FILTREXX CERTIFIED™ INSTALLER.

E20

FOR STEEPER SLOPES, SEE DETAIL SHEET D101 DETAIL D6



CURLEXX II MATTING SLOPE STABILIZATION DETAIL

NOT TO SCALE

TO BE CONSTRUCTED IAW NH SWM #3 4–1 EROSION CONTROL PRACTICES, TEMPORARY EROSION CONTROL BLANKET, PAGE 68.

E21 *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.

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 (CESSWI), 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 COMPLETE.

14.) SMOOTH AND REVEGETATE ALL DISTURBED AREAS.

15.) FINISH PAVING ALL ROADWAYS.

E–102

DOVER PLANNING #16–31C

REVISION	DATE	DESCRIPTION

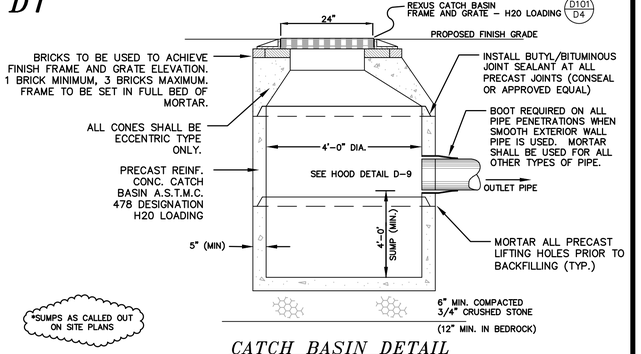
EROSION & SEDIMENT CONTROL DETAILS
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE : AS SHOWN
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 – 090

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

D1

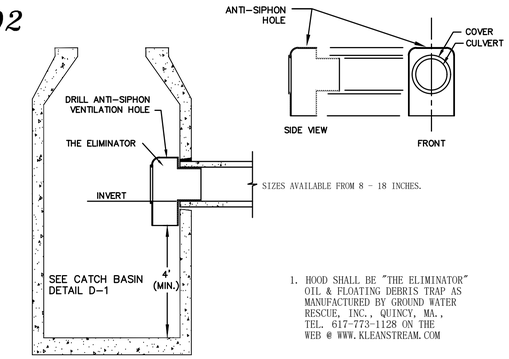


CATCH BASIN DETAIL

NOT TO SCALE

SEE SAND FILTER DETAILS AND GRADING AND DRAINAGE SHEETS

D2

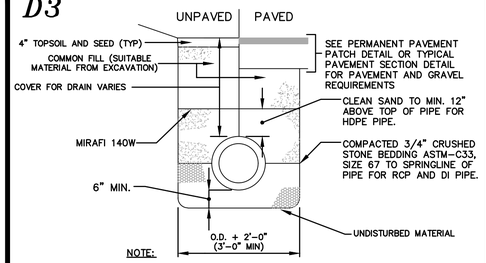


1. HOOD SHALL BE "THE ELIMINATOR" OIL & FLOATING DEBRIS TRAP AS MANUFACTURED BY GROUND WATER RESCUE, INC., QUINCY, MA., TEL. 617-773-1128 ON THE WEB @ WWW.KLEANSTREAM.COM

CATCH BASIN HOOD DETAIL

NOT TO SCALE

D3



NOTE:

PLASTIC DRAIN PIPE (HDPE) SHALL BE ADS N-12 (CORRUGATED EXTERIOR/SMOOTH INTERIOR) OR EQUAL MEETING AASHTO M-252 AND H-20 LOADING.

DI DRAIN PIPE SHALL BE CL. 50.

RC DRAIN PIPE SHALL BE CLASS III UNLESS OTHERMISE NOTED.

TYPICAL DRAIN AND SEWER PIPE TRENCH

NOT TO SCALE

D4

Manhole Castings L-1

Rexus Ductile Iron Frame & Cover

REXUS manhole covers feature a unique spring bar locking mechanism and a spline located in the hinge housing for improved security; additional locking options are available to further deter unauthorized access and theft. Made from ductile iron — an engineered material that offers many advantages over traditional cast iron — REXUS covers deliver excellent performance in all the key areas of concern to municipal engineers.

Highlights:

- Ductile iron
- Spring bar locking
- Available in 24" opening
- Hinged cover
- Cover with 90° blocking mechanism
- Exceeds H20 loading
- Optional locking features
- Independently certified

Rexus Frame & Grate

Rexus Frame & Grate In Open Position Showing Hinged Grate

DESCRIPTION	PRODUCT NUMBER
24" REXUS D8 MH F & C - Plain	62114 24 F
24" REXUS D8 MH F & C - Sewer	62114 24 S
24" REXUS D8 MH F & C - Drain	62114 24 D
24" REXUS D8 MH F & C - Water	62114 24 W WTR
24" REXUS D8 CB F & Grate	62114 CB3R
REXUS Pent Lock with Key	62132 P32 01
REXUS Pent Lock without Key	62132 P32 02

NOTE: See page L-2 for the SCS locking device for Rexus and Pazzaz.

REXUS Anti-Theft Cover Locks

Pent Locking Kit:

- ¼ turn lock actuated by an asymmetrical five-sided bolt head.
- On-site installation takes five minutes:
  1. Punch out the center of the locking bolt area.
  2. Install the kit in compliance with the instructions supplied.
- Lock must be operated with the handling key (supplied with the kit; can be purchased separately).

SPECIFICATIONS:

Manhole cover and frame shall be called REXUS or approved equal. Cover and frame shall be manufactured from Ductile Iron and be 3rd party certified and ISO 9000 approved. Covers shall be hinged and incorporate a 90-degree blocking system to prevent accidental closure. Covers shall be one-man operable using standard tools and shall be capable of withstanding a test load of 100,000 lbs. The cover shall incorporate a spring bar locking system, which automatically activates when the cover is closed. Additional security features to include a device to prevent the cover from being completely removed from the frame. This device shall be capable of being deactivated if required. Frames shall be circular, incorporate a seating ring, and have a nominal 24-inch clear opening. Frame depth shall not exceed 4 inches, and the flange shall incorporate bedding slots and bolt holes.

www.ejprescott.com L-1

CATCH BASIN FRAME AND GRATE WILL BE REXUS, OR APPROVED EQUAL, 24 INCH OPENING, DUCTILE IRON, H20 LOADING.

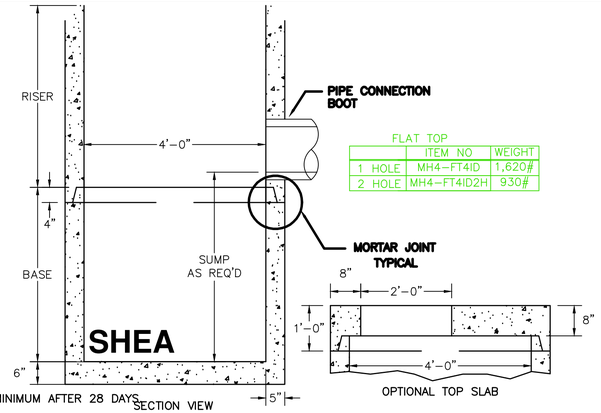
D5

RISER SECTION

HEIGHT	ITEM NO	WEIGHT
1'-0"	MH4-12CS4ID	856#
2'-0"	MH4-24CS4ID	1,712#
2'-6"	MH4-30CS4ID	2,140#
3'-0"	MH4-36CS4ID	2,568#
4'-0"	MH4-48CS4ID	3,424#
5'-0"	MH4-60CS4ID	4,280#

BASE SECTION

HEIGHT	ITEM NO	WEIGHT
2'-0"	MH4-24S4ID	2,640#
2'-6"	MH4-30S4ID	3,067#
3'-0"	MH4-36S4ID	3,495#
3'-6"	MH4-42S4ID	3,922#
4'-0"	MH4-48S4ID	4,350#
4'-6"	MH4-54S4ID	4,777#
5'-0"	MH4-60S4ID	5,205#
5'-6"	MH4-66S4ID	5,633#
6'-0"	MH4-72S4ID	6,060#



FLAT TOP

	ITEM NO	WEIGHT
1 HOLE	MH4-FT4ID	1,620#
2 HOLE	MH4-FT4ID2H	930#

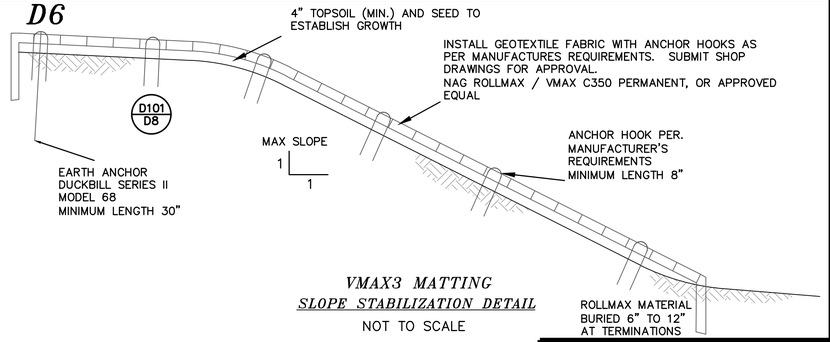
NOTES:

1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. REINFORCED STEEL CONFORMS TO LATEST ASTM A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) BASE BOTTOM.
3. H-20 DESIGN LOADING PER AASHTO HS-20-44; ASTM C478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS."

DRAIN MANHOLE DETAIL

NOT TO SCALE

D6

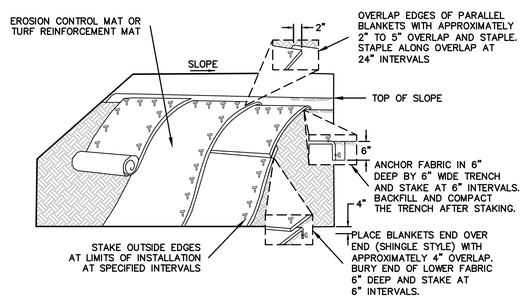


VMAX3 MATTING
SLOPE STABILIZATION DETAIL

NOT TO SCALE

D7

VMAX3 MATTING & CURLEX II

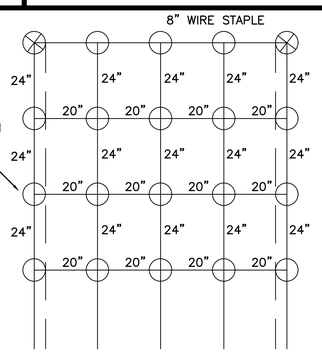


NOTE : STAKING PATTERNS SHALL FOLLOW MANUFACTURERS RECOMMENDATIONS. MINIMUM SPACING ACROSS FABRIC AS SHOWN.

INSTALLATION OF EROSION CONTROL FABRICS

NOT TO SCALE

D8



1.) THE BEGINNING AND END OF EACH ROW OF NAG C350 WILL BE BURIED SIX TO 12 INCHES DEEP.
2.) AT THE TOP OF EACH ROW WHERE THE ROWS OVERLAP, AN EARTH ANCHOR WILL BE INSTALLED TO A MINIMUM DEPTH OF 30 INCHES.
3.) STAPLES WILL BE INSTALLED AT A RATE OF 3.4 STAPLES PER SQUARE YARD AS DEMONSTRATED.
4.) STAPLES WILL BE INSTALLED TO A MINIMUM DEPTH OF 8 INCHES.
5.) ROWS OF NAG ROLLMAX WILL BE INSTALLED PARALLEL WITH AN AVERAGE OF THREE AND ONE-HALF INCHES OF OVERLAP. STAPLES WILL BE INSTALLED ALONG THE OVERLAP SEAM, AS SHOWN.

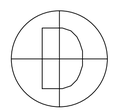
VMAX3 MATTING
STAPLE PATTERN GUIDE

NOT TO SCALE

D9

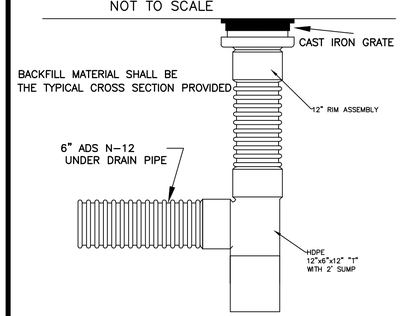
CASTINGS ARE RATED FOR H20 WHEEL LOAD TRAFFIC

PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT



12" CAST IRON GRATE

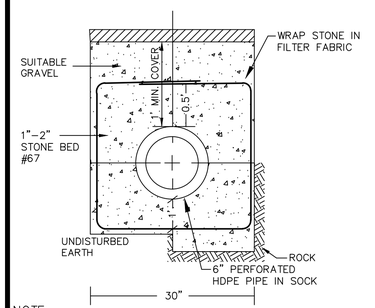
NOT TO SCALE



ADS N-12 INLINE DRAIN

NOT TO SCALE USED FOR CLEANOUTS

D10



NOTE:

1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPECS.

UNDERDRAIN TRENCH DETAIL

REFERENCE IS MADE TO A LONG TERM MAINTENANCE MANUAL PREPARED BY BERRY SURVEYING & ENGINEERING, WHICH IS ON FILE AT THE CITY OF DOVER PLANNING DEPARTMENT, AND CAN BE FOUND AT THE OFFICE OF BERRY SURVEYING & ENGINEERING. (603) 332-2863

D-101

DOVER PLANNING #16-31C

REVISION	DATE	DESCRIPTION

DRAINAGE DETAILS FOR 6 GROVE STREET RESIDENCES, LLC FOR PROPERTY LOCATED AT 6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

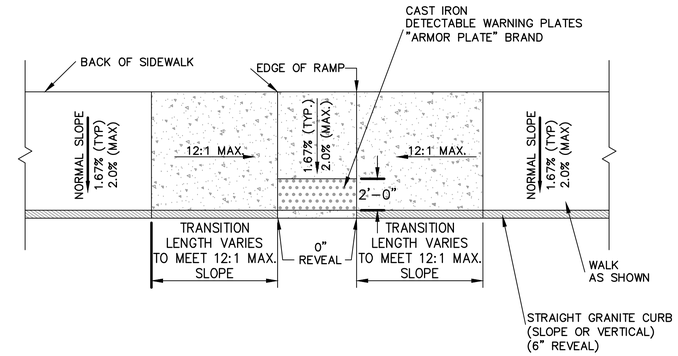
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 - 090

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 4243
LICENSED PROFESSIONAL ENGINEER

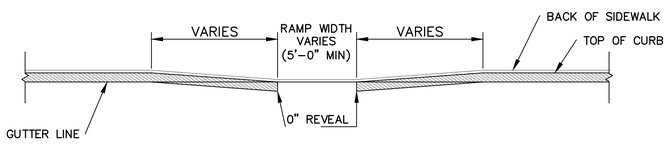
SHEET 15 OF 21

C1



PLAN

(NOT TO SCALE)



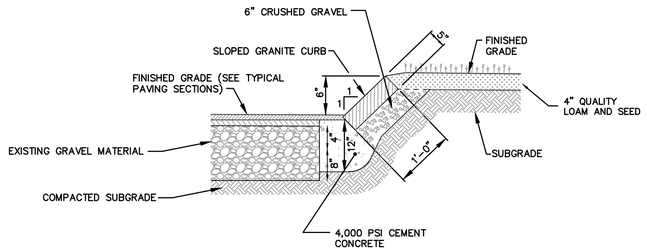
ELEVATION

(NOT TO SCALE)

TYPICAL DETAIL FOR WHEELCHAIR RAMP

(NOT TO SCALE)

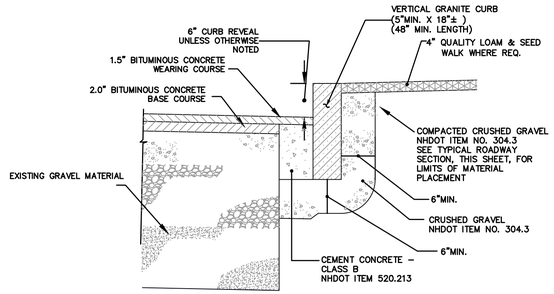
C2



SLOPE GRANITE CURB DETAIL

NOT TO SCALE

C3



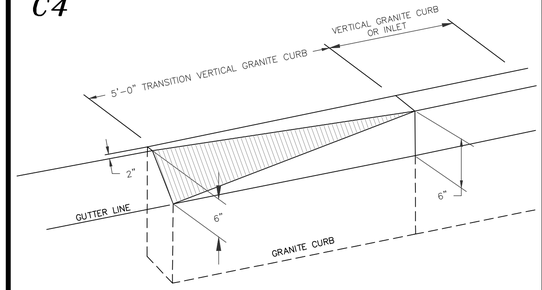
VERTICAL GRANITE CURB DETAIL

NOT TO SCALE

GENERAL NOTE:

1.) TO BE USED IN PLACE OF THE CONCRETE WALK AND INTEGRATED CURB AT THE OWNERS DISCRETION

C4

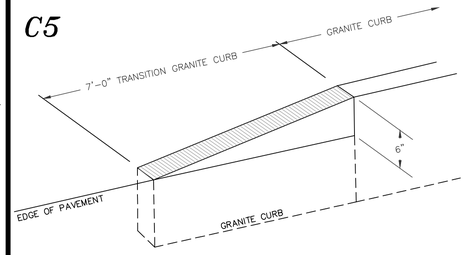


CURB TRANSITION DETAIL

NOT TO SCALE

TO BE USED FOR TRANSITION FROM VERTICAL GRANITE CURB TO SLOPED GRANITE CURB

C5

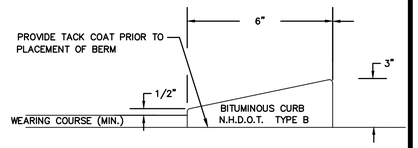


CURB TRANSITION DETAIL

NOT TO SCALE

TO BE USED FOR TRANSITION FROM GRANITE CURB TO EDGE OF PAVEMENT

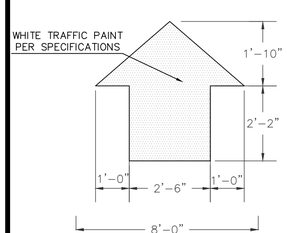
C6



MODIFIED CAPE COD BERM

NOT TO SCALE

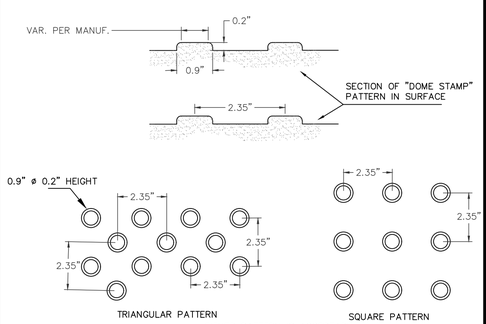
C7



PAVEMENT MARKINGS DETAILS

NOT TO SCALE

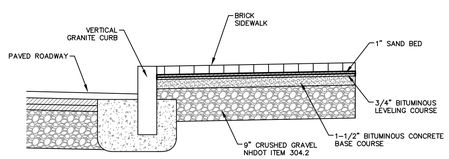
C8



DETECTABLE WARNING SURFACE

NOT TO SCALE

C9



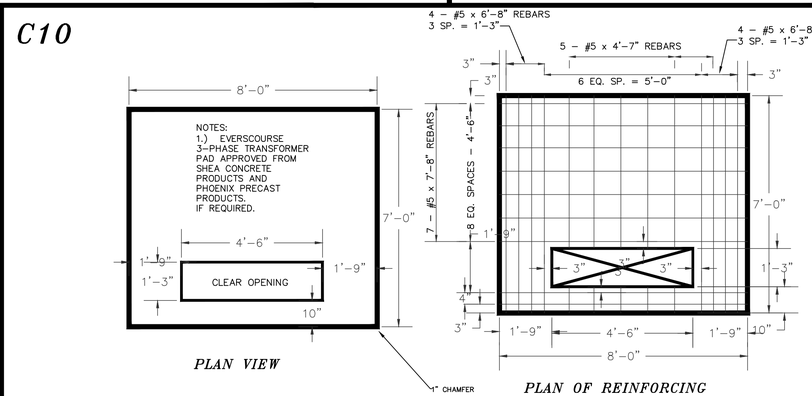
BRICK SIDEWALK

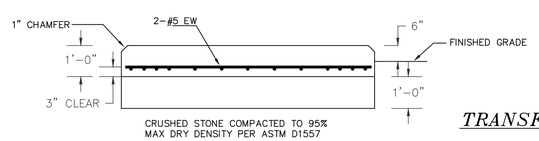
NOT TO SCALE

NOTE:

1.) USE POLYMERIC SAND FOR JOINTS BETWEEN BRICK

C10





SECTION VIEW

TRANSFORMER PAD DETAIL

NOT TO SCALE

NOTES:

1.) CONFIRM SIZE WITH ELECTRIC COMPANY BEFORE CONSTRUCTION.

2.) USE LOCAL ELECTRIC COMPANY DETAILS AS REQUIRED.

C-101

DOVER PLANNING #16-31C

REVISION	DATE	DESCRIPTION

CONSTRUCTION DETAILS
FOR
6 GROVE STREET RESIDENCES, LLC
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

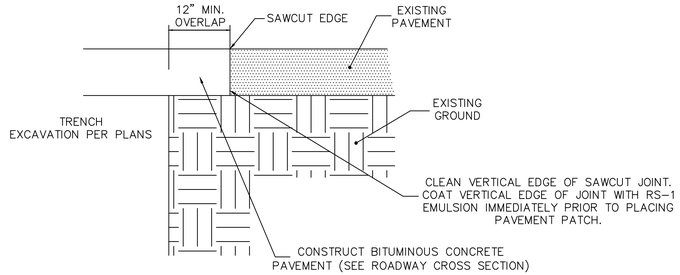
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

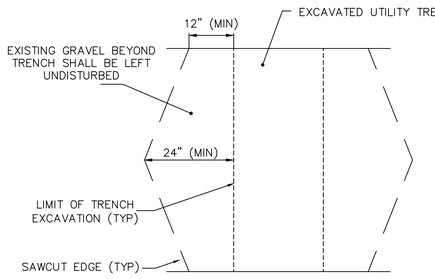
SCALE : AS SHOWN
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 - 090

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
NO. 14243
LICENSED PROFESSIONAL ENGINEER

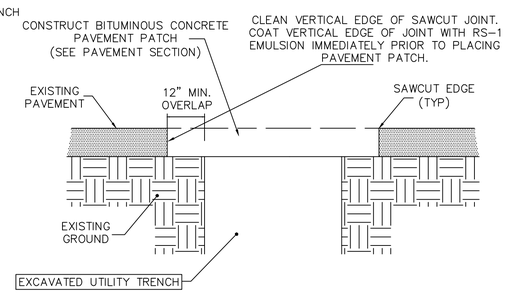
SHEET 16 OF 21

C11





PLAN

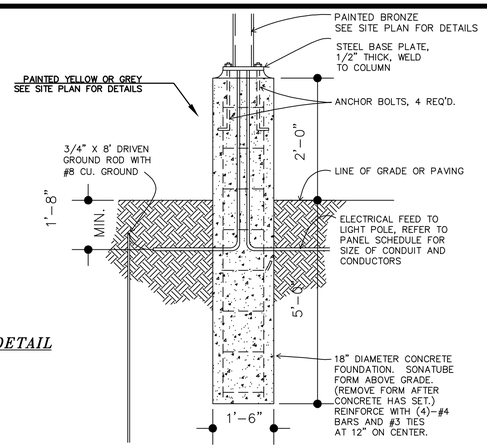


SECTION

NOTES
1. MACHINE CUT EXISTING PAVEMENT.
2. ALL TEMPORARY, DAMAGED, OR DEFECTIVE PAVEMENT SHALL BE REMOVED PRIOR TO PLACEMENT OF PERMANENT TRENCH REPAIRS.
3. DIAMOND PATCHES, SHALL BE REQUIRED FOR ALL TRENCHES CROSSING ROADWAY. DIAMOND PATCHES SHALL MEET NHDOT REQUIREMENTS.

TYPICAL TRENCH PATCH
NOT TO SCALE

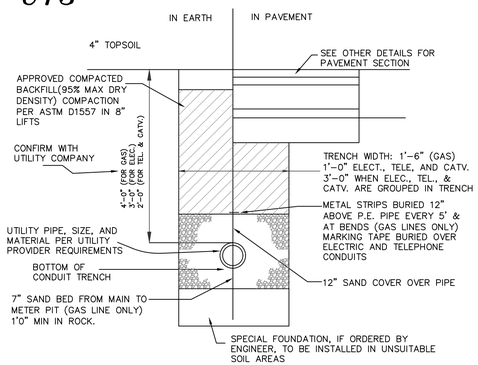
C12



POLE FOUNDATION

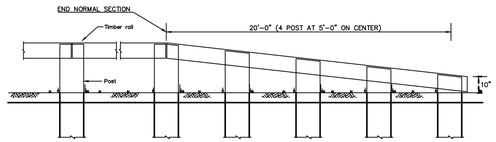
PARKING LOT LIGHT BASE DETAIL
SCALE: NONE

C13

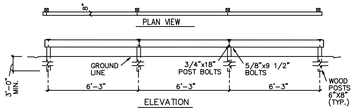


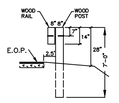
ELECTRICAL, TELEPHONE, AND GAS TRENCH
NOT TO SCALE

C14



WOOD GUARD RAIL TERMINAL UNIT DETAIL

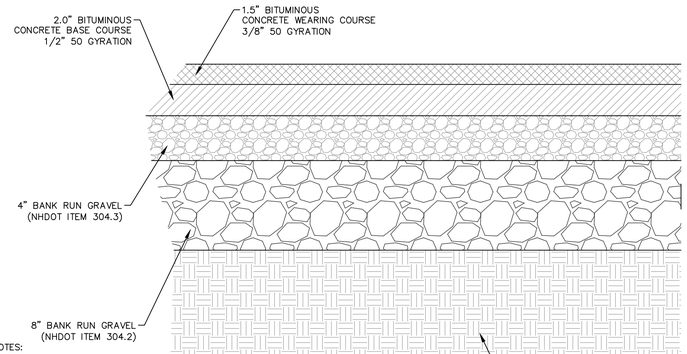




NOTES:
1. USE 6'-0" POSTS WHEN FILL SLOPE IS 4:1 OR FLATTER
2. POST TYPE : 10" x 12" WOOD
3. BEAM TYPE : 6" x 10" WOOD
4. POST SPACING : 5'-0" O.C.
5. NOMINAL BARRIER HEIGHT : 27"
6. ALL RAILS & POSTS TO BE TREATED WITH PRESERVATIVE MATERIAL CONFORMING TO AASHTO M133

WOODEN RAIL GUARD RAIL
NOT TO SCALE

C15



NOTES:

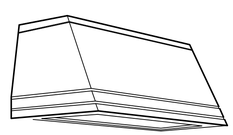
1.) BITUMINOUS MATERIALS SHALL CONFORM TO NHDOT SPECIFICATION SUBSECTION 401.3.6.

2.) PAVEMENT BASE COURSE AGGEGATE SHALL CONFORM TO NHDOT SPECIFICATION SECTION 304, ITEM 304.3 AND COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY.

3.) PAVEMENT SUBBASE COURSE AGGREGATE AND AGGREGATE FOR SUBGRADE REPAIR AREAS SHALL BE SUITABLE FOR USE AS STRUCTURAL FILL AND BE PROOFROLLED AND COMPABED TO 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY. FOR NEW CONSTRUCTION AREAS ONLY. IN EXISTING PAVEMENT AREAS THE CONTRACTOR IS TO ENSURE THE BASE MATERIAL IS SUITABLE TO THE OWNER FOR RE-PAVING

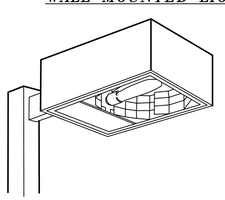
BITUMINOUS CONCRETE PAVEMENT SECTION
NOT TO SCALE

C16



1. WST 100M WT WITH 100-WATT CLEAR ED-17 METAL HALIDE BULB
2. MOUNTED ON BUILDING 10' HIGH
3. SEE LIGHTING PLAN FOR LUMINAIRE SCHEDULE

WALL MOUNTED LIGHTING

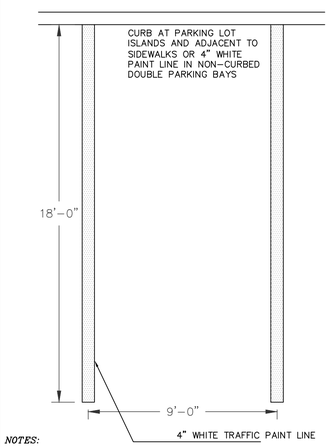


POLE MOUNTED LIGHTING LAMP "D"
NOT TO SCALE

NOTES:
1.) POLE MOUNTED LAMPS. SEE LIGHTING AND SITE PLANS FOR FURTHER DETAILS

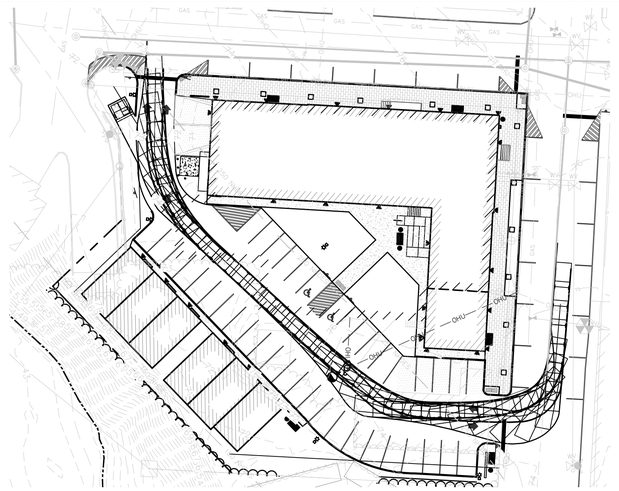
C17

PARKING SPACE DETAIL
NOT TO SCALE



NOTES:
1.) PROVIDE TWO COATS OF PAINT ON ALL PARKING LINES.
2.) SEE PROPOSED SITE PLANS FOR LOCATION OF PARKING SPACES.
3.) PAINTED SPACES ONLY WHERE MARKED ON SITE PLAN

C18



TRUCK TURNING TEMPLATE DOVER FIRE
NOT TO SCALE

DOVER PLANNING #16-31C

REVISION	DATE	DESCRIPTION

CONSTRUCTION DETAILS
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

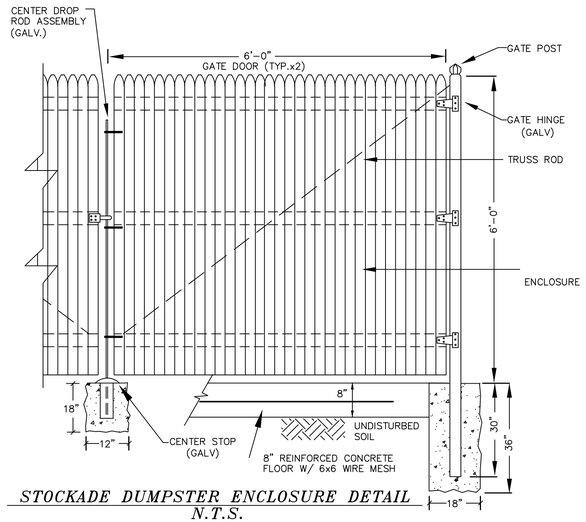
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 - 090

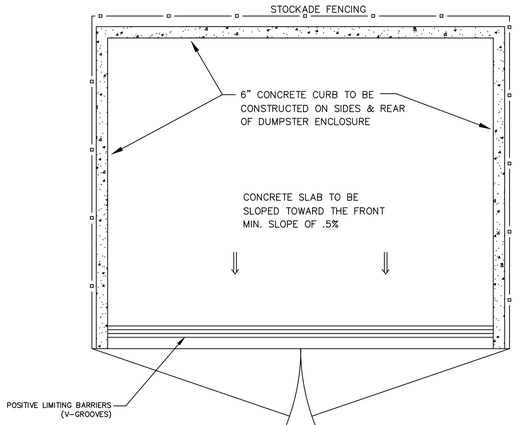
STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

C-102

C19

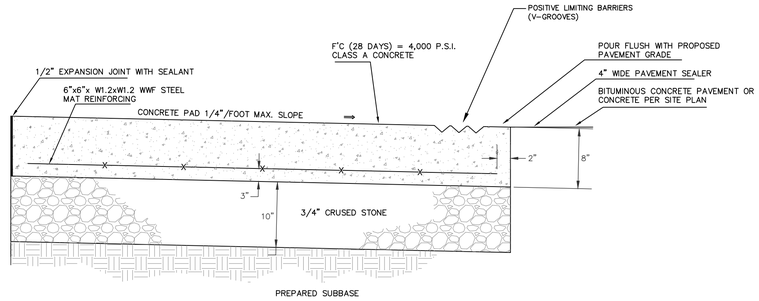


STOCKADE DUMPSTER ENCLOSURE DETAIL
N.T.S.



DUMPSTER SLAB DETAILS
N.T.S. NOT TO SCALE

C20



SECTION VIEW

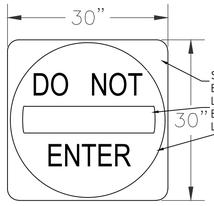
DUMPSTER PAD & CONCRETE PAVEMENT
NOT TO SCALE

NOTES:

1.) DUMPSTER PAD WILL BE SCREENED BY STOCKADE FENCE.

2.) CONFIGURATION WILL ENCLOSE 2–8 YARD DUMPSTERS.

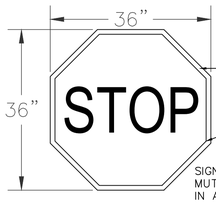
C21



SIGN BACKGROUND TO BE WHITE. LETTERING AND BAR TO BE WHITE. LARGE CIRCLE TO BE RED.

SIGN R5–1 AS SHOWN IN THE MUTCD. INSTALLATION WILL BE IN ACCORDANCE WITH THE MUTCD.

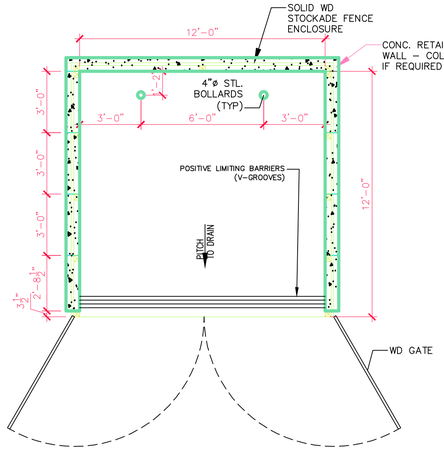
C22



SIGN BACKGROUND TO BE WHITE. LETTERING TO BE WHITE. OCTOGON TO BE RED.

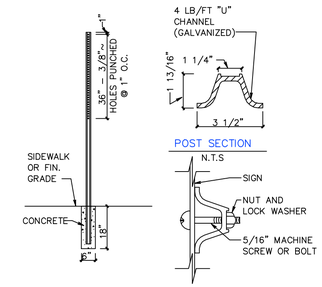
SIGN R1–1 AS SHOWN IN THE MUTCD. INSTALLATION WILL BE IN ACCORDANCE WITH THE MUTCD.

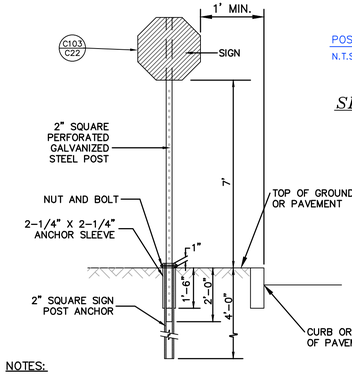
C23



DUMPSTER ENCLOSURE & CONCRETE PAD PLAN
NOT TO SCALE

C24





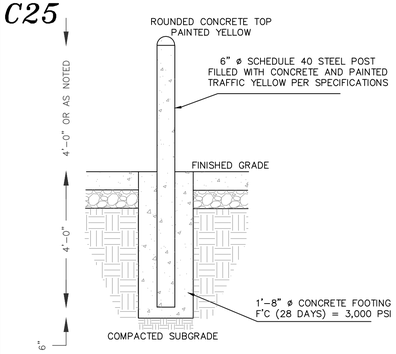
SIGN MOUNTING DETAIL
NOT TO SCALE

NOTES:

1. ALL SIGNAGE SHALL BE TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS AND NHDOT STANDARDS.
2. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS/CATALOG CUTS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ERECTING SIGNS.
3. THE LOCATION OF THE SIGNS SHALL BE AS INDICATED ON THE DRAWINGS AND/OR AS DIRECTED BY THE CITY OF DOVER DEPARTMENT OF PUBLIC WORKS.

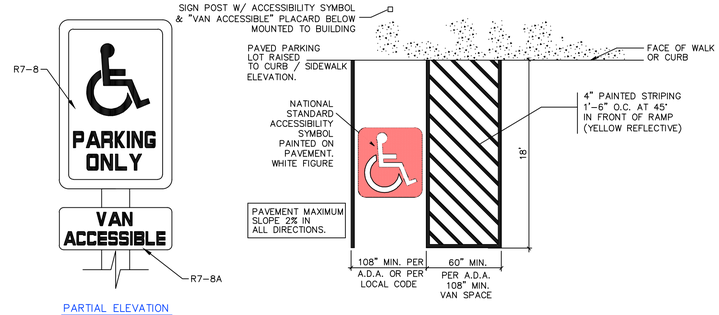
TYPICAL SIGN POST
(NOT TO SCALE)

C25



BOLLARD DETAIL
NOT TO SCALE

C26



PARTIAL ELEVATION
N.T.S.

PARKING STALL SIGNAGE FOR THE PHYSICALLY CHALLENGED
NOT TO SCALE

DOVER PLANNING #16–31C

REVISION	DATE	DESCRIPTION

CONSTRUCTION DETAILS
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

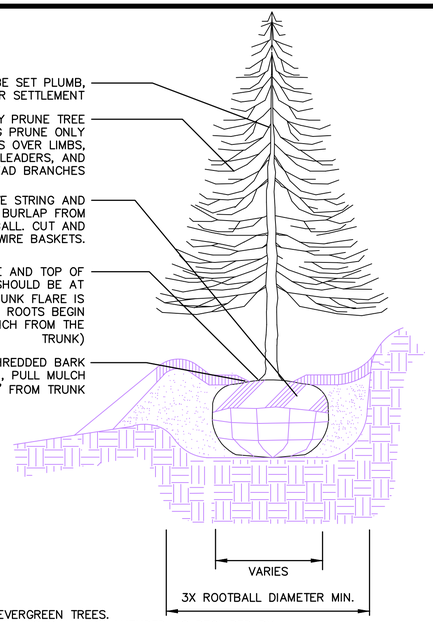
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE : AS SHOWN
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 – 090

STATE OF NEW HAMPSHIRE – KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER

C–103

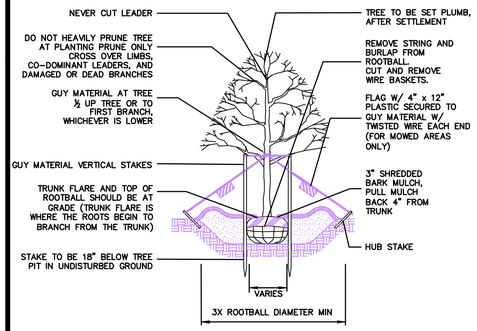
L1



NOTES:
1. DO NOT STAKE EVERGREEN TREES.
2. LOAM FOR BACKFILLING SHALL BE AMENDED AS REQUIRED BY LANDSCAPE ARCHITECT.
3. TAMP BACKFILL SOIL AROUND ROOTBALL FIRMLY TO MINIMIZE ROOTBALL SHIFT.

EVERGREEN TREE PLANTING

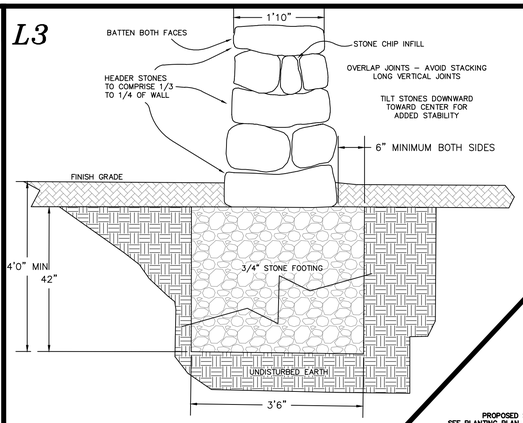
L2



NOTES:
1. GUYING AND STAKING TO BE DETERMINED IN THE FIELD BY THE LANDSCAPE ARCHITECT. LOCAL FIELD CONDITIONS AS WELL AS PLANT CHARACTERISTICS WILL DETERMINE THE NECESSITY OF GUYING AND STAKING.
2. TYPICALLY ONLY TREES WITH A 3" OR GREATER CALIPER NEED TO BE STAKED. TREES WITH LESS THAN A 3" CALIPER NEED TO BE STAKED ONLY AS REQUIRED BY LANDSCAPE ARCHITECT.
3. ONLY WRAP TREE TRUNKS AS REQUIRED BY LANDSCAPE ARCHITECT.
4. TREE SHALL BE SET PLUMB, AFTER SETTLEMENT.
5. LOAM FOR BACKFILLING SHALL BE AMENDED AS REQUIRED BY LANDSCAPE ARCHITECT.
6. CITY TREES PLANTED ON PRIVATE PROPERTY, ADJACENT TO A PUBLIC RIGHT-OF-WAY, NEED TO BE PLANTED A MINIMUM OF 5 FEET FROM THE EDGE OF THE CITY SIDEWALK.

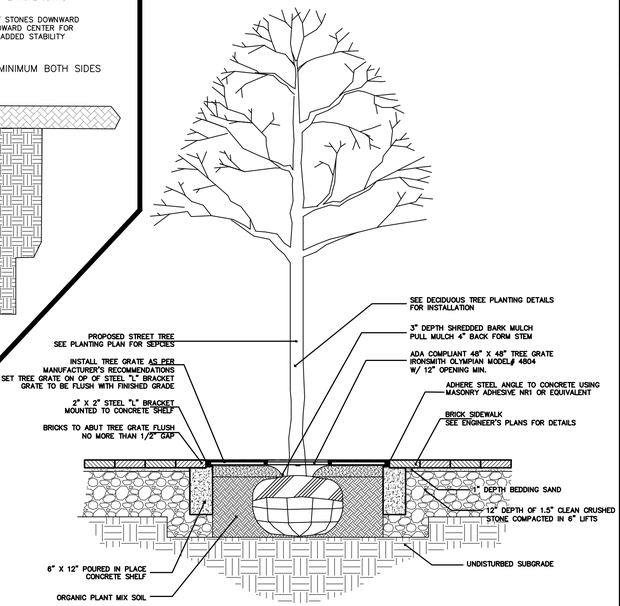
DECIDUOUS TREE PLANTING

L3



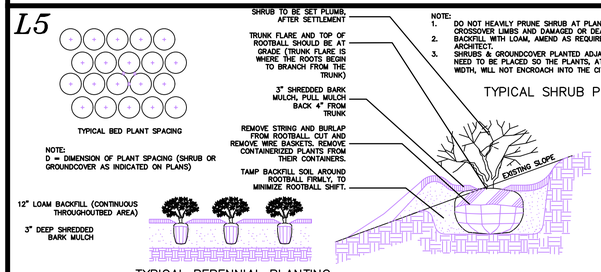
FIELD STONE MASONRY WALL DETAIL

L4



TREE GRATE DETAIL

L5

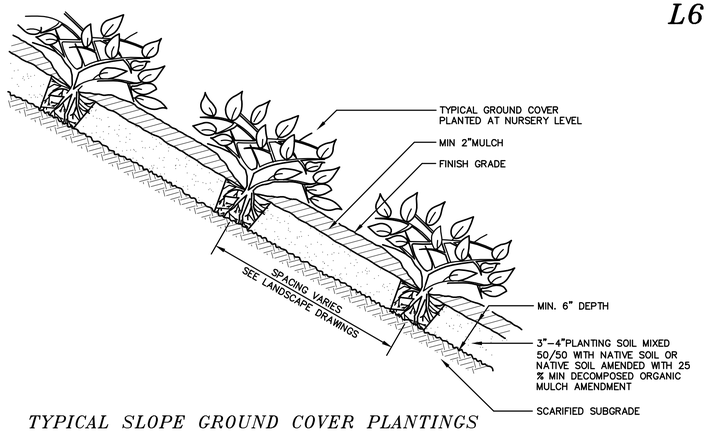


NOTE:
1. DO NOT HEAVILY PRUNE SHRUB AT PLANTING, PRUNE ONLY CROSSOVER LIMBS AND DAMAGED OR DEAD BRANCHES.
2. BACKFILL WITH LOAM, AMEND AS REQUIRED BY LANDSCAPE ARCHITECT.
3. SHRUBS & GROUNDCOVER PLANTED ADJACENT TO CITY SIDEWALK'S NEED TO BE PLACED SO THE PLANTS, AT THEIR MATURE HEIGHT & WIDTH, WILL NOT ENCROACH INTO THE CITY'S SIDEWALK.

TYPICAL SHRUB PLANTING

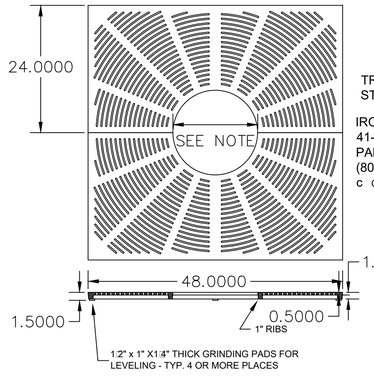
TYPICAL PERENNIAL PLANTING

L6



TYPICAL SLOPE GROUND COVER PLANTINGS

L7



TREE GRATE □M4804
STYLE: OLYMPIAN

IRONSMITH
41-701 CORPORATE WAY, □3
PALM DESERT, CA 92260
(800) 338-4766
c COPYRIGHT

SLOT WIDTH IS 1/4" MAXIMUM, MEETS ADA COMPLIANCE.
GRATE CAST FROM GRAY IRON OR ALUMINUM
TREE OPENING SIZE. 16" , 20" OR 24"
STEEL ANGLE FRAME REQUIRED
FOR INSTALLATION USE MODEL M4800F
OUTER FRAME DIM. IS 3/4" ± 1/8" GREATER THAN GRATE.

SIDE WALK TREE WELL
(NOT TO SCALE)

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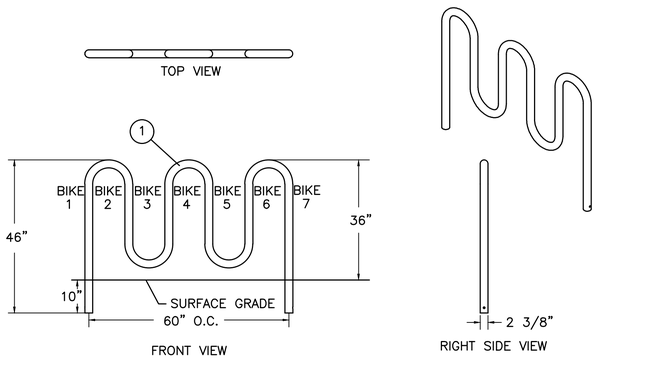
L8

MATERIALS LIST
(1) TUBING – ø 2 3/8" x .154" Wall Steel Tubing

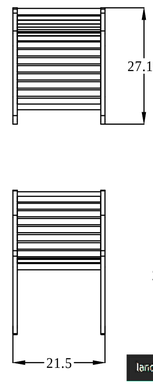


BIKE RACK
(NOT TO SCALE)

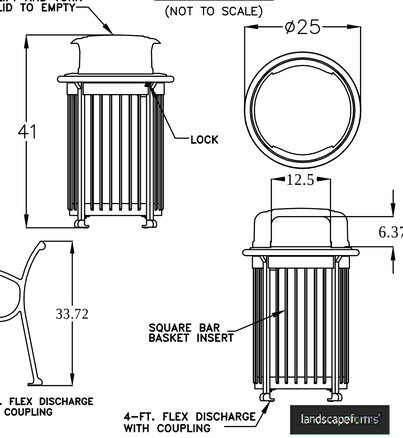
L9

Scarborough™
Product Drawing
www.landscapeforms.com
Date: 5/19/2010
Ph: 800.521.2546

BENCH DETAIL
(NOT TO SCALE)



BIN DETAIL
(NOT TO SCALE)



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NOTES:
1. DUCTILE IRON CASTINGS COME WITH A TEN YEAR WARRANTY AGAINST BREAKAGE.
2. DRAWING NOT TO SCALE. DO NOT SCALE DRAWINGS.
3. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PREHEATED, AND ELECTROSTATICALLY POWDER-COATED WITH T.G.I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PRETREATED, PREHEATED AND COATED WHILE HOT TO FILL CREVICES AND BUILD COATING FILM. COATED PARTS ARE THEN FULLY CURED TO COATING MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH COAT AVERAGES 8–10 MILS (200–250 MICRONS).
4. IT IS NOT RECOMMENDED TO LOCATE ANCHOR BOLTS UNTIL BENCH IS IN PLACE. THIS LANDSCAPE FORMS, INC. PRODUCT MUST BE PERMANENTLY AFFIXED TO THE GROUND. CONSULT YOUR LOCAL CODES FOR REGULATIONS.
5. ANCHOR BOLTS NOT PROVIDED BY VICTOR STANLEY, INC.
7. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.
8. THIS PRODUCT IS SHIPPED FULLY ASSEMBLED.

OR APPROVED EQUAL AS APPROVED BY THE DESIGN ENGINEER AND THE DIRECTOR OF PLANNING

L–101

DOVER PLANNING #16–31C

REVISION	DATE	DESCRIPTION

LANDSCAPING DETAILS
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31, LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE : AS SHOWN
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 – 090

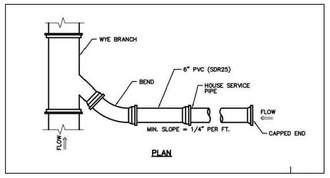
STATE OF NEW HAMPSHIRE – KENNETH A. BERRY No. 14243 LICENSED PROFESSIONAL ENGINEER

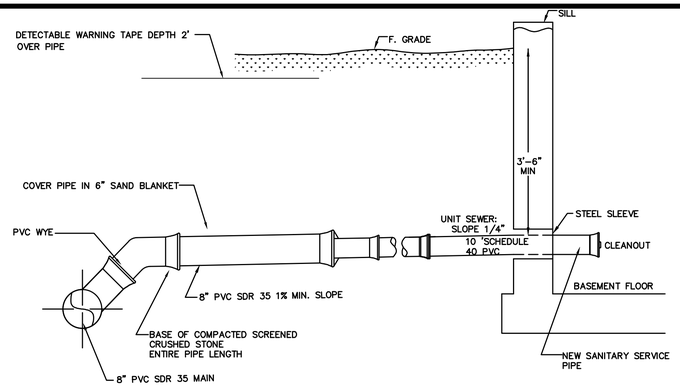
U1

1.) SEE DETAILS FOR SERVICE CONNECTION REQUIREMENTS

2.) SERVICE CONNECTION SHALL BE INSTALLED BELOW WATER MAIN WHERE POSSIBLE.

3.) CLEANOUTS SHALL BE INSTALLED INSIDE EACH BUILDING EXIT POINT

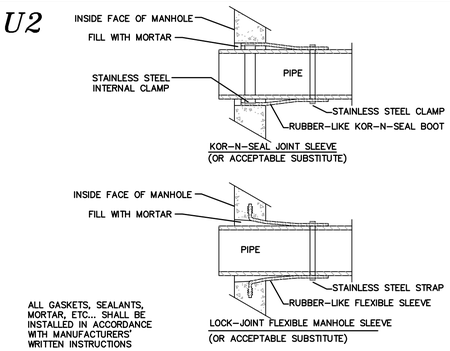




DETAIL OF UNIT SEWER SERVICE

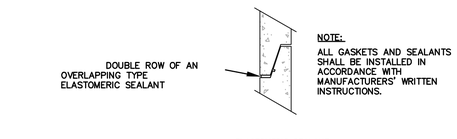
NOT TO SCALE

U2



DETAIL "A" – PIPE TO MANHOLE JOINTS

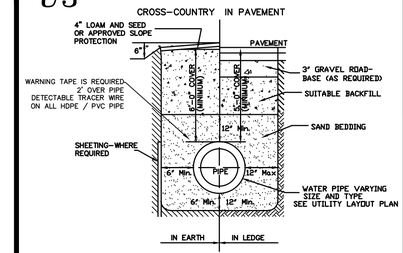
NOT TO SCALE



DETAIL "B" HORIZONTAL JOINTS

NOT TO SCALE

U3



TYPICAL TRENCH DETAIL FOR WATER SYSTEM

NOT TO SCALE

U4

NOTES ON MANHOLE CONSTRUCTION:

1) IT IS THE INTENTION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES SHALL BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT AND ADEQUATE JOINTING. THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND HS-20-44 LOADING, INCLUDING THE COVER. ALL SMH CONSTRUCTION AND MATERIALS WILL BE IAW ENV.-WQ 704.13 ADOPTED OCTOBER 15, 2014

2) BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE. (IAW ENV.-WQ 704.12 (d))

3) SEWER MANHOLE DIAMETER SHALL BE AS INDICATED ON THE PLANS.

4) PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478.

5) GRAVITY SEWER PIPE TESTING WILL BE IN ACCORDANCE WITH ENV.-WQ 704.06 AND MAN HOLE TESTING IAW ENV.-WQ 704.17 DATED OCTOBER 15, 2014.

6) INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF THE PIPE AND FLOW. INVERT BRICKS SHALL BE LAID ON EDGE AND THE BASE SECTION SHALL BE FULL. AT CHANGES IN DIRECTIONS, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. CARE SHALL BE TAKEN TO ENSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY. (IAW ENV.-WQ 704.13 (a) (9)), MORTAR SHALL CONFORM WITH REQUIREMENTS OF IAW ENV.-WQ 704.13 (c).

7) FRAMES AND COVERS: MANHOLES FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. 3-INCH (MINIMUM HEIGHT) LETTERS WITH THE WORD "SEWER" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH MANHOLE COVER. (IAW ENV.-WQ 704.13 (a) (4-6)) SEWER MAN HOLE COVERS ARE TO PAMREX.

8) SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS.

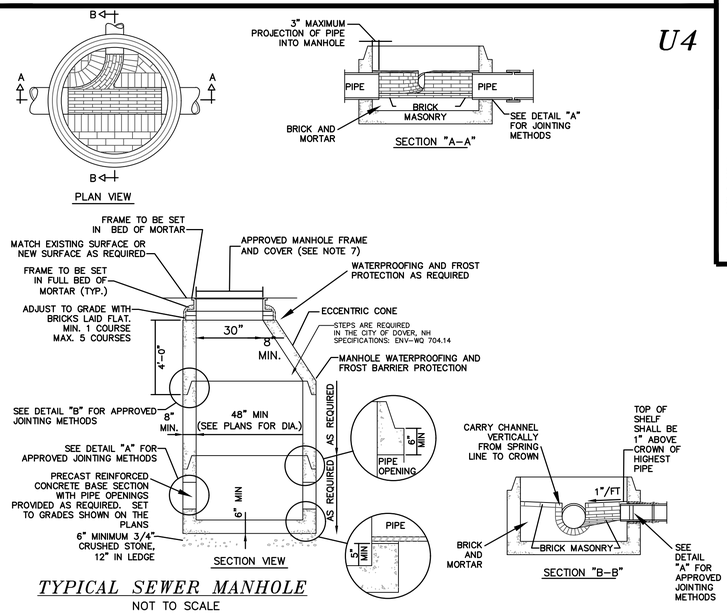
9) HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE DOVER DPW, WHICH TYPE SHALL, IN GENERAL, DEPEND FOR WATERTIGHTNESS UPON A DOUBLE ROW OF AN OVERLAPPING TYPE ELASTOMERIC OR MASTIC-LIKE GASKET. APPROVED ELASTOMERIC SEALANTS ARE: RAM-NEK, KENT SEAL NO. 2, EZ, OR EQUAL.

10) IN CROSS COUNTRY AREAS OUTSIDE OF THE PAVED ROADWAY SURFACE, THE MANHOLE FRAME ELEVATION SHALL BE A MINIMUM OF 6" ABOVE FINISHED GRADE. GRADE TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE MANHOLE. SEE TYPICAL TRENCH DETAIL ON SHEET D-102.

11.) ALL FRAMES AND GRATES ARE TO BE U.S.A. MADE. MANHOLE STEPS ARE REQUIRED IN THIS MUNICIPALITY AND MUST CONFORM TO THE REQUIREMENTS OF ENV-WQ 704.14.

12.) THE CONTRACTOR TO WORK WITH CITY OF DOVER REVIEW ENGINEER AND SEWER DEPARTMENT ON THE MEANS AND METHODS USED TO INSTALL ALL SEWER STRUCTURES. SPECIFIC ATTENTION IS TO BE PAID TO THE INSTALLATION OF SMH 1A, WHEREAS THE EXISTING PIPE SLOPE IS UNKNOWN. DURING LOW FLOW CONDITIONS, CUT AND TEMPORARILY CAP THE EXISTING 8" VC LINE, OR INSTALL TEMPORARY BY-PASS LINE (OF EQUAL SIZE), AFTER INSTALLATION OF NEW BASIN, FERNCO THE NEW SDR 35 PIPES TO THE EXISTING VC LINES. THIS INSTALLATION IS TO BE COORDINATED WITH THE CITY OF DOVER SEWER DEPARTMENT.

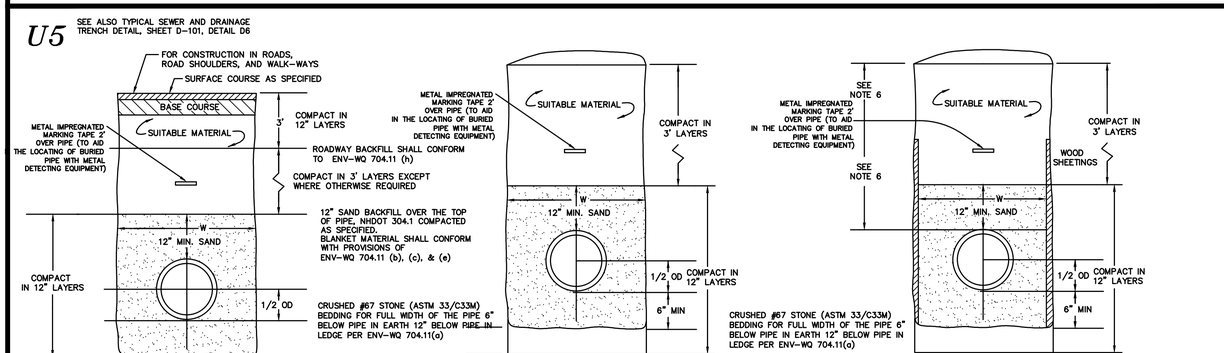
13.) ANY WORK INVOLVING THE CUTTING INTO THE EXISTING A.C. PIPE SHALL MEET THE REQUIREMENTS OF ENV-A 1800.



TYPICAL SEWER MANHOLE

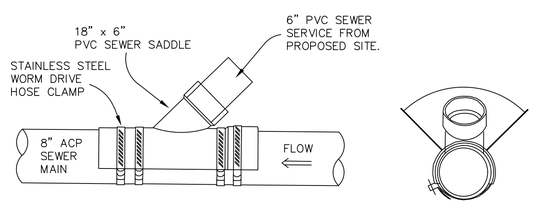
NOT TO SCALE

U5



NOT TO SCALE

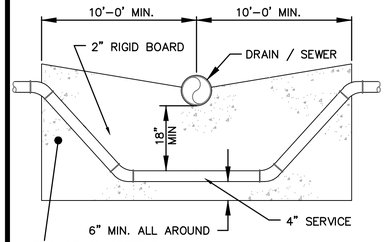
U6



SEWER SADDLE DETAIL

NOT TO SCALE

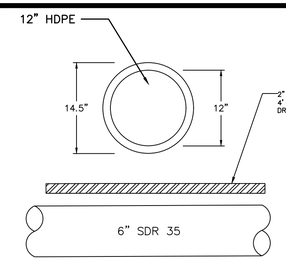
U7



WATER MAIN INSTALLATION – BELOW DRAIN / SEWER

NOT TO SCALE

U8



CROSS SECTION A-A

SEWER AND DRAIN CROSSING

NOT TO SCALE

DOVER PLANNING #16-31C

REVISION	DATE	DESCRIPTION

UTILITY DETAILS
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 – 090

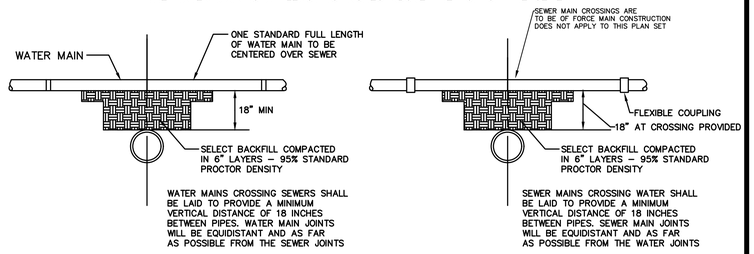
STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14142
LICENSED PROFESSIONAL ENGINEER

U-101

U9

SEPERATION NOTES:

1. WATER MAIN SHALL BE IN ACCORDANCE WITH THE "RECOMMENDED STANDARDS FOR WATER WORKS" SO-CALLED TEN STATE STANDARDS AND NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL DESIGN STANDARDS.
2. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWERS. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IF THIS DISTANCE CANNOT BE OBTAINED, THEN THE PIPES SHALL BE INSTALLED IN A SEPERATE TRENCH AT AN ELEVATION SO THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.

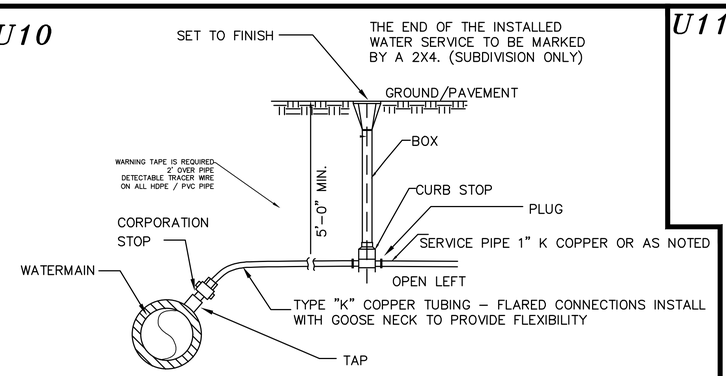


WATER MAIN ABOVE SEWER WATER MAIN BELOW SEWER

TYPICAL WATER/SEWER SEPERATION DETAILS

NOT TO SCALE

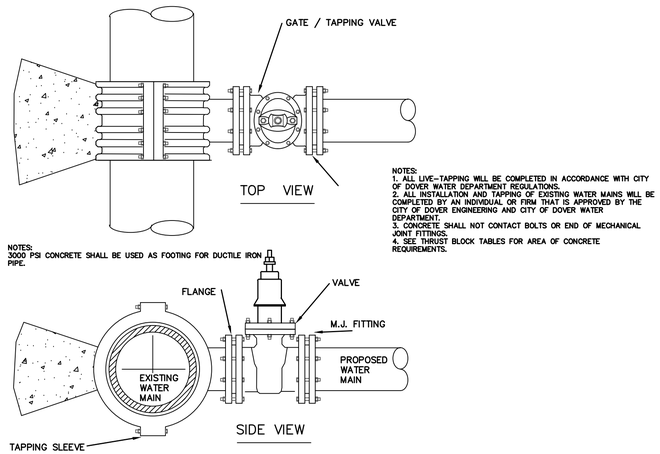
U10



TYPICAL WATER SERVICE CONNECTION

NOT TO SCALE

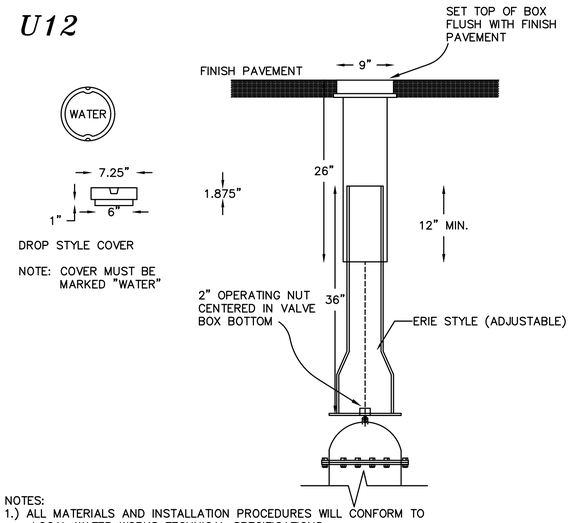
U11



DETAIL FOR STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY

NOT TO SCALE

U12



NOTES:
1.) ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO LOCAL WATER WORKS TECHNICAL SPECIFICATIONS.

2.) ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 6' FROM TOP OF PIPE TO FINISH GRADE.

VALVE BOX DETAIL

NOT TO SCALE

U13

NOTES:

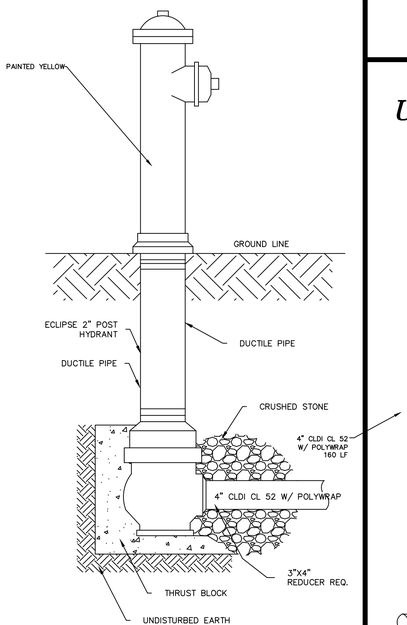
HYDRANTS SHALL BE SELF-DRAINING, NON-FREEZING, COMPRESSION TYPE WITH 2-3/16" MAIN VALVE OPENING. INLET CONNECTION SHALL BE 4" MJ. OUTLET SHALL BE 2" IP.

HYDRANTS SHALL HAVE A 3" DUCTILE IRON PIPE RISER WITH A CAST IRON TOP STOCK, AND NON-TURNING OPERATING ROD. PRINCIPAL INTERIOR OPERATING PARTS SHALL BE BRASS AND REMOVABLE FROM THE HYDRANT FOR SERVICING WITHOUT EXCAVATING THE HYDRANT.

HYDRANTS SHALL BE SET IN 4 CUBIC FEET OF CRUSHED STONE TO ALLOW FOR PROPER DRAINAGE OF THE HYDRANT. RECOMMENDATIONS OF THE AWWA SHOULD BE FOLLOWED WHEN INSTALLING THE HYDRANT.

POST HYDRANTS SHALL BE ECLIPSE NO. 2 POST HYDRANTS, 3-INCH MECHANICAL JOINT, AS MANUFACTURED BY JOHN C. KUPFERLE FOUNDRY COMPANY, ST. LOUIS, MISSOURI.

POST HYDRANTS ARE NON-STOCK AND ARE ORDERED AS NEEDED. PLEASE PLAN INSTALLATION ACCORDINGLY.



POST HYDRANT DETAIL

NOT TO SCALE

U16

TYPICAL THRUST BLOCKS

NOT TO SCALE

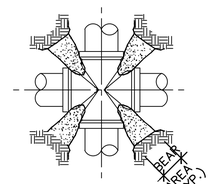


FIGURE 1
CROSS
(ONLY REQ'D IF ANY LEG IS LESS THAN 60 FT. LONG)

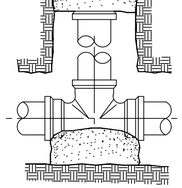


FIGURE 2
TEE, PLUG OR CAP

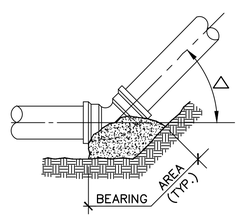


FIGURE 3
HORIZONTAL OR UPWARD VERTICAL BEND

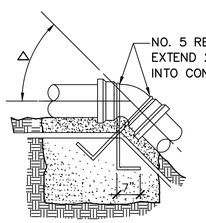


FIGURE 4
DOWNWARD VERTICAL BEND

GENERAL NOTES:

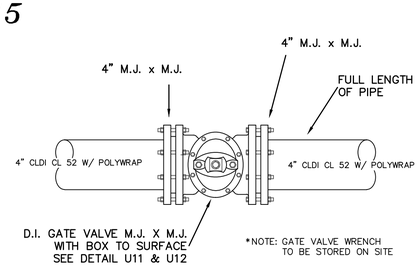
1. ALL FITTINGS & EXPOSED REBAR TO BE WRAPPED W/ TWO LAYERS OF 6 MIL. POLYETHYLENE WHERE COVERED WITH CONCRETE.
2. ALL CONCRETE SHALL BE CLASS C 3000 P.S.I. MINIMUM 28 DAYS COMPRESSIVE STRENGTH.
3. PLACE CONCRETE AGAINST UNDISTURBED EARTH.
4. TABLE DENOTES MINIMUM BEARING AREA OR VOLUME OF THRUST BLOCK. SPECIAL DESIGN FOR EACH INSTALLATION IS REQUIRED IF ALLOWABLE SOIL BEARING CAPACITY IS LESS THAN 3000 P.S.F.
5. VERTICAL SURFACES NOT BEARING AGAINST UNDISTURBED EARTH SHALL BE FORMED.
6. KEEP CONCRETE AWAY FROM FLANGE BOLTS AND FITTINGS.

PIPE I.D.	BEARING AREA, SQUARE FEET						VOLUME OF CONC. CU.YD		
	FIGURE 1	FIGURE 2	FIGURE 3, △				FIGURE 4, △		
			90°	45°	22-1/2°	11-1/4°	45°	22-1/2°	11-1/4°
4"	2	2	2	1	1	1	1.0	.5	.5
6"	2	3	3	2	1	1	1.5	1.0	.5
8"	2	5	6	3	2	1	2.0	1.0	.5
10"	3	7	10	5	3	1	4.0	2.0	1.0
12"	3	10	14	8	4	2			
14"	4	14	20	10	5	3			
16"	4	20	24	12	7	4			
18"	5	24	30	16	10	5			
20"	5	28	40	20	12	6			

NOTE:

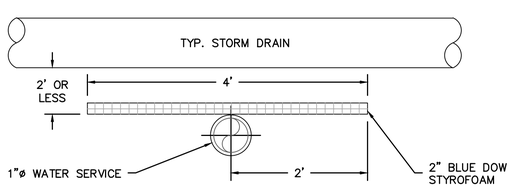
MECHANICAL JOINTS AT ALL FITTINGS IE: BENDS, TEES, CROSSES, AND VALVES SHALL BE THRUST RESTRAINT. (MEGA-LUG OR APPROVED EQUAL).

U15



SHUTOFF VALVE DETAIL

NOT TO SCALE



INSULATE WATER PIPE WHERE CROSSING UNDER CULVERT

NOT TO SCALE

U14

DOVER PLANNING #16-31C

REVISION	DATE	DESCRIPTION

UTILITY DETAILS
FOR
6 GROVE STREET RESIDENCES, LLC
FOR PROPERTY LOCATED AT
6 GROVE STREET, DOVER NH
TAX MAP 31 LOT 14

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

AS MARKED
DATE : JANUARY 18, 2018
FILE NO. : DB 2016 – 090

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 12243
LICENSED PROFESSIONAL ENGINEER

U-102

City of Dover, New Hampshire
SUBDIVISION APPLICATION

[Revision Date: August 02, 2017]

Office Use Only	Project #:		Date Received:	
	Amount Paid:		Time Received:	

APPLICANT AND OWNER INFORMATION

Name of Applicant: TDAK & Company LLC Telephone # 603-235-8469

Address of Applicant: 9 Kelsey Drive, Greenland, NH 03840

Name of Property Owner (*if different from applicant*): _____ Telephone #_____

Address of Property Owner: 9 Kelsey Drive, Greenland, NH 03840

E-Mail Address: TDAK3.0@gmail.com

PROPERTY INFORMATION

Address of Property: 99 Sixth Street

Assessor's Map # 35 Lot(s) # 57

Zoning District(s) R-12 Overlay District(s) _____

Size of Parcel: 90,322 Sq. Ft. (2.07 Ac.) Property Deed: Book 4337 Page: 557

Existing Use of Property: Residence / 2 unit

SUBDIVISION INFORMATION

Subdivision Type: Major (4 + net new lots): X Open Space: X

Existing Number of Lots: 2 Units Proposed Number of Lots: 4 Units (Total 6 OSS Units)

City Water? X Yes ___ No How far is city water from the property? Approx. 30 Feet

City Sewer? X Yes ___ No How far is city sewer from the property? Approx. 45 Feet

Highway Access (check where applicable): X City Street ____ State Highway

Estimated Length of Proposed Roads: 391 feet Public or Private Road? Private

WAIVER REQUESTS

Subdivision Regulations section(s) to be waived: Waiver to 30' buffer for Unit #1 and roadway
Lane Width Waiver

Justification for waiver request(s) (*attach additional sheets as needed*): _____

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kenneth A Berry, PE, LLS
Berry Surveying & Engineering

Address 335 Second Crown Point Rd, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: 805 E-mail address: K.Berry@BerrySurveying.com

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Kenneth A Berry, PE, LLS
Berry Surveying & Engineering

Address 335 Second Crown Point Rd, Barrington, NH 03825 Telephone #: 603-332-2863

Professional License #: 14243 E-mail address: K.Berry@BerrySurveying.com

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. Furthermore, I/We submit that the existing conditions sheet of the plan represents the lot in question, and that no alteration of the site shall take place during Planning Board review up to and including the pre-construction meeting. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: 1-17-18

Signature of Applicant (*if different from owner*): _____ Date: _____

Signature of Agent: _____ Date: 1-17-18

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: 1-17-18

AUTHORIZATION TO COMPLETE THE PROJECT ON SUBJECT PROPERTY

I, and my successors, hereby authorize the City of Dover and its assigns to enter my property for the purpose of completing the site work as required by the approved plan should the letter or credit or other surety be called. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: _____

Signature of Applicant (*if different from owner*): _____ Date: _____

CERTIFICATION OF FEES

I, and my successors, hereby certify that I understand that the City of Dover collects impact fees, utility investment fees and inspection fees for projects developed in Dover. Said fees must be paid before a Certificate of Occupancy can be obtained for a structure, unless a different payment schedule is agreed to by the applicant and the City prior to approvals being issued by the Dover Planning Board. Additionally, should the property be in "Current Use" it will be subject to the Land Use Change Tax.

Signature of Property Owner: _____ Date: _____

Signature of Applicant (*if different from owner*): _____ Date: _____

CERTIFICATION OF PUBLIC ROADWAY ACCEPTANCE

I, and my successors, hereby certify that I understand that the acceptance of a roadway as a public road is an action of the City Council in its sole and complete discretion. In order for the City Council to consider accepting a road as public, it must be free of encumbrances. No roadway with private utility easements shall be accepted as a public road by the City unless the easements are expunged prior to the transfer of land to the City. License agreements for any and all private utilities within the right of way may be granted by the City upon acceptance of the unencumbered roadway consistent with applicable state law.

Signature of Property Owner: _____ Date: _____

Signature of Applicant (*if different from owner*): _____ Date: _____

City of Dover, New Hampshire
SUBDIVISION SUBMISSION CHECKLIST

[Revision Date: December 15, 2017]

This review checklist is intended to assist the applicant in the planning process of preparing a Subdivision application for Planning Board action. The size of the project will determine the types of information required for review, therefore, a **pre-application conference** with the Planning Department to determine the list of items that must be completed is strongly encouraged.

Fees will be invoiced and are due along with fifteen (15), folded, copies of the plan set and materials, including response to TRC comments, will be due 3 weeks prior to the Planning Board meeting.

The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all subdivision requirements. Please refer to the Subdivision Regulations for full details.

APPLICANT: TDAK + COMPANY File Number: _____

PROJECT TITLE: 99 SIXTH STREET / CARMENS WAY

PROPERTY LOCATION: 99 SIXTH STREET Tax Map: 35 Lot: 57

	Explain How Provided	Reviewed
1. Completed and signed Application form		
2. Electronic copy of the surveyed plat layout	CD	
3. Electronic copy of supplementary materials and application	CD	
4. Traffic Impact Assessment and Analysis (Standard or Advanced)	CD STANDARD	
5. Fiscal Impact Analysis (For more than 10 units)	N/A	
6. Waiver requests to the Subdivision Regulations, with written justification	CD	
7. Conditional Use Permit applications	N/A	
8. Narrative describing yield plan and cost analysis	CD	
9. List of all professional agents to be notified for Planning Board	BSE + SEE	
10. Letter to Serve from Public and Private Utilities		
11. Eight folded copies of subdivision plan w/scale of not less than 1"=50' or 1"=100' for larger subdivisions, for TRC. Plans shall contain the following items as appropriate:	✓	
Location map at appropriate scale	✓	
Proposed subdivision name and title and Planning File #	✓	
Date, north arrow and scale	✓	
Names of all abutting property owners	✓	
Name and address of owners and/or applicants	✓	
Signature & stamp of NH licensed land surveyor and/or engineer	✓	
Zoning District boundaries, including any special or overlay districts	✓	
Location of Conservation District areas	✓	
Location, names and widths of existing and proposed streets, including pavement widths, grades, curbs and crosswalks	✓	
Location and widths of existing & proposed easements & right of ways	✓	
Location and widths of existing and proposed sidewalks	✓	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	✓	
Existing and proposed lot areas in square feet	✓	
Existing and proposed topographic information at two foot intervals	✓	

	Explain How Provided	Reviewed
Existing and proposed buildings and structure locations	✓	
Minimum building setbacks or build to lines on all lots	✓	
Location and size of existing and proposed electric, telephone, gas cable and other underground utilities	✓	
Existing and proposed water lines and fire hydrants, including materials and capacity needed	✓	
Location and materials of sanitary sewage facilities within project site and projected additional peak hour sewer load	✓	
Existing and proposed septic system, including test pit locations and results and NHDES subdivision permit number	N/A ✓	
Existing and proposed stormwater lines and facilities	✓	
Existing and proposed streetlights	✓	
Location of Flood Hazard Zone	✓	
Location of all bodies of water and watercourses	N/A ✓	
Location of wetlands and buffers	N/A ✓	
Neighborhood plan with aerial underlay showing how project relates to abutting uses	✓	
Existing natural features and/or significant vegetation on property	✓	
Depict existing contours up to 100 ft. beyond project limits	✓	
Soil types	✓	
Map and lot numbers for existing and proposed lots as assigned by Tax Assessor	✓	
Location of all land offered for dedication for public use or land to be held in common by property owners of the subdivision	✓	
Location, material and size of existing and proposed permanent monuments	✓	
Existing railroad lines	N/A ✓	
Note regarding solid waste disposal	✓	
All applicable Dover Common Subdivision notes	✓	
12. Construction Detail Sheets shall contain the following information:		
Profiles showing existing & proposed elevations along the center lines of proposed streets & within 100' of intersections with existing streets	✓	
Profiles showing the locations & a typical cross-section detail of streets	✓	
Location of street trees, street lighting poles and street signs	✓	
Location, size and invert elevations of existing and proposed sanitary sewers, stormwater drains and fire hydrants	✓	
Location and size of all water, gas and other underground utilities	✓	
13. Additional Information if appropriate		
Stormwater Management Plan depicting the existing and proposed storm drainage system and engineered drainage analysis	✓	
Stormwater Management System Operation and Maintenance Plan	✓	
Erosion and Sedimentation Control Plan	✓	
Perimeter Landscaping Plan	✓	
Proposed restrictive covenants or homeowners association documents		
Dates and permit numbers of all required state and federal permits		
If wetland buffer, indicate placards locations, as applicable	N/A	
Hydrogeologic study if located in Groundwater Protection Zone	N/A	
Provide additional exhibits/technical data determined appropriate by the Planning Board or its staff as required		

REVIEWED BY: _____ DATE_____ TRC DATE_____

BERRY SURVEYING & ENGINEERING
335 Second Crown Point Road
Barrington, NH 03825
Phone: (603) 332-2863
Fax: (603) 335-4623
www.BerrySurveying.Com

Fiscal Analysis of Yield Plan

For

99 Sixth Street
Tax Map 35, Lot #57

TDAK & CO LLC
9 Kelsey Way
Greenland, NH 03840

Prepared By

Berry Surveying & Engineering
335 Second Crown Point Road
Barrington, NH 03825
603-332-2863

File Number
DB2017-060

The yield plan provides for five total units which would be built around an existing two unit condominium.

The proposed road for the yield plan is 490 linear feet to the neck of the cul-de-sac, with a total length around the cul-de-sac of 256 linear feet. This roadway will have significant cuts and fills for the first 490 linear feet.

We have conducted an engineer's estimate on a roadway of this nature recently using the NHDOT weighted standard construction numbers and have found that a roadway with full utilities is approximately $420.00 a linear foot (LF), while a roadway without full utilities is approximately $300.00 a linear foot.

490 feet of Road with full utilities @ $420.00 a linear foot: $205,800.00
256 feet of cul-de-sac without utilities @ $300.00 a linear foot: $76,800.00
Engineering: $ 30,000.00

Total Approximate cost to build the Yield Plan = $312,600.00
Total number of Lots/Units = 5
Total cost per unit = $62,520.00

The retail price in Dover at the moment for lots is approximately $125,000.00. This is the price that the builder will likely building into the home price, in a situation where the builder is also the developer. The developers of this project site will also build the home on the lots. There is a respectable margin within this yield plan, along with the lack of inventory in Dover, NH the likely hood of construction for a developer / builder is very high.

Respectfully submitted,

Berry Surveying & Engineering

BERRY SURVEYING & ENGINEERING
335 Second Crown Point Road
Barrington, NH 03825
Phone: (603) 332-2863
Fax: (603) 335-4623
www.BerrySurveying.Com

January 16, 2018

City of Dover Planning Department
Attention: Assistant City Planner Donna Benton
288 Central Ave
Dover, NH 03820

RE: Trip End Analysis & Design Analysis
Troy Thibodeau
6 Unit Development
99 Sixth Street

Dear Mrs. Benton:

Pursuant to the Subdivision Regulations, Berry Surveying & Engineering (BS&E) has prepared this Traffic Impact Assessment for the purpose of reviewing the following:

- Site Description & Proposal
- Sixth Street Assessment
- Trip Generation & Distribution
- Sight Distances

Site Description & Proposal:

The property currently contains a two family structure which has direct driveway access to Sixth Street via two driveway curb cuts. A block retaining wall with varying heights currently exists at the front of the site. A break in the wall allows for driveway access to the site. Much of the site is open, but a vegetative barrier of trees and smaller shrubs prohibits a majority of the view from Sixth Street of the property.

The proposal is to construct a private roadway system which will provide an 18 feet wide access to four single family detached houses and the two unit condominium. The position of the proposed road was chosen for constructability, as well as sight distance. The retaining wall at the front of the site will have approximately 30 feet removed to allow for expanded roadway access. This section of wall will be relocated to an area out of the proposed roadway to contain the existing grade. Once this has been done, the retaining wall will not obscure site distance in either direction. Lastly, this proposed location uses the majority of the existing driveway as an entrance position for the site. Additionally the eastern abutter (Tax Map 35, Lot 56) is more amenable to this development and its proximity to the boundary line based on conversations the applicant has had with the abutter.

Sixth Street Assessment:

Sixth Street runs between Central Ave and crosses over Route 16; it is classified as an arterial road. It has a paved width of approximately 28 feet in the area of the proposed project, and has a

bituminous sidewalk on the north side. Vertical granite curbing exists on both sides of the road in the area of the proposed project. Sixth Street has a centerline delineation as well as edge line delineation.

Existing Trip Generation:

Using the 9th Edition ITE Trip Generation Manual, we determined the following trip generation for the existing site. Land Use Code 230 Residential Condominium/Townhouse was used in deriving the trip generation for the existing site.

Residential (2 Unit Condominium) Existing Trip Generation:

Residential Condominium/Townhouse Peak Hour of Generator AM Weekday

Total Trips	19% Entering	81% Exiting
0.88T	0.17T	0.71T

Residential Condominium/Townhouse Peak Hour of Generator PM Weekday

Total Trips	64% Entering	36% Exiting
1.04T	0.67T	0.37T

Residential Condominium/Townhouse Peak Hour of Generator Saturday

Total Trips	54% Entering	46% Exiting
0.94T	0.51T	0.43T

Residential Condominium/Townhouse Total Weekday

Total Trips	50% Entering	50% Exiting
11.62T	5.81T	5.81T

It is assumed that there is a fairly even split between trips going east and west on Sixth Street.

Existing Vehicular Speeds:

Sixth Street has a posted speed limit of 30 MPH. It has been observed by Berry Surveying & Engineering that speeds in the area of the project site are not excessive, and for the purposes of this study it is assumed that the 85th percentile falls between 30-35 MPH.

Trip Generation:

The 9th Edition ITE Trip Generation Manual was used to determine the volume of trips, as well as the percentage of entrance-to-exit traffic experienced at the AM & PM Peak hour between 7 and 9 AM and 4 and 6 PM. Additionally, Saturday peak hours of the generator and the total daily weekday trips are provided. Land Use Codes 210 Single-Family Detached Housing, and 230 Residential Condominium/Townhouse were used in deriving the trip generation for the proposed site.

Residential Trip Generation (4 Single-Family Detached Houses):

Single-Family Detached Housing Peak Hour of Generator AM Weekday

Total Trips	24% Entering	76% Exiting
3.08T	0.80T	2.28T

Single-Family Detached Housing Peak Hour of Generator PM Weekday

Total Trips	64% Entering	36% Exiting
4.08T	2.61T	1.47T

Single-Family Detached Housing Peak Hour of Generator Saturday

Total Trips	54% Entering	46% Exiting
3.72T	2.01T	1.71T

Single-Family Detached Housing Total Weekday

Total Trips	50% Entering	50% Exiting
38.08T	19.04T	19.04T

Residential Trip Generation (2 Condominium Units Existing):

Residential Condominium/Townhouse Peak Hour of Generator AM Weekday

Total Trips	19% Entering	81% Exiting
0.88T	0.17T	0.71T

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Residential Condominium/Townhouse Peak Hour of Generator PM Weekday

Total Trips	64% Entering	36% Exiting
1.04T	0.67T	0.37T

Residential Condominium/Townhouse Peak Hour of Generator Saturday

Total Trips	54% Entering	46% Exiting
0.94T	0.51 T	0.43T

Residential Condominium/Townhouse Total Weekday

Total Trips	50% Entering	50% Exiting
11.62T	5.81T	5.81T

Combined Trip Generation:

(Combined Volumes) Peak Hour of Generator AM Weekday

Total Trips	23% Entering	77% Exiting
3.96T	1.24T	4.27T

(Combined Volumes) Peak Hour of Generator PM Weekday

Total Trips	64% Entering	36% Exiting
5.12T	3.28T	1.84T

(Combined Volumes) Peak Hour of Generator Saturday

Total Trips	54% Entering	46% Exiting
4.66T	2.52T	2.14T

(Combined Volumes) Total Weekday Volume

Total Trips	50% Entering	50% Exiting
47.90T	24.85T	24.85T

As expected, there is an increase in trip generation across all analysis periods. Based on our analysis, we expect to see a weekday AM peak increase of 3.08 trips, a weekday PM peak increase of 4.08 trips, a weekend peak hour increase of 3.72 trips, and a total weekday increase of 36.28 trips. This nominal increase will not impact surrounding intersection performance.

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Sight Distance & Safety Analysis:

The existing site is free of obstructions, and the location of the proposed roadway provides clear sight distances in excess of 250 feet in both directions on Sixth Street, as illustrated in the Sight Distance Plan included in the submitted plan set. The AASHTO Geometric Design Manual of highways and streets requires 200 feet of stopping site distance on crest vertical curves with a design speed of 30 MPH. As previously discussed, it was determined that speeds in the area of the project site are not excessive, and for the purposes of this study it is assumed that the 85th percentile falls between 30-35 MPH. From this determination, the requirement of 200 feet of stopping sight distance in each direction will be sufficient for this proposed roadway.

Respectfully Submitted,

BERRY SURVEYING & ENGINEERING

Christopher R. Berry SIT
Principal, President

Kenneth A. Berry, PE, LLS,
CPSWQ, CPESC, CESSWI
Principal, VP-Technical Operations

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Single-Family Detached Housing
(210)

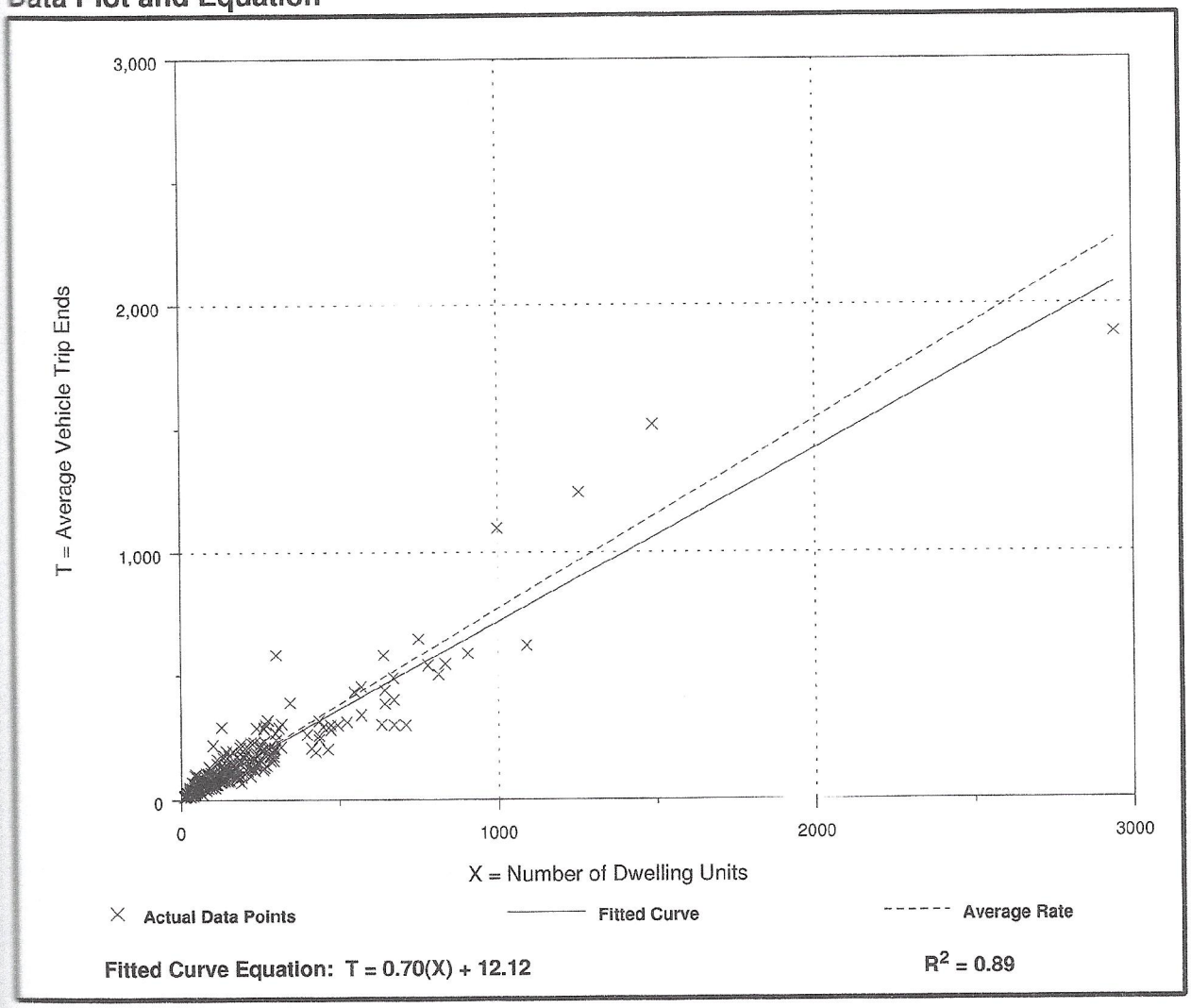
Average Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
A.M. Peak Hour of Generator

Number of Studies: 343
Avg. Number of Dwelling Units: 180
Directional Distribution: 26% entering, 74% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.77	0.33 - 2.27	0.91

Data Plot and Equation



Fitted Curve Equation: T = 0.70(X) + 12.12

R^2 = 0.89

Single-Family Detached Housing
(210)

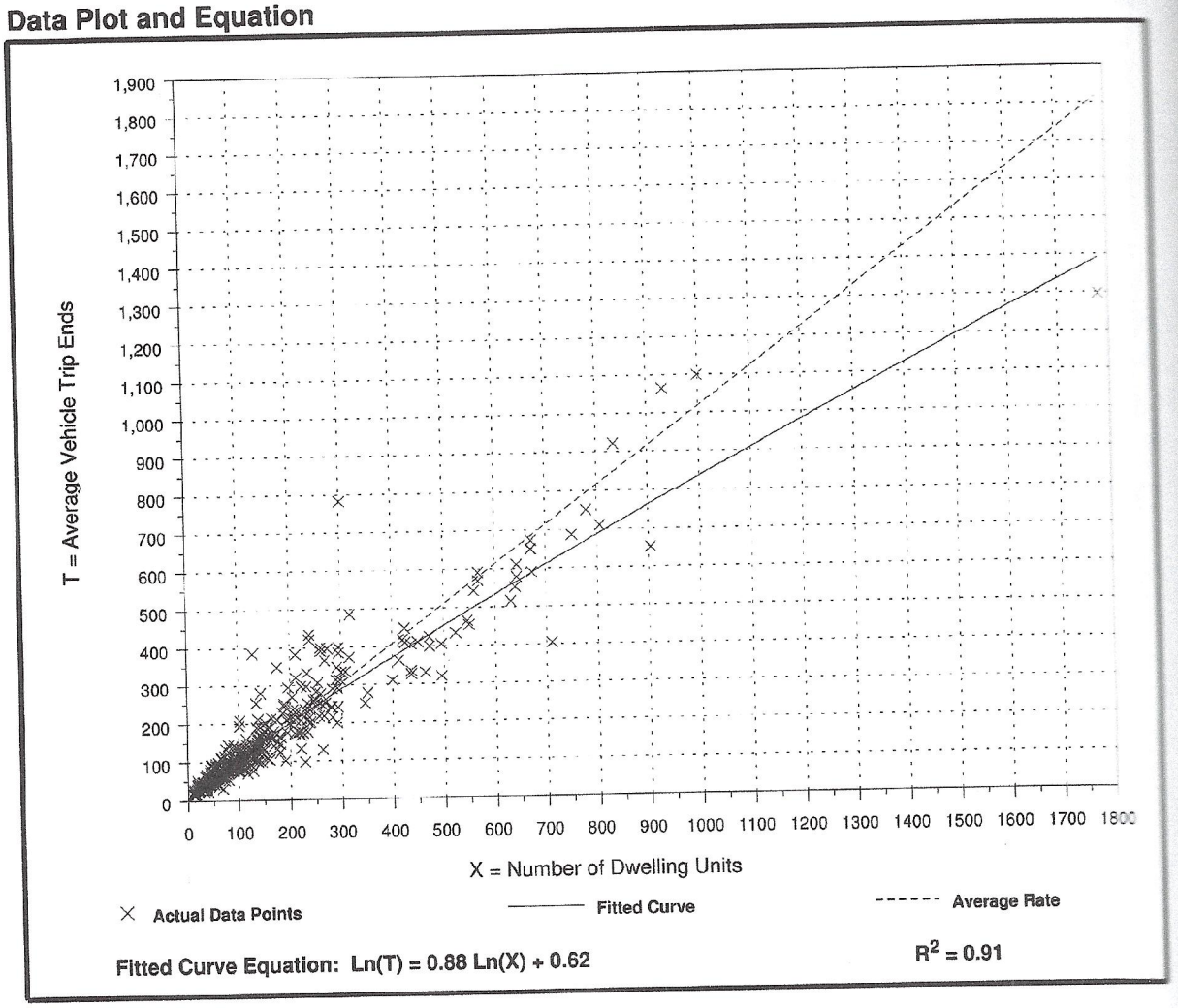
Average Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
P.M. Peak Hour of Generator

Number of Studies: 362
Avg. Number of Dwelling Units: 174
Directional Distribution: 64% entering, 36% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
1.02	0.42 - 2.98	1.05

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.88 Ln(X) + 0.62

R^2 = 0.91

Single-Family Detached Housing
(210)

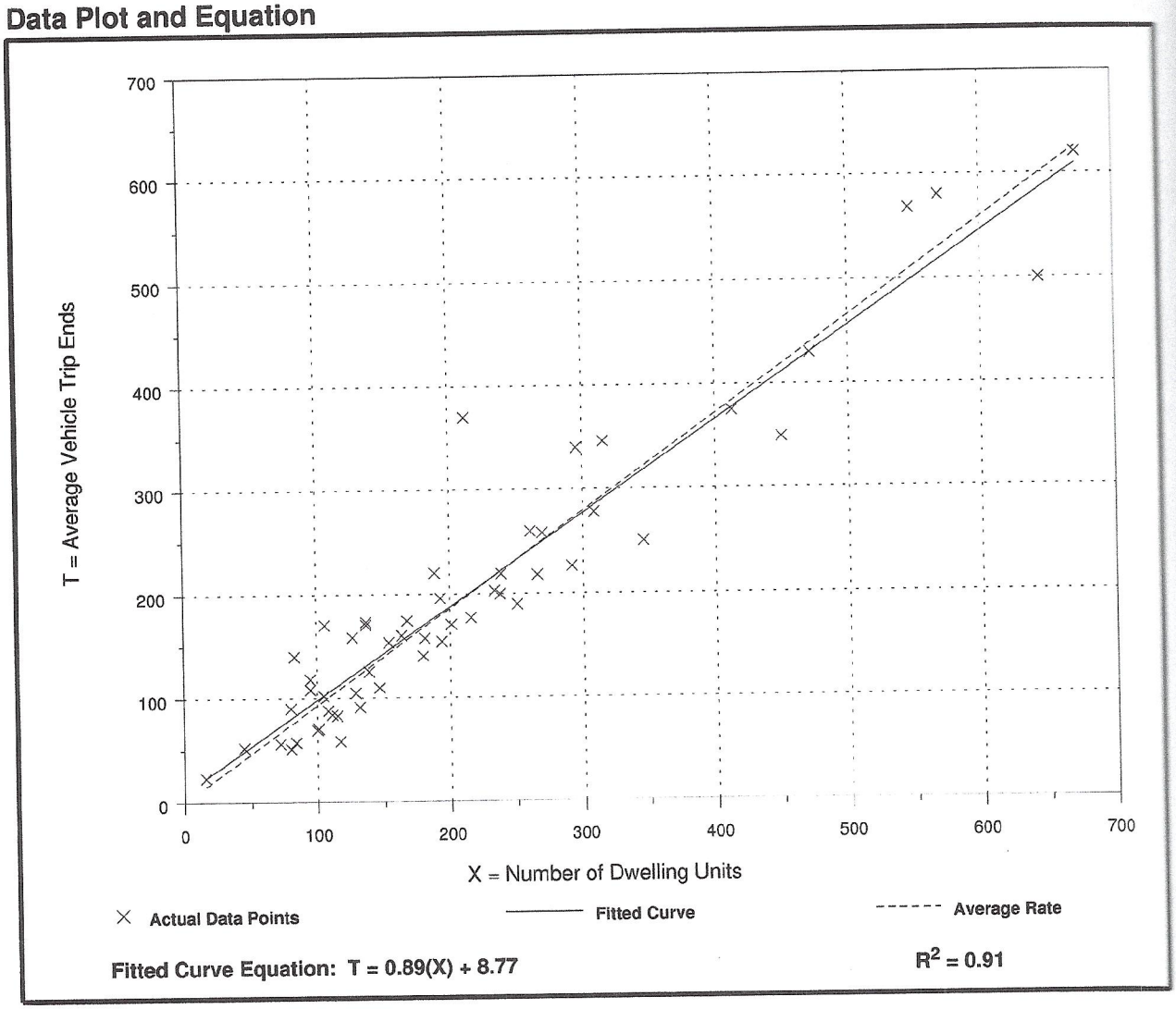
Average Vehicle Trip Ends vs: Dwelling Units
On a: Saturday,
Peak Hour of Generator

Number of Studies: 54
Avg. Number of Dwelling Units: 215
Directional Distribution: 54% entering, 46% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.93	0.50 - 1.75	0.99

Data Plot and Equation



Fitted Curve Equation: $T = 0.89(X) + 8.77$

$R^2 = 0.91$

Single-Family Detached Housing
(210)

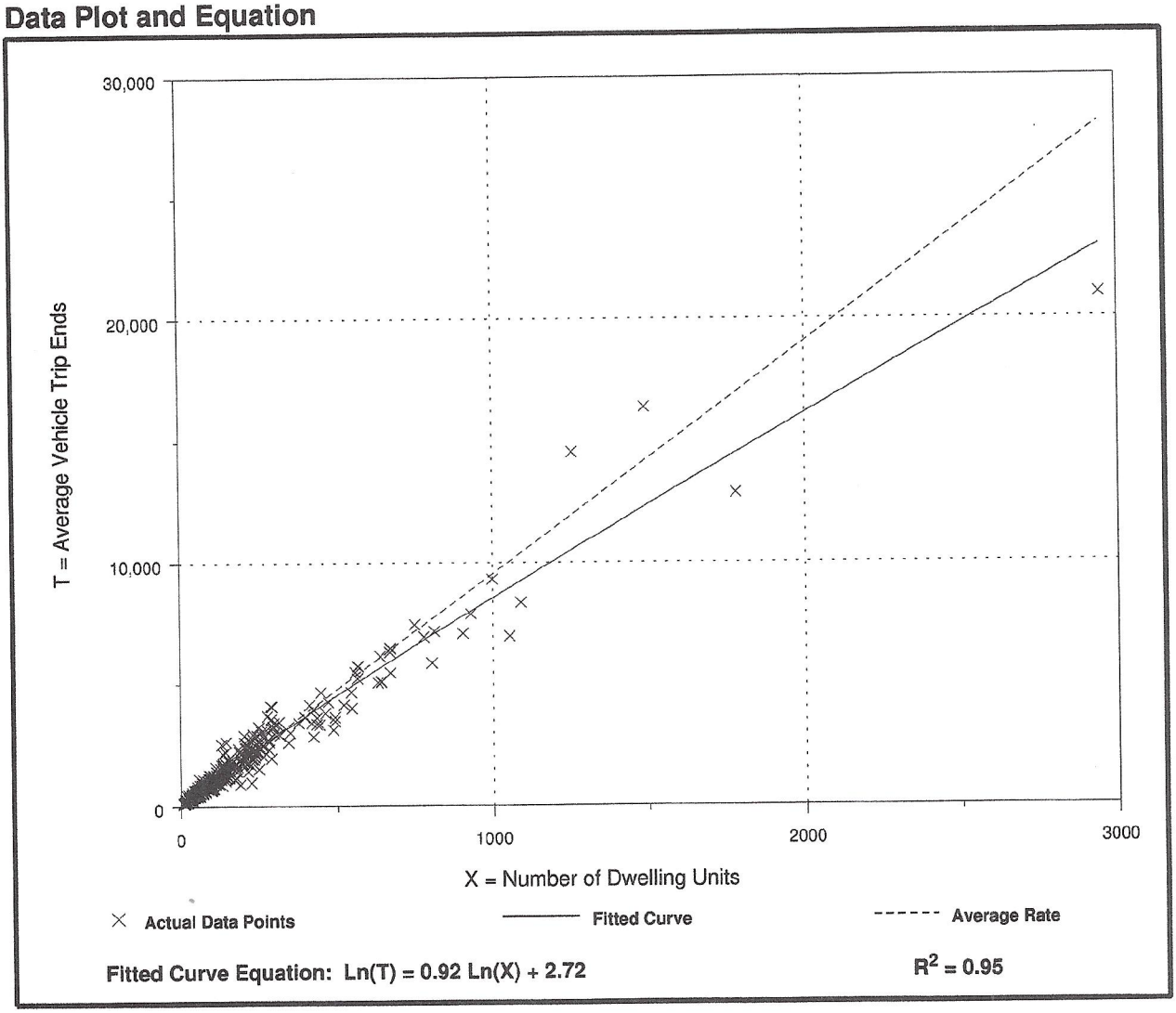
Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Number of Studies: 355
Avg. Number of Dwelling Units: 198
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.52	4.31 - 21.85	3.70

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 2.72

R^2 = 0.95

Residential Condominium/Townhouse
(230)

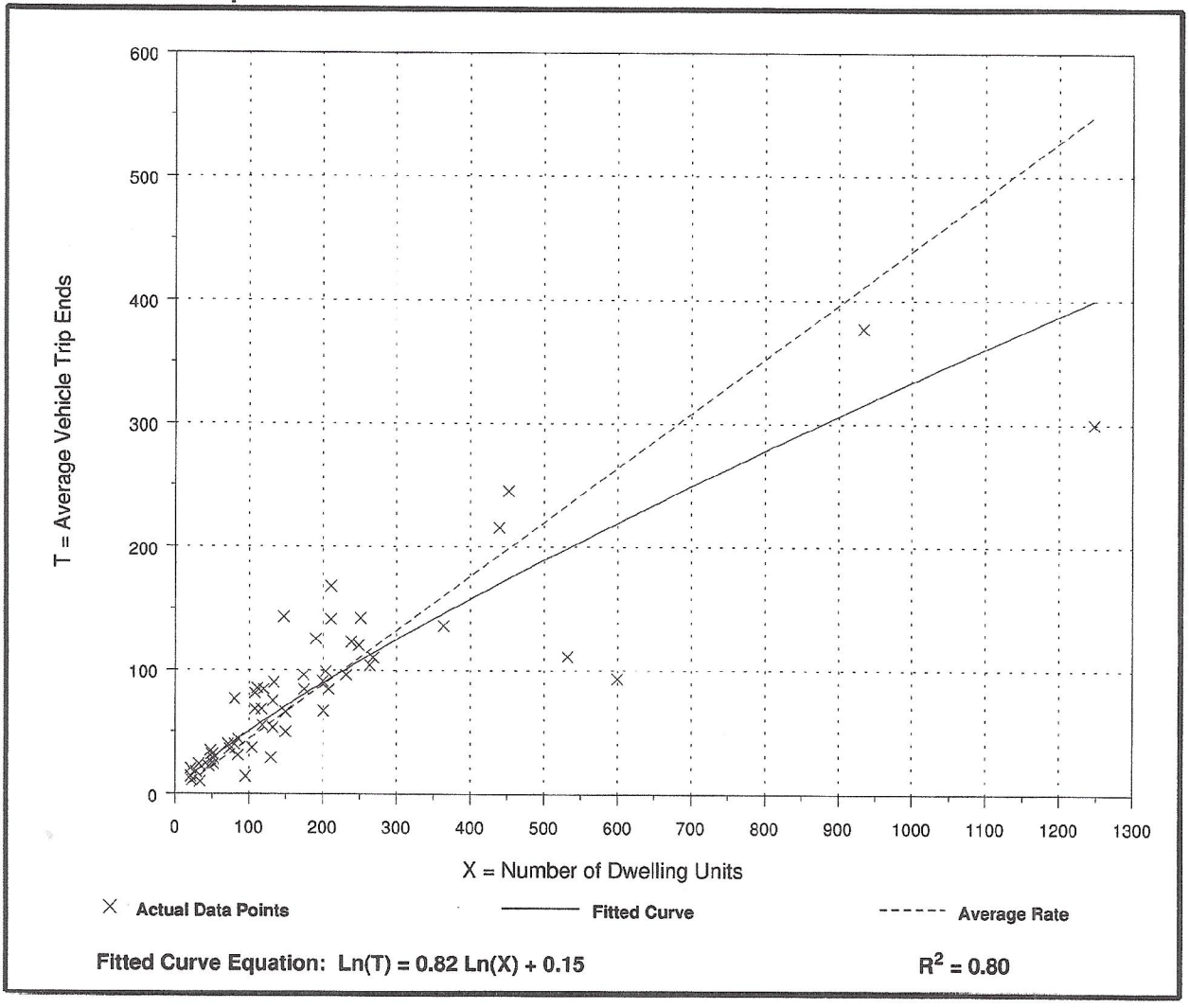
Average Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
A.M. Peak Hour of Generator

Number of Studies: 54
Avg. Number of Dwelling Units: 196
Directional Distribution: 19% entering, 81% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 0.97	0.68

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.82 Ln(X) + 0.15 $R^2 = 0.80$

Residential Condominium/Townhouse
(230)

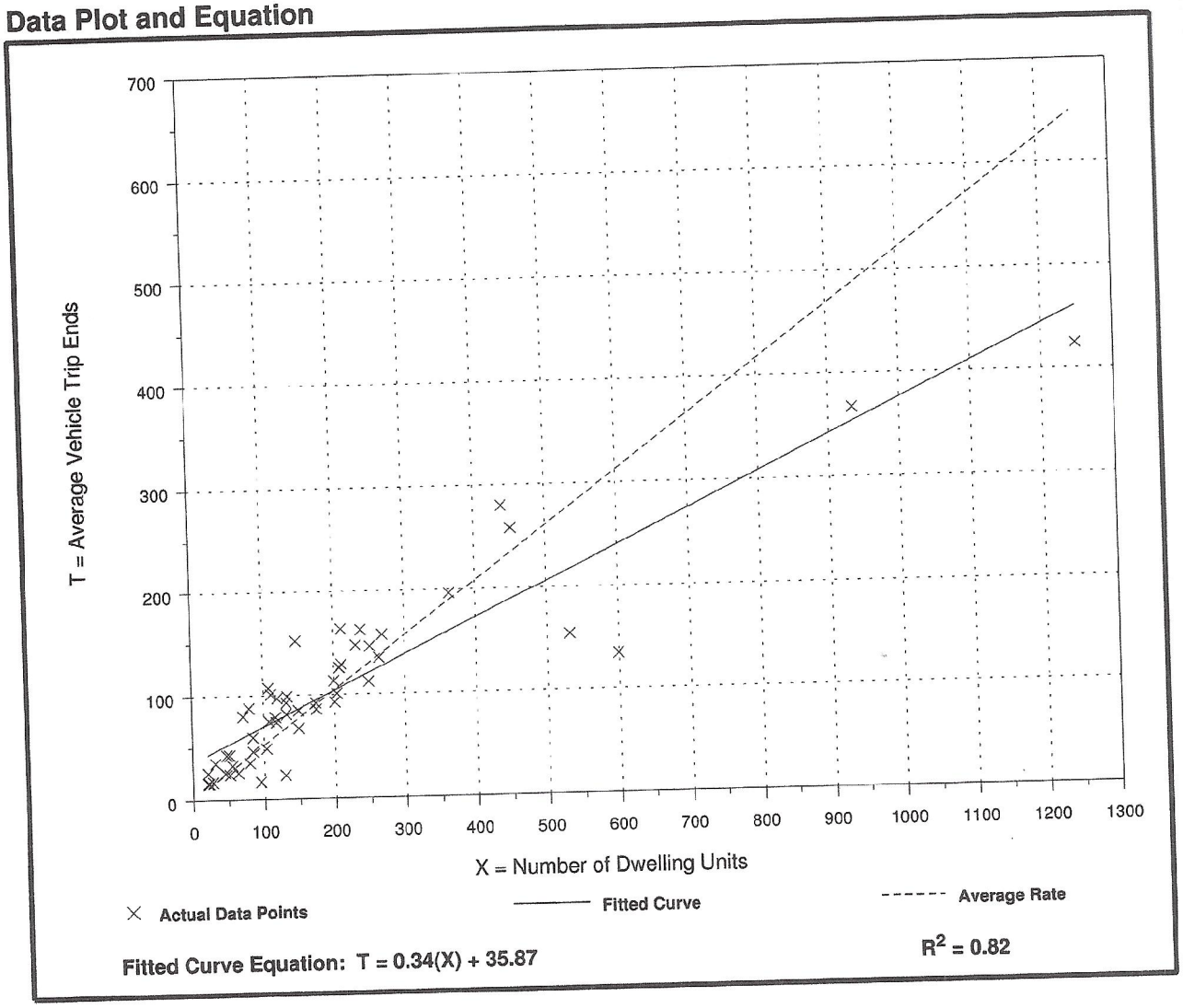
Average Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
P.M. Peak Hour of Generator

Number of Studies: 52
Avg. Number of Dwelling Units: 199
Directional Distribution: 64% entering, 36% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.52	0.18 - 1.24	0.75

Data Plot and Equation



Fitted Curve Equation: T = 0.34(X) + 35.87

R^2 = 0.82

Residential Condominium/Townhouse
(230)

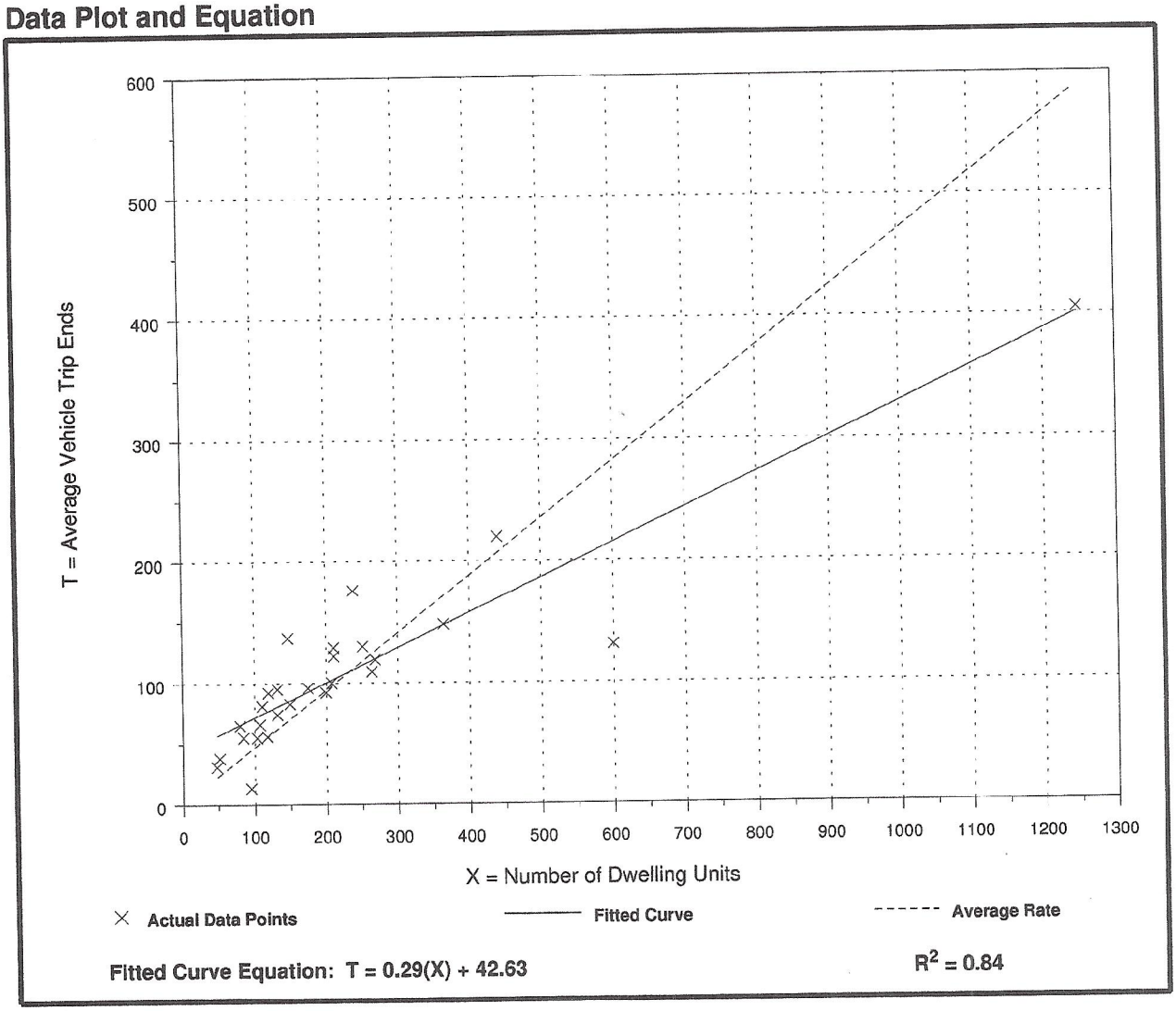
Average Vehicle Trip Ends vs: **Dwelling Units**
On a: **Saturday,**
Peak Hour of Generator

Number of Studies: 27
Avg. Number of Dwelling Units: 228
Directional Distribution: 54% entering, 46% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.47	0.14 - 0.93	0.71

Data Plot and Equation



Fitted Curve Equation: T = 0.29(X) + 42.63

R^2 = 0.84

Residential Condominium/Townhouse
(230)

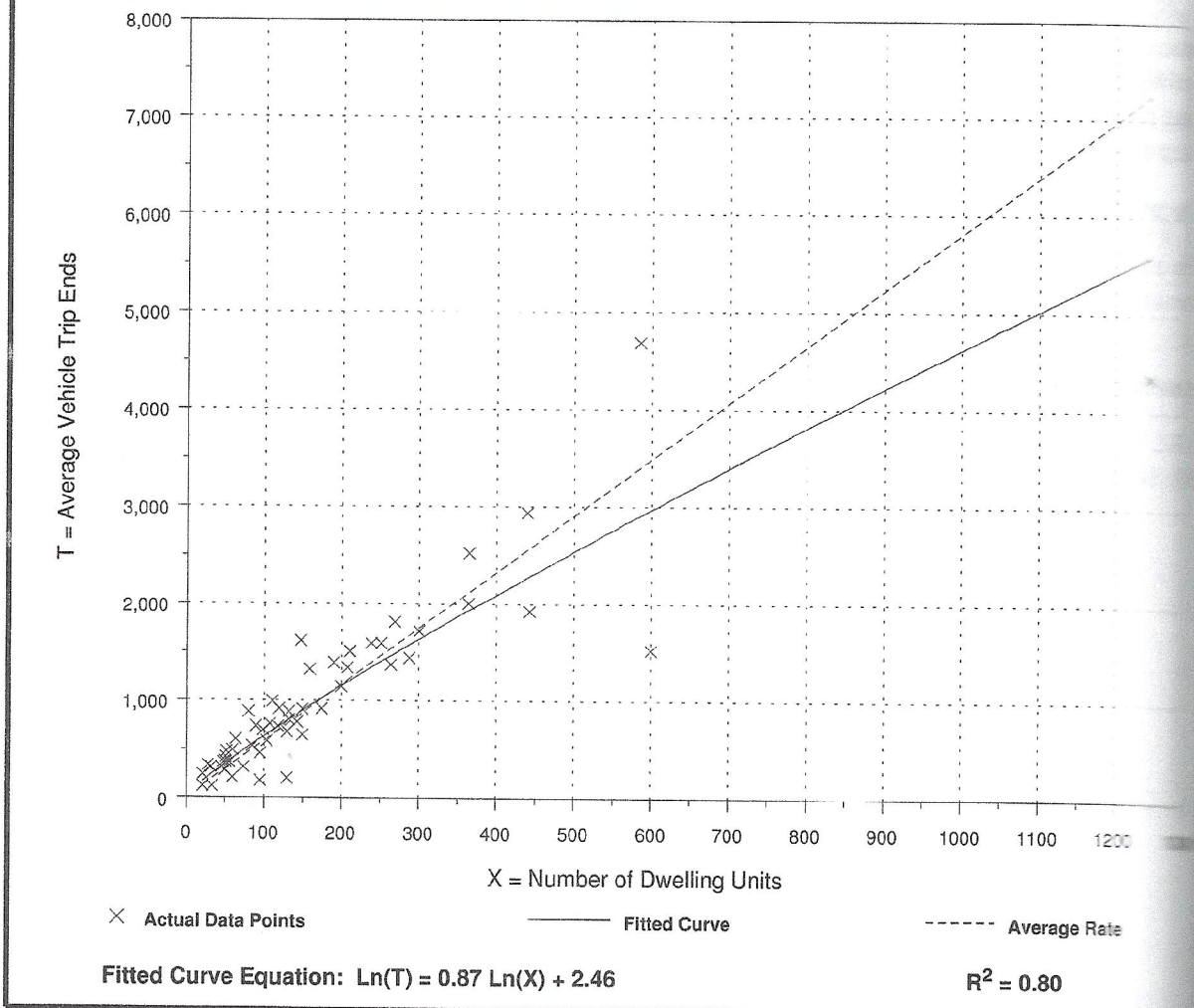
Average Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Number of Studies: 56
Avg. Number of Dwelling Units: 179
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.81	1.53 - 11.79	3.11

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.87 Ln(X) + 2.46

R^2 = 0.80

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January 17, 2018

City of Dover Planning Board
Attn: Christopher Parker Assistant City Manager
288 Central Ave
Dover, NH 03820

RE: Proposed Open Space Development
Troy Thibodeau
Sixth Street

Mr. Chairperson & Members of the Dover Planning Board:

In accordance with to the subdivision standards Article 155-51 following waivers are hereby requested:

1. **Identification of Waiver Request**:
   - Propose a 15 foot side building setback where a 30 foot external buffer is required on the eastern side of the subject parcel.

2. **Explanation:**

The applicant is proposing a 15 foot building setback where a 30 foot external buffer is normally required. This allows for the use of more buildable land outside of areas with greater than 20% slope. This also allows for the proposed roadway to be located in the majority of the footprint of the existing driveway. Infrastructure that is required for the development will be located within this area as well, reducing the area of greater than 20% slopes disturbed. Additionally the eastern abutter (Tax Map 35, Lot 56) is more amenable to this development and its proximity to the boundary line based on conversations the applicant has had with the abutter.

3. **Waiver Justification**:

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

The purpose and intent is to allow for a roadway and building envelope that fit around the existing land conditions. In this case, it is our assessment that minimizing development and change to areas of steep slopes and maintaining the required buffer to the west, is the best way to develop this particular site and thus caries out the purpose and intent of the regulations. The open space afforded would be a continuation of the surrounding undeveloped land, allowing significant buffer from rear and westerly (side) abutters.

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

Strict conformity would require the applicant to again consider placing more of the development towards areas of steeper slopes, reducing usable yard area for perspective residents. It would also reduce the ability to reuse land that currently exists within the current driveway footprint, resulting in the disturbance of land that would not otherwise need to be disturbed. Other residential lots on Sixth Street across from the subject parcel do not enjoy a 30 foot side external buffer, as this would allow for the proposed development to more closely conform to neighboring lots. This reduction would be to satisfy a regulation that is otherwise incongruent with the surrounding neighborhood.

1. Identification of Waiver Request:

- Propose development of an 18 foot wide roadway with a 1 foot shoulder.

2. Explanation:

The applicant is proposing an 18 foot wide road way with a 1 foot shoulder where a development of five or more parcels in R-12 requires a road width of 24-32 foot with a 3 foot shoulder, depending on the sites physical characteristics and the layout and density of the proposed development (Subdivision Article 155-48).

3. Waiver Justification:

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

The purpose of a roadway being 24-32 feet wide with a 3 foot shoulder is to build a roadway that can adequately handing traffic speeds, volumes and higher levels of intensity. While the proposed development does contain six residential units, the volume and intensity of the traffic that would travel the proposed roadway is low. These values and how they were calculated can be found in the Trip End Analysis & Design Analysis. As there is an existing two unit condominium on site, increases in traffic volume are marginal. It has been found that increase of 3.28 trip during the AM peak hour, an increase of 4.08 trips in the PM peak hour, an increase of 3.72 trips in the Saturday peak hour, and a total of 36.28 trips on a weekday will occur. As it can be seen, these are low volume increases and would not warrant a larger roadway than the 18 foot wide, 1 foot shoulder proposed. It can also be assumed that the intensity of the traffic will be low, as a majority of traffic will be lower weight passenger vehicles. A reduction in roadway width will also allow for the use of the existing driveway footprint and reduce the amount of steep slopes disturbed along the proposed driveway.

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

Strict conformity would require the applicant to build a roadway that is not necessary to handle the intensity and volume of traffic that this roadway will be experiencing on a day-to-day basis. It also would require for more disturbance of earth that is not necessary and would require removal of earth from locations of greater than 20% slopes. As is stated in Subdivision Article 155-48, "The width of the roadway shall be determined by the site's physical characteristics and

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the layout and density of the proposed development". This would be a great application of this line and should be applied accordingly.

Thank you for your time and attention to this matter and we hope you look favorably upon the request.

BERRY SURVEYING & ENGINEERING

Christopher R. Berry SIT
Principal, President

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January 17, 2018

City of Dover
Attention: Assistant City Planner Donna Benton
288 Central Ave
Dover, NH 03820

Re: TDAK & Company LLC
Open Space Subdivision (Affordable)
99 Sixth Street
Dover, NH
Tax Map 35, Lot 57

Dear Mrs. Benton,

On behalf of our client TDAK & Company LLC. (TDAK), Berry Surveying & Engineering (BS&E) is submitting for TRC to discuss a proposed development off of Sixth Street, formerly known as Carmens Way.

Background and General Narrative:

TDAK owns the parcel known as 99 Sixth Street in Dover, NH (Tax Map 35, Lot 57). BS&E has conducted an on-site survey of the parcel which includes a topographic analysis as well as a wetlands analysis. Please note there are no wetlands found on the parcel. The site contains a single brick structure which sits atop the existing hill and over looks Sixth Street. There is a wall that was constructed along the sidewalk on Sixth Street to retain this site from the municipal right of way. The parcel is 2.07 acres in size and has approximately 282 feet of frontage along Sixth Street. There are two driveways which are used to access the parcel from Sixth Street. The rear of the site slopes gently to the Hillcrest Drive neighborhood, and is generally wooded. The front of the project site contains a wooded buffer and steeper slopes.

The Proposal:

The proposal is to construct a private roadway up the existing easterly driveway location and wrap around the existing brick structure on the parcel. This structure has been converted to a two unit condominium. Along with the two unit condominium, the private roadway will provide access to four additional single family detached homes. The proposed homes will be part of a condo subdivision and be sold as individual units. The proposed private roadway will be approximately 391 feet long.

January 17, 2018

After careful consideration, the total of six units was determined to be the most appropriate for this project site. The existing two unit condominium and the proposed four single family homes. These units will be serviced by municipal water and sewer. This Open Space Subdivision (OSS) will allow for the more dense use of land while still having natural wooded buffers between the subject parcels and the abutters to the north and west. Additionally, we have designed this project as the pilot for the new affordable housing ordinance being contemplated by the planning board. The more dense construction will resemble other locations nearby on Sixth Street and allow for more modern structures to exist in the area. A series of three landscape retaining walls will be installed to allow for the optimal use of land and to minimize the impact on areas of steep slopes.

Due to the elevation challenges of this site, two waivers are being requested. The first is proposing a 15 foot side building setback where a 30 foot external buffer would be required. This would allow for the construction of the proposed roadway in the majority of the footprint of the existing driveway. By doing this, it reduces the amount of steep slopes that would need to be disturbed or created during construction. It would also allow for the construction of the single family houses to occur on more flat, and usable land for the perspective residents. The second wavier is proposing the construction of an 18 foot wide roadway with a 1 foot wide shoulder where a 24-32 foot roadway with a 3 foot shoulder would be required. Along with the first proposition, this would allow for the majority of the proposed roadway to within the existing driveway footprint. This smaller roadway would also minimize the amount of steep slopes that will need to be disturbed. Due to the projected low traffic volumes and intensities, it has been felt that these two waivers will allow for the optimal use of the available land in this parcel.

We look forward to working with staff on this proposal.

BERRY SURVEYING & ENGINEERING

Christopher R. Berry
Principal, President

BERRY SURVEYING & ENGINEERING

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TABLE OF CONTENTS:

SHEET 1 ~ NEIGHBORHOOD PLAN
SHEET 2 ~ EXISTING CONDITIONS PLAN
SHEET 3 ~ SITE SPECIFIC SOILS MAP
SHEET 4 ~ YIELD PLAN (OPEN SPACE SUBDIVISON (OSS) BASIS)
SHEET 5 ~ SITE PLAN
SHEET 6 ~ CONDO SUBDIVISION
SHEET 7 ~ GRADING PLAN
SHEET 8 ~ ROAD DESIGN PLAN
SHEET 9 ~ P101–SAND FILTER AND DRY SWALE DETAIL PLAN
SHEET 10 ~ EROSION & SEDIMENT CONTROL PLAN
SHEET 11 ~ UTILITY PLAN
SHEET 12 ~ ENTRANCE SIGHT DISTANCE PLAN
SHEET 13 ~ CROSS SECTIONS 0+00 TO END
SHEET 14 ~ E101–SEDIMENT & EROSION DETAILS
SHEET 15 ~ E102–SEDIMENT & EROSION DETAILS
SHEET 16 ~ D101–DRAINAGE DETAILS
SHEET 17 ~ C101–CONSTRUCTION DETAILS
SHEET 18 ~ C102–CONSTRUCTION DETAILS
SHEET 19 ~ U101–UTILITY DETAILS
SHEET 20 ~ U102–UTILITY DETAILS
SHEET 21 ~ L101–LANDSCAPING DETAILS

CARMENS WAY
OPEN SPACE SUBDIVISION
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

NOTE:

BERRY SURVEYING & ENGINEERING HAS PREPARED AN INSPECTION & MAINTENANCE MANUAL AS PART OF THIS PROJECTS DOCUMENTATION. ALL USERS ARE BOUND TO THIS DOCUMENT AS PART OF THE APPROVAL OF THE PLANNING BOARD. COPIES OF THE YEARLY INSPECTIONS ARE TO BE DELIVERED TO THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT.

OWNER: TDAK & COMPANY LLC
9 KELSEY DRIVE
GREENLAND, NH 03840

APPLICANT: TDAK & COMPANY LLC
9 KELSEY DRIVE
GREENLAND, NH 03840

SURVEYOR OF RECORD: KENNETH A. BERRY, PE, LLS
CPESC, CESSWI, CPSWQ
BERRY SURVEYING & ENGINEERING
335 CROWN POINT ROAD
BARRINGTON, NH 03825
(603) 332–2863

ENGINEER OF RECORD: KENNETH A. BERRY, PE, LLS
CPESC, CESSWI, CPSWQ
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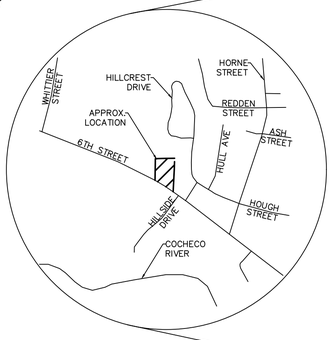
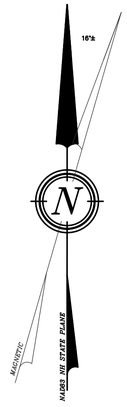
WETLAND SCIENTIST: STONEY RIDGE ENVIRONMENTAL
CYNTHIA M. BALCIUS, CSS, CWS, CPESC
229 PARKER MOUNTAIN ROAD
ALTON, NH 03809
(603)–776–5825

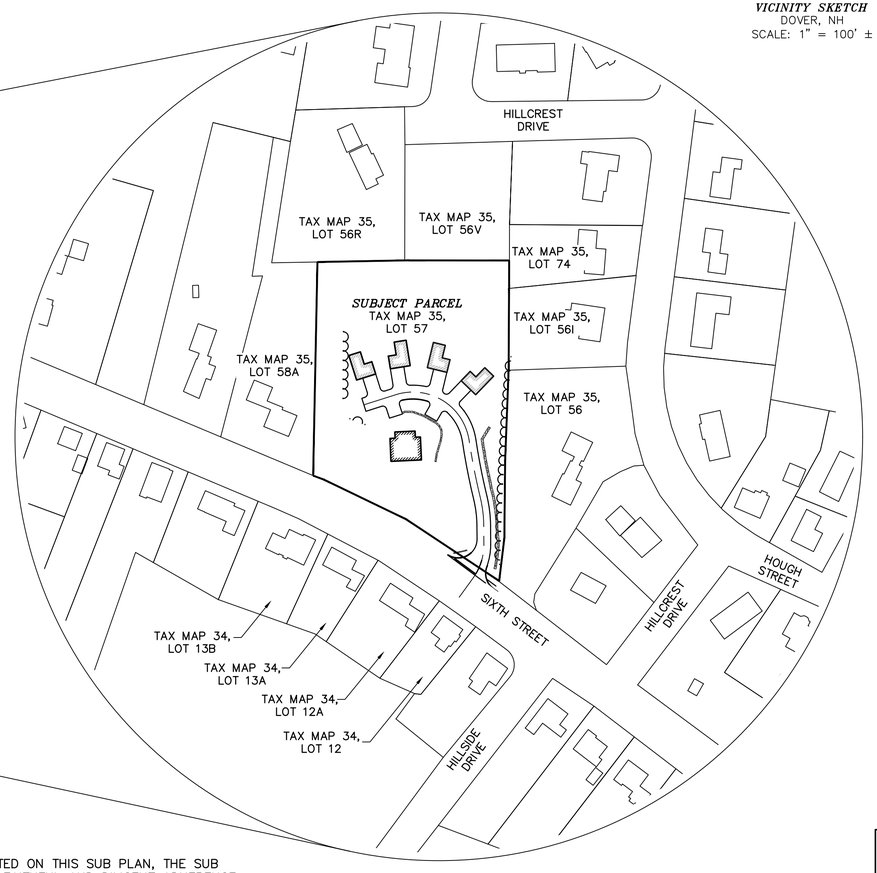
SOIL SCIENTIST: STONEY RIDGE ENVIRONMENTAL
CYNTHIA M. BALCIUS, CSS, CWS, CPESC
229 PARKER MOUNTAIN ROAD
ALTON, NH 03809
(603)–776–5825

LOCATION PLAN
DOVER, NH
NOT TO SCALE





VICINITY SKETCH
DOVER, NH
SCALE: 1" = 100' ±



REQUIRED PERMITS:

1.) NHDES SEWER DISCHARGE PERMIT
2.) EPA NOTICE OF INTENT (NOI)

GENERAL PLAN SET NOTES:

1.) 11x17" PLANS ARE HALF THE PUBLISHED SCALE.

2.) ALL PLANS ARE CONSIDERED TO BE NOT FOR CONSTRUCTION UNLESS THEY CONTAIN THE APPROVAL STAMP OF THE CITY OF DOVER.

WHETHER OR NOT OTHERWISE EXPRESSLY RECITED ON THIS SUB PLAN, THE SUB PLAN APPROVAL GRANTED IS CONDITIONED ON FAITHFUL AND DILIGENT ADHERENCE BY THE OWNER/SUBDIVIDER/DEVELOPER OF ALL TERMS, CONDITIONS, PROVISIONS AND SPECIFICATIONS OF THE CITY OF DOVER LAND SITE PLAN REGULATIONS AS AMENDED OR AS MAY LATER BE AMENDED, IN EFFECT ON THE DATE OF APPROVAL, UNLESS OR EXCEPT INSOFAR AS EXPRESSLY WAIVED, IN ANY PARTICULAR, BELOW. NON – ADHERENCE MAY RESULT IN A REVOCATION OF APPROVAL. ANY VARIATION FROM THE APPROVED PLAN WILL REQUIRE A RESUBMISSION FOR SUB PLAN APPROVAL.

REVISION	DATE	DESCRIPTION

OPEN SPACE SUBDIVISION
LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE : AS SHOWN
DATE : JANUARY 17, 2018
FILE NO. : DB 2017–060

STATE OF NEW HAMPSHIRE – LICENSED LAND SURVEYOR – NO. 805 – KENNETH A. BERRY – SIGNATURE

STATE OF NEW HAMPSHIRE – KENNETH A. BERRY No. 14243 – LICENSED PROFESSIONAL ENGINEER

EXISTING LEGEND:

- IRON BOUND ~TBS~
- IRON BOUND ~FND~
- GRANITE BOUND ~FND~
- STONE BOUND ~FND~
- UTILITY POLE
- GUY WIRE
- CURB STOP
- GATE VALVE
- GAS VALVE
- FIRE HYDRANT
- CATCH BASIN
- SEWER MANHOLE
- DRAIN MANHOLE
- SINGLE POST SIGN
- TEST PIT
- TREE
- BUILDING SETBACK LINE
- WATER LINE
- OVERHEAD UTILITIES
- SOILS LINE
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- EXISTING CULVERT PIPE

ABBREVIATION LEGEND:

S.G.C.	SLOPED GRANITE CURB
V.G.C.	VERTICAL GRANITE CURB
E.O.P.	EDGE OF PAVEMENT
B.C.C.	BITUMINOUS CONCRETE CURB
BITUM.	BITUMINOUS
E.O.P.	EDGE OF PAVEMENT
E.S.H.W.T	ESTIMATE SEASONAL HIGH WATER TABLE
TYP.	TYPICAL
T. BLOCK	THRUST BLOCK
CONC.	CONCRETE
U.G.E.	UNDER GROUND ELECTRIC / UTILITY
U.D.	UNDER DRAIN
F.E.S.	FLARED END SECTION
HDPE	HIGH DENSITY POLYETHYLENE
RCP	REINFORCED CONCRETE PIPE
F.G.	FINISHED GRADE
E.G.	EXISTING GRADE
T.W.	TRAVELED WAY
T.B.R.	TO BE REMOVED
'/.	FEET / FEET

{ } SSL ( ) ~ {SIZE} SINGLE SOLID LINE (COLOR W=WHITE, Y=YELLOW)
{ } DSL ( ) ~ {SIZE} DOUBLE SOLID LINE (COLOR W=WHITE, Y=YELLOW)
{ } SSB ( ) ~ {SIZE} SINGLE SOLID W/ BROKEN LINE (COLOR W=WHITE, Y=YELLOW)
{ } SBL ( ) ~ {SIZE} SINGLE BROKEN LINE (COLOR W=WHITE, Y=YELLOW)
{ } DBL ( ) ~ {SIZE} DOUBLE BROKEN LINE (COLOR W=WHITE, Y=YELLOW)

PROPOSED LEGEND:

- UTILITY POLE
- UTILITY PADS
- SEWER MANHOLE
- WATER SHUT OFF / VALVE
- HYDRANT
- THRUST BLOCK
- LIGHTING
- CATCH BASIN / DRAIN MANHOLE
- SIGNAGE
- LAMP
- CONTOUR MINOR (F41)
- CONTOUR MAJOR (F40)
- SPOT GRADE (F70.31)
- CULVERT W/ FLARED END SECTION (F.E.S.)
- FOUNDATION DRAIN (F.D.)
- DETAIL SHEET / DETAIL (E101 / E6)
- TREE LINE
- CENTER LINE
- UNDERGROUND UTILITY TRANSFORMER / J.BOX (UGE)
- UNDER DRAIN (U.D.)
- WATER LINE (W)
- SEWER LINE (S)
- SILT FENCE / EROSION MIX BERM (SF)
- FILTREXX 12" SILT SOXX (SS)
- FILTREXX 8" SILT SOXX (SS)
- ORANGE CONSTRUCTION PERIMETER FENCE (C)
- EASEMENT
- MULCH BERM
- STOCK PILE
- CHECK DAM
- HAY BALE

GIS SKETCH
DOVER, NH
SCALE: 1" = 100' ±

SIGN ID NUMBER	SIGN SIZE (WIDTH x HEIGHT)	SIGN	TEXT DIMENSIONS	NO. OF SIGNS	BACKGROUND	LEGEND	BORDER	SYMBOL	POST SIZE & QUANTITY
R1-1	36"x36"	STOP	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	RED	WHITE	WHITE	–	U-CHANNEL (1)
R7-1	24"x30"	NO PARKING ANY TIME	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	WHITE	BLACK	BLACK	–	U-CHANNEL (1)
R2-1	24"x30"	SPEED LIMIT 25	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	WHITE	BLACK	BLACK	–	U-CHANNEL (1)
W14-2	30"x30"	NO OUTLET	SEE STANDARD HIGHWAY SIGNS 2004 EDITION PUBLISHED BY USDOT – FHWA	1	YELLOW	BLACK	BLACK	–	U-CHANNEL (1)

ABUTTERS WITHIN 200':

N/F MORRISSEY-SMITH, KIMBERLEE
112 SIXTH STREET
DOVER, NH 03820
TAX MAP 34, LOT 13B
S.C.R.D. BOOK 4376, PAGE 273

N/F MARCOTTA, RHONDA & LOPES, TAMARA
110 SIXTH STREET
DOVER, NH 03820
TAX MAP 34, LOT 13A
S.C.R.D. BOOK 2921, PAGE 35

N/F GINN, KATHERINE
644 STATE STREET
APT #4
PORTSMOUTH, NH 03801
TAX MAP 34, LOT 12A
S.C.R.D. BOOK 4180, PAGE 612

N/F THOMPSON, SETH & GLENN
104 SIXTH STREET
DOVER, NH 03820
TAX MAP 34, LOT 12
S.C.R.D. BOOK 4003, PAGE 438

N/F CARVILLE CAROLE REV. TRUST
97 SIXTH STREET
DOVER, NH 03820
TAX MAP 35, LOT 56
S.C.R.D. BOOK 3698, PAGE 800

ABUTTERS WITHIN 200' CONT.:

N/F CARVILLE CAROLE REV. TRUST
97 SIXTH STREET
DOVER, NH 03820
TAX MAP 35, LOT 56
S.C.R.D. BOOK 3698, PAGE 800

N/F BICKFORD FAMILY REV. TRUST
119 SIXTH STREET
DOVER, NH 03820
TAX MAP 35, LOT 58
S.C.R.D. BOOK 2245, PAGE 361

N/F KEENAN, SUSAN E REV TRUST
31 HILLCREST DRIVE
DOVER, NH 03820
TAX MAP 35, LOT 56V
S.C.R.D. BOOK 2846, PAGE 269

N/F DIONNE, NORMAN J. & LORRIE J.
2 HILLCREST DRIVE
DOVER, NH 03820
TAX MAP 35, LOT 56I
S.C.R.D. BOOK 2324, PAGE 509

ABUTTERS WITHIN 200' CONT.:

N/F KEENAN, SUSAN E REV TRUST
31 HILLCREST DRIVE
DOVER, NH 03820
TAX MAP 35, LOT 56R
S.C.R.D. BOOK 2791, PAGE 869

N/F SMITH, GORDON & SUSAN REV TRUST
2A HILLCREST DRIVE
DOVER, NH 03820
TAX MAP 35, LOT 74
S.C.R.D. BOOK 4014, PAGE 965

N/F SUPPLE, GARRETT E. & JEANNE V.
4 HILLCREST DRIVE
DOVER, NH 03820
TAX MAP 35, LOT 56II
S.C.R.D. BOOK 1976, PAGE 182

N/F CARVILLE, CRAIG E. & COLLETTE A.
2B HILLCREST DRIVE
DOVER, NH 03820
TAX MAP 35, LOT 56-1
S.C.R.D. BOOK 1556, PAGE 112

ABUTTERS WITHIN 200' CONT.:

N/F VERSCHUEREN JAMES REV. LIVING TST
102B SIXTH STREET
DOVER, NH 03820
TAX MAP 34, LOT 13D
S.C.R.D. BOOK 4228, PAGE 552

N/F LUNT, TERESA J. & BRIAN R.
114 SIXTH STREET
DOVER, NH 03820
TAX MAP 34, LOT 13C
S.C.R.D BOOK 963, PAGE 410

N/F BICKFORD FAMILY REV. TRUST.
119 SIXTH STREET
DOVER, NH 03820
TAX MAP 35, LOT 58
S.C.R.D. BOOK 2245, PAGE 361

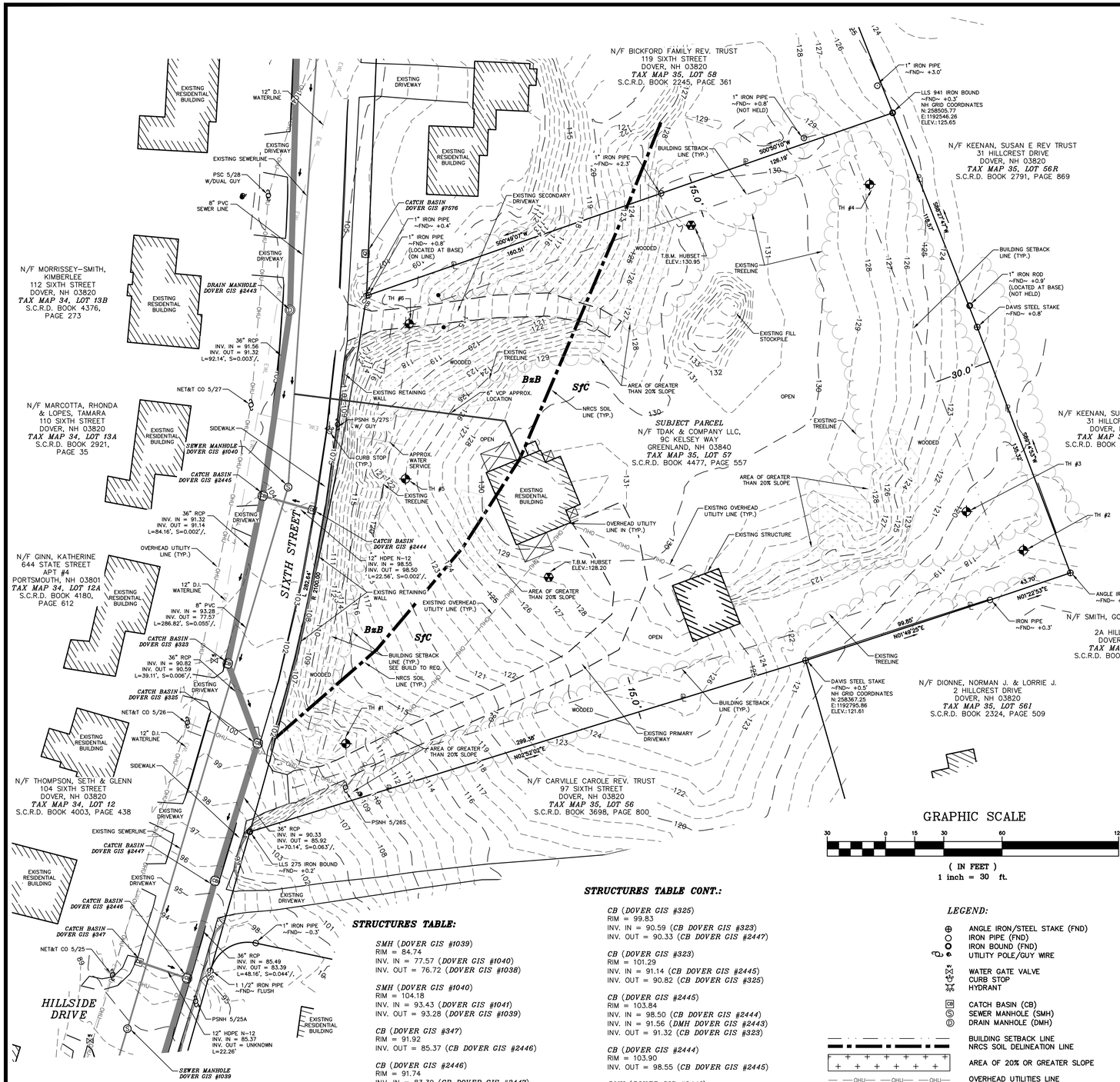
REVISION	DATE	DESCRIPTION

NEIGHBORHOOD PLAN
LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

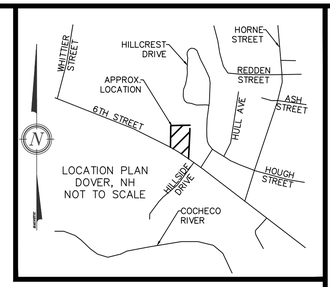
SCALE : AS SHOWN
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

STATE OF NEW HAMPSHIRE
No. 805
KENNETH A. BERRY
LICENSED LAND SURVEYOR
SIGNATURE



PLAN REFERENCES:

1. "PLAN OF LAND PREPARED FOR TIMNIK, LLC" DATED: MARCH 25, 2016 BY: JASON POHOPEK DESIGN & CONSTRUCTION, LLC UNRECORDED, ON FILE AT THIS OFFICE
2. "LOT LINE ADJUSTMENT PLAN PREPARED FOR PATRICK MURRAY TAX MAP 35, LOT NO.S 59 & 59A 125 SIXTH STREET CITY OF DOVER COUNTY OF STRAFFORD STATE OF NEW HAMPSHIRE" DATED: OCTOBER 24, 2013 BY: MCENEANEY SURVEY ASSOCIATES, INC. S.C.R.D.: PLAN #106-081
3. "PLAN OF LAND FOR SUSAN E. KEENAN TRUSTEE OF THE SUSAN E. KEENAN REVOCABLE TRUST TAX MAP 35 LOT56V - LOT 13" DATED: JANUARY 28, 2012" BY: KENNETH E. MOORE S.C.R.D.: PLAN #103-031
4. "PLAN OF SUBDIVISION FOR CAROLE A. CARVILLE SIXTH STREET & HILLCREST DRIVE DOVER, NEW HAMPSHIRE" BY: K.E. MOORE & B.G. STAPLES LAND SURVEYORS DATED: MARCH, 1990 S.C.R.D.: PLAN #37A-144
5. "FINAL PLAN PART OF THE CARVILLE TRACT DOVER NEW HAMPSHIRE" BY: G.L. DAVIS & ASSOCIATES ENGINEERS DATED: AUGUST 6, 1956 S.C.R.D.: PLAN #37 POCKET #3 FOLDER #4
6. "PLAN OF LOTS CARLTON C. & LENA B. MEAD DOVER NEW HAMPSHIRE" BY: G.L. DAVIS & ASSOCIATES ENGINEERS DATED: AUGUST 6, 16637 POCKET #1 FOLDER #2
7. "CARVILLE TRACT FISCHER AGENCY SPONSOR DOVER, N.H." BY: T.W. CHESLEY DATED: SEPTEMBER, 1951 S.C.R.D.: PLAN #4 POCKET #7 FOLDER #3



NOTES:

1.) OWNER: TDAK & COMPANY LLC
9 KELSEY DRIVE
GREENLAND, NH 03840

2.) DOVER TAX MAP 35, LOT 57

3.) LOT AREA: 90,322 Sq. Ft. 2.07 Ac.

4.) S.C.R.D. BOOK 4477, PAGE 557

5.) ZONING: MEDIUM DENSITY RESIDENTIAL (R-12)
SETBACKS:
FRONTAGE: 100 FEET, MINIMUM
MIN. LOT AREA: 12,000 Sq. Ft.
FRONT SETBACK: 15-25 FEET (BUILD TO)
SIDE SETBACK: 15 FEET
REAR SETBACK: 30 FEET
WETLAND SETBACK: 50 FEET

6.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE & BELIEF, PART OF THIS PARCEL DOES FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF.: FEMA COMMUNITY# -330145, MAP# - 33017C0310E, DATED: SEPTEMBER 30, 2015.

7.) VERTICAL DATUM BASED ON USGS NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD83. COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

8.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN JUNE OF 2017, WITH AN ERROR OF CLOSURE OF GREATER THAN 1 PART IN 10,000.

9.) THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF TAX MAP 35 LOT 57.

10.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

JURISDICTIONAL WETLANDS WERE DELINEATED BY CINDY BALCIUS OF STONEY RIDGE ENVIRONMENTAL LLC IN JULY OF 2017 UTILIZING THE FOLLOWING STANDARDS:

1) FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 7.0. 2010. L.M. VASILAS, G.W. HURT, AND C.V. NOBLE (EDS.). UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.
2) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND. VERSION 3. APRIL 2004. NEIWPCC WETLANDS WORKGROUP. WILMINGTON, MA 01887.
3) NORTH AMERICAN DIGITAL FLORA: NATIONAL WETLAND PLANT LIST, VERSION 2.1.0 (HTTP://WETLAND_PLANTS.USACE.ARMY.MIL). U.S. ARMY CORPS OF ENGINEERS, ENGINEER RESEARCH AND DEVELOPMENT CENTER, COLD REGIONS RESEARCH AND ENGINEERING LABORATORY, HANOVER, NH, AND BONAP, CHAPEN HILL.
4) STATE OF NEW HAMPSHIRE 2014 WETLAND PLANT LIST. LICHVAR, R.W., M. BUTTERWICH, N.C. MELVIN, AND W.N. KIRCHNER. 2014. THE NATIONAL WETLAND PLANT LIST: 2014 UPDATE OF WETLAND RATINGS. PHYTONEURON 2014-41:1-42.
5) CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL. JANUARY 1987. WETLANDS RESEARCH PROGRAM TECHNICAL REPORT Y-87-1.
6) REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION. JANUARY 2012, VERSION 2. U.S. ARMY CORPS OF ENGINEERS. ENVIRONMENTAL LABORATORY ERDC/EL TR-12-1.
7) CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. DECEMBER 1979. L. COWARDIN, V. CARTER, F. GOLET, AND E. LAROE. US DEPARTMENT OF THE INTERIOR. FISH AND WILDLIFE SERVICE. FWS/OBS-79/31.

SOILS:

BxB - BUXTON SILT LOAM, 3 TO 8% SLOPES
SfC - SUFFIELD SILT LOAM, 8 TO 15% SLOPES

SEE WEBSOIL USDA-NRCS
SEE ALSO SITE SPECIFIC SOIL SURVEY, SHEET 3 OF 21

EXISTING BUILDING COVERAGE:

2,588 Sq. Ft., 0.06 Ac. (2.9% OF LOT)

EXISTING IMPERVIOUS COVERAGE:

17,250 Sq. Ft., 0.40 Ac. (19.1% OF LOT)

EXISTING AREA OF 20% OR GREATER SLOPE:

18,590 Sq. Ft., 0.40 Ac. (20.6% OF LOT)

STRUCTURES TABLE:

SMH (DOVER GIS #1039)
RIM = 84.74
INV. IN = 77.57 (*DOVER GIS #1040*)
INV. OUT = 76.72 (*DOVER GIS #1038*)

SMH (DOVER GIS #1040)
RIM = 104.18
INV. IN = 93.43 (*DOVER GIS #1041*)
INV. OUT = 93.28 (*DOVER GIS #1039*)

CB (DOVER GIS #347)
RIM = 91.92
INV. OUT = 85.37 (*CB DOVER GIS #2446*)

CB (DOVER GIS #2446)
RIM = 91.74
INV. IN = 83.39 (*CB DOVER GIS #2447*)
INV. IN = UNABLE TO DETERMINE (*CB DOVER GIS #347*)
INV. OUT = 83.24 (*CB DOVER GIS #575*)

CB (DOVER GIS #2447)
RIM = 95.44
INV. IN = 85.92 (*CB DOVER GIS #325*)
INV. OUT = 85.49 (*CB DOVER GIS #2446*)

STRUCTURES TABLE CONT.:

CB (DOVER GIS #325)
RIM = 99.83
INV. IN = 90.59 (*CB DOVER GIS #323*)
INV. OUT = 90.33 (*CB DOVER GIS #2447*)

CB (DOVER GIS #323)
RIM = 101.29
INV. IN = 91.14 (*CB DOVER GIS #2445*)
INV. OUT = 90.82 (*CB DOVER GIS #325*)

CB (DOVER GIS #2445)
RIM = 103.84
INV. IN = 98.50 (*CB DOVER GIS #2444*)
INV. IN = 91.56 (*DMH DOVER GIS #2443*)
INV. OUT = 91.32 (*CB DOVER GIS #323*)

CB (DOVER GIS #2444)
RIM = 103.90
INV. OUT = 98.55 (*CB DOVER GIS #2445*)

DMH (DOVER GIS #2443)
RIM = 104.81
INV. IN = 92.54 (*DMH DOVER GIS #283*)
INV. OUT = 92.14 (*CB DOVER GIS #2445*)

CB (DOVER GIS #7576)
RIM = 104.97
INV. OUT = 99.97 (*UNKNOWN DISCHARGE LOCATION*)

LEGEND:

- ANGLE IRON/STEEL STAKE (FND)
- IRON PIPE (FND)
- IRON BOUND (FND)
- UTILITY POLE/GUY WIRE
- WATER GATE VALVE
- CURB STOP
- HYDRANT
- CATCH BASIN (CB)
- SEWER MANHOLE (SMH)
- DRAIN MANHOLE (DMH)
- BUILDING SETBACK LINE
- NRCS SOIL DELINEATION LINE
- AREA OF 20% OR GREATER SLOPE
- OVERHEAD UTILITIES LINE
- EXISTING WATER LINE
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
- TYP. TYPICAL
- FND FOUND
- PL PROPERTY LINE
- T.B.M. TEMPORARY BENCHMARK
- TH TEST HOLE

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

MAGNETIC
NAD83 NH STATE PLANE
NGS

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

1-17-18
KENNETH A. BERRY L.L.S. 805 DATE

I CERTIFY THAT THIS PLAT EXCEEDS THE MINIMUM REQUIREMENT FOR ACCURACY AND COMPLETENESS OF THE STATE OF N.H. AND OF THE CITY OF DOVER, N.H.- 1:10,000 -

1-17-18
KENNETH A. BERRY LLS 805 DATE

REVISION	DATE	DESCRIPTION

EXISTING CONDITIONS
LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

STATE OF NEW HAMPSHIRE — NO. 805 — LICENSED LAND SURVEYOR
KENNETH A BERRY
SIGNATURE

Berry Surveying & Engineering
Sixth Street, Dover
SRE# 17-110
January 15, 2018

SITE-SPECIFIC SOIL MAP UNIT KEY

Symbol	Map Unit	Slope Class	Drainage Class	HSG/Group
38B	Eldridge Fine Sandy Loam	3-8% slopes	Moderately Well Drained	C/3
38C	Eldridge Fine Sandy Loam	8-15% slopes	Moderately Well Drained	C/3
38D	Eldridge Fine Sandy Loam	15-25% slopes	Moderately Well Drained	C/3
38E	Eldridge Fine Sandy Loam	25-50% slopes	Moderately Well Drained	C/3
38F	Eldridge Fine Sandy Loam	50%+ slopes	Moderately Well Drained	C/3
26B	Windsor loamy fine sand	3-8% slopes	Excessively Well Drained	A/1
26C	Windsor loamy fine sand	8-15% slopes	Excessively Well Drained	A/1
26D	Windsor loamy fine sand	15-25% slopes	Excessively Well Drained	A/1
26E	Windsor loamy fine sand	25-50% slopes	Excessively Well Drained	A/1
26F	Windsor loamy fine sand	50%+ slopes	Excessively Well Drained	A/1
699A	Urban land-buildings	0-3% slopes		

"This map product is within the technical standards of the National Cooperative Soil Survey. It is a special purpose product, produced by a certified soil scientist, and is not a product of the USDA Natural Resources Conservation Service. There is a narrative report that accompanies this map and map key."

JURISDICTIONAL WETLANDS WERE DELINEATED BY CINDY BALCIUS OF STONEY RIDGE ENVIRONMENTAL LLC IN JULY OF 2017 UTILIZING THE FOLLOWING STANDARDS:

1) FIELD INDICATORS OF HYDRIC SOILS IN THE UNITED STATES, VERSION 7.0. 2010. L.M. VASILAS, G.W. HURT, AND C.V. NOBLE (EDS.). UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, IN COOPERATION WITH THE NATIONAL TECHNICAL COMMITTEE FOR HYDRIC SOILS.
2) FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND. VERSION 3. APRIL 2004. NEIWPCC WETLANDS WORKGROUP. WILMINGTON, MA 01887.
3) NORTH AMERICAN DIGITAL FLORA: NATIONAL WETLAND PLANT LIST, VERSION 2.1.0 (HTTP://WETLAND_PLANTS.USACE.ARMY.MIL). U.S. ARMY CORPS OF ENGINEERS, ENGINEER RESEARCH AND DEVELOPMENT CENTER, COLD REGIONS RESEARCH AND ENGINEERING LABORATORY, HANOVER, NH, AND BONAP, CHAPEN HILL.
4) STATE OF NEW HAMPSHIRE 2014 WETLAND PLANT LIST. LICHVAR, R.W., M. BUTTERWICH, N.C. MELVIN, AND W.N. KIRCHNER. 2014. THE NATIONAL WETLAND PLANT LIST: 2014 UPDATE OF WETLAND RATINGS. PHYTONEURON 2014-41:1-42.
5) CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL. JANUARY 1987. WETLANDS RESEARCH PROGRAM TECHNICAL REPORT Y-87-1.
6) REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION. JANUARY 2012, VERSION 2. U.S. ARMY CORPS OF ENGINEERS. ENVIRONMENTAL LABORATORY ERDC/EL TR-12-1.
7) CLASSIFICATION OF WETLANDS AND DEEPWATER HABITATS OF THE UNITED STATES. DECEMBER 1979. L. COWARDIN, V. CARTER, F. GOLET, AND E. LAROE. US DEPARTMENT OF THE INTERIOR. FISH AND WILDLIFE SERVICE. FWS/OBS-79/31.

STONEY RIDGE ENVIROMENTAL, LLC.
CINDY BALCIUS, CSS #84

STONEY RIDGE ENVIROMENTAL, LLC.
CINDY BALCIUS, CWS #61

MAGNETIC
NAD83 NH STATE PLANE

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

KENNETH A. BERRY L.L.S. 805 1-17-18
DATE

REVISION	DATE	DESCRIPTION

SITE SPECIFIC SOIL SURVEY

LAND OF
TDAK & COMPANY, LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 30 FT.
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

STATE OF NEW HAMPSHIRE No 805 KENNETH A. BERRY LICENSED LAND SURVEYOR
SIGNATURE

NOTES:

1.) OWNER: TDAK & COMPANY LLC
9 KELSEY DRIVE
GREENLAND, NH 03840

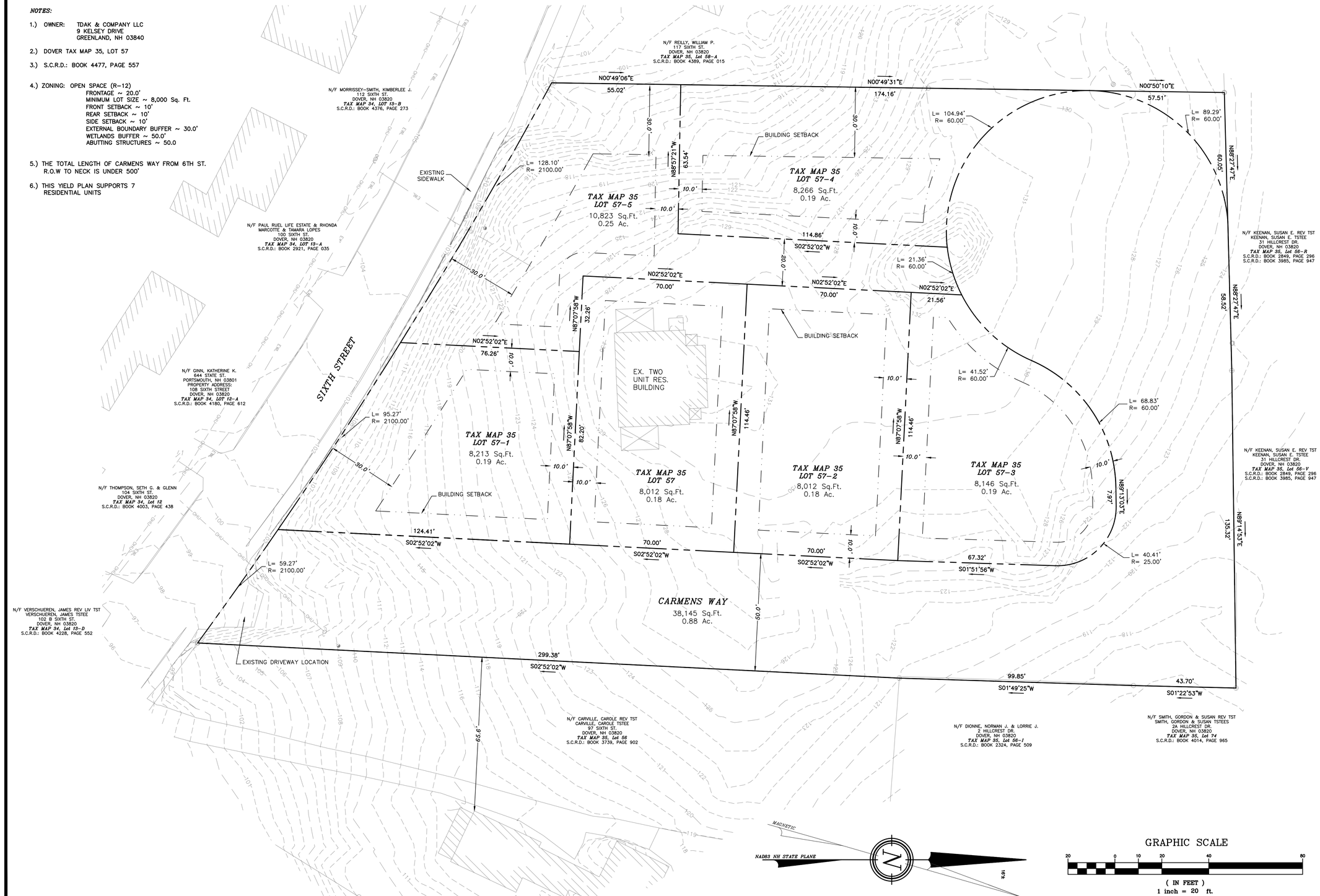
2.) DOVER TAX MAP 35, LOT 57

3.) S.C.R.D.: BOOK 4477, PAGE 557

4.) ZONING: OPEN SPACE (R-12)
FRONTAGE ~ 20.0'
MINIMUM LOT SIZE ~ 8,000 Sq. Ft.
FRONT SETBACK ~ 10'
REAR SETBACK ~ 10'
SIDE SETBACK ~ 10'
EXTERNAL BOUNDARY BUFFER ~ 30.0'
WETLANDS BUFFER ~ 50.0'
ABUTTING STRUCTURES ~ 50.0

5.) THE TOTAL LENGTH OF CARMENS WAY FROM 6TH ST. R.O.W TO NECK IS UNDER 500'

6.) THIS YIELD PLAN SUPPORTS 7 RESIDENTIAL UNITS



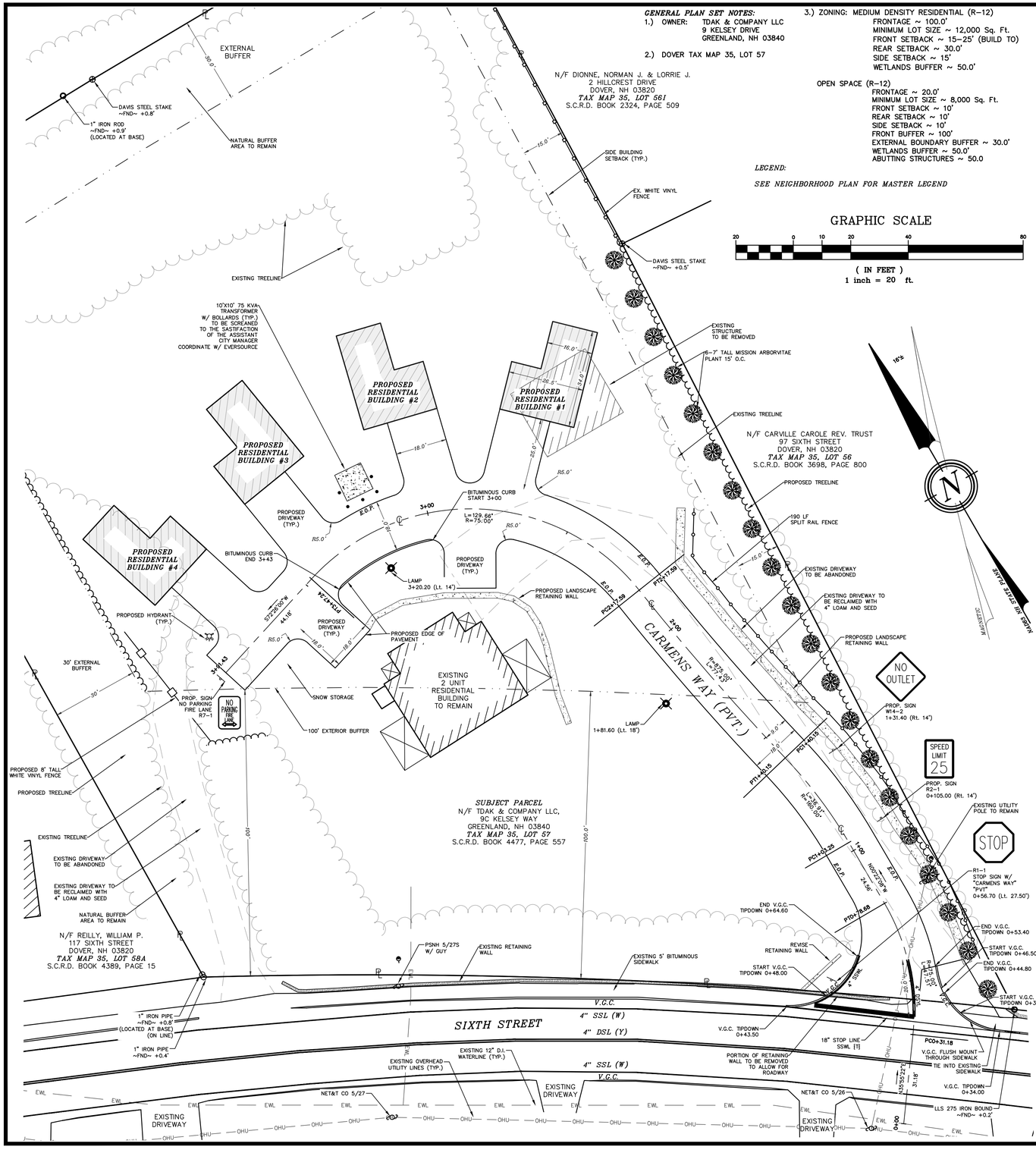
REVISION	DATE	DESCRIPTION

YIELD PLAN R12 OSS BASIS

LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060



GENERAL PLAN SET NOTES:

1.) OWNER: TDAK & COMPANY LLC
9 KELSEY DRIVE
GREENLAND, NH 03840

2.) DOVER TAX MAP 35, LOT 57

3.) ZONING: MEDIUM DENSITY RESIDENTIAL (R-12)
FRONTAGE ~ 100.0'
MINIMUM LOT SIZE ~ 12,000 Sq. Ft.
FRONT SETBACK ~ 15-25' (BUILD TO)
REAR SETBACK ~ 30.0'
SIDE SETBACK ~ 15'
WETLANDS BUFFER ~ 50.0'

OPEN SPACE (R-12)
FRONTAGE ~ 20.0'
MINIMUM LOT SIZE ~ 8,000 Sq. Ft.
FRONT SETBACK ~ 10'
REAR SETBACK ~ 10'
SIDE SETBACK ~ 10'
FRONT BUFFER ~ 100'
EXTERNAL BOUNDARY BUFFER ~ 30.0'
WETLANDS BUFFER ~ 50.0'
ABUTTING STRUCTURES ~ 50.0

LEGEND:

SEE NEIGHBORHOOD PLAN FOR MASTER LEGEND

4.) THE PURPOSE OF THIS PLAN IS TO DEMONSTRATE SITE LAYOUT ITEMS AS WELL AS FINISH CONSTRUCTION ITEMS.

5.) AS-BUILT PLANS OF THE SITE SHALL BE SUBMITTED ON A REPRODUCIBLE MYLAR MEDIUM AND IN A DIGITAL DXF FORMAT ON DISK TO THE CITY OF DOVER GIS OFFICE UPON COMPLETION OF PROJECT. AS-BUILT PLANS SHALL BE PREPARED AND CERTIFIED CORRECT BY A L.L.S. OR P.E.

6.) EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 149-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.

7.) TOPOGRAPHIC SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING IN 2017.

8.) DATUM: PROJECT DATUM IS BASED ON GPS COORDINATES ESTABLISHED WITH A TOPCON HIPER SR RECEIVER IN MAY 2017 AND REPRESENTED IN NEW HAMPSHIRE STATE PLANE COORDINATES NAD 1983 AND VERTICALLY BY NAVD 1988.

9.) FINAL UTILITY LOCATIONS TO BE COORDINATED BETWEEN THE CONTRACTOR, ALL APPROPRIATE UTILITY COMPANIES AND THE DOVER DPW.

10.) CONTRACTOR TO CONTACT DOVER DPW A MINIMUM OF TWO WEEKS PRIOR TO ANY CONSTRUCTION TO COORDINATE ALL WORK CONCERNING INSTALLATION OF ANY PROPOSED WATER LINE IMPROVEMENTS.

11.) ALL WATER MAIN AND SERVICE INSTALLATIONS SHALL CONFORM TO CITY OF DOVER STANDARDS.

12.) CONTRACTOR SHALL COORDINATE ALL ELECTRICAL INSTALLATIONS WITH EVERSOURCE AT (603) 436-7708. ALL ELECTRIC CONDUIT INSTALLATION SHALL BE INSPECTED BY EVERSOURCE PRIOR TO BACKFILL. A 48-HOUR MINIMUM NOTICE IS REQUIRED.

13.) CONTRACTOR SHALL COORDINATE ALL TELECOMMUNICATIONS INSTALLATIONS WITH FAIRPOINT COMMUNICATIONS AT (603) 427-5525.

14.) CONTRACTOR SHALL COORDINATE ALL CABLE INSTALLATIONS WITH COMCAST AT 1-800-266-2278.

15.) ALL NEW ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.

16.) THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER.

17.) APPROVED BACKFLOW PREVENTORS SHALL BE PROVIDED FOR DOMESTIC WATER LINES.

17.) ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.

18.) ALL CONSTRUCTION SHALL CONFORM TO THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

19.) PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES, TRENCHES, AND OTHER AREAS DURING CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL, AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOFF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAFFIC IN SENSITIVE AREAS, AND MAINTAINING AN EFFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL MEETING THE ENGINEERS SPECIFIC RECOMMENDED CRITERIA.

20.) IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER (NOT ALLOWED IN CITY R.O.W.), EXPOSED SUBGRADES ARE SUSCEPTIBLE TO FROST. NO FILL OR UTILITIES SHALL BE PLACED ON FROZEN GROUND. THIS WILL LIKELY REQUIRE REMOVAL OF A FROZEN SOIL CRUST AT THE COMMENCEMENT OF EACH DAY'S OPERATION. THE FINAL SUBGRADE ELEVATION WOULD ALSO REQUIRE AN APPROPRIATE DEGREE OF INSULATION AGAINST FREEZING.

21.) PLACEMENT OF BORROW MATERIALS SHALL BE PERFORMED IN A MANNER THAT PREVENTS LONG TERM DIFFERENTIAL SETTLEMENT. EXCESSIVELY WET MATERIALS SHALL BE STOCKPILED AND ALLOWED TO DRAIN BEFORE PLACEMENT. FROZEN MATERIAL SHALL NOT BE USED FOR CONSTRUCTION. VOIDS BETWEEN STONES AND CLUMPS OF MATERIAL SHALL BE FILLED WITH FINE MATERIALS.

22.) SEE DETAILS CONCERNING SITE LAYOUT, DRAINAGE, UTILITY AND SEDIMENT AND EROSION CONTROLS.

23.) ALL CATCH BASINS SHALL BE PRE-CAST H-20 LOADING AND SHALL BE EQUIPPED WITH DEEP SUMPS (4' MIN.) AND HOODS (SEE DETAILS) HOODS ARE TO BE "THE ELIMINATOR" BY KLEANSTREAM. RIMS ARE TO BE REXUS STYLE AND SHALL BE SET FLUSH WITH FINISH GRADE, UNLESS OTHERWISE INSTRUCTED DURING CONSTRUCTION BY DOVER DPW. RIMS ABOVE FINISH GRADE WILL BE NOT BE ACCEPTED. ALL RIMS, GRATES AND COVERS ARE TO BE U.S.A MADE.

24.) ALL EROSION CONTROL NOTES SHALL INCLUDE PROVISIONS FOR CONSTRUCTION SEQUENCING, TEMPORARY EROSION CONTROL MEASURES, AND PERMANENT STANDARDS SUCH AS LOAM SPREAD RATE FOR DISTURBED AREAS, RATES OF LIME, TYPE AND RATES FOR FERTILIZER, AND SEED AND MULCH MIXTURE WITH RATES OF APPLICATION. FILTREXX SOXX IS PREFERRED OVER THE USE OF SILT FENCE. FENCING IS TO BE USED ON SITE ONLY AS REQ. AND DIRECTED BY THE SWPPP INSPECTOR.

25.) SEE SHEET EROSION & SEDIMENT CONTROL PLANS FOR INLET PROTECTION DETAILS

26.) ALL DRAINAGE PIPE IS TO BE HDPE N-12. INDIVIDUAL PIPE SIZES ARE SPECIFIED. RECYCLED PIPE IS APPROVED FOR PROJECT SITE. RECYCLED HDPE PIPE "GREEN PIPE" IS ACCEPTABLE FOR THIS PROJECT SITE.

27.) ALL ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER IS TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY. TEMPORARY BENCHMARKS (T.B.M.) ARE TO BE PROVIDED BY THE DESIGN ENGINEER.

28.) NOTE THAT THE PROJECT IS SUBJECT TO THE EPA NPDES PHASE II. THE NOTICE OF INTENT (NOI) MUST BE FILED ALONG WITH A STORMWATER POLLUTION PREVENTION PLAN (SWPPP). WEEKLY INSPECTIONS WILL BE CONDUCTED BY THE DESIGN ENGINEER.

29.) UPON FINAL COMPLETION AND 85% STABILIZATION THE DRAINAGE SYSTEM IS TO BE CLEANED OF ALL DEBRIS TO INCLUDE THE PUMPING OF THE BASIN SUMPS.

30.) ALL UNPAVED AREAS ARE TO RECEIVE 4" QUALITY LOAM AND SEED

31.) ALL BASINS AND DRAINS ARE TO HAVE BOOTS INSTALLED ON ALL INLETS AND OUTLETS

32.) THE LIMITS OF CONSTRUCTION DISTURBANCE AND TREE CLEARING LIMITS ARE TO BE MARKED OUT AND APPROVED BY THE CITY PRIOR TO WORK.

33.) ALL TREATMENT SWALE TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS UNLESS OTHERWISE INSTRUCTED BY THE DESIGN ENGINEER DURING CONSTRUCTION.

34.) A LETTER OF CREDIT FOR THE COST OF RE-VEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS, AS MAY BE APPLICABLE.

35.) A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE CITY ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.

36.) BUILDING ADDRESSES SHALL BE DETERMINED BY THE BUILDING OFFICIAL.

37.) THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY:
1. EPA NOTICE OF INTENT (NOI) (PENDING)
2. NHDES SEWER DISCHARGE PERMIT (PENDING)

38.) LIST ANY VARIANCES OR SPECIAL EXCEPTIONS GRANTED BY THE ZONING BOARD OF ADJUSTMENT. NONE

39.) THIS PLAN PROPOSES 39,600 ± SQ. FT. OF DISTURBANCE.

40.) CALL DIG SAFE PRIOR TO BEGINNING WORK (1-888-344-7233)

41.) WRITTEN DIMENSION ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR IS TO CONFIRM ALL ELEVATIONS. CONFLICTS WILL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

42.) SNOW STORAGE WILL BE ALONG THE EDGE OF THE ROADWAY WITHIN INDIVIDUAL UNIT LOTS. PRIOR TO THE SIGNING OF THE PLAN THE HOME OWNERS DOCUMENTS NEED TO BE WRITTEN AND INCLUDE A PROVISION ALLOWING FOR THIS TO TAKE PLACE.

43.) RESIDENTIAL WATER SHUTOFF VALVES THAT ARE PLACED WITHIN PAVED AREAS ARE TO BE SET INSIDE VALVE BOXES.

44.) THE DEVELOPMENT PROPOSES PRIVATE TRASH AND RECYCLING PICKUP. TRASH AND RECYCLING IS NOT TO BE PLACED AT THE END OF THE ROADWAY WHERE IT MEETS 6TH STREET.

45.) A LETTER OF CREDIT FOR THE COST OF REVEGETATING ALL DISTURBED EARTH AREAS ON THE SITE AND APPROVED CONSTRUCTION SIGN SHALL BE IN PLACE PRIOR TO EARTH DISTURBING ACTIVITY.

46.) THE STRUCTURES SHALL BE SERVED BY A SPRINKLER SYSTEM AS REQUIRED UNDER CHAPTER 109-30 OF THE CODE OF THE CITY OF DOVER AND THE 2015 STATE BUILDING CODES.

47.) SPRINKLER CONNECTIONS MUST BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM MUST BE COMPLETED.

48.) FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13.

49.) SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY-FRIDAY 7AM-6PM, SATURDAY AND SUNDAY 9AM-4PM. HOURS OF CONSTRUCTION MUST BE DOCUMENTED ON A SITE CONSTRUCTION SIGN ALONG WITH THE CONTACT INFORMATION FOR THE GENERAL CONTRACTOR. SAID SIGNAGE MUST BE LOCATED AND APPROVED BY THE CITY ENGINEER OR THE ASSISTANT CITY MANAGER.

50.) PROPOSED IMPERVIOUS COVERAGE: 9,800 Sq. Ft. ± (0.23 Ac.)
PROPOSED BUILDING COVERAGE: 2,890 Sq. Ft. ± (0.07 Ac.)

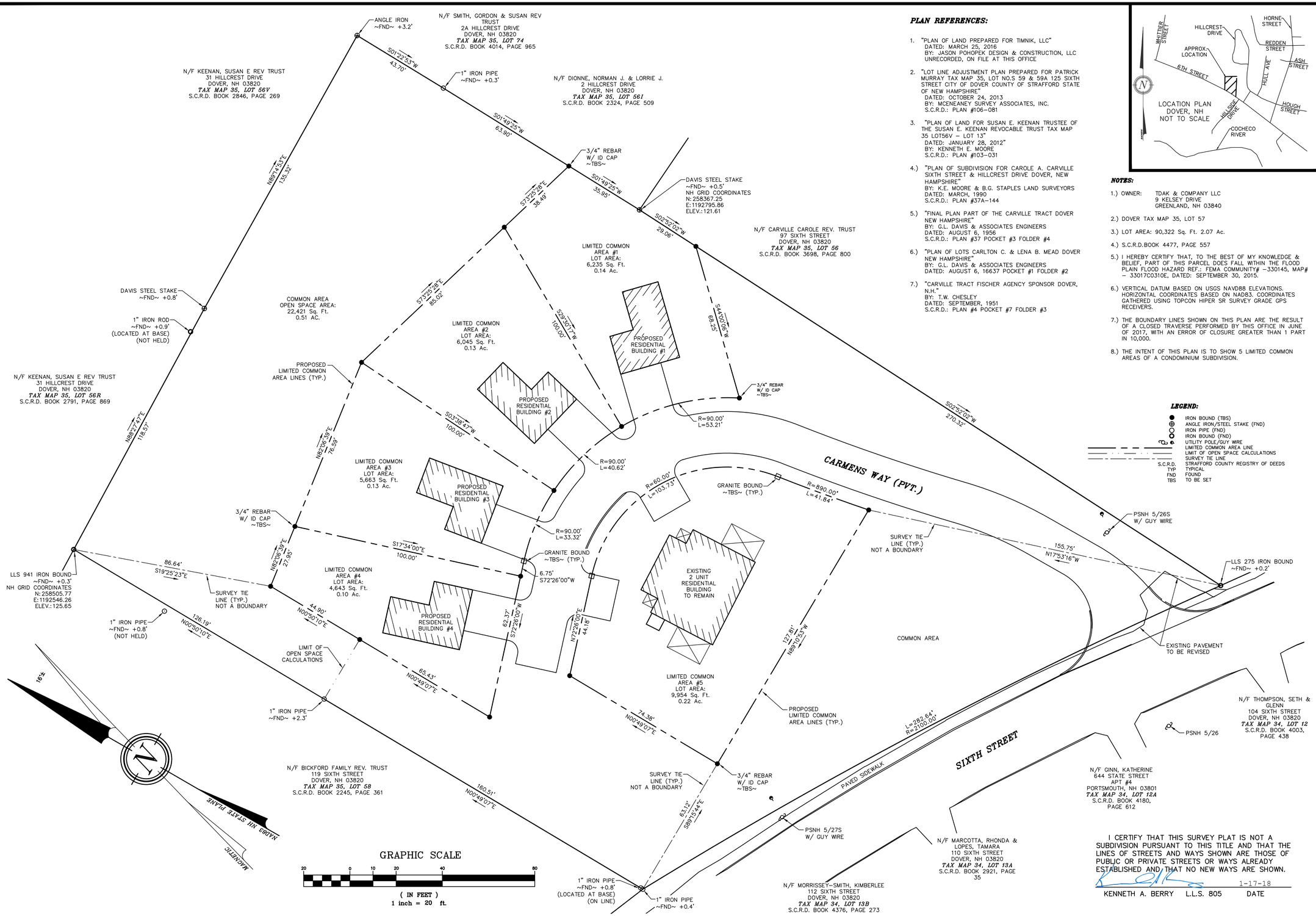
REVISION	DATE	DESCRIPTION

SITE PLAN
LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER



PLAN REFERENCES:

1. "PLAN OF LAND PREPARED FOR TIMNIK, LLC" DATED: MARCH 25, 2016 BY: JASON POHOPEK DESIGN & CONSTRUCTION, LLC UNRECORDED, ON FILE AT THIS OFFICE
2. "LOT LINE ADJUSTMENT PLAN PREPARED FOR PATRICK MURRAY TAX MAP 35, LOT NO.S 59 & 59A 125 SIXTH STREET CITY OF DOVER COUNTY OF STRAFFORD STATE OF NEW HAMPSHIRE" DATED: OCTOBER 24, 2013 BY: MCENEANEY SURVEY ASSOCIATES, INC. S.C.R.D.: PLAN #106-081
3. "PLAN OF LAND FOR SUSAN E. KEENAN TRUSTEE OF THE SUSAN E. KEENAN REVOCABLE TRUST TAX MAP 35 LOT56V - LOT 13" DATED: JANUARY 28, 2012" BY: KENNETH E. MOORE S.C.R.D.: PLAN #103-031
4. "PLAN OF SUBDIVISION FOR CAROLE A. CARVILLE SIXTH STREET & HILLCREST DRIVE DOVER, NEW HAMPSHIRE" BY: K.E. MOORE & B.G. STAPLES LAND SURVEYORS DATED: MARCH, 1990 S.C.R.D.: PLAN #37A-144
5. "FINAL PLAN PART OF THE CARVILLE TRACT DOVER NEW HAMPSHIRE" BY: G.L. DAVIS & ASSOCIATES ENGINEERS DATED: AUGUST 6, 1956 S.C.R.D.: PLAN #37 POCKET #3 FOLDER #4
6. "PLAN OF LOTS CARLTON C. & LENA B. MEAD DOVER NEW HAMPSHIRE" BY: G.L. DAVIS & ASSOCIATES ENGINEERS DATED: AUGUST 6, 16637 POCKET #1 FOLDER #2
7. "CARVILLE TRACT FISCHER AGENCY SPONSOR DOVER, N.H." BY: T.W. CHESLEY DATED: SEPTEMBER, 1951 S.C.R.D.: PLAN #4 POCKET #7 FOLDER #3

NOTES:

1.) OWNER: TDAK & COMPANY LLC
9 KELSEY DRIVE
GREENLAND, NH 03840

2.) DOVER TAX MAP 35, LOT 57

3.) LOT AREA: 90,322 Sq. Ft. 2.07 Ac.

4.) S.C.R.D.BOOK 4477, PAGE 557

5.) I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE & BELIEF, PART OF THIS PARCEL DOES FALL WITHIN THE FLOOD PLAIN FLOOD HAZARD REF.: FEMA COMMUNITY# -330145, MAP# - 33017C0310E, DATED: SEPTEMBER 30, 2015.

6.) VERTICAL DATUM BASED ON USGS NAVD88 ELEVATIONS. HORIZONTAL COORDINATES BASED ON NAD83. COORDINATES GATHERED USING TOPCON HIPER SR SURVEY GRADE GPS RECEIVERS.

7.) THE BOUNDARY LINES SHOWN ON THIS PLAN ARE THE RESULT OF A CLOSED TRAVERSE PERFORMED BY THIS OFFICE IN JUNE OF 2017, WITH AN ERROR OF CLOSURE GREATER THAN 1 PART IN 10,000.

8.) THE INTENT OF THIS PLAN IS TO SHOW 5 LIMITED COMMON AREAS OF A CONDOMINIUM SUBDIVISION.

LEGEND:

- IRON BOUND (TBS)
- ANGLE IRON/STEEL STAKE (FND)
- IRON PIPE (FND)
- IRON BOUND (FND)
- UTILITY POLE/GUY WIRE
- LIMITED COMMON AREA LINE
- LIMIT OF OPEN SPACE CALCULATIONS
- SURVEY TIE LINE
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
- TYP TYPICAL
- FND FOUND
- TBS TO BE SET

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

1-17-18

KENNETH A. BERRY L.L.S. 805 DATE

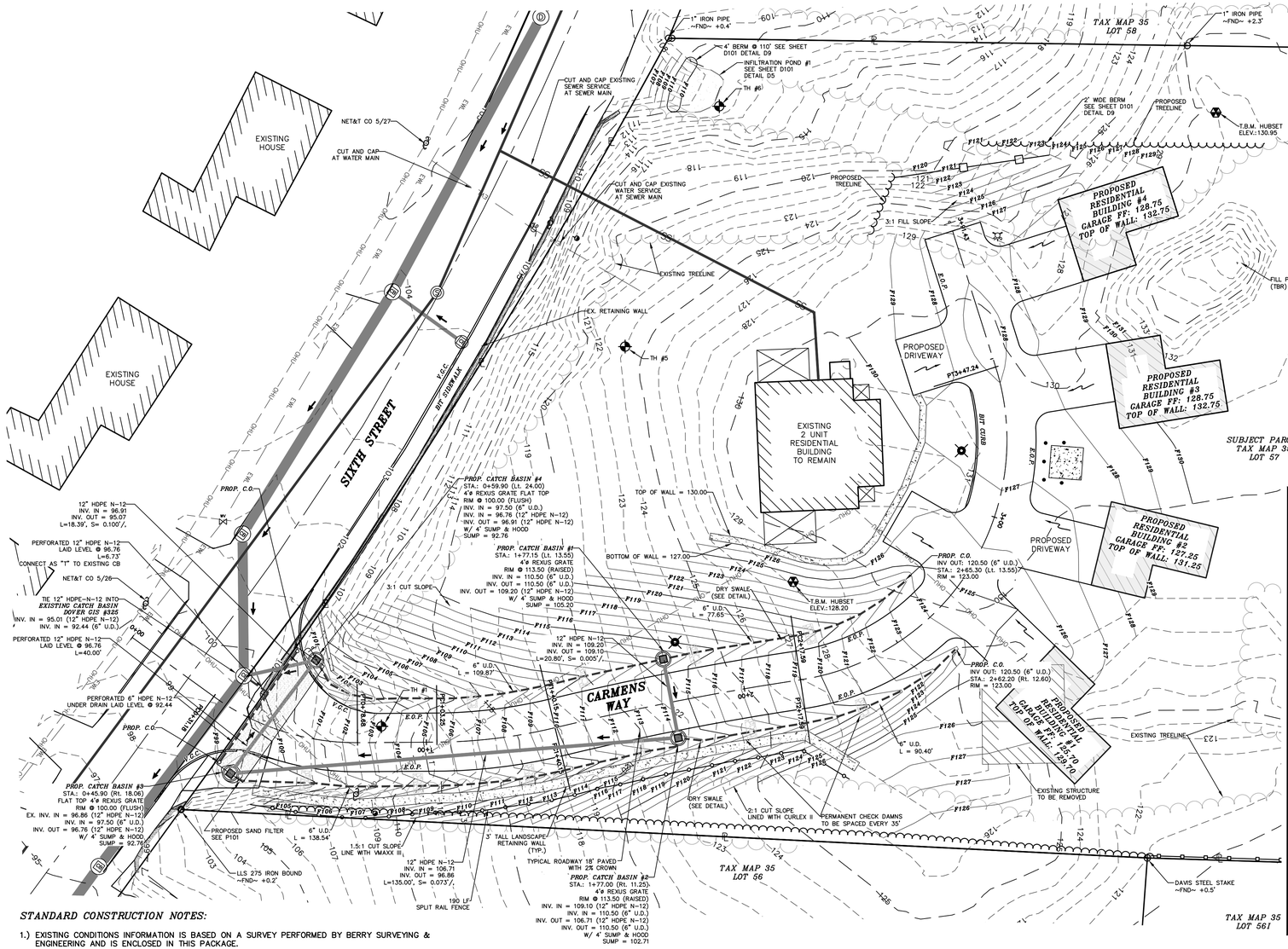
REVISION	DATE	DESCRIPTION

CONDOMINIUM SUBDIVISION PLAN
LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

STATE OF NEW HAMPSHIRE — NO. 805 KENNETH A BERRY — LICENSED LAND SURVEYOR
SIGNATURE



PROPOSED ENTRANCE PLAN VIEW

STANDARD CONSTRUCTION NOTES:

1.) EXISTING CONDITIONS INFORMATION IS BASED ON A SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING AND IS ENCLOSED IN THIS PACKAGE.

2.) THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS DATED 2010. CURRENT STANDARD PLANS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

3.) CONTRACTOR SHALL TAKE SPECIAL CARE IN NOT DISTURBING EXISTING MONUMENTS BOUNDS, AND OR BENCHMARKS WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION

4.) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE EXACTLY AND TO PRESERVE ANY AND ALL UNDERGROUND UTILITIES CALL "DIG-SAFE" 1-888-DIGSAFE (344-7233) AT LEAST 72 HOURS BEFORE COMMENCING CONSTRUCTION

5.) WHERE AN EXISTING UNDERGROUND UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.

6.) THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.

7.) AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

8.) THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS, OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE & RESET" (R & R)

9.) ALL SYMBOLS, WORDS, TRANSVERSE MARKINGS (STOP BARS, CROSSWALK LINES, AND RAILROAD SYMBOLS), LANE LINES, AND ALL OTHER MARKINGS NOTED WITH ‡†‡ SHALL BE THERMOPLASTIC

10.) ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL HAVE LOAM PLACED AND SEEDED. THE LOAM SHALL HAVE A MINIMUM DEPTH OF 4 INCHES AND SHALL BE PLACED FLUSH WITH THE TOP OF THE ADJACENT CURB, EDGING, BERM OR PAVEMENT SURFACE.

STANDARD CONSTRUCTION NOTES CONT:

11.) COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM WITH CITY OF DOVER CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.

NOTES:

1.) THE INTENT OF THIS PLAN SET IS TO SHOW THE OVERVIEW OF THE SITE GRADING AT 99 SIXTH STREET.

2.) CURRENT OWNER: TDAK & COMPANY LLC
9 KELSEY DRIVE
GREENLAND, NH 03840

3.) APPLICANT: TDAK & COMPANY LLC
9 KELSEY DRIVE
GREENLAND, NH 03840

4.) TAX MAP 35, LOT 57 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS.

MAGNETIC
HADRS NH STATE PLANE
GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

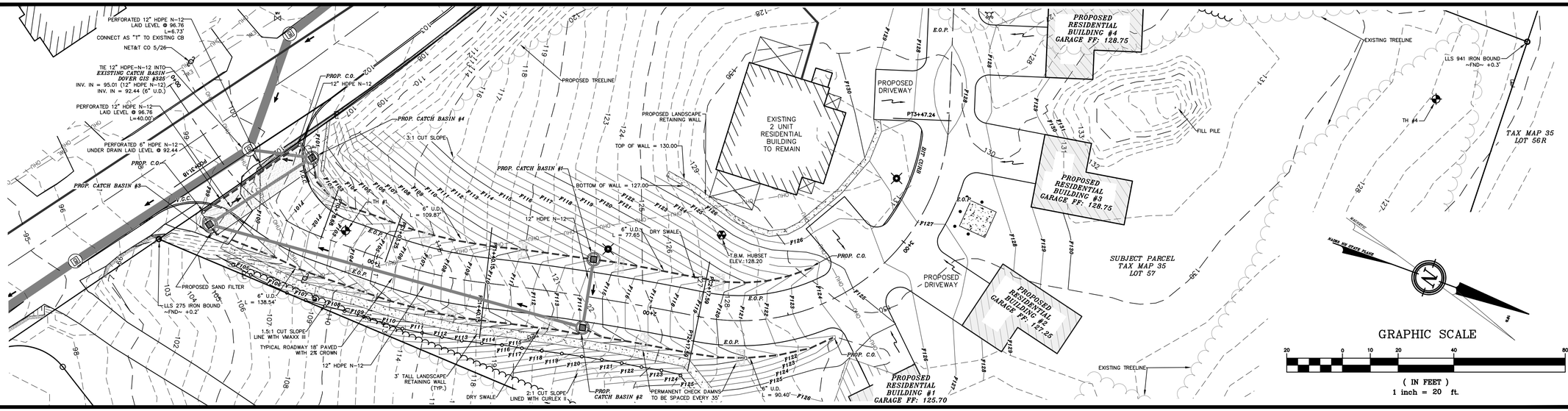
REVISION	DATE	DESCRIPTION

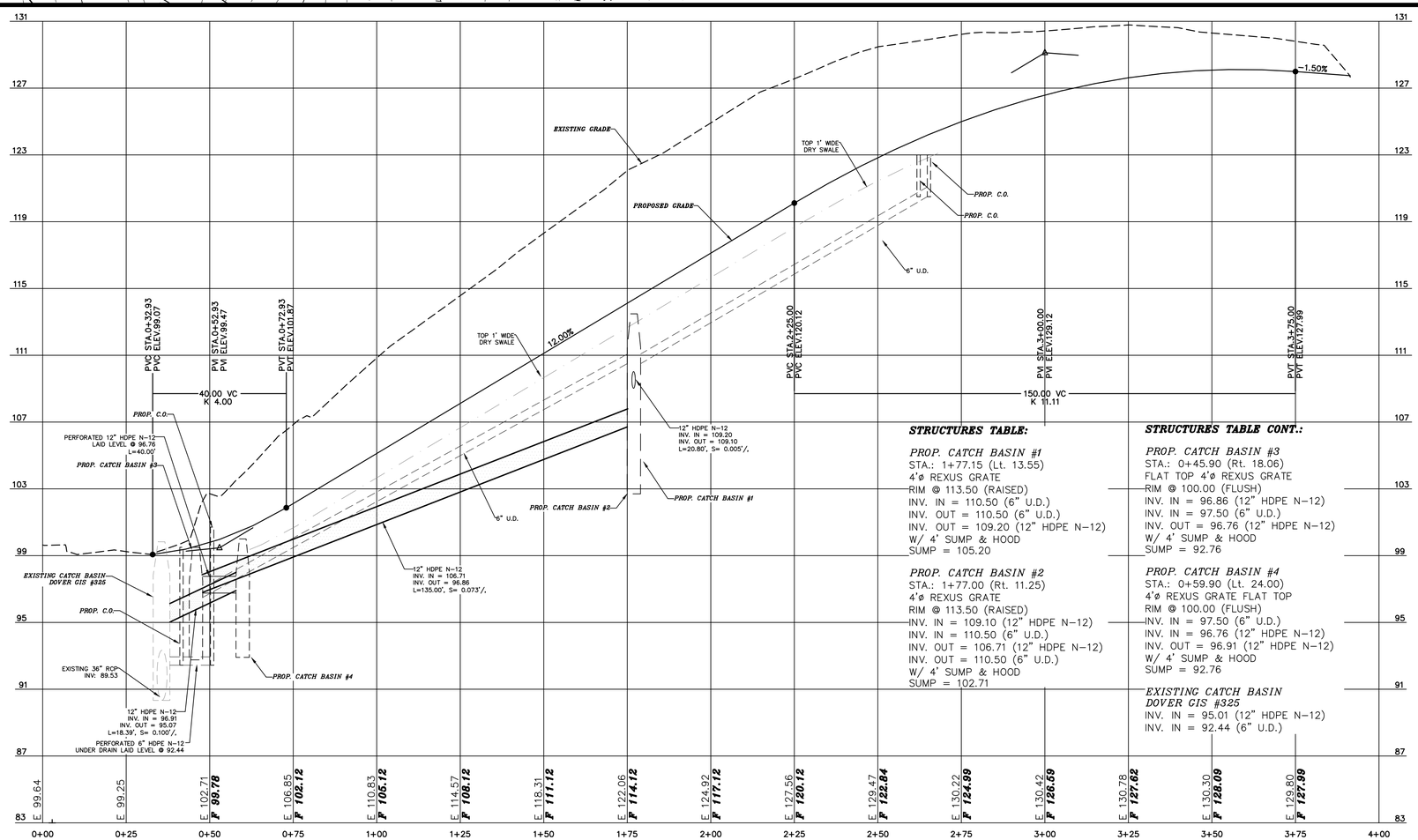
GRADING AND DRAINAGE PLAN
LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14743
LICENSED PROFESSIONAL ENGINEER





STRUCTURES TABLE:

PROP. CATCH BASIN #1
STA.: 1+77.15 (Lt. 13.55)
4'ø REXUS GRATE
RIM @ 113.50 (RAISED)
INV. IN = 110.50 (6" U.D.)
INV. OUT = 110.50 (6" U.D.)
INV. OUT = 109.20 (12" HDPE N-12)
W/ 4' SUMP & HOOD
SUMP = 105.20

PROP. CATCH BASIN #2
STA.: 1+77.00 (Rt. 11.25)
4'ø REXUS GRATE
RIM @ 113.50 (RAISED)
INV. IN = 109.10 (12" HDPE N-12)
INV. IN = 110.50 (6" U.D.)
INV. OUT = 106.71 (12" HDPE N-12)
INV. OUT = 110.50 (6" U.D.)
W/ 4' SUMP & HOOD
SUMP = 102.71

STRUCTURES TABLE CONT.:

PROP. CATCH BASIN #3
STA.: 0+45.90 (Rt. 18.06)
FLAT TOP 4'ø REXUS GRATE
RIM @ 100.00 (FLUSH)
INV. IN = 96.86 (12" HDPE N-12)
INV. IN = 97.50 (6" U.D.)
INV. OUT = 96.76 (12" HDPE N-12)
W/ 4' SUMP & HOOD
SUMP = 92.76

PROP. CATCH BASIN #4
STA.: 0+59.90 (Lt. 24.00)
4'ø REXUS GRATE FLAT TOP
RIM @ 100.00 (FLUSH)
INV. IN = 97.50 (6" U.D.)
INV. IN = 96.76 (12" HDPE N-12)
INV. OUT = 96.91 (12" HDPE N-12)
W/ 4' SUMP & HOOD
SUMP = 92.76

EXISTING CATCH BASIN
DOVER GIS #325
INV. IN = 95.01 (12" HDPE N-12)
INV. IN = 92.44 (6" U.D.)

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

NOTES:

1.) THE INTENT OF THIS PLAN IS TO SHOW THE PLAN AND PROFILE OF CARMENS WAY.

2.) CURRENT OWNER: TDAK & COMPANY LLC
9 KELSEY DRIVE
GREENLAND, NH 03840

3.) APPLICANT: TDAK & COMPANY LLC
9 KELSEY DRIVE
GREENLAND, NH 03840

4.) TAX MAP 35, LOT 57 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS.

STANDARD CONSTRUCTION NOTES CONT:

5.) ALL ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER IS TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY. TEMPORARY BENCHMARKS (T.B.M.) ARE TO BE PROVIDED BY THE DESIGN ENGINEER.

6.) NOTE THAT THE PROJECT IS SUBJECT TO THE EPA NPDES PHASE II. THE NOTICE OF INTENT (NOI) MUST BE FILED ALONG WITH A STORMWATER POLLUTION PREVENTION PLAN (SWPPP). WEEKLY INSPECTIONS WILL BE CONDUCTED BY THE DESIGN ENGINEER.

7.) UPON FINAL COMPLETION AND 85% STABILIZATION THE DRAINAGE SYSTEM IS TO BE CLEANED OF ALL DEBRIS TO INCLUDE THE PUMPING OF THE BASIN SUMPS.

8.) ALL UNPAVED AREAS ARE TO RECEIVE 4" QUALITY LOAM AND SEED

9.) ALL BASINS AND DRAINS ARE TO HAVE BOOTS INSTALLED ON ALL INLETS AND OUTLETS

10.) ALL TREATMENT SWALE TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS UNLESS OTHERWISE INSTRUCTED BY THE DESIGN ENGINEER DURING CONSTRUCTION.

11.) A LETTER OF CREDIT FOR THE COST OF RE-VEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURS, AS MAY BE APPLICABLE.

12.) A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND DOVER CITY STAFF SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.

13.) BUILDING ADDRESSES SHALL BE DETERMINED BY THE BUILDING OFFICIAL.

14.) THE FOLLOWNG FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY:
EPA NOTICE OF INTENT (NOI)
NHDES SEWER DISCHARGE PERMIT

15.) THIS SUBDIVISION PLAN PROPOSES 39,600 ± SQ. FT. OF DISTURBANCE. PER ENV-WQ 1503.12 (B) AN ALTERATION OF TERRAIN PERMIT IS NOT REQUIRED.

16.) WRITTEN DIMENSION ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR IS TO CONFIRM ALL ELEVATIONS. CONFLICTS WILL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

REVISION	DATE	DESCRIPTION

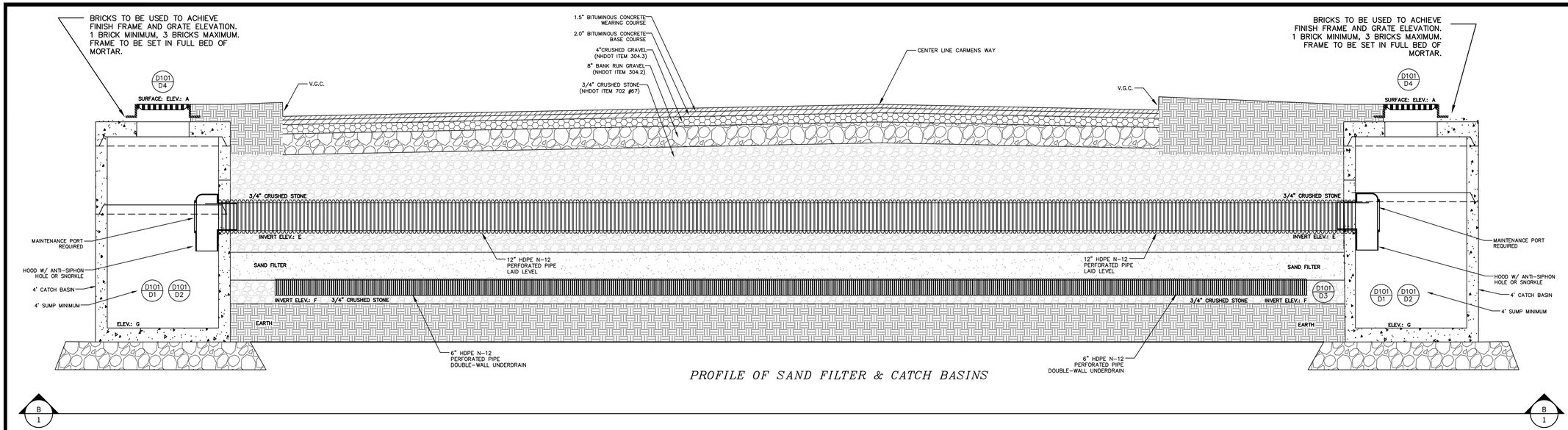
PLAN AND PROFILE 0+00-END CARMENS WAY

LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

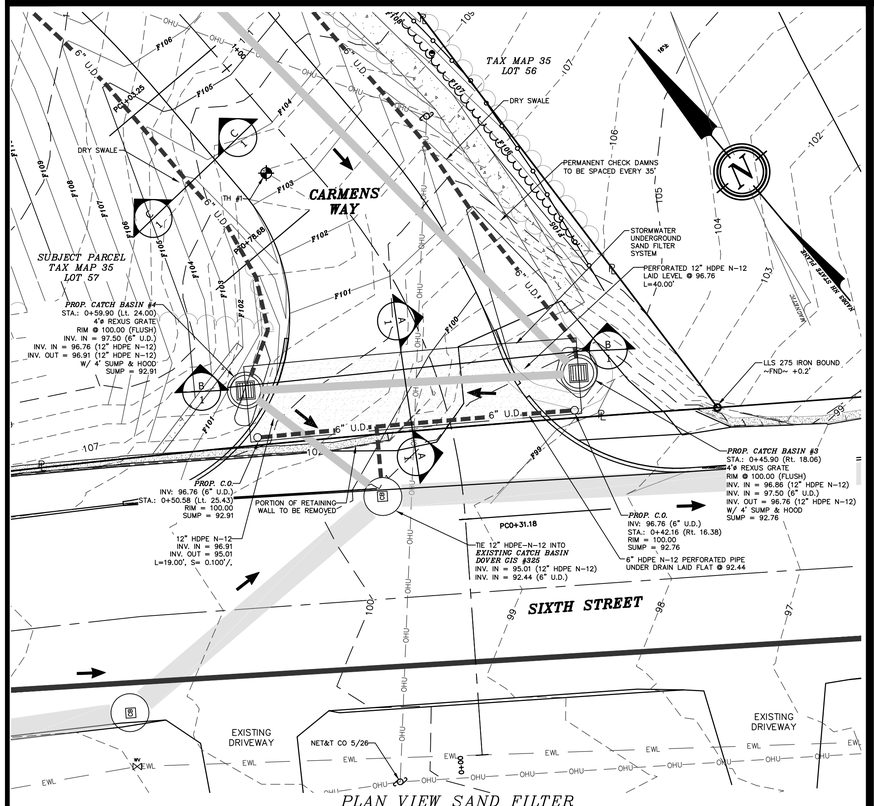
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14245
LICENSED PROFESSIONAL ENGINEER



PROFILE OF SAND FILTER & CATCH BASINS



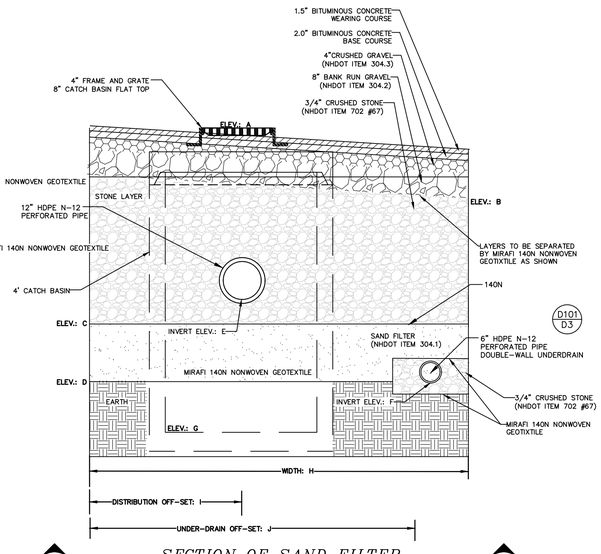
PLAN VIEW SAND FILTER

GRAPHIC SCALE

20 0 5 10 20 40

(IN FEET)

1 inch = 10 ft.



SECTION OF SAND FILTER

CRUSHED STONE BEDDING *

SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 – 100
3/8"	20 – 55
# 4	0 –10
# 8	0 – 5

* EQUIVALENT TO STANDARD STONE SIZE #67 – SECTION 702 OF NHDOT NHDOT STANDARD SPECIFICATIONS

ELEVATION A	ELEVATION B	ELEVATION C	ELEVATION D	ELEVATION E	ELEVATION F	ELEVATION G	DISTANCE H	DISTANCE I	DISTANCE J
99.00 FEET	97.66 FEET	96.26 FEET	92.44 FEET	96.76 FEET	92.44 FEET	91.44 FEET	10.0 FEET	4.00 FEET (AVERAGE)	9.50 FEET
SURFACE	TOP OF SYSTEM	TOP OF SAND FILTER	BOTTOM OF SYSTEM	DISTRIBUTION CULVERT	UNDER DRAIN	SUMP ELEVATION	SYSTEM WIDTH	DISTRIBUTION OFF-SET	UNDER-DRAIN OFF-SET

SAND FILTER DRAINAGE SYSTEM

NOT TO SCALE

NOTES:

1.) THE INTENT OF THIS PLAN SET IS TO SHOW THE DETAIL OF THE SAND FILTER AND DRY SWALE DRAINAGE DESIGN OF THE SITE AT 99 SIXTH STREET.

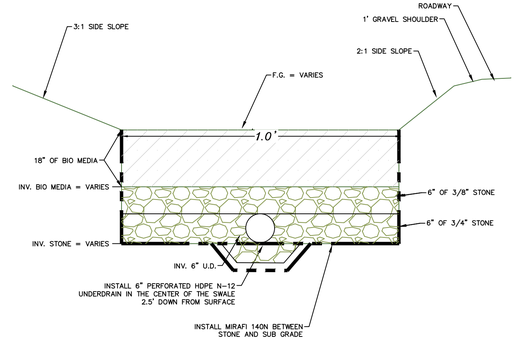
2.) CURRENT OWNER: TDAK & COMPANY LLC
9 KELSEY DRIVE
GREENLAND, NH 03840

3.) APPLICANT: TDAK & COMPANY LLC
9 KELSEY DRIVE
GREENLAND, NH 03840

4.) TAX MAP 35, LOT 57 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS.

FILTER MEDIA MIXTURES

Component Material	Percent of Mixture by Volume	Gradation of material	
		Sieve No.	Percent by Weight Passing Standard Sieve
Filter Media Option A			
ASTM C–33 concrete sand	50 to 55		
Loamy sand topsoil, with fines as indicated	20 to 30	200	15 to 25
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 to 30	200	< 5



TYPICAL DRY SWALE SECTION

DRY SWALE SYSTEM

NOT TO SCALE

P–101

REVISION	DATE	DESCRIPTION

SAND FILTER AND DRY SWALE DETAIL PLAN
LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE : 1 IN. EQUALS 10 FT.
DATE : JANUARY 17, 2018
FILE NO. : DB 2017–060

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14245
LICENSED PROFESSIONAL ENGINEER

SOILS & DEWATERING:

BxB – BUXTON SILT LOAM, 3 TO 8% SLOPES — *K = 0.32 UNDISTURBED*
SfC – SUFFIELD SILT LOAM, 8 TO 15% SLOPES — *K = 0.37 UNDISTURBED*

SEE SITE SPECIFIC SOILS MAP (SSSM)
SEE WEBSOIL USDA–NRCS
ERODIBILITY FACTOR – K, CPESC MANUAL, ENVIROCERT INTERNATIONAL INC. & ROCKINGHAM COUNTTY SOIL SURVEY, ROCKWEB SOIL ATTRIBUTES.

THE SOIL ERODIBILITY FACTOR (K) OF THE SOILS ARE RELATIVELY HIGH (K=0.32.) TO (K=.37). THESE VALUES ARE BASED UPON AN UNDISTURBED ANALYSIS, DISTURBED VALUES ARE HIGHER. CONTRACTOR TO BE AWARE OF THE SOIL PROFILES AND ENSURE THAT PROPER EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE TAKEN AT ALL TIMES. ANY DEWATERING REQUIREMENTS IN NEW HAMPSHIRE REQUIRE SPECIAL PROVISIONS IN ACCORDANCE WITH THE "CLARIFICATION OF SECTION 9.1.2 (STATE OF NEW HAMPSHIRE CONDITIONS) AND OTHER NH SPECIFIC INFORMATION FOR THE U.S. EPA 2012 NPDES CONSTRUCTION GENERAL PERMIT (CGP)" DATED MAY 3, 2012 INCLUDED IN THE SWPPP.

COVER MANAGEMENT DURING CONSTRUCTION FOR EXPOSED SOIL WILL INCLUDE HAY / STRAW APPLIED AT A RATE OF 2.0 TONS PER ACRE, TEMPORARY SEEDING OF ANNUAL RYE GRASS, AND PERMANENT SEEDING AT THE EARLIES OPPORTUNITY. SEE ADDITIONAL REQUIREMENT FOR STABILIZATION ON THE EROSION AND SEDIMENT CONTROL DETAIL SHEETS, E–101 AND E–102.

THE CONSTRUCTION SCHEDULE WILL BE MANAGED SO THAT ALL STORMWATER STRUCTURES WILL BE BUILT AND STABILIZED PRIOR TO RECEIVING SURFACE WATER RUNOFF. CONTRACTOR TO BE RESPONSIBLE FOR ALL DIVERSIONS DURING CONSTRUCTION AND FOR INTERIM SEDIMENT AND EROSION CONTROL MEASURES.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

MAGNETIC
NAD83 NH STATE PLANE
N

NOTES:

1.) OWNER: TDAK & COMPANY L.L.C.
99 SIXTH STREET,
DOVER, NH 03820

A.) TAX MAP 35, LOT 57

2.) THE PURPOSE OF THIS PLAN IS TO DEMONSTRATE PROPER EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION PRACTICES FOR PHASE TWO

3.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

4.) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 1–888–344–7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

5.) SEE DETAILS CONCERNING SITE LAYOUT, DRAINAGE, UTILITY AND SEDIMENT AND EROSION CONTROLS.

6.) ALL DRAINAGE PIPE IS TO BE HDPE N–12. INDIVIDUAL PIPE SIZES ARE SPECIFIED ON GRADING AND DETAIL PLAN SHEETS.

7.) ALL ELEVATIONS TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER IS TO BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY. TEMPORARY BENCHMARKS (T.B.M.) ARE TO BE PROVIDED BY THE DESIGN ENGINEER.

8.) UPON FINAL COMPLETION AND 85% STABILIZATION, THE DRAINAGE SYSTEM IS TO BE CLEANED OF ALL DEBRIS. SEDIMENT CONTROL PRACTICES REMOVED AND DISPOSED OF PROPERLY, AND ANNUAL MAINTENANCE PREFORMED ON ALL DRAINAGE PRACTICES.

29 L.F. 8" SILT SOXX
35 L.F. 8" SILT SOXX
NET&T CO 5/27
INLET PROTECTION
EXISTING SIDEWALK
EXISTING RETAINING WALL
SIXTH STREET
INLET PROTECTION
NET&T CO 5/26
INLET PROTECTION
INLET PROTECTION
18' x 75' CONSTRUCTION ENTRANCE
1:1 BACK SLOPE LINED WITH VMAX III
INSTALL TEMPORARY 18" FILTREXX CHECK DAM SPACED 12.5'
INLET PROTECTION
3' TALL LANDSCAPE RETAINING WALL (TYP.)
TAX MAP 35 LOT 56
108 L.F. SILT FENCE
PLACE 8" SILT SOXX ALONG PROPOSED SILT FENCE
3:1 SLOPES LINED WITH CURLEXX II MATTING OR EQUAL
NRCS SOIL DELINIATION LINE (TYP.)
PROPOSED RESIDENTIAL BUILDING #4
PROPOSED TREELINE
FILL PILE TO BE REMOVED
PROPOSED LANDSCAPE RETAINING WALL
EXISTING 2 UNIT RESIDENTIAL BUILDING TO REMAIN
3:1 SLOPES LINED WITH CURLEXX II MATTING OR EQUAL
94 L.F. 8" SILT SOXX
PERMANENT CHECK DAM SPACED 35'
76 L.F. 8" SILT SOXX
INLET PROTECTION
INSTALL TEMPORARY 18" FILTREXX CHECK DAM SPACED 12.5'
CARMENS WAY
PERMANENT CHECK DAM SPACED 35'
PROPOSED TREELINE
INLET PROTECTION
2:1 SLOPES LINED WITH CURLEXX II MATTING OR EQUAL
TAX MAP 35 LOT 56
PROPOSED RESIDENTIAL BUILDING #3
SUBJECT PARCEL TAX MAP 35 LOT 57
PROPOSED DRIVEWAY (TYP.)
PROPOSED RESIDENTIAL BUILDING #2
PROPOSED RESIDENTIAL BUILDING #1
TAX MAP 35 LOT 58
TAX MAP 35 LOT 56R
NATURAL BUFFER AREA TO REMAIN
TAX MAP 35 LOT 56V
TAX MAP 35 LOT 561
TAX MAP 35 LOT 74

LEGEND:

IRON PIPE (FND)
IRON BOUND (FND)
REBAR (FND)
UTILITY POLE
GUY WIRE
BENCHMARK
CONIFEROUS TREE
DECIDUOUS TREE
SILT FENCE
FILTREXX SILTSOXX
TREE LINE
NRCS SOIL DELINEATION
SOIL TYPE

REVISION	DATE	DESCRIPTION

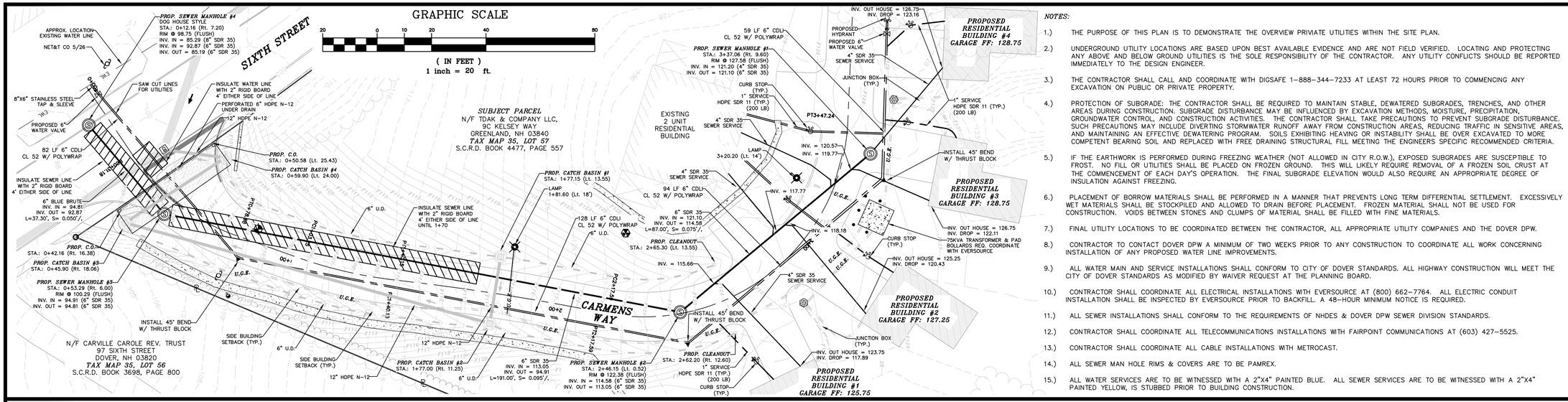
EROSION AND SEDIMENT CONTROL PLAN

LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 17, 2018
FILE NO. : DB 2017–060

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER



NOTES:

1.) THE PURPOSE OF THIS PLAN IS TO DEMONSTRATE THE OVERVIEW PRIVIATE UTILITIES WITHIN THE SITE PLAN.

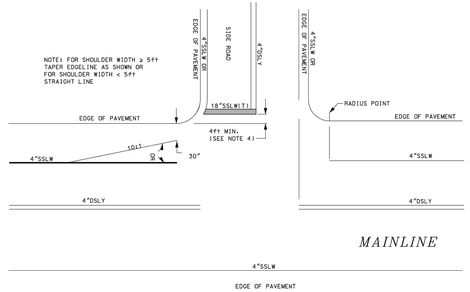
2.) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.

3.) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

4.) PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES, TRENCHES, AND OTHER AREAS DURING CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL, AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOFF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAFFIC IN SENSITIVE AREAS, AND MAINTAINING AN EFFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL MEETING THE ENGINEERS SPECIFIC RECOMMENDED CRITERIA.

5.) IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER (NOT ALLOWED IN CITY R.O.

CENTERLINE AND EDGELINE "CUTS" AT SIDE ROAD



GENERAL NOTES

1.) EDGE LINE DETAILS ARE SHOWN FOR MAINLINE ROADWAYS WITHOUT TURN LANE. THE PRESENCE OF TURN LANES MAY REQUIRE DIFFERENT EDGELINE TREATMENTS,

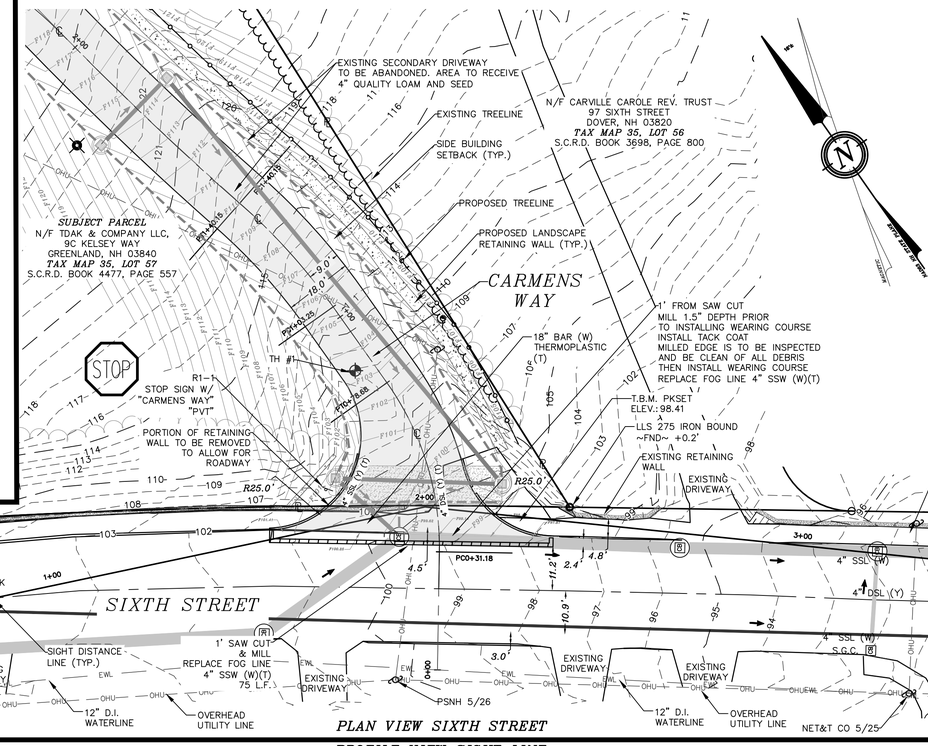
2.) EDGELINES ON THE SIDE ROADS, WHEN CALLED FOR, SHALL FOLLOW THE ABOVE MAINLINE TYPICALS. EDGELINES SHALL NOT BE CONTINUOUS AROUND THE MAINLINE/SIDE ROAD RADIUS. EDGELINES SHALL END AT STOP BARS.

3.) CENTERLINE AND EDGELINE SHALL BE CONTINUOUS PAST RESIDENTIAL DRIVEWAYS. CENTERLINE AND EDGELINE SHALL BREAK FOR COMMERCIAL DRIVES W/TRAFFIC CONTROLS, MINOR SIDE ROADS, OR PRIVATE INTERSECTIONS.

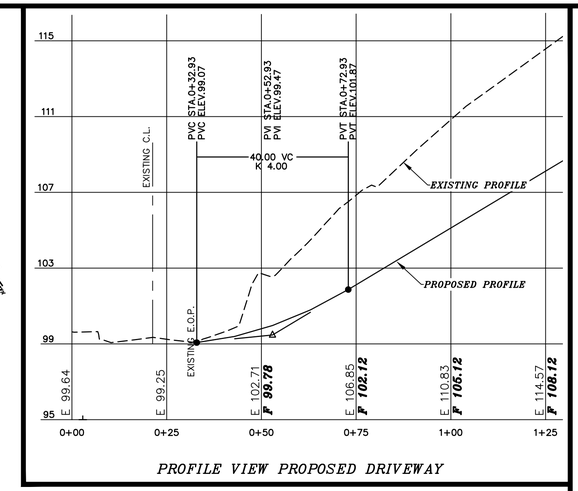
4.) LOCATION OF THE STOP LINE MAY VARY DUE TO INTERSECTION SIGHT DISTANCE AND VEHICLE TURNING RADIUS AND MAY NOT ALWAYS COINCIDE WITH THE LOCATION OF THE STOP SIGN.

5.) IF THERE IS NO EDGELINE, END STOP BAR 12" FROM EDGE FO PAVEMENT.

6.) STOP BARS, WORDS, LANE LINES, SYMBOLS AND ARROWS SHALL BE THERMOPLASTIC (T).

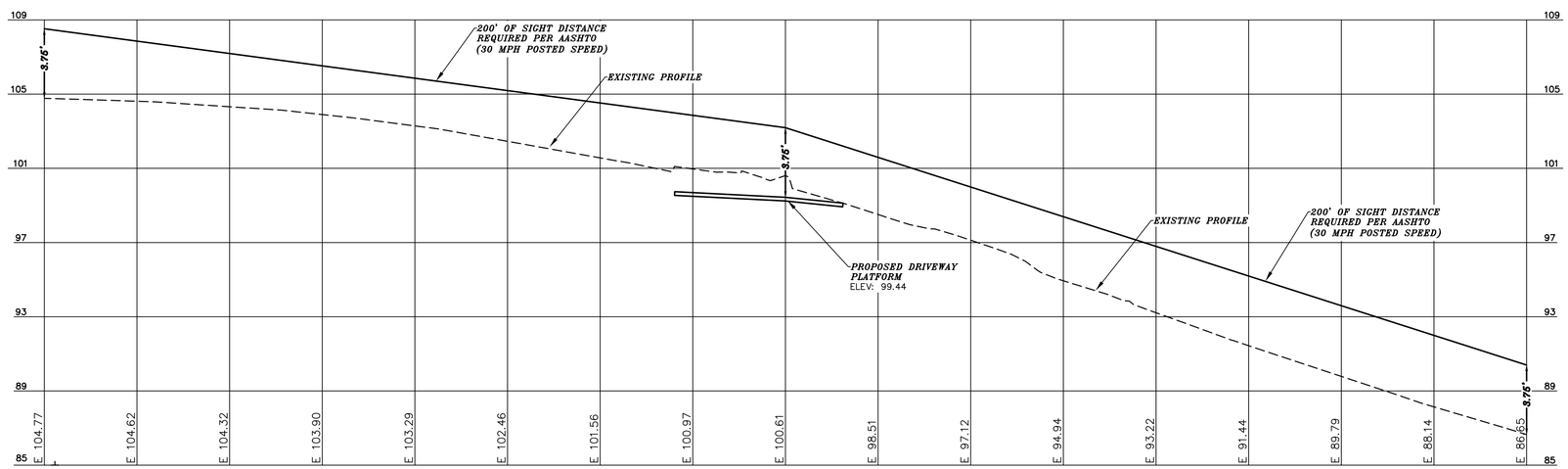


PLAN VIEW SIXTH STREET



PROFILE VIEW PROPOSED DRIVEWAY

PROFILE VIEW SIGHT LINE



GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.
VERTICAL SCALE: 1" = 4'

NOTES:

1.) OWNER: TDAK & COMPANY LLC
9 KELSEY DRIVE
GREENLAND, NH 03840

2.) DOVER TAX MAP 35, LOT 57

3.) LOT AREA: 90,322 Sq. Ft. 2.07 Ac.

4.) S.C.R.D. BOOK 4477, PAGE 557

5.) THIS IS A RESIDENTIAL DRIVEWAY.

6.) EXISTING CONDITIONS INFORMATION IS BASED ON A SURVEY PERFORMED BY BERRY SURVEYING & ENGINEERING AND IS ENCLOSED IN THIS PACKAGE.

7.) ALL PAVEMENT MARKINGS TO BE PAINTED TO NHDOT STANDARD NO. PM-9.

8.) SEE NHDOT STANDARD PLAN PM-10A FOR WORD AND SYMBOL DETAILS.

9.) THE SPEED LIMIT ON SIXTH STREET IS 30MPH.

10.) WORK WITHIN CITY OF DOVER WILL REQUIRE PROFESSIONAL FLAGGING SERVICES AND POLICE SUPERVISION.

11.) DESIGN ENGINEER TO PROVIDE INSPECTION & OVERSIGHT OF ALL WORK WITHIN R.O.W.

LEGEND:

- IRON BOUND (FND)
- UTILITY POLE/GUY WIRE
- OHU — OHU — OVERHEAD UTILITES
- EWL — EXISTING WATERLINE
- PROPERTY LINE
- S.C.R.D. STRAFFORD COUNTY REGISTRY OF DEEDS
- TYP. TYPICAL
- FND FOUND
- S.G.C. SLANTED GRANITE CURB
- PL PROPERTY LINE
- E.O.P. EDGE OF PAVEMENT
- SSL (W/Y) SINGLE SOLD LINE (WHITE/YELLOW)
- SSB (Y) DOUBLE SOLID LINE (YELLOW)

REVISION	DATE	DESCRIPTION

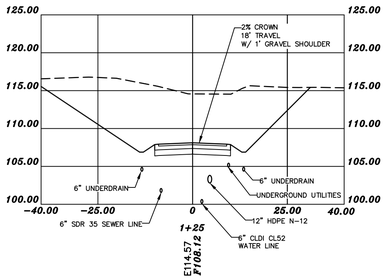
SIGHT DISTANCE PROFILE
LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

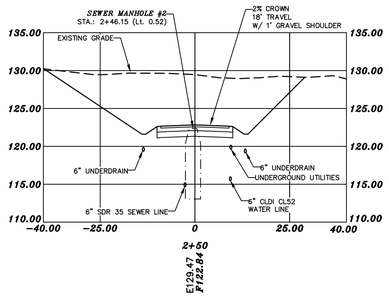
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

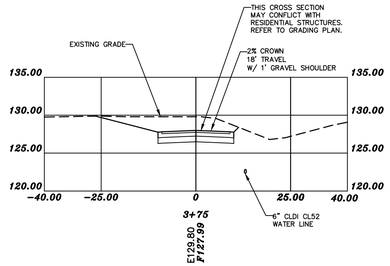
SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

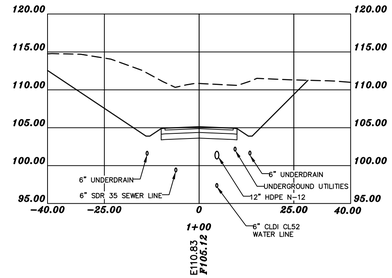
STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14245
LICENSED PROFESSIONAL ENGINEER

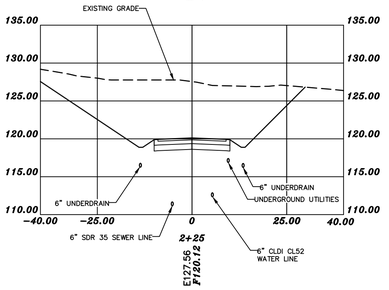
DOT-1

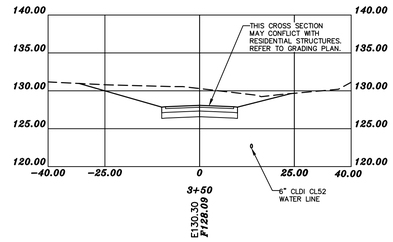


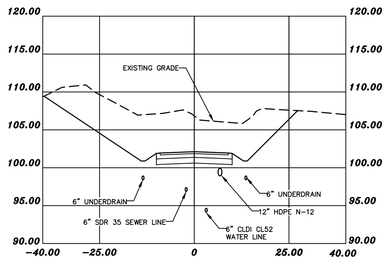


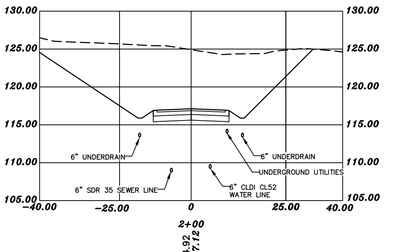


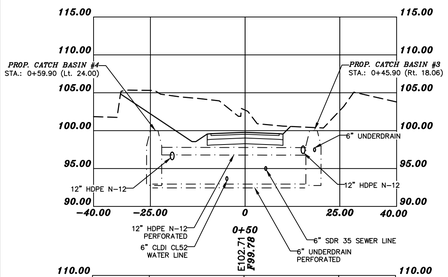


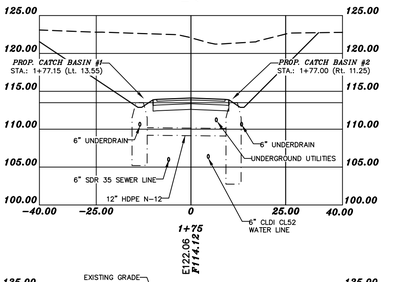


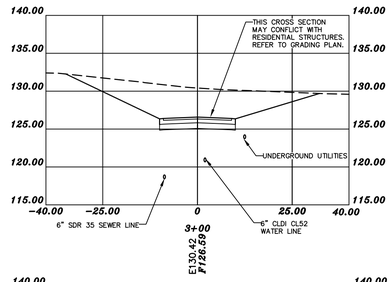


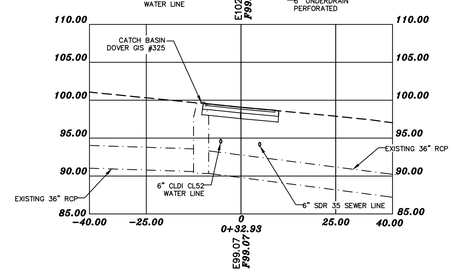


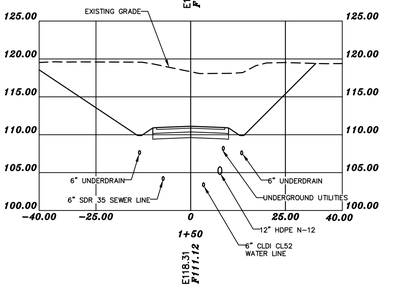


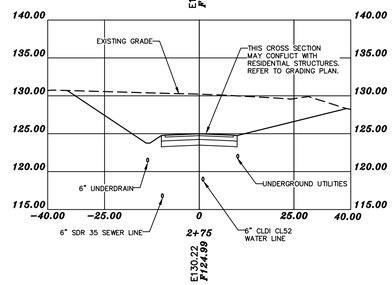


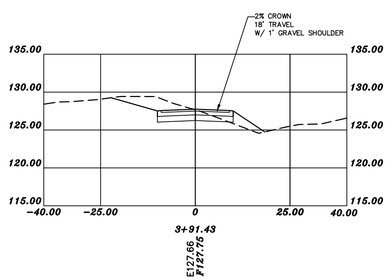












GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
Vertical Scale 1 inch = 10 ft.

REVISION	DATE	DESCRIPTION

CROSS SECTIONS 0+00 – END

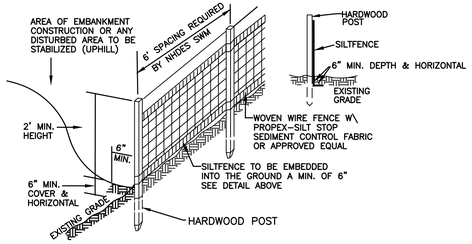
LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : 1 IN. EQUALS 20 FT.
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

E1



SILT FENCE CONSTRUCTION SPECIFICATIONS

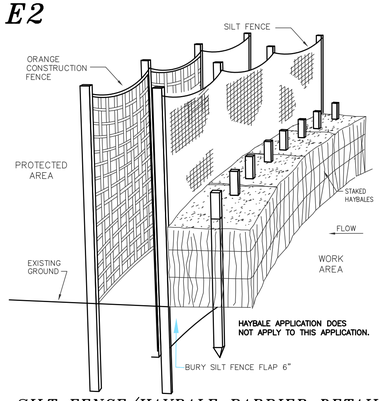
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES AND FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP MID AND BOTTOM SECTIONS AND BE EMBEDDED INTO GROUND A MINIMUM OF 8" THE FENCE POSTS SHALL BE A MINIMUM 48" LONG, SPACED A MAXIMUM 10' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED BY SIX INCHES, FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BY-PASSING.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE AND PROPERLY DISPOSED OF. SEE MAINTENANCE NOTE BELOW, REMOVAL OF SEDIMENT REQUIRED AT A DEPTH OF 6-INCHES.
4. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.
5. SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER.
6. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND RE-VEGETATED.
7. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, SILT FENCE, PAGE 90.

SILT FENCE MAINTENANCE

1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH SIX-INCHES IN DEPTH.
4. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

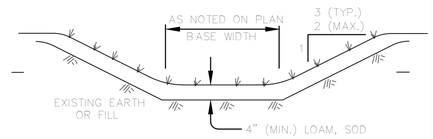
SILT FENCE DETAIL
NOT TO SCALE

E2



SILT FENCE/HAYBALE BARRIER DETAIL
THIS METHOD TO BE USED ALONG THE REAR OF THE PROPERTY
NOT TO SCALE

E3



GRASS TREATMENT SWALE
NOT TO SCALE

1.) INSPECT ANNUALLY FOR EROSION, SEDIMENT ACCUMULATIONS, VEGETATION LOSS, & INVASIVE SPECIES. REPAIR AS NECESSARY.

2.) MOW GRASS ANNUALLY TO A DEPTH OF 4".

3.) INSTALL STABILIZATION MATTING DURING CONSTRUCTION

4.) USE TO RECLAIM EXISTING D.W.

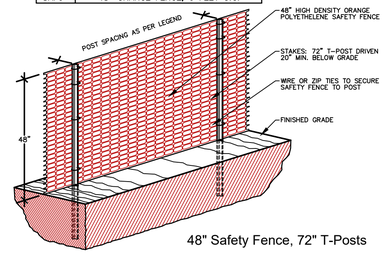
TO BE CONSTRUCTED IAW NH SWM #2 CHAPTER 4, #5 TREATMENT SWALES, PAGE 123.

E4

CONSTRUCTION SAFETY FENCE
NOT TO SCALE

LEGEND

SAF12	48" ORANGE FENCE, 12 FEET O.C.
SAF11	48" ORANGE FENCE, 11 FEET O.C..
SAF10	48" ORANGE FENCE, 10 FEET O.C.
SAF9	48" ORANGE FENCE, 9 FEET O.C.
SAF8	48" ORANGE FENCE, 8 FEET O.C..
SAF7	48" ORANGE FENCE, 7 FEET O.C.
SAF6	48" ORANGE FENCE, 6 FEET O.C.



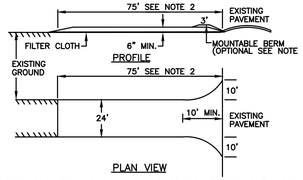
48" Safety Fence, 72" T-Posts

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.

REVISION	DATE	DESCRIPTION

E5

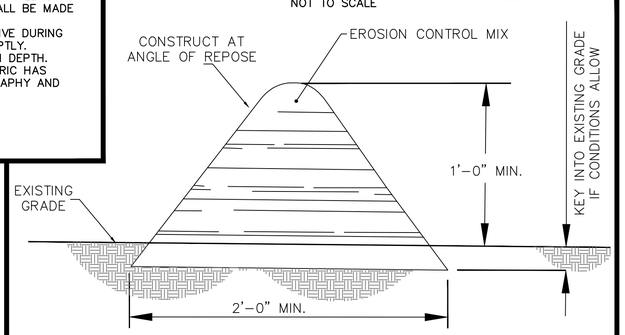
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



1. STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 3 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 75 FEET, EXCEPT THAT THE MINIMUM LENGTH MAY BE REDUCED TO 50 FEET IF A 3-INCH TO 6-INCH BERM IS INSTALLED AT THE ENTRANCE OF THE PROJECT SITE.
3. THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER.
5. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.
8. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY CONSTRUCTION EXIT, PAGE 124.

E6

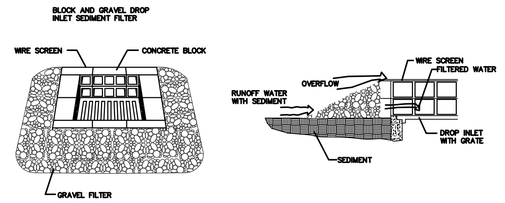
EROSION CONTROL MIX BERM
NOT TO SCALE



EROSION CONTROL MIX BERMS SHALL BE USED ONLY AS FOLLOWS:

1. 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.
2. THE BERMS SHALL BE INSTALLED FOLLOWING THE CONTOUR OF THE LAND AS CLOSLY AS POSSIBLE.
3. THE BERMS SHALL BE INSTALLED ON SLOPES LESS THAN 5%.
4. 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.
5. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS, OR REPROCESSED WOOD PRODUCTS SHALL NOT BE USED AS ORGANIC MATERIAL.
6. THE MIX SHALL NOT CONTAIN SILTS, CLAY, OR FINE SANDS.
7. 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.
8. THE MIX PH SHALL BE BETWEEN 5.0 AND 8.0.
9. THE BERM SHALL BE AT LEAST 12 INCHES HIGH AND AT LEAST 2 FEET WIDE.
10. TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, EROSION CONTROL MIX BERMS, PAGE 106.

E7



MAINTENANCE

ALL STRUCTURES SHOULD BE INSPECTED AFTER EVERY RAIN STORM AND REPAIRS MADE AS NECESSARY. SEDIMENT SHOULD BE REMOVED FROM TRAPPING DEVICES AFTER THE SEDIMENT HAS REACHED A MAXIMUM OF ONE HALF THE DEPTH OF THE TRAP. THE SEDIMENT SHOULD BE DISPOSED OF IN A SUITABLE AREA AND PROTECTED FROM EROSION BY EITHER STRUCTURE OR VEGETATIVE MEANS. THE TEMPORARY TRAPS SHOULD BE REMOVED AND THE AREA REPAIRED AS SOON AS THE CONTRIBUTING DRAINAGE AREA TO THE INLET HAS BEEN COMPLETELY STABILIZED.

BLOCK & GRAVEL DROP INLET SEDIMENT FILTER
NOT TO SCALE

TO BE USED IN ALL AREAS WHERE THERE WILL BE NO TRAFFIC.

TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY STORM DRAIN INLET PROTECTION, PAGE 118.

E8

TEMPORARY EROSION CONTROL MEASURES

1. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME.
2. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND AT LOCATIONS AS REQUIRED, DIRECTED BY THE ENGINEER.
3. 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)
4. 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.
5. 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.
6. 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 AND RE-VEGETATED.
7. 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.
8. DITCHES, SWALES, AND BASINS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
9. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
10. DRIVEWAYS AND CUT AND FILL SPLOPES MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINAL GRADE.
11. STABILIZATION MEANS:
    - 11.1. A MINIMUM OF 85% OF VEGETATIVE COVER HAS BEEN ESTABLISHED.
    - 11.2. A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED, OR
    - 11.3. EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
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)

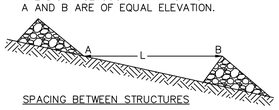
SEDIMENT & EROSION CONTROL DETAILS
COMPOSITE DETAIL SHEET

LAND OF
TDAK, A COMPANY LLC
99 & 99A SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

E9

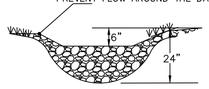
STONE CHECK DAM
NOT TO SCALE

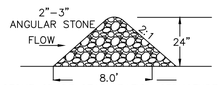
THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION.



SPACING BETWEEN STRUCTURES

NOTE: KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIUM OF 18" TO PREVENT FLOW AROUND THE DAM.

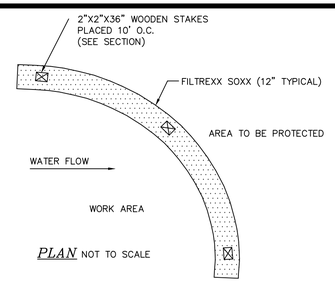




STONE GRADE STABILIZATION STRUCTURE

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 PLANS.
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.

E10

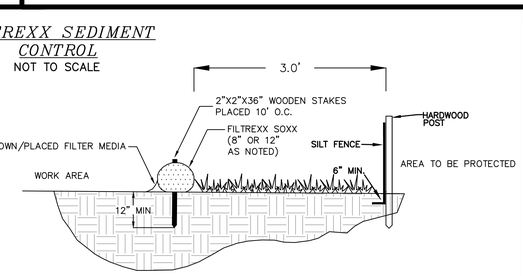


PLAN NOT TO SCALE

NOTES

1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. FILTER MEDIA FILL TO MEET APPLICATION REQUIRMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.
4. SILTSOXX MAY BE USED IN PLACE OF SILT FENCE OR OTHER SEDIMENT BARRIERS.
5. SILTSOXX COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIRMENTS OF THE SPECIFIC APPLICATION.
6. FILTREXX SOXX IS A REGISTERED TRADEMARK OF FILTREXXIN TERNATIONAL, LLC.
7. SILT FENCE IS NOT A SUBSTITUTION FOR SILT SOXX AND ANY EQUAL SUBSTITUTION TO BE APPROVED.
8. TO BE CONSTRUCTED IAW FILTREXX, SECTION 1:EROSION & SEDIMENT CONTROL (PAGE 323) - CONSTRUCTION ACTIVITIES, SWPPP CUT SHEET: FILTREXX SEDIMENT CONTROL

FILTREXX SEDIMENT CONTROL
NOT TO SCALE

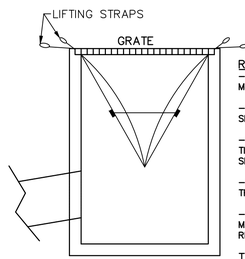


Filtrexx International, LLC
35481 Grafton Eastern Rd | Grafton, Oh 44044
440-926-2607 | fax: 440-926-4021
WWW.FILTREXX.COM
OR APPROVED EQUAL

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.

SECTION NOT TO SCALE

E11



RECOMMENDED MAINTENANCE SCHEDULE

-EACH SILTSACK SHOULD BE INSPECTED AFTER EVERY MAJOR RAIN EVENT, AND MUST BE MAINTAINED.

-IF THERE HAVE BEEN NO MAJOR EVENTS, SILTSACK SHOULD BE INSPECTED EVERY 2-3 WEEKS.

-THE RESTRAINT CORD SHOULD BE VISIBLE AT ALL TIMES. IF CORD IS COVERED WITH SEDIMENT, THE SILTSACK SHOULD BE EMPTIED.

-TO BE USED IN ALL AREAS WHERE THERE WILL BE TRAFFIC.

- ARE SUBJECT TO DAMAGE BY SNOW PLOWS, AND MUST BE INSPECTED AFTER ANY SNOW EVENT AND REPLACED AS REQUIRED.

TO BE CONSTRUCTED IAW NH SWM #3 4-2 SEDIMENT CONTROL PRACTICES, TEMPORARY STORM DRAIN INLET PROTECTION, PAGE 118.

SILTSACK DETAIL
NOT TO SCALE

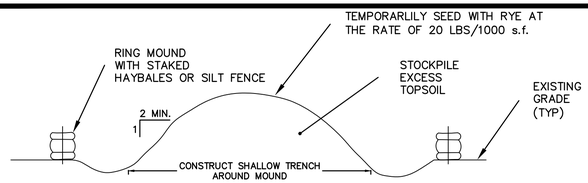
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE: AS NOTED
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14241
LICENSED PROFESSIONAL ENGINEER

E-101

E12



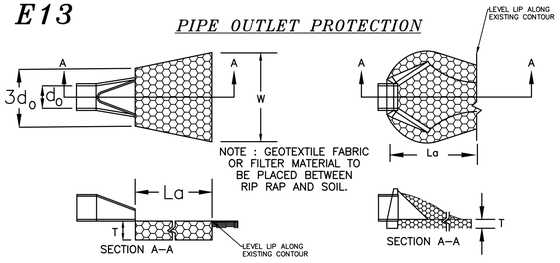
TOPSOIL STOCKPILE MOUND

NOT TO SCALE

TO BE CONSTRUCTED IAW NH SWM #3 4–1 EROSION CONTROL PRACTICES, SOIL STOCKPILE PRACTICES, PAGE 46.

E13

PIPE OUTLET PROTECTION



PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL

PIPE OUTLET TO WELL–DEFINED CHANNEL

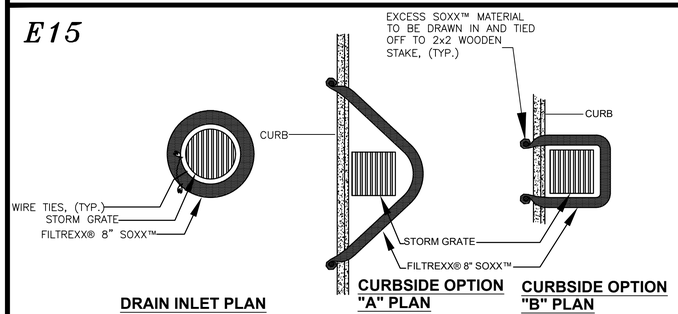
PIPE OUTLET PROTECTION CONSTRUCTION SPECIFICATIONS

1. THE SUB GRADE FOR THE FILTER MATERIAL, GEOTEXTILE 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 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.
5. TO BE CONSTRUCTED IAW NH SWM #2 4–6 CONVEYANCE PRACTICES, 6. OUTLET PROTECTION, PAGE 172.

E14

TABLE 7–24––RECOMMENDED RIP RAP GRADATION RANGES			
d50 SIZE=	0.5	FEET 6	INCHES
% OF WEIGHT SMALLER THAN THE GIVEN d50 SIZE		SIZE OF STONE (INCHES) FROM	TO
100%		9	12
85%		8	11
50%		6	9
15%		2	3

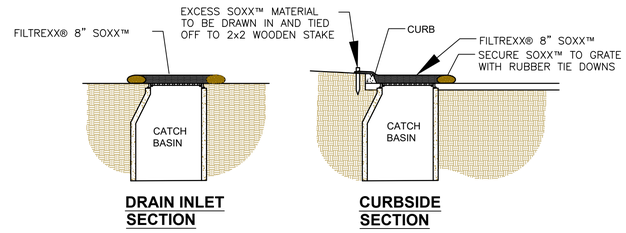
E15



DRAIN INLET PLAN

CURBSIDE OPTION "A" PLAN

CURBSIDE OPTION "B" PLAN



DRAIN INLET SECTION

CURBSIDE SECTION

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. FILTER MEDIA™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

FILTREXX INLET PROTECTION

NOT TO SCALE

E16

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 not yet complete.

SEEDING GUIDE

USE	SEEDING MIXTURE 1/	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED	POORLY DRAINED
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	FAIR	FAIR
	C	POOR	GOOD	EXCELLENT	GOOD
	D	FAIR	FAIR	GOOD	EXCELLENT
	E	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD	FAIR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
	D	GOOD	GOOD	EXCELLENT	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	GOOD	FAIR	POOR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
	D	FAIR	GOOD	GOOD	EXCELLENT
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	F	FAIR	EXCELLENT	EXCELLENT	2/
	G	FAIR	EXCELLENT	EXCELLENT	2/

GRAVEL PIT, SEE NH–PM–24 IN APPENDIX FOR RECOMMENDATION REGARDING RECLAMATION OF SAND AND GRAVEL PITS.

1/ REFER TO SEEDING MIXTURES AND RATES IN TABLE 7–36.
2/ POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.

RECOMMENDED *

SEEDING RATES

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.
A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREEPING RED FESCUE	10	0.25
CROWN VETCH	15	0.35
OR		
FLAT PEA	30	0.75
TOTAL	40 OR 55	0.95 OR 1.35
C. TALL FESCUE	24	0.55
CREEPING RED FESCUE	24	0.55
BIRDS FOOT TREFOIL	REMOVED	REMOVED
TOTAL	48	1.10
D. TALL FESCUE	20	0.45
FLAT PEA	30	0.75
TOTAL	50	1.20
E. CREEPING RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.60

CONSERVATION MIX	POUNDS PER ACRE	POUNDS PER 1,000 S.F.
RED FESCUE (35%)	75	1.75
TALL FESCUE (25%)	55	1.25
ANNUAL RYEGRASS (12%)	33	0.75
PERENNIAL RYEGRASS (10%)	26	0.60
KENTUCKY BLUEGRASS (10%)	22	0.50
WHITE CLOVER (3%)	7	0.15

SEEDING SPECIFICATIONS

1. GRADING AND SHAPING
   A. SLOPES SHALL NOT BE STEEPER THAN 2:1;3:1 SLOPES OR FLATTER ARE PREFERRED.
   WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION
   A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
   B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO 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 OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
3. ESTABLISHING A STAND
   A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING
   AND INCORPORATED INTO THE SOIL KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE,
   THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:
   AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100LBS. PER 1,000 SQ.FT.
   NITROGEN(N), 50LBS. PER ACRE OR 1.1LBS. PER 1,000 SQ.FT.
   PHOSPHATE(P2O5), 100LBS. PER ACRE OR 2.2LBS. PER 1,000 SQ.FT.
   POTASH(K2O), 100LBS. PER ACRE OR 2.2LBS. PER 1,000 SQ.FT.
   (NOTE: THIS IS THE EQUIVALENT OF 500LBS. PER ACRE OF 10–20–20 FERTILIZER OR 1,000LBS. PER ACRE OF 5–10–10.)
   B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
   C. REFER TO TABLE(G–E1 THIS SHEET) FOR APPROPRIATE SEED MIXTURES AND TABLE(H–E1 THIS SHEET) FOR RATES OF SEEDING. ALL LEGUMES (CROWNVETCH, BIRDSFOOT TREFOIL, AND FLATPEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT.
   D. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.
4. MULCH
   A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
   B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90LBS PER 1000 S.F.
5. MAINTENANCE TO ESTABLISH A STAND
   A. PLANTED AREA SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
   B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIAL STAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.
   C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.
6. TO BE CONSTRUCTED IAW NH SWM #3 4–1 EROSION CONTROL PRACTICES, PERMANENT VEGETATION, PAGE 60.

E17

WINTER STABILIZATION NOTES

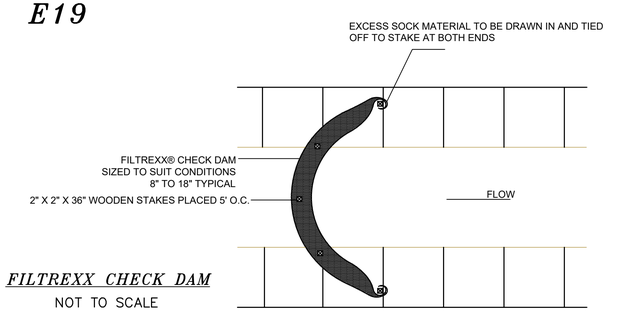
1. ALL DISTURBED AREAS THAT DO NOT HAVE AT LEAST 85% VEGETATIVE COVERAGE PRIOR TO OCTOBER 15TH SHALL BE STABILIZED BY APPLYING MULCH AT A RATE OF 3–4 TONS PER ACRE. ALL SIDE SLOPES, STEEPER THAN 4:1, THAT ARE NOT DIRECTED TO SWALES OR DETENTION BASINS, SHALL BE LINED WITH BIODEGRADABLE/PHOTODEGRADABLE "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 ABOVE.
2. 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 GRADED AND SHAPED.
3. PRIOR TO NOV. 15TH ALL ROADWAY AND PARKING AREAS SHALL BE BROUGHT UP TO AND THROUGH THE BANK RUN GRAVEL APPLICATION. IF THESE AREAS' ELEVATIONS ARE PROPOSED TO REMAIN BELOW THE PROPOSED SUBGRADE 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 SHALL HAVE BETWEEN 15–25% PASSING THE #200 SIEVE AND THE LARGEST STONE SIZE SHALL BE 2". IF THE SITE IS ACTIVE AFTER NOVEMBER 15TH, ANY ACCUMULATED SNOW SHALL BE REMOVED FROM ALL ROADWAY AND PARKING AREAS.
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 WILL REMAIN THROUGHOUT THE WINTER SHALL BE SURROUNDED WITH SILT FENCING.

E18

DEFINITION OF STABLE:

1. WHEN A BASE COURSE GRAVEL HAS BEEN INSTALLED IN AN AREA TO BE PAVED
2. WHEN A MINIMUM OF 85% VEGITATIVE GROWTH OCCURS.
3. WHEN A MINIMUM OF 3" OF NON–EROSIVE MATERIAL,SUCH AS STONE OR RIP–RAP HAS BEEN INSTALLED.
4. WHEN PROPER EROSION CONTROL BLANKETS, SUCH AS CURLEX II, C350 OR OTHER DOT APPROVED MATTING, HAS BEEN INSTALLED PROPERLY.
5. 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.
6. CITY OF DOVER CHAPTER 149–14 A: 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 ONE HUNDRED (100) 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.

E19



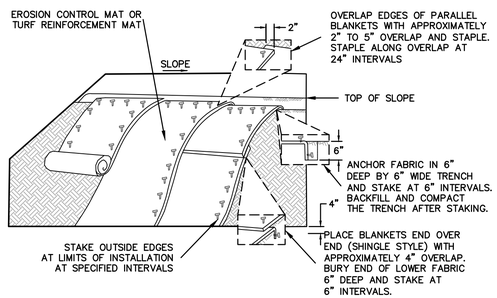
FILTREXX CHECK DAM

NOT TO SCALE

NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. CHECK DAM SHOULD BE USED IN AREAS THAT DRAIN 10 ACRES OR LESS.
3. SEDIMENT SHOULD BE REMOVED FROM BEHIND CHECK DAM ONCE THE ACCUMULATED HEIGHT HAS REACHED ½ THE HEIGHT OF THE CHECK DAM.
4. CHECK DAM CAN BE DIRECT SEEDED AT THE TIME OF INSTALLATION.
5. CONTRACTOR IS REQUIRED TO BE A FILTREXX CERTIFIED™ INSTALLER.

E20

VMAX3 MATTING & CURLEX II



NOTE : STAKING PATTERNS SHALL FOLLOW MANUFACTURERS RECOMMENDATIONS. MINIMUM SPACING ACROSS FABRIC AS SHOWN.

INSTALLATION OF EROSION CONTROL FABRICS

NOT TO SCALE

E21

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.

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. ALLDISTURBED 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 (CESSWI), 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 COMPLETE.

14.) SMOOTH AND REVEGETATE ALL DISTURBED AREAS.

15.) FINISH PAVING ALL ROADWAYS.

E–102

REVISION	DATE	DESCRIPTION

SEDIMENT & EROSION CONTROL DETAILS
COMPOSITE DETAILS

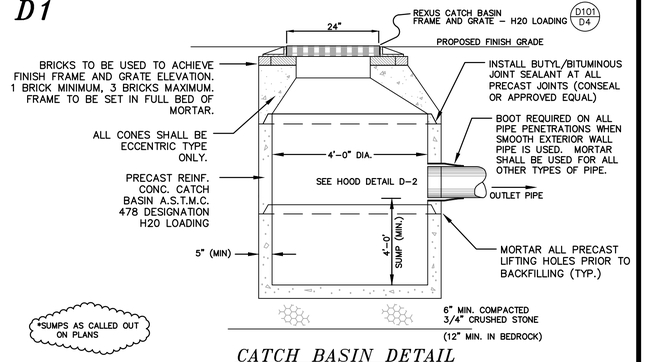
LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY & SURVEYING ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE: AS NOTED
DATE : JANUARY 17, 2018
FILE NO. : DB 2017–060

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14243
LICENSED PROFESSIONAL ENGINEER

D1

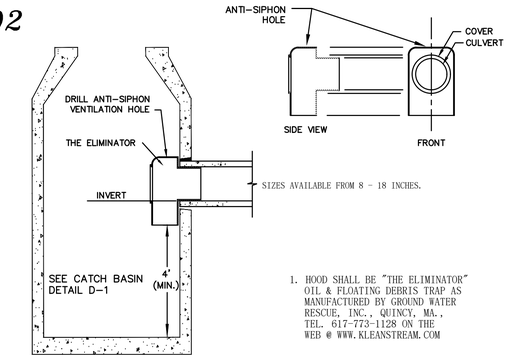


CATCH BASIN DETAIL

NOT TO SCALE

SEE SAND FILTER DETAILS AND GRADING AND DRAINAGE SHEETS

D2

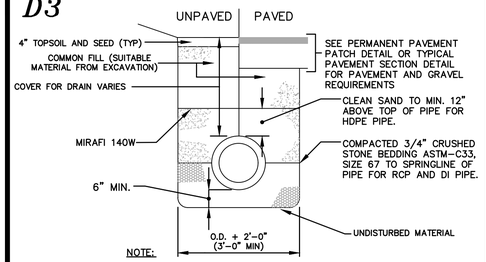


1. HOOD SHALL BE "THE ELIMINATOR" OIL & FLOATING DEBRIS TRAP AS MANUFACTURED BY GROUND WATER RESCUE, INC., QUINCY, MA., TEL. 617-773-1128 ON THE WEB @ WWW.KLEANSTREAM.COM

CATCH BASIN HOOD DETAIL

NOT TO SCALE

D3



NOTE:

PLASTIC DRAIN PIPE (HDPE) SHALL BE ADS N-12 (CORRUGATED EXTERIOR/SMOOTH INTERIOR) OR EQUAL MEETING AASHTO M-252 AND H-20 LOADING.

TYPICAL DRAIN TRENCH

NOT TO SCALE

D4

Manhole Castings L-1

Rexus Ductile Iron Frame & Cover

REXUS manhole covers feature a unique spring bar locking mechanism and a spline located in the hinge housing for improved security; additional locking options are available to further deter unauthorized access and theft. Made from ductile iron — an engineered material that offers many advantages over traditional cast iron — REXUS covers deliver excellent performance in all the key areas of concern to municipal engineers.

Highlights:

- Ductile iron
- Spring bar locking
- Available in 24" opening
- Hinged cover
- Cover with 90° blocking mechanism
- Exceeds H20 loading
- Optional locking features
- Independently certified

Rexus Frame & Grate

Rexus Frame & Grate In Open Position Showing Hinged Grate

DESCRIPTION	PRODUCT NUMBER
24" REXUS DI MH F & C - Plain	62114 24 P
24" REXUS DI MH F & C - Sewer	62114 24 S
24" REXUS DI MH F & C - Drain	62114 24 D
24" REXUS DI MH F & C - Water	62114 24 WTR
24" REXUS DI CB F & Grate	62114 CB/R
REXUS Post Lock with Key	62132 P32 01
REXUS Post Lock without Key	62132 P32 02

NOTE: See page L-2 for the SCS locking device for Rexus and Pamrex.

REXUS Anti-Theft Cover Locks

Pent Locking Kit:

- ¼ turn lock actuated by an asymmetrical five-sided bolt head.
- On-site installation takes five minutes:
  1. Punch out the center of the locking bolt area.
  2. Install the kit in compliance with the instructions supplied.
- Lock must be operated with the handling key (supplied with the kit; can be purchased separately).

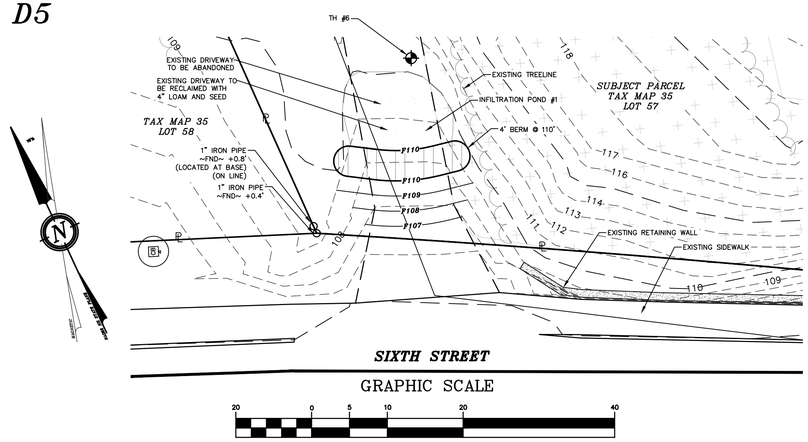
SPECIFICATIONS:

Manhole cover and frame shall be called REXUS or approved equal. Cover and frame shall be manufactured from Ductile Iron and be 3" party certified and ISO 9000 approved. Covers shall be hinged and incorporate a 90-degree blocking system to prevent accidental closure. Covers shall be one-man operable using standard tools and shall be capable of withstanding a test load of 100,000 lbs. The cover shall incorporate a spring bar locking system, which automatically activates when the cover is closed. Additional security features to include a device to prevent the cover from being completely removed from the frame. This device shall be capable of being deactivated if required. Frames shall be circular, incorporate a seating ring, and have a nominal 24-inch clear opening. Frame depth shall not exceed 4 inches, and the flange shall incorporate bedding slots and bolt holes.

www.ejprescott.com L-1

CATCH BASIN FRAME AND GRADE WILL BE REXUS, OR APPROVED EQUAL, 24 INCH OPENING, DUCTILE IRON, H20 LOADING.

D5



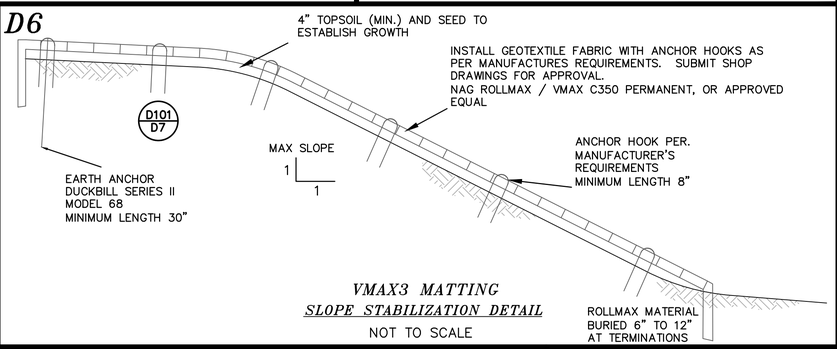
GRAPHIC SCALE

20 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

INFILTRATION POND #1 PLAN VIEW

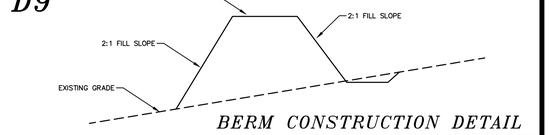
D6



VMAX3 MATTING
SLOPE STABILIZATION DETAIL

NOT TO SCALE

D9



BERM CONSTRUCTION DETAIL

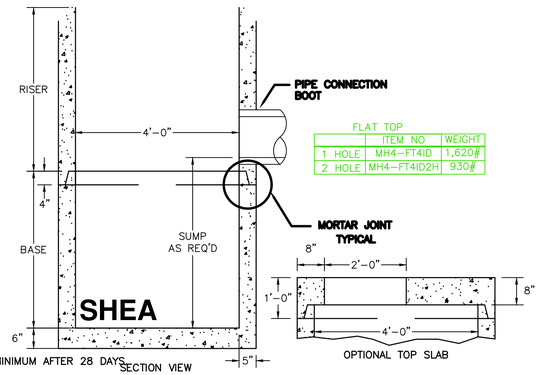
D11

RISER SECTION

HEIGHT	ITEM NO	WEIGHT
1'-0"	MH4-12CS4ID	856#
2'-0"	MH4-24CS4ID	1,712#
2'-6"	MH4-30CS4ID	2,140#
3'-0"	MH4-36CS4ID	2,568#
4'-0"	MH4-48CS4ID	3,424#
5'-0"	MH4-60CS4ID	4,280#

BASE SECTION

HEIGHT	ITEM NO	WEIGHT
2'-0"	MH4-24S4ID	2,640#
2'-6"	MH4-30S4ID	3,067#
3'-0"	MH4-36S4ID	3,495#
3'-6"	MH4-42S4ID	3,922#
4'-0"	MH4-48S4ID	4,350#
4'-6"	MH4-54S4ID	4,777#
5'-0"	MH4-60S4ID	5,205#
5'-6"	MH4-66S4ID	5,633#
6'-0"	MH4-72S4ID	6,060#



FLAT TOP

	ITEM NO	WEIGHT
1 HOLE	MH4-FT41D	1,620#
2 HOLE	MH4-FT41D2H	930#

NOTES:

1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. REINFORCED STEEL CONFORMS TO LATEST ASTM A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) BASE BOTTOM.
3. H-20 DESIGN LOADING PER AASHTO HS-20-44; ASTM C478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS."

CATCH BASIN DETAIL FLAT TOP

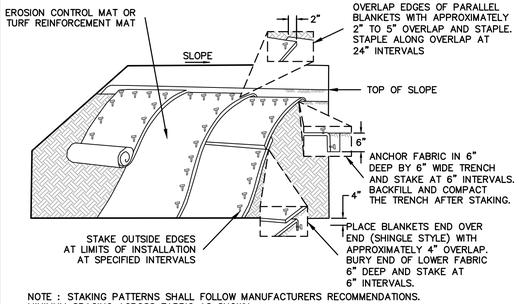
NOT TO SCALE

REFERENCE IS MADE TO A LONG TERM MAINTENANCE MANUAL PREPARED BY BERRY SURVEYING & ENGINEERING, WHICH IS ON FILE AT THE CITY OF DOVER PLANNING DEPARTMENT, AND CAN BE FOUND AT THE OFFICE OF BERRY SURVEYING & ENGINEERING. (603) 332-2863

D-101

D7

VMAX3 MATTING & CURLEX II

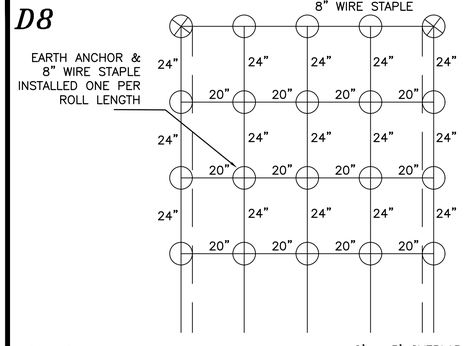


NOTE : STAKING PATTERNS SHALL FOLLOW MANUFACTURERS RECOMMENDATIONS. MINIMUM SPACING ACROSS FABRIC AS SHOWN.

INSTALLATION OF EROSION CONTROL FABRICS

NOT TO SCALE

D8



2' – 5' OVERLAP 3.4 STAPLES PER SQ YD 2' – 5' OVERLAP

TOTAL WIDTH: 6' 8"

1.) THE BEGINNING AND END OF EACH ROW OF NAG C350 WILL BE BURIED SIX TO 12 INCHES DEEP.
2.) AT THE TOP OF EACH ROW WHERE THE ROWS OVERLAP, AN EARTH ANCHOR WILL BE INSTALLED TO A MINIMUM DEPTH OF 30 INCHES.
3.) STAPLES WILL BE INSTALLED AT A RATE OF 3.4 STAPLES PER SQUARE YARD AS DEMONSTRATED.
4.) STAPLES WILL BE INSTALLED TO A MINIMUM DEPTH OF 8 INCHES.
5.) ROWS OF NAG ROLLMAX WILL BE INSTALLED PARALLEL WITH AN AVERAGE OF THREE AND ONE-HALF INCHES OF OVERLAP. STAPLES WILL BE INSTALLED ALONG THE OVERLAP SEAM, AS SHOWN.

VMAX3 MATTING
STAPLE PATTERN GUIDE

NOT TO SCALE

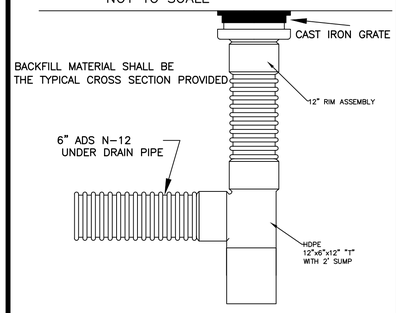
D10

CASTINGS ARE RATED FOR H20 WHEEL LOAD TRAFFIC

PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT

12" CAST IRON GRATE

NOT TO SCALE



ADS N-12 INLINE DRAIN

NOT TO SCALE USED FOR CLEANOUTS

REVISION	DATE	DESCRIPTION

DRAINAGE DETAILS
COMPOSITE DETAILS

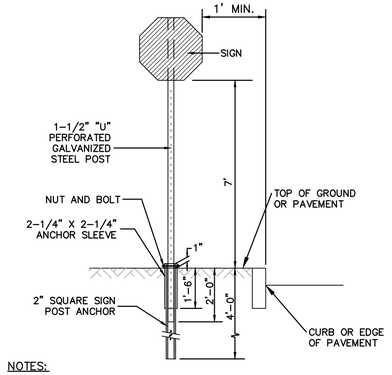
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE: AS NOTED
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

STATE OF NEW HAMPSHIRE - KENNETH A. BERRY No. 7424 LICENSED PROFESSIONAL ENGINEER -

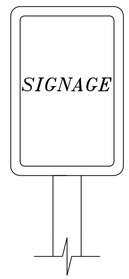
C1



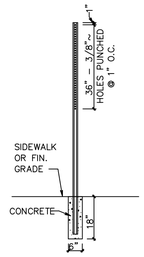
NOTES:

1. ALL SIGNAGE SHALL BE TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS AND NHDOT STANDARDS.
2. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS/CATALOG CUTS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ERECTING SIGNS.
3. THE LOCATION OF THE SIGNS SHALL BE AS INDICATED ON THE DRAWINGS AND/OR AS DIRECTED BY THE CITY OF ROCHESTER DEPARTMENT OF PUBLIC WORKS.

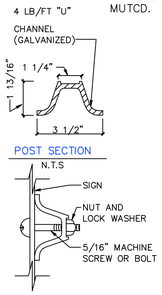
TYPICAL SIGN POST
(NOT TO SCALE)



PARTIAL ELEVATION
N.T.S.



POST
N.T.S.



MOUNTING
N.T.S.

C2

LIGHTING NOTES:

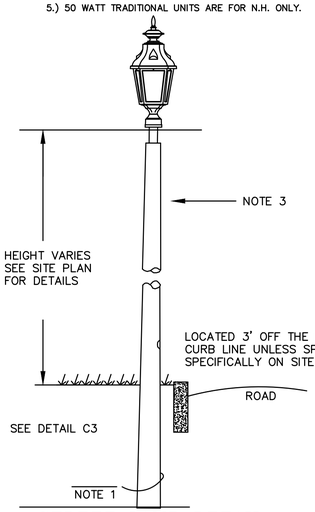
1.) POLES TO BE SET SO THAT WIRING EXIT FACES THE ROAD.

2.) ORIENT FIXTURE CORRECTLY AS TO FIELD AND STREET SIDE.

3.) USE GRAY POLE WITH CONTEMPORARY FIXTURE AND BLACK WITH TRADITIONAL. MATERIALS DETERMINED BY UNITIL.

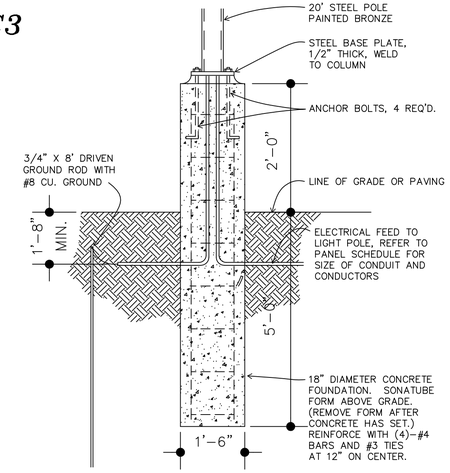
4.) EXTEND DIRECT BURIED CABLE FAR ENOUGH INTO THE POLE TO MAKE THE CONNECTION AT THE HANDHOLE IN THE POLE. EXTEND #14, 2/C COPPER STREET LIGHT CABLE FROM THIS CONNECTION TO THE LUMINAIRE.

5.) 50 WATT TRADITIONAL UNITS ARE FOR N.H. ONLY.



STREET LAMP DETAIL
NOT TO SCALE

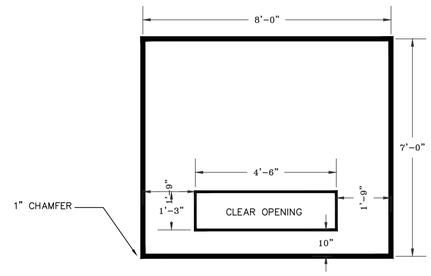
C3



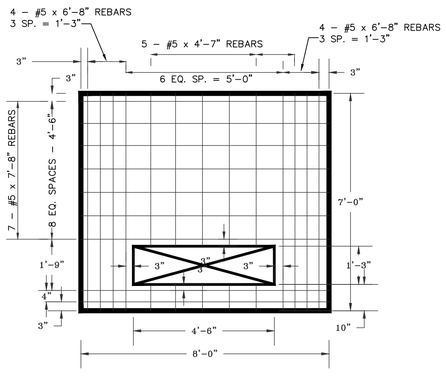
POLE FOUNDATION

LIGHT BASE DETAIL
SCALE: NONE

C4

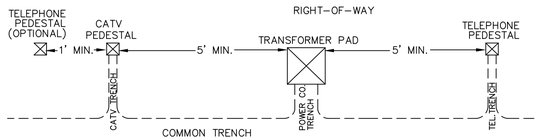


PLAN VIEW

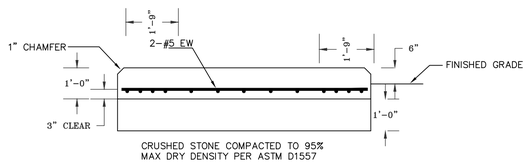


PLAN OF REINFORCING

C5



PEDESTAL PLACEMENT



SECTION VIEW

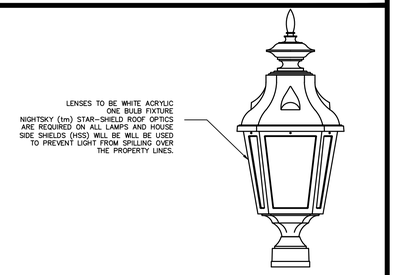
NOTES:
1.) CONFIRM SIZE WITH ELECTRIC COMPANY BEFORE CONSTRUCTION.

2.) USE LOCAL ELECTRIC COMPANY DETAILS AS REQUIRED.

TRANSFORMER PAD DETAIL
NOT TO SCALE

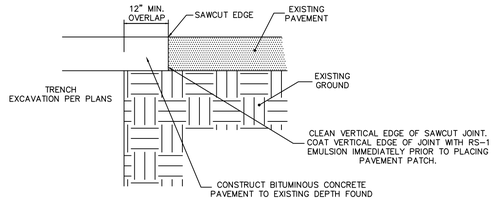
C6

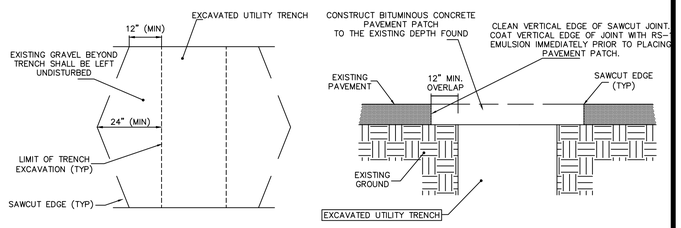
TYPICAL RESIDENTIAL LAMP "B"
NOT TO SCALE



STREET LIGHTING LAMP "A"
NOT TO SCALE

C7





PLAN *SECTION*

NOTES
1. MACHINE CUT EXISTING PAVEMENT.
2. ALL TEMPORARY, DAMAGED, OR DEFECTIVE PAVEMENT SHALL BE REMOVED PRIOR TO PLACEMENT OF PERMANENT TRENCH REPAIRS.
3. DIAMOND PATCHES, SHALL BE REQUIRED FOR ALL TRENCHES CROSSING ROADWAY. DIAMOND PATCHES SHALL MEET NHDOT REQUIREMENTS.

TYPICAL TRENCH PATCH
NOT TO SCALE

REVISION	DATE	DESCRIPTION

CONSTRUCTION DETAILS
COMPOSITE DETAILS

LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

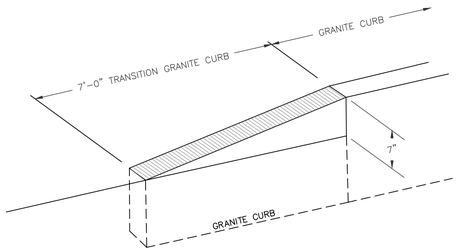
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE: AS NOTED
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 18215
LICENSED PROFESSIONAL ENGINEER

C-101

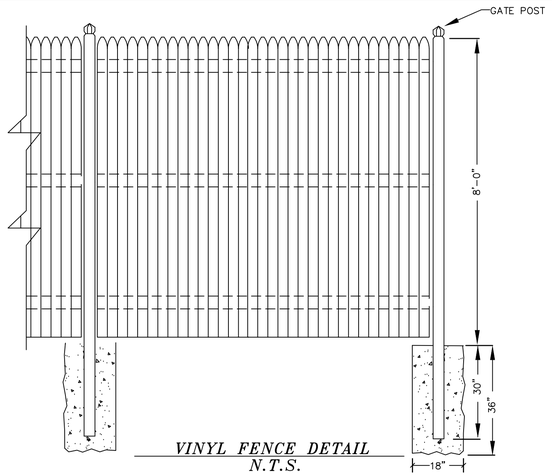
C8



CURB TRANSITION DETAIL
NOT TO SCALE

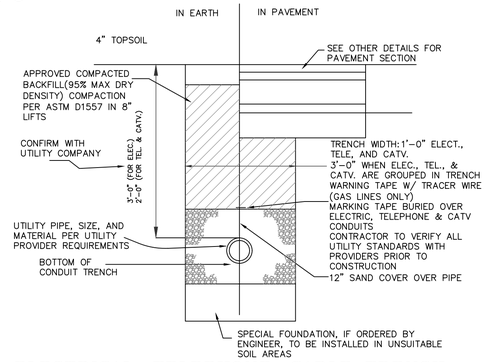
TO BE USED FOR TRANSITION FROM GRANITE CURB TO EDGE OF PAVEMENT

C9



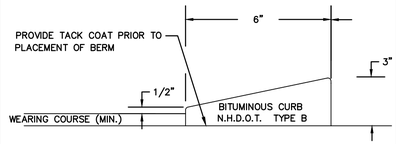
VINYL FENCE DETAIL
N.T.S.

C10



ELECTRICAL, TELEPHONE, CABLE TRENCH
NOT TO SCALE

C11



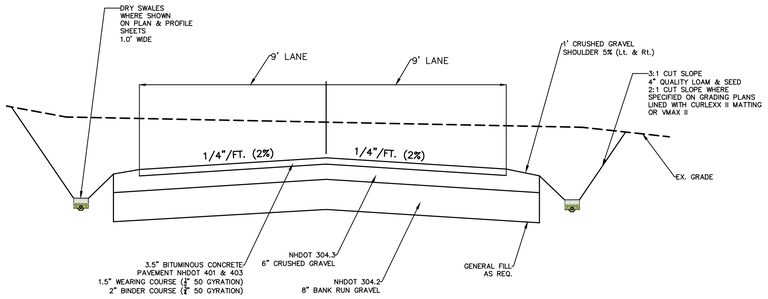
MODIFIED CAPE COD BERM
NOT TO SCALE

C12

CROSS SECTION NOTES

1. ALL ROADWAY FILL TO BRING ROAD TO SUBGRADE SHALL BE INSTALLED IN LIFTS NO GREATER THAN 12".

2. ALL FILL SHALL BE COMPACTED TO 95% MINIMUM. COMPACTION TESTS TO BE CONDUCTED AT THE START OF THE PROJECT AND NO FURTHER THAN 100 FEET APART.

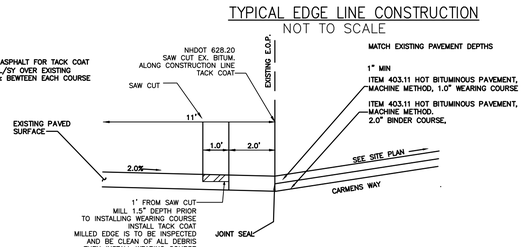


TYPICAL ROADWAY SECTION CARMENS WAY

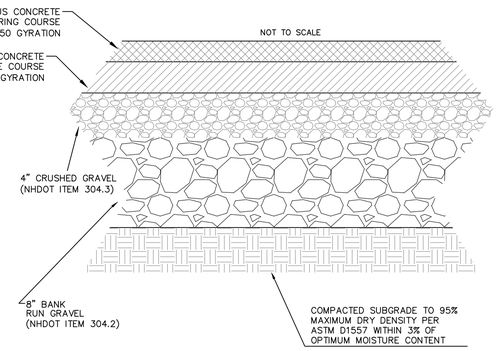
COMPACTED SUBGRADE – CONTRACTOR SHALL SCARIFY SUBGRADE TO A DEPTH OF 30 INCHES BELOW F-GRADE. ALL STONES GREATER THAN 6" IN DIAMETER SHALL BE REMOVED FROM THE SCARIFIED LAYER. ANY IMPORTED FILL SHALL BE FREE OF ORGANICS AND FROST AND SHALL HAVE NO ROCKS LARGER THAN 6" IN DIAMETER. FILL MATERIAL SHALL BE APPROVED BY THE CITY'S AGENT AND/OR THE CITY'S ENGINEER.

C13

TYPICAL EDGE LINE CONSTRUCTION
NOT TO SCALE



C14



NOTES:

1.) BITUMINOUS MATERIALS SHALL CONFORM TO NHDOT SPECIFICATION SUBSECTION 401.3.6.

2.) PAVEMENT BASE COURSE AGGEGATE SHALL CONFORM TO NHDOT SPECIFICATION SECTION 304, ITEM 304.3 AND COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY.

3.) PAVEMENT SUBBASE COURSE AGGREGATE AND AGGREGATE FOR SUBGRADE REPAIR AREAS SHALL BE SUITABLE FOR USE AS STRUCTURAL FILL AND BE PROOFROLLED AND COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY.

BITUMINOUS CONCRETE PAVEMENT SECTION
NOT TO SCALE

C15

NOTES:

1.) THE PROPOSED APPLICATION FOR THIS LOCK BLOCK OR EQUAL (AS DETERMINED BY THE DESIGN ENGINEER WITH APPROVAL BY DOVER ENGINEERING (BS&E 603-332-2863) IS FOR A WALL THAT IS APPROXIMATELY 3.0' TALL.

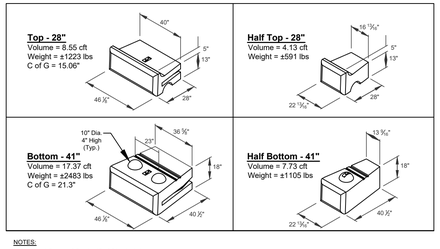
2.) USE THE 41" BOTTOM BLOCK TO INSTALL THE FIRST COURSE. NOTE EMBEDMENT REQUIREMENT. COURSE DEPTH IS 1.5'

3.) USE 41" TOP BLOCK ALONG TOP OF WALL. NOTE WALL DROPS ARE TO BE FULL BLOCK DEPTHS.

4.) USE 41" HALF BLOCKS FOR RADIAL TURNS AND END SECTIONS.

5.) THE WALL MANUFACTURER TYPICALLY PROVIDES WALL PROFILE AND BLOCK COUNT TO THE CONTRACTOR AS REQUIRED FOR CONSTRUCTION. THIS IS TO BE REVIEWED BY BOTH DOVER ENGINEERING AND DESIGN ENGINEER FOR CORRELATION WITH PROJECT SITE PLANS.

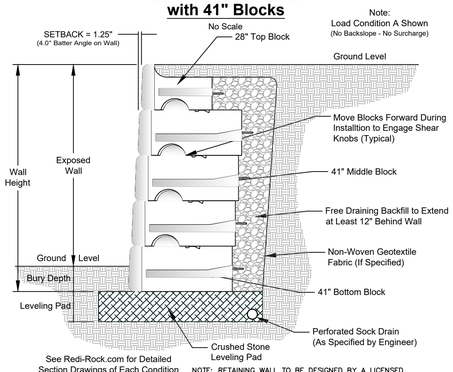
41" SERIES BLOCKS



NOTES:
Volume and Center of Gravity (C of G) calculations are based on the blocks as shown.
Center of Gravity is measured from the back of the block.
Half blocks may include a fork lift slot on one side.
Actual weights and volumes may vary.
Weight shown is based on 143 pcf concrete.

Redi-Rock® International, LLC
RETAINING WALL DETAIL
NOT TO SCALE

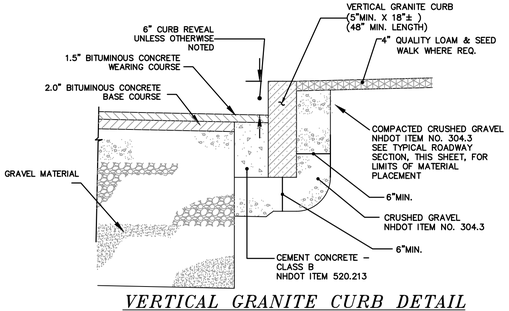
Typical Gravity Wall with 41" Blocks



See Redi-Rock.com for Detailed Section Drawings of Each Condition Shown in the Design Charts

NOTE: RETAINING WALL TO BE DESIGNED BY A LICENSED PROFESSIONAL STRUCTURAL ENGINEER.

C16



VERTICAL GRANITE CURB DETAIL
NOT TO SCALE

C-102

REVISION	DATE	DESCRIPTION

CONSTRUCTION DETAILS
COMPOSITE DETAILS

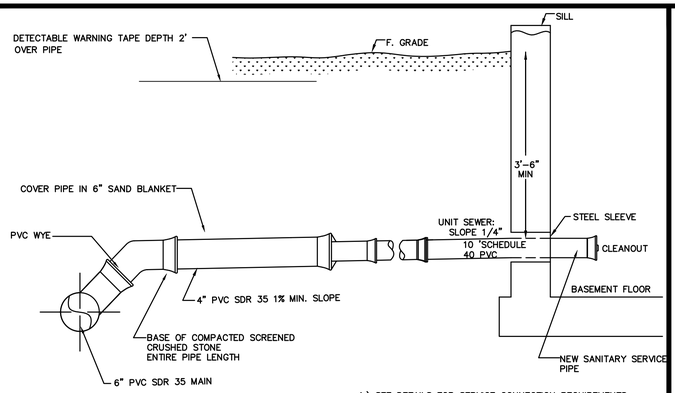
LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE: AS NOTED
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

STATE OF NEW HAMPSHIRE – KENNETH A. BERRY No. 7423 – LICENSED PROFESSIONAL ENGINEER

U1



DETAIL OF UNIT SEWER SERVICE

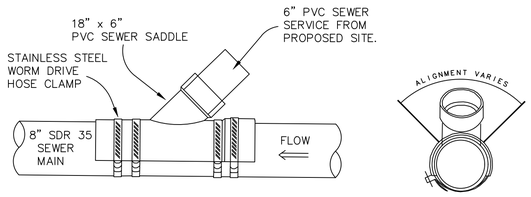
NOT TO SCALE

1.) SEE DETAILS FOR SERVICE CONNECTION REQUIREMENTS

2.) SERVICE CONNECTION SHALL BE INSTALLED BELOW WATER MAIN WHERE POSSIBLE.

3.) CLEANOUTS SHALL BE INSTALLED INSIDE EACH BUILDING EXIT POINT

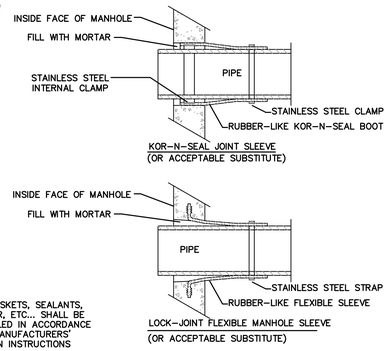
U2



SEWER SADDLE DETAIL

NOT TO SCALE

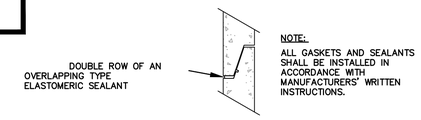
U3



ALL GASKETS, SEALANTS, MORTAR, ETC... SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS

DETAIL "A" – PIPE TO MANHOLE JOINTS

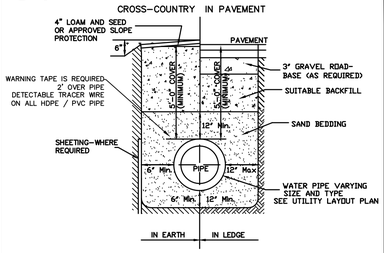
NOT TO SCALE



DETAIL "B" HORIZONTAL JOINTS

NOT TO SCALE

U4



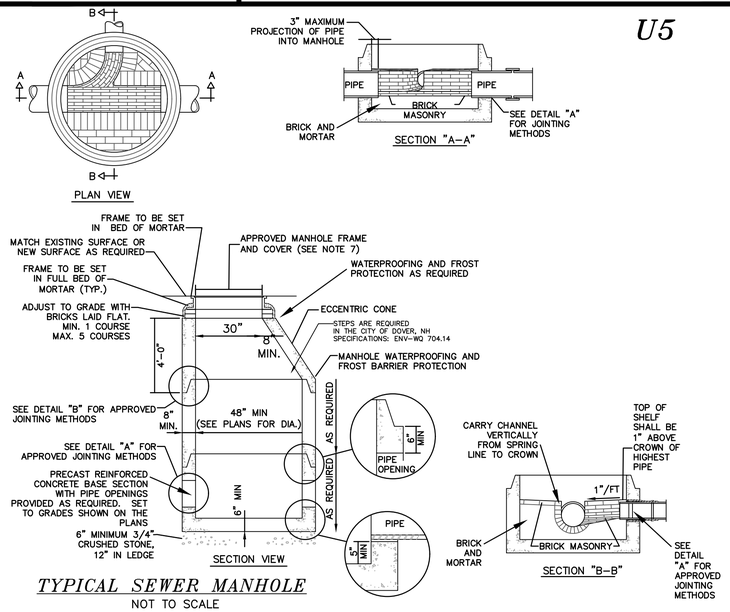
TYPICAL TRENCH DETAIL FOR WATER SYSTEM

NOT TO SCALE

U5

NOTES ON MANHOLE CONSTRUCTION:

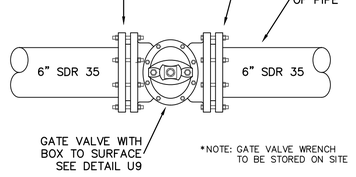
1) IT IS THE INTENTION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES SHALL BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT AND ADEQUATE JOINTING. THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND HS-20-44 LOADING, INCLUDING THE COVER. ALL SMH CONSTRUCTION AND MATERIALS WILL BE IAW ENV.-WQ 704.13 ADOPTED OCTOBER 15, 2014
2) BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE. (IAW ENV.-WQ 704.12 (d))
3) SEWER MANHOLE DIAMETER SHALL BE AS INDICATED ON THE PLANS.
4) PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478.
5) GRAVITY SEWER PIPE TESTING WILL BE IN ACCORDANCE WITH ENV.-WQ 704.06 AND MAN HOLE TESTING IAW ENV.-WQ 704.17 DATED OCTOBER 15, 2014.
6) INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF THE PIPE AND FLOW. INVERT BRICKS SHALL BE LAID ON EDGE AND THE BASE SECTION SHALL BE FULL. AT CHANGES IN DIRECTIONS, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. CARE SHALL BE TAKEN TO ENSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY. (IAW ENV.-WQ 704.13 (a) (9)). MORTAR SHALL CONFORM WITH REQUIREMENTS OF IAW ENV.-WQ 704.13 (c).
7) FRAMES AND COVERS: MANHOLES FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. 3-INCH (MINIMUM HEIGHT) LETTERS WITH THE WORD "SEWER" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH MANHOLE COVER. (IAW ENV.-WQ 704.13 (a) (4-6)) SEWER MAN HOLE COVERS ARE TO PAMREX.
8) SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS.
9) HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE DOVER DPW, WHICH TYPE SHALL, IN GENERAL, DEPEND FOR WATERTIGHTNESS UPON A DOUBLE ROW OF AN OVERLAPPING TYPE ELASTOMERIC OR MASTIC-LIKE GASKET. APPROVED ELASTOMERIC SEALANTS ARE: RAM-NEK, KENT SEAL NO. 2, EZ, OR EQUAL.
10) IN CROSS COUNTRY AREAS OUTSIDE OF THE PAVED ROADWAY SURFACE, THE MANHOLE FRAME ELEVATION SHALL BE A MINIMUM OF 6" ABOVE FINISHED GRADE. GRADE TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE MANHOLE. SEE TYPICAL TRENCH DETAIL ON SHEET D-102.
11.) ALL FRAMES AND GRATES ARE TO BE U.S.A. MADE. MANHOLE STEPS ARE REQUIRED IN THIS MUNICIPALITY AND MUST CONFORM TO THE REQUIREMENTS OF ENV-WQ 704.14.
12.) THE CONTRACTOR TO WORK WITH CITY OF DOVER REVIEW ENGINEER AND SEWER DEPARTMENT ON THE MEANS AND METHODS USED TO INSTALL ALL SEWER STRUCTURES. SPECIFIC ATTENTION IS TO BE PAID TO THE INSTALLATION OF SMH 1A, WHEREAS THE EXISTING PIPE SLOPE IS UNKNOWN. DURING LOW FLOW CONDITIONS, CUT AND TEMPORARILY CAP THE EXISTING 8" VC LINE, OR INSTALL TEMPORARY BY-PASS LINE (OF EQUAL SIZE). AFTER INSTALLATION OF NEW BASIN, FERNCO THE NEW SDR 35 PIPES TO THE EXISTING VC LINES. THIS INSTALLATION IS TO BE COORDINATED WITH THE CITY OF DOVER SEWER DEPARTMENT.
13.) ANY WORK INVOLVING THE CUTTING INTO THE EXISTING A.C. PIPE SHALL MEET THE REQUIREMENTS OF ENV-A 1800.



TYPICAL SEWER MANHOLE

NOT TO SCALE

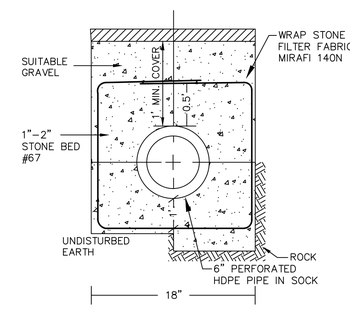
U6



SHUTOFF VALVE DETAIL

NOT TO SCALE

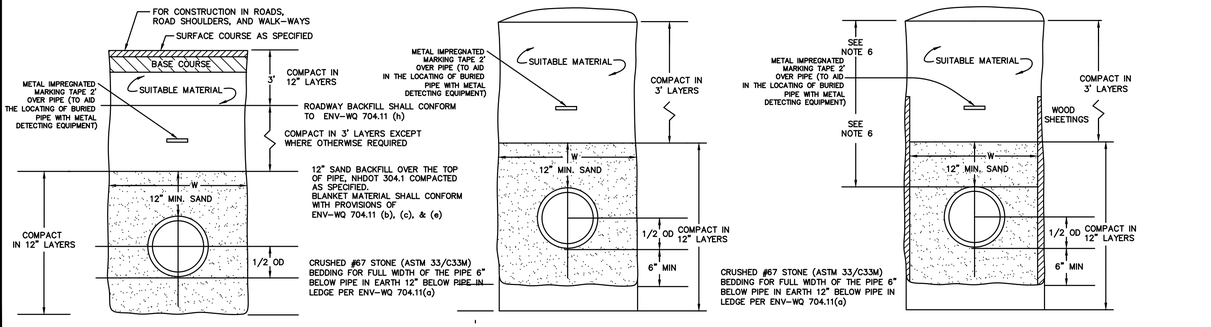
U7



UNDERDRAIN TRENCH DETAIL

U8

SEE ALSO TYPICAL SEWER AND DRAINAGE TRENCH DETAIL, SHEET U-102, DETAIL U13

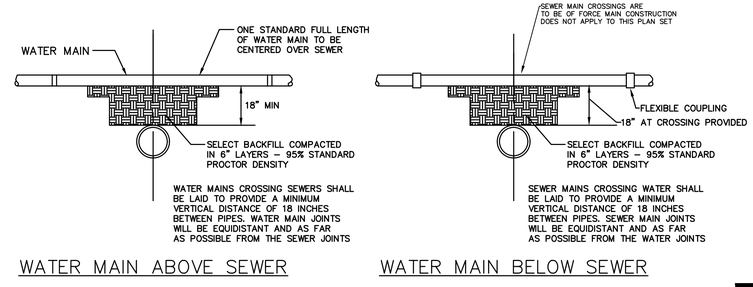


NOT TO SCALE

U9

SEPERATION NOTES:

1. WATER MAIN SHALL BE IN ACCORDANCE WITH THE "RECOMMENDED STANDARDS FOR WATER WORKS" SO-CALLED TEN STATE STANDARDS AND NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL DESIGN STANDARDS.
2. WATER MAINS SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED SEWERS. THE DISTANCE SHALL BE MEASURED EDGE TO EDGE. IF THIS DISTANCE CANNOT BE OBTAINED, THEN THE PIPES SHALL BE INSTALLED IN A SEPERATE TRENCH AT AN ELEVATION SO THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.



TYPICAL WATER/SEWER SEPERATION DETAILS

NOT TO SCALE

REVISION	DATE	DESCRIPTION

UTILITY DETAILS
COMPOSITE DETAILS

LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

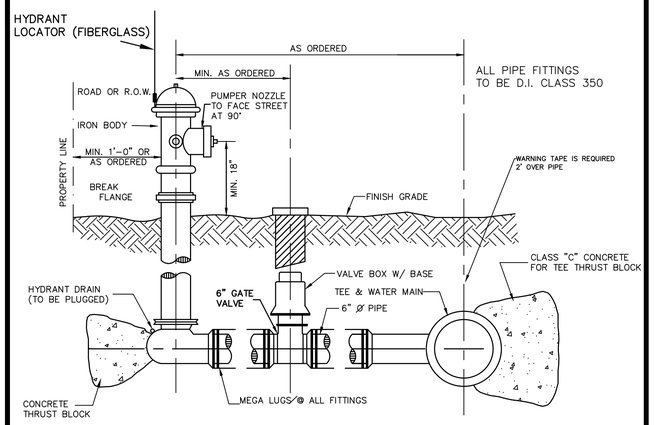
BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

STATE OF NEW HAMPSHIRE - KENNETH A. BERRY No. 14240 LICENSED PROFESSIONAL ENGINEER

U-101

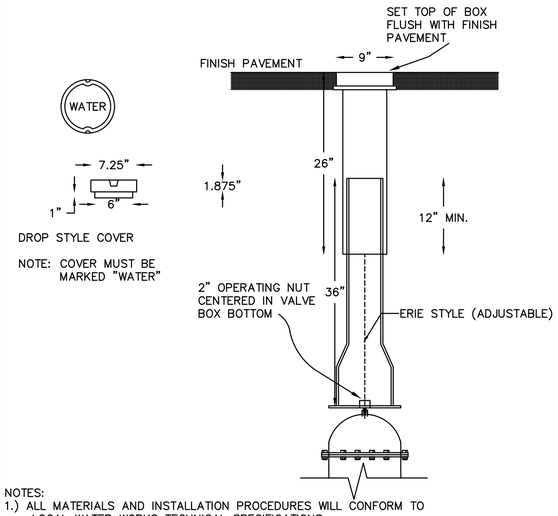
U10



1.) THE FIRE HYDRANT IS TO BE PAINTED CITY OF DOVER STANDARD COLORS AND BE EQUIPPED WITH A HYDRANT LOCATOR.
2.) THE FIRE HYDRANT SHALL BE THE "KENNEDY" TYPE OR APPROVED EQUAL.
3.) K81A HYDRANTS AND GATE VALVES OPEN RIGHT

HYDRANT INSTALLATION DETAIL

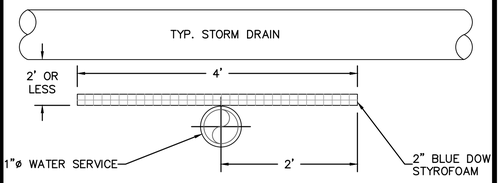
U11



NOTES:
1.) ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO LOCAL WATER WORKS TECHNICAL SPECIFICATIONS.
2.) ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 6' FROM TOP OF PIPE TO FINISH GRADE.

VALVE BOX DETAIL
NOT TO SCALE

U12



INSULATE WATER PIPE WHERE CROSSING UNDER CULVERT
NOT TO SCALE

U13

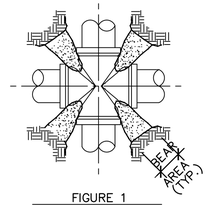


FIGURE 1
CROSS
(ONLY REQ'D IF ANY LEG IS LESS THAN 60 FT. LONG)

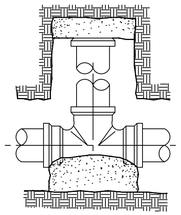
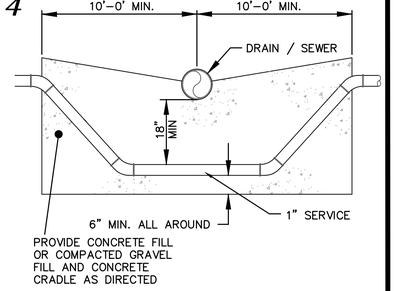


FIGURE 2
TEE, PLUG OR CAP

U14



WATER MAIN INSTALLATION – BELOW DRAIN / SEWER
NOT TO SCALE

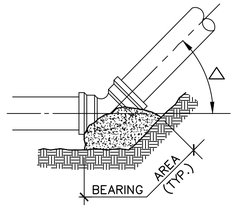


FIGURE 3
HORIZONTAL OR UPWARD VERTICAL BEND

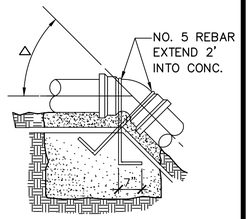


FIGURE 4
DOWNWARD VERTICAL BEND

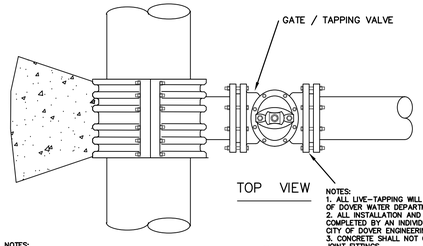
TYPICAL THRUST BLOCKS
NOT TO SCALE

PIPE I.D.	BEARING AREA, SQUARE FEET						VOLUME OF CONC. CU.YD		
	FIGURE 1	FIGURE 2	FIGURE 3, △				FIGURE 4, △		
			90°	45°	22-1/2°	11-1/4°	45°	22-1/2°	11-1/4°
4"	2	2	2	1	1	1	1.0	.5	.5
6"	2	3	3	2	1	1	1.5	1.0	.5
8"	2	5	6	3	2	1	2.0	1.0	.5
10"	3	7	10	5	3	1	4.0	2.0	1.0
12"	3	10	14	8	4	2			
14"	4	14	20	10	5	3			
16"	4	20	24	12	7	4			
18"	5	24	30	16	10	5			
20"	5	28	40	20	12	6			

NOTE:
MECHANICAL JOINTS AT ALL FITTINGS IE: BENDS, TEES, CROSSES, AND VALVES SHALL BE THRUST RESTRAINT. (MEGA-LUG OR APPROVED EQUAL).

GENERAL NOTES:
1. ALL FITTINGS & EXPOSED REBAR TO BE WRAPPED W/ TWO LAYERS OF 6 MIL. POLYETHYLENE WHERE COVERED WITH CONCRETE.
2. ALL CONCRETE SHALL BE CLASS C 3000 P.S.I. MINIMUM 28 DAYS COMPRESSIVE STRENGTH.
3. PLACE CONCRETE AGAINST UNDISTURBED EARTH.
4. TABLE DENOTES MINIMUM BEARING AREA OR VOLUME OF THRUST BLOCK. SPECIAL DESIGN FOR EACH INSTALLATION IS REQUIRED IF ALLOWABLE SOIL BEARING CAPACITY IS LESS THAN 3000 P.S.F.
5. VERTICAL SURFACES NOT BEARING AGAINST UNDISTURBED EARTH SHALL BE FORMED.
6. KEEP CONCRETE AWAY FROM FLANGE BOLTS AND FITTINGS.

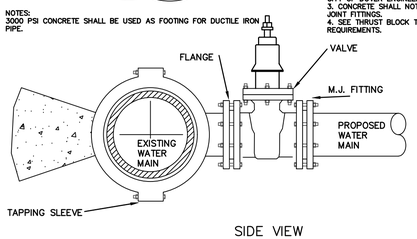
U15



TOP VIEW

NOTES:
1. ALL LIVE-TAPPING WILL BE COMPLETED IN ACCORDANCE WITH CITY OF DOVER WATER DEPARTMENT REGULATIONS.
2. ALL INSTALLATION AND TAPPING OF EXISTING WATER MAINS WILL BE COMPLETED BY AN INDIVIDUAL OR FIRM THAT IS APPROVED BY THE CITY OF DOVER ENGINEERING.
3. CONCRETE SHALL NOT CONTACT BOLTS OR END OF MECHANICAL JOINT FITTINGS.
4. SEE THRUST BLOCK TABLES FOR AREA OF CONCRETE REQUIREMENTS.

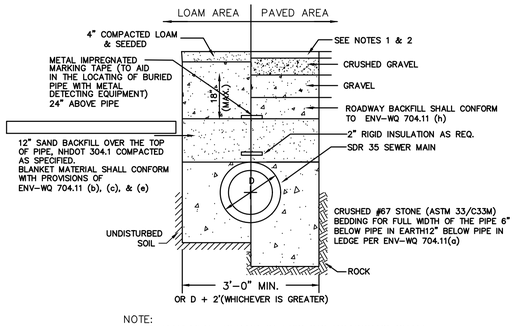
NOTES:
3000 PSI CONCRETE SHALL BE USED AS FOOTING FOR DUCTILE IRON PIPE.



SIDE VIEW

DETAIL FOR STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY
NOT TO SCALE

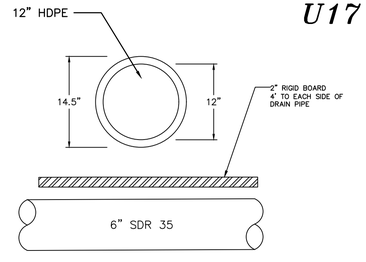
U16



NOTE:
1. PAVEMENT REPAIR IN EXISTING ROADWAYS SHALL CONFORM TO STREET OPENING REGULATIONS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO SUBDIVISION SPEC'S.
2. ANTI-SEEP COLLARS OR CLAY CHECK DAMS ON STEEP RUNS IN WET CONDITIONS

TYPICAL DRAIN AND SEWER PIPE TRENCH
NOT TO SCALE

U17

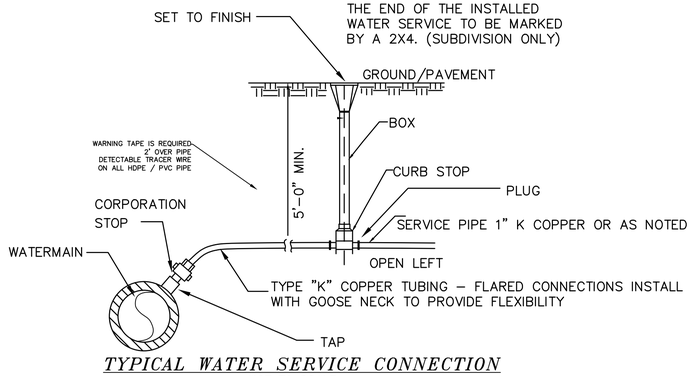


CROSS SECTION A–A

SEWER AND DRAIN CROSSING

U18

NOT TO SCALE



TYPICAL WATER SERVICE CONNECTION
NOT TO SCALE

U-102

REVISION	DATE	DESCRIPTION

UTILITY DETAILS
COMPOSITE DETAILS

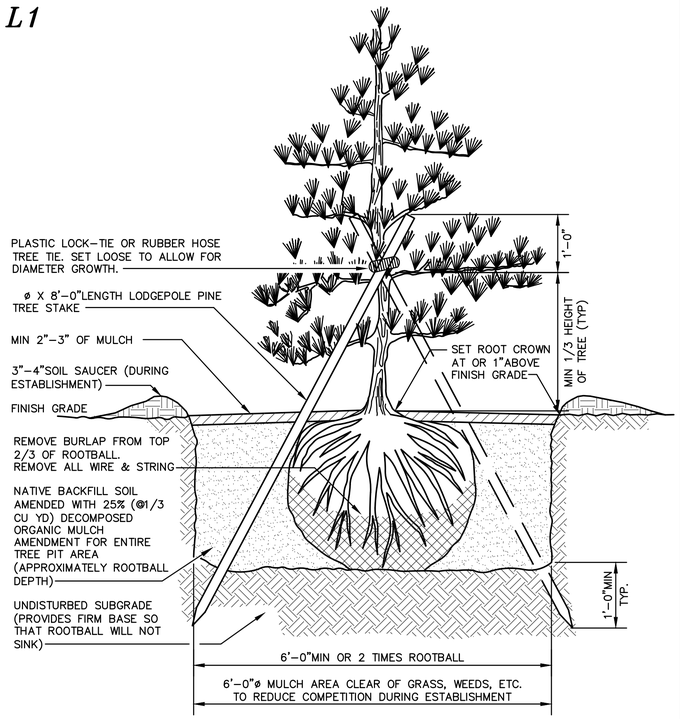
LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332-2863

SCALE : AS SHOWN
DATE : JANUARY 17, 2018
FILE NO. : DB 2017-060

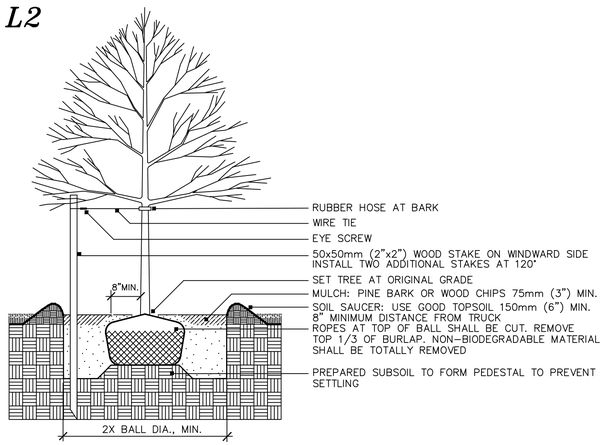
STATE OF NEW HAMPSHIRE
KENNETH A. BERRY
No. 14245
LICENSED PROFESSIONAL ENGINEER

L1



CONIFERIOUS TREE PLANTING

L2



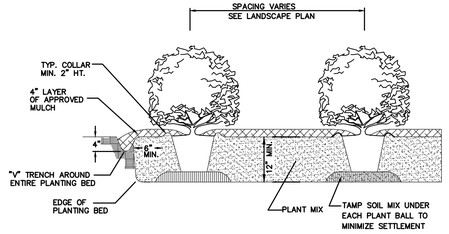
DECIDUOUS TREE PLANTING

NOTE: STAKING TO BE USED IN PARKING ISLANDS AND OTHER CONFINED AREAS AS NECESSARY TO AVOID CONFLICTS WITH PEDESTRIANS

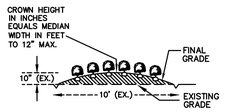
L3

NOTES:

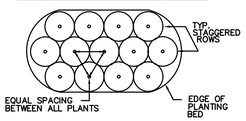
1. SCARIFY ROOT MASS OF CONTAINERIZED PLANT MATERIAL.
2. INSTALL CONTAINERIZED PLANTS AT FINSHED GRADE
3. TAMP PLANTING MIX FIRMLY AS PIT IS FILLED AROUND EACH PLANT BALL.
4. OMIT COLLAR AROUND EACH SHRUB WHEN IRRIGATION SYSTEM IS PRESENT.
5. SOAK EACH PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.



TYPICAL PLANTING BED DETAIL



TYPICAL BED CROWNING

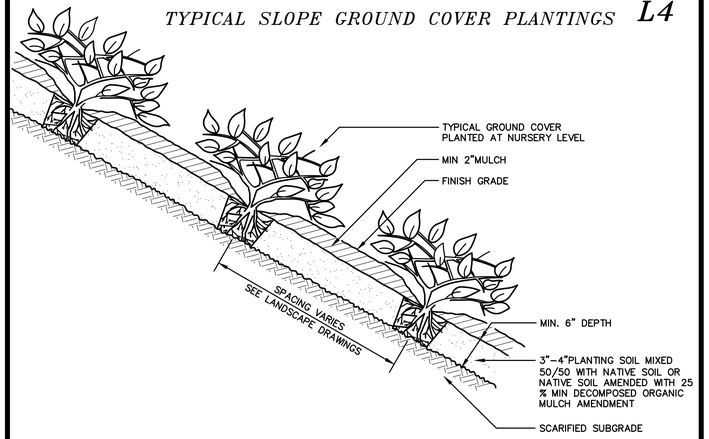


TYPICAL PLANTING BED PLAN

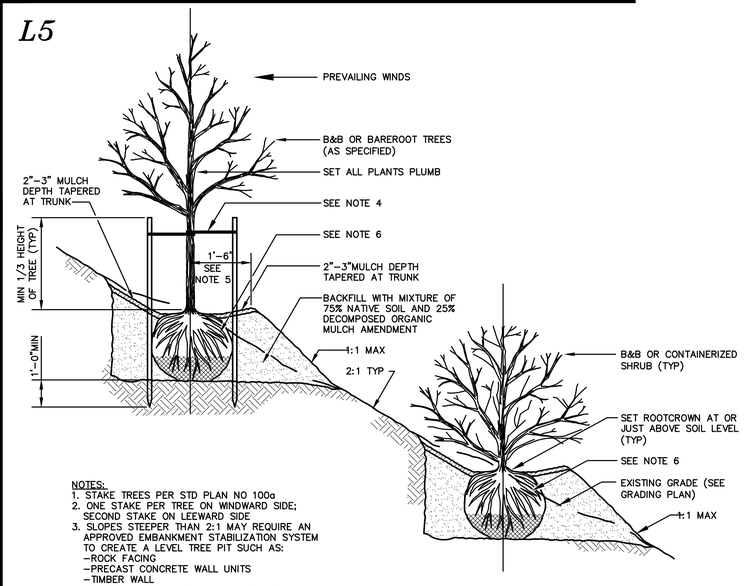
SHRUB & HEDGE PLANTING

L4

TYPICAL SLOPE GROUND COVER PLANTINGS



L5



NOTES:
1. STAKE TREES PER STD PLAN NO 100a
2. ONE STAKE PER TREE ON WINDWARD SIDE; SECOND STAKE ON LEEWARD SIDE
3. SLOPES STEEPER THAN 2:1 MAY REQUIRE AN APPROVED EMBANKMENT STABILIZATION SYSTEM TO CREATE A LEVEL TREE PIT SUCH AS:
   –ROCK FACING
   –PRECAST CONCRETE WALL UNITS
   –TIMBER WALL
   –MANUFACTURED SLOPE RETENTION UNITS
4. CHAINLOCK TREE TIE. LOOP EACH TIE AROUND TREE LOOSELY TO PROVIDE 1" SLACK FOR DIAMETER GROWTH.
5. SHAPE SOIL TO PROVIDE 3' DIAMETER OR ROOTBALL DIAMETER, WHICHEVER IS GREATER, WATERING RING.
6. REMOVE ALL WIRE AND STRING. REMOVE TOP 2/3 OF BURLAP.

TREE PLANTING ON SLOPES

L6

NOTES:

1.) CALL DIG SAFE PRIOR TO BEGINNING WORK. (1–888–344–7233). THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF THE SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES, PAVING, WALKS, CURBING, ETC DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO THE OWNER OR GENERAL CONTRACTOR.

2.) CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL SITE CONDITIONS PRIOR TO CONSTRUCTION BIDDING. SEE NOTE XXX ON OVERALL SITE PLAN.

3.) PROVIDED SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING CONDITIONS.

4.) ALL PLANT MATERIAL INSTALLED SHALL MEET THE SPECIFICATIONS OF "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN

5.) ALL PLANT MATERIALS SHALL BE FREE FROM INSECTS AND DISEASE.

6.) ALL PLANTINGS SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING STAKING OR GUYING, WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE FROM OWNER.

7.) ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.

8.) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING AND NEWLY PLANTED TREES AND SHRUBS DURING THE CONSTRUCTION PROCESS. WHERE REQUIRED, THE CONTRACTOR SHALL INSTALL TEMPORARY FENCING (SNOW OR EQUAL) AROUND EXISTING TREES AND SHRUBS THAT COULD BE IMPACTED BY THE CONSTRUCTION PROCESS. STORAGE OF CONSTRUCTION EQUIPMENT, CONSTRUCTION MATERIALS, SNOW STORAGE AND OR VEHICLE PARKING SHALL NOT BE PERMITTED WITHIN THE DRIP LINE OF TREES OR TWENTY FEET WHICH EVER IS GREATER.

9.) NEW PLANTINGS SHALL BE INSTALLED PER PROJECT DRAWINGS AND SPECIFICATION THAT INCLUDE FERTILIZATION AND MULCHING AS REQUIRED.

10.) ALL SHRUB BEDS AND TREE PITS SHALL BE MULCHED WITH 3" CLEAN SHREDDED BLACK MULCH

11.) WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR GROUND COVER AND PERENNIAL BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL–ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.

12.) MAINTENANCE OF NEW PLANTINGS AND LAWNS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND OR LANDSCAPE SUBCONTRACTOR UNTIL ACCEPTANCE BY THE OWNER. RESPONSIBILITIES SHALL INCLUDE WATERING WEEDING AND MOWING AS NECESSARY. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE, REPLACEMENT MATERIAL SHALL BE GUARANTEED FOR AND ADDITIONAL YEAR FROM TIME OF INSTALLATION.

13.) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY EROSION CONTROL MEASURES DURING THE CONSTRUCTION PHASE AND UNTIL ALL AREAS HAVE BEEN STABILIZED AND ACCEPTED BY THE OWNER. THE GENERAL CONTRACTOR SHALL PROVIDE WEEKLY INSPECTIONS OF EROSION MEASURE AND IMMEDIATELY AFTER STORM EVENTS AND REPAIR AS NECESSARY.

14.) THE GENERAL CONTRACTOR AND OR THE LANDSCAPE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL THREE GUYING MATERIAL ONCE PLANT MATERIAL HAS BEEN ESTABLISHED. (MINIMUM OF ONE GROWNG SEASON). ALL TEMPORARY EROSION CONTROL MEASURE SHALL BE REMOVED ONCE STABILIZATION OF DISTURBANCE HAS BEEN ACCEPTED BY OWNER.

15.) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR A MINIMUM OF TWO MOWINGS FOR ALL TURF AREAS OR UNTIL ACCEPTANCE BY THE OWNER. A MINIMUM UNIFORM 75% CATCH OF TURF IS REQUIRED FOR ACCEPTANCE.

16.) ALL PLANTINGS SHALL BE WATERED REGULARLY DURING THEIR FIRST YEAR AND MAINTAINED PERMANENTLY IN GOOD GROWING CONDITION AS AN EFFECTIVE VISUAL SCREEN.

17.) SHRUBS OR TREES WHICH DIE SHALL BE REPLACED WITHIN ONE GROWING SEASON WITH NEW SHRUBS OR TREES TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE LANDSCAPING REQUIREMENTS.

18.) ALL REQUIRED LANDSCAPING SHALL BE INSTALLED BEFORE OCCUPANCY, OR WITHIN SIX MONTHS IF OCCUPANCY OCCURS DURING WINTER CONDITIONS.

19.) TREES ARE TO BE 2–2.5" CALIPER 6" OFF THE ROOT BALL.

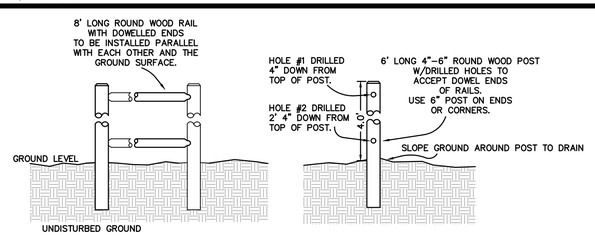
20.) ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 – NURSERY STOCK, LATEST EDITIONS (AMERICAN ASSOCIATION OF NURSERYMEN, INC.)

21.) 4" AGED PINEBARK MULCH AND A WEED BARRIER (TY–PAR FABRIC OR APPROVED EQUAL) SHALL BE APPLIED TO ALL SHRUB AND GROUND COVER BEDS. INSTALL WEED BARRIER AS PER MANUFACTURERS RECOMMENDATIONS.

22.) PLANT–PIT BACK–FILL SHALL BE MIXED AT A RATE OF 7 PARTS OF TOPSOIL TO 2 PARTS OF DEHYDRATED COW MANURE. SLOW RELEASE FERTILIZER SHALL BE APPLIED AS PER MANUFACTURERS RECOMMENDATIONS. USE EXISTING ON–SITE TOPSOIL AS PART OF BACK FILL WHEN AVAILABLE.

23.) ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE RESTORED WITH SEED OR SOD AS INDICATED ON PLANS.

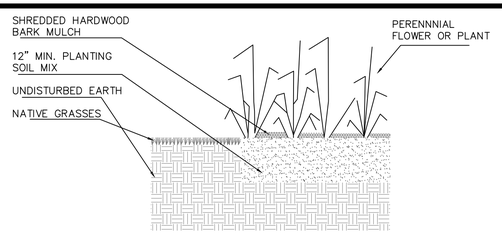
L7



TYPICAL POST & RAIL FENCE DETAIL

N.T.S.

L8



PERENNIAL PLANTING DETAIL

REVISION	DATE	DESCRIPTION

LANDSCAPING CONSTRUCTION DETAILS
COMPOSITE DETAILS

LAND OF
TDAK & COMPANY LLC
99 SIXTH STREET
DOVER, N.H.
TAX MAP 35, LOT 57

BERRY SURVEYING & ENGINEERING
335 SECOND CROWN POINT ROAD
BARRINGTON, NH 03825 (603)332–2863

SCALE: AS NOTED
DATE : JANUARY 17, 2018
FILE NO. : DB 2017–060

STATE OF NEW HAMPSHIRE – KENNETH A. BERRY No. 14143 LICENSED PROFESSIONAL ENGINEER

L–101

SHEET 21 OF 21