CITY OF DOVER

PLANNING TECHNICAL REVIEW COMMITTEE –AGENDA

Meeting Type: Regular Meeting
Meeting Location: McConnell Center, 61 Locust St., Room 305
Meeting Date: **Thursday, September 8, 2022**
Meeting Time: **10:30 AM**

1. 10:30 AM – 11:15 AM: Site Review for TSB Properties, LLC, Assessor's Map D, Lots 12-1, zoned IT, located at Production Drive. (Proposal is to construct five (5) warehouse buildings, totaling 24,420 sf). A Wetlands Protection District CUP for wetland impact will also appear before the Planning Board. (P22-62)

2. 11:15 AM – 12:00 PM: Site Review for White Birch Armory, (Owner: Recon Realty, LLC) Assessor's Map G, Lot 3-A-100, zoned CM, located at 80 Industrial Park Drive. (Proposal is to construct a 20,287sf addition to increase office and warehouse space on site, including additional parking, landscaping, lighting and stormwater management improvements). A Wetlands Protection District CUP for wetland impact will also appear before the Planning Board. (P22-63)

City of Dover, New Hampshire
SITE REVIEW APPLICATION

[Revision Date: July 1, 2021]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: TSB Properties LLC. Telephone # 603-396-1637

Address of Applicant: 385 Sixth Street, Dover, NH, 03820

E-Mail Address: jsmith@windsorbrook.com

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

Address of Property Owner: _____

PROPERTY INFORMATION

Address of Property: Production Drive

Assessor's Map # D Lot(s) # 12-1

Zoning District(s) IT Overlay District(s) Wetlands Protection District

Size of Parcel: 337,616 sq. ft. 7.75 ac. Property Deed: Book 4545 Page: 961

Existing Use of Property: Vacant

SITE PLAN INFORMATION

Describe Proposed Use: Constructing 5 Warehouse unit buildings totaling 24,420 sf

Area of Parcel to be Developed: 89,395 sq. ft.

If Multi-family Residential: Number of Units N/A & Buildings Proposed N/A

If lodging: Number of Units N/A & number of Buildings N/A

Number of Parking Spaces: Existing 0 Proposed 0

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

Number of Employees Total: 0 In Maximum Shift: 0

Disposition of Parcel:

Building Footprint 24,420 sq. ft.

Total Building Area 24,420 sq. ft.

Paved Area 40,823 sq. ft.

Building Setbacks:

Front Yard 188 ft.

Rear Yard 60 ft.

Side Yard: Right 989 ft. Left 52 ft.

City Water? _x_ Yes ___ No How far is city water from the property? Production Drive

City Sewer? _x_ Yes ___ No How far is city sewer from the property? Production Drive

TRANSFER OF DEVELOPMENT RIGHTS INFORMATION

Type of TRANSFER OF DEVELOPMENT RIGHT REQUEST (Check All That Apply):

□ Residential □ Residential (reduced size) □ Industrial | □ Purchase □ Land Preservation

Relief sought (Check All That Apply):

□ Lot Size □ Frontage □ Setback □ 30' Buffer □ Increase by _____ units

Describe Proposed Use or Activity that requires TDR; describe any impacts and document mitigation:

_____

_____

_____

BUILDING INFORMATION

Type of Building to be Built: Pre fabricated steel & concrete with Metal Siding

Height of Building: 11'-4" to 20;-0" Finished Floor Elevation: varies; 197.0 High, 194.0 Low

Number of Seats (where applicable) N/A

Estimated value of construction: $500,000 Refuse removal: Public / Private (circle one)

WAIVER REQUESTS

Site Review Regulations section(s) to be waived: N/A

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

_____

_____

_____

_____

_____

_____

_____

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kevin M. McEneaney, LLS McEneaney Survey Associates of NE

Address 24 Chestnut Street, Dover, NH 03820 Telephone #: 603-742-0911

Professional License #: NH LLS #661 E-mail address: kevin@surveynh.com

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Stephen J. Haight, P.E. Civilworks New England

Address PO Box 1166 Dover, NH 03821 Telephone #: 603-749-0443

Professional License #: NH Civil Engineer #7978 E-mail address: shaight@civilworksne.com

ARCHITECT INFORMATION

Name of Architect and Company (Licensed in N.H.) John W. Tuttle, AIA - TW Design

Address 254 Drake Hill Road Strafford, NH 03884 Telephone #: 603-664-2181

Professional License #: NH Licensed Architect #4015 E-mail address: john@tw-designs.com

LANDSCAPE ARCHITECT INFORMATION

Name of Landscape Architect and Company (Licensed in N.H.) Jefferey R. Hyland IronwoodDesign Group, LLC.

Address PO Box 873 Newmarket, NH 03857 Telephone #: 603-772-0590

Professional License #: NH Landscape Architect #0026 E-mail address: jhyland@fewood.com

Wetland ~~SOIL~~ SCIENTIST INFORMATION

Name ~~of Soil~~ Wetland Scientist and Company (Licensed in N.H.) Damon E. Burt, CWS Fraggle Rock Environmental

Address 38 Garland Road, Strafford, NH, 03884 Telephone #: 603-969-5574

Professional License #: NH CWS #163 E-mail address: frenvironmental@gmail.com

CONSERVATION EASEMENT HOLDER N/A

Name of Easement Holder: _____ Telephone #_____

Address Easement Holder: _____

CITY OF DOVER SITE REVIEW
LIST OF ABUTTERS

Pursuant to RSA 676:4, the State Law of New Hampshire, the City of Dover is required to notify the applicant, abutters (including holders of conservation easements), and any professional whose seal is on the plan, of the public hearing by certified mail, return receipt requested. Staff will provide the abutter information, while the applicant must provide accurate contact information for the owner, applicant and professional agents representing the project.

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
D	12-2	TSB Properties LLC.	385 Sixth Street, Dover NH 03820

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS
Jessica Smith	TSB Properties LLC.	385 Sixth Street, Dover NH 03820

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Stephen J. Haight, P.E.	Civilworks New England	PO Box 1166 Dover, NH 03821
Kevin M. McEneaney, LLS.	McEneaney Survey Associates	24 Chestnut Street Dover, NH 03820

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

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: Jessica Smith Date: 8/16/22

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

Signature of Agent: [signature] Date: 8/16/22

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: Jessica Smith Date: 8/16/22

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: Jessica Smith Date: 8/16/22

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: Jessica Smith Date: 8/16/22

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

CIVILWORKS NEW ENGLAND
181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

TRANSMITTAL

To: City of Dover
Planning Board
288 Central Avenue
Dover, NH 03820

From: CivilWorks New England

Phone: (603)-749-0443

Date: 8/18/2022

Re: TSB Properties, LLC.
Production Drive Lot 12-1
385 Sixth Street
Dover, NH, 03820
1st TRC Submittal

● Comments:

Attached are the following:

- Supplemental:
  - Project Narrative
  - Site Review Application
  - Owner Authorization Letter
  - Conditional Use Permit Application
  - Stormwater Management Inspection and Maintenance Manual
  - Traffic Assessment Memorandum
  - Utility Will Serve Letters
  - Wastewater Pump Calculations
  - Wetlands Permit Application
  - Draft Floor Plans
  - Draft Ironwood Landscape O&M
  - Con Comm Document
  - Correspondence with Consolidated Communication

PROJECT NARRATIVE

for

TSB Properties, LLC.

Site Plan

Production Drive

Tax Map D, Lot 12-1

August 2022

PROJECT OVERVIEW & SITE CHARACTERISTICS

The project parcel is shown on Tax Map D as Lot 12-1, is located within the IT District and consists of 7.754 acres, currently undeveloped. The project applicant is proposing (5) buildings totaling 24,420 sf warehouse buildings with associated infrastructure. The lot is currently owned by TSB Properties.

Utilities are currently located in Production Drive.

The proposed site will include underground communication service, gas service, water services, and associated drainage improvements. A portion of the grading and drainage work is proposed within the 50' wetland buffer with impacts of 9,552 sf. (See Conditional Use Permit application). There is 2,480 sf. of wetland disturbance.

The project site consists of the following general improvements:

- Construction of +/- 24,420 sf warehouse facility with truck access.
- Construction of on-site stormwater infiltration and treatment system, grading, and other drainage requirements.
- On site utility construction.
- Construction of (1) new entrances on Production Drive.
- Stabilize remaining areas with loam and seed.

DRIVEWAY AND PARKING LOT

The facility will have a 24' wide driveway entrance and the site access will be 30' to 55' wide to accommodate delivery trucks and emergency vehicles access. Lighting for the proposed building will be per the Lighting Plan and will be LED fixtures that are dark sky compliant.

For the proposed warehouse facility, per the City of Dover, no parking is proposed.

WETLAND SETBACK IMPACT TYPE

The project work requires a conditional use permit from the City of Dover. Approximately 9,552 sf of the wetland buffer will be impacted. The project does not impact bogs, marshes, sand

dunes, tidal wetlands, cedar swamps, undisturbed tidal buffer zone, or involve any work within 50 feet of a salt marsh. The project impacts 2,480 s.f of wetland, an Expedited Minimum Impact Wetland Permit Application has been submitted. The project is not located within 100 feet of prime wetlands.

DRAINAGE

The parcel is located at the west side of Production Drive. The proposed development will be surrounded by other commercial properties within a previously established industrial park. The watershed of the parcel includes the project site. On site soils are Scantic Silt Loam, and Hollis Charlton fine sandy loam. Scantic series soils classified as ScB C, Hollis-Charlton series soils classified as HcB/HcC C.

The proposed development of the site includes the construction of (5) buildings totaling 24,420 sf. The project also includes the installation of utility and drainage, including on-site stormwater infiltration and treatment systems. The post development watershed is modeled utilizing the same points of analysis as the predevelopment watershed, allowing direct comparison of the peak runoff between the pre and post developed conditions (see drainage report).

UTILITIES

The proposed project will connect to City of Dover water and sewer, Unitil Gas, and Eversource for electricity. Water, sewer, gas, and electric lines are currently located within Production Drive. Building connections will be made per the City's Community Services Utility Division and Fire Department requirements and standards.

City of Dover, New Hampshire
SITE PLAN REVIEW SUBMISSION CHECKLIST

[Revision Date: June 4, 2019]

This site plan review checklist, as required by Chapter 153-6-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.

The first step would be to appear before the Technical Review Committee, to apply, eight (8) folded copies of the site plan with scale of not less than 1"=50' or 1" =100' for larger site plans, need to be provided, along with payment of plan review fees.

Two weeks prior to Planning Board, three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and materials, including response to TRC comments, will be due. Abutter/Notice Fees will be invoiced and need to be paid 28 hours 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: TSB Properties LLC. File Number: _____

PROJECT TITLE: Site Plan for TSB Properties LLC.

PROPERTY LOCATION: Production Drive Tax Map: D Lot: 12-1

	Where/How Provided	Reviewed
1. Completed and signed Application form		
2. Plan Review Fees are provided		
3. Electronic copy of the engineered/surveyed plan layout		
4. Electronic copy of supplementary materials and application		
5. Traffic Impact Assessment and Analysis (Standard or Advanced)		
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. Folded 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		
Location and width of existing and proposed access/egress ways		

	Explain How Provided	Reviewed
Depict pedestrian walkways and accessible access		
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		
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 within the plan set		
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		
11. 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		
Letter to Serve from Public and Private Utilities		
Erosion and Sedimentation Control Plan		
Landscape Operation and Maintenance 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		
Depict test boring locations, groundwater elevations and soil profiles and/or soils types call-outs		
Location of proposed drive-in facilities		
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
Revised August 10, 2020

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 plan is to *(describe the purpose of the plan).*

2. Owners of Record are: Name
   Street address
   Municipality, State, Zip Code
   _____
   Authorized Signature

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

4. The subject parcel(s) contains ____ acres or _____ sq. ft. area of land.

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

6. Reference Plans: (*List all reference plans and their SCRD #)*

7. All applicable right-of-way, conservation, slope, construction, power line, cross travel, or other easements shall be referenced in a note.

8. Zoning dimensional and density requirements are as follows:

   Required: Provided:

   a. Zoning district _____ sub-district _____
   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.
   e. Maximum/minimum lot coverage _____ %
   f. Minimum/maximum bldg. height _____ ft./stories

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

9. 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.

10. 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)*).

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

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

13. As-built plans of the subdivision shall be submitted on paper and in digital format AutoCAD DWG, AutoCAD DXF or ESRI format to the City of Dover Engineer's Office upon completion of project if a street is proposed for City acceptance. 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. The installation of electric power, cable television and telephone lines shall be underground throughout the site for which development is proposed.

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

16. 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.

17. 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.

18. 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 any earth disturbing activity occurs.

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

20. A letter of credit for the cost of revegetating all disturbed areas on the site shall be submitted, and the approved construction sign installed prior to any earth disturbing activity occurs.

21. 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.

22. 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.

23. Building addresses (including apt/unit numbers if applicable) shall be assigned by the Building Official at the time of issuance of a building permit.

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

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

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

27. Any retaining wall taller than four feet (4') requires issuance of a building permit from Inspection Services.

28. Any fence taller than seven feet (7') requires the issuance of a building permit from Inspection Services.

29. Applicant shall complete Land Use Development Tracking Form, most recently revised version, utilizing the online Pollution Tracking and Accounting Pilot Project (PTAPP) portal. https://www.unh.edu/unhsc/ptapp

30. The owner of record shall record at the Registry of Deeds documentation sufficient to provide notice to all persons/entities 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.

31. Fire department access road(s) shall be installed and maintained to support the imposed loads of fire apparatus in all weather conditions at all times.

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

33. Exterior lighting shall be cut-off type fixtures per Chapter 153-14-E and shall provide lighting directed on-site only.

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

35. Elevations are based on U.S.G.S. NVD 1988 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).

36. A security system shall be installed as required by Chapter 45, Article I, section 45-2 of the Code of the City of Dover. (*If a business establishment or multi-family dwelling contained in a new, altered or repaired structure*)

37. Approved backflow preventers shall be provided for both fire and domestic water lines.

38. The (*existing or proposed*) structure shall be served by a sprinkler system as required by Chapter 81- 30 of the Code of the City of Dover and the adopted State of NH Building and Fire Codes.

39. 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 and approved by Inspection Services prior to connection of the backflow device.

40. Fire department connection(s) shall be located on the street side of the building per NFPA 13. Access to the FDC shall maintain a clear and unobstructed path at all times.

41. 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. (i.e. IBC, ANSI-117.1) and NH RSA 155-A:5.

REMARKS:

Ref: TSB PROPORTIES, LLC
Site Plan
Tax Map D, Lot 12-1
Production Drive, Dover, NH 03820

Re: Letter of Authorization

I, **TSB Properties, LLC,** of 385 Sixth Street, Dover NH, 03820, do hereby authorize Civilworks New England, to pursue State and local permits as it applies to the development of land owned by TSB Properties, LLC, located at Production Drive, Dover, NH, Tax Map D, Lot 12-1.

Authorized Signatory

Jessica Smith
Managing Member

Date

8/12/22

City of Dover, New Hampshire
CONDITIONAL USE PERMIT APPLICATION

[Revision Date: October 19, 2020]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: TSB Properties, LLC. Telephone #603-396-1637

Address of Applicant: 385 Sixth Street, Dover, NH 03820

E-Mail Address: jsmith@windsorbrook.com

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

Address of Property Owner: _____

PROPERTY INFORMATION

Assessor's Map # D Lot(s) # 12-1

Address of Property: Production Drive

Zoning District(s) IT Overlay District(s) Wetlands Protection District

Existing Use of Property: Vacant

CONDITIONAL USE PERMIT INFORMATION

Type of Conditional Use Permit (Check All That Apply):

☐ Conservation District	☐ RCM Use Overlay District	☐ Gateway District
☐ Groundwater Protection	☐ Off-Street Parking and Loading	☐ Alternative Treatment Center
☒ Wetland Protection District	☐ Central Business District	☐ Heritage Residential District

Describe Proposed Use or Activity That Requires Conditional Use Permit and Describe Any Impacts:

This application is to request a Conditional Use Permit to allow 9,552 sf of impact to the wetland buffer impact, and 2,480 sf of wetland impact.

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status:

Expedited Minimum Impact Wetlands Permit Application

Name of Professional That Prepared Plans: Stephen J. Haight, P.E. - Civilworks NE

Address PO Box 1166 Dover, NH 03821 Telephone #: 603-749-0443

Professional License #: NH Civil Engineer #7978 E-mail address: shaight@civilworksne.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. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: Jessica Smith Date: 8/16/22

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

Signature of Agent: SJH Date: 8/16/22

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: Jessica Smith Date: 8/16/22

CITY OF DOVER CONDITIONAL USE
LIST OF ABUTTERS

Pursuant to RSA 676:4, the State Law of New Hampshire, the City of Dover is required to notify the applicant, abutters (including holders of conservation easements), and any professional whose seal is on the plan, of the public hearing by certified mail, return receipt requested. Staff will provide the abutter information, while the applicant must provide accurate contact information for the owner, applicant and professional agents representing the project.

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
D	12-1	TSB Properties LLC.	385 Sixth Street, Dover NH 03820

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS
Jessica Smith	TSB Properties LLC.	385 Sixth Street, Dover NH 03820

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Stephen J. Haight, P.E.	Civilworks New England	PO Box 1166 Dover, NH 03821
Kevin M. McEneaney, LLS.	McEneaney Survey Associates	24 Chestnut Street Dover, NH 03820

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

Stormwater Management System Inspection & Maintenance Plan

Prepared for

WAREHOUSE FACILITY
Map D, Lot 12-1

Production Drive
Dover, New Hampshire
Strafford County

AUGUST 2022

Owner of Record:

TSB PROPERTIES, LLC
100 Tri-City Road, Unit 117
Somersworth, New Hampshire 03878

Prepared By:

CIVILWORKS NEW ENGLAND
P.O. Box 1166
181 Watson Road
Dover, New Hampshire 03821

Introduction

Civilworks NE, has prepared the following Stormwater Management System Inspection & Maintenance Plan for **TSB Properties, LLC.** The intent of this plan is to provide a list of procedures that document the inspection and maintenance requirements of the Stormwater Management System for this site.

The following inspection and maintenance program is necessary in order to keep the Stormwater Management System functioning properly. These measures will also help to minimize potential environmental impacts to the areas surrounding the developed site. By following the enclosed procedures, the property owners, and maintenance personnel will be able to maintain the functional design of the Stormwater Management System and maximize its ability to remove sediment and other contaminants from site generated stormwater runoff while at the same time ensuring the recharge of groundwater resources through continued infiltration.

This plan also requires the Owner/Operator to prepare and implement a salt minimization plan to reduce salt usage on-site and ultimately within the watershed. This plan will allow the owner/operator to monitor and modify how much salt is needed, when it should be applied, where it needs to be applied, with the ultimate goal of reducing salt-use without compromising safety. It is expected that salt-use reduction will lead to long-term cost-savings as a result of purchasing less salt and reduced impacts on vegetation (e.g., landscaping) and corrosion of infrastructure .

The salt minimization plan should include the retention of a contractor who has completed the Green SnowPro Training course and obtained NH DES Salt Application Certification.

It is anticipated that this be a living document that will be updated at regular intervals (recommend updating annually in advance of the winter season in order to facilitate adjustments).

Owner

TSB Properties, LLC
385 Sixth Street
Dover, NH 03820

In the event of a change in ownership, this Inspection and Maintenance Plan shall be transferred to the new party; transfer shall be documented to NH DES in writing.

Contact / Responsible Party

TSB Properties, LLC
385 Sixth Street
Dover, NH 03820

Jessica Smith
Phone: (603) 396-1637
Email: jsmith@winsorbrook.com

The contact information for the Contact / Responsible Party shall be kept current; transfer shall be documented to NH DES in writing.

Management Company

TSB Properties, LLC
385 Sixth Street
Dover, NH 03820

The contact information for the Management Party shall be kept current.

Inspection Schedule / Record Retention

Inspection frequency should, at a minimum, be in accordance with New Hampshire Stormwater Manual, Volume 2, latest edition, as updated by NH DES. See the Inspection and Maintenance Plan for frequency requirements. A copy of the completed Stormwater Management System's Inspection & Maintenance Log and Deicing Salt Quantity Use Log shall be maintained, kept on-site, and be made available to local, state, or federal regulators as applicable by law. All Inspection and Maintenance records must be provided to NH DES upon request.

Stormwater Management System Components

The Stormwater Management System associated with the project is designed to mitigate both the quantity and quality of site-generated stormwater runoff and to recharge the underlying groundwater resources. As a result, its design includes the following elements:

- Pipes/Culverts
- Outlet Structures
- Energy Dissipation Structures (Rip Rap)
- Catch Basins
- Storm Chambers (ADS)
- Contech Filterra Bioscape
- Pavement
- Litter / Trash Removal

Structure callouts correlate to the design plans, a copy of which shall be maintained with this Inspection and Maintenance Plan.

Control of Invasive Species

During maintenance activities, check for the presence of invasive plants and remove in a safe manner. Invasive plants shall be controlled to prevent them from reproducing, spreading, or re-growing. See the University of New Hampshire – Cooperative Extension's "Method for Disposing Non-Native Invasive Plants", included at the end of this manual, for guidance on the removal and disposal of invasive species.

Inspection and Maintenance Plan

By implementing the following procedures, the owners will be able to maintain the functional design of the Stormwater Management System and maximize the system's ability to remove sediment and other contaminants from site generated stormwater runoff and to effectively recharge the underlying groundwater resources.

PIPES/CULVERTS:

- Inspect once per year.
- Inspect for clogging and sediment accumulation.
- Remove all debris immediately and sediment accumulations ≥ 2 inches.

OUTLET STRUCTURE(S):

- Inspect once per year.
- Inspect for clogging and sediment accumulation.
- Remove all debris immediately and sediment accumulations ≥ 2 inches.

ENERGY DISSIPATION STRUCTURES (RIP RAP):

- Inspect the outlet protection annually for damage and deterioration. Repair damages immediately.
- If stones become displaced from the riprap areas, they should be replaced immediately and chinked in to assure stability. Add additional riprap as needed. Vegetation growing through the riprap should be eliminated at least yearly.

CATCH BASIN(S):

- Inspect once per year.
- Inspect for floatables, sediment accumulation, and hydrocarbons (oils and grease).
- Remove all floatables immediately and sediment accumulations ≥ 1 foot.
- Hydrocarbons shall be removed immediately by skimming, absorbent materials, or other methods and should be disposed of in accordance with applicable State and Federal regulations.

STORM CHAMBERS (ADS):

- Inspect isolator row(s) for sediment
    - Inspection ports (if present):
        - Remove/open lid on nyloplast incline drain.
        - Remove and clean flexstorm filter if installed.
        - Using a flashlight and stadia rod, measure depth of sediment and record on maintenance log.
        - Lower a camera into isolator row for visual inspection of sediment levels (optional).
        - If sediment is at, or above, 3'' (80 mm), clean out isolator row using the jetvac process.
    - All isolator rows:
        - Remove cover from structure at upstream end of isolator row.
        - Using a flashlight, inspect down the isolator row through outlet pipe:
            i. Mirrors on poles or cameras may be used to avoid a confined space entry.
            ii. Follow OSHA regulations for confined space entry if entering a manhole.
        - If sediment is at, or above, 3'' (80 mm), clean out isolator row using the jetvac process.
- Clean out isolator row using the jetvac process:
    - A fixed culvert cleaning nozzle with rear facing spread of 45'' (1.1 m) or more preferred.
    - Apply multiple passes of jetvac until backflush water is clean.
    - Vacuum structure sump as required.

- Replace all covers, grates. Filters and lids; record observations and actions.
- Inspect and clean basins and manholes upstream of the stormtech system.

CONTECH FILTERRA BIOSCAPE:

- Inspect for accumulated sediments or trash impair free flow of water into Filterra.
- Inspect for trash and floatable debris accumulation.
- Inspect for "ponding" in unit which could be indicative of clogging due to excessive fine sediment accumulation or spill of petroleum oils.
- Inspect health of vegetation within the system.
    - If poor health/lack of growth, inspect soil/mulch for over saturation which could be indicative of a spill nearby, incorrect plant selection, pest infestation, and/or vandalism to plants.
- Inspect for excessive vegetative growth within the system. Trim/prune as necessary.
    - Plants should be appropriate to the species and location of Filterra.
- Inspect structure for cracks.
- Remove trash, debris, and accumulated sediments, based on inspection.
- Repair cracks wider than ½ inch, based on inspection.

PAVEMENT:

- Minimize sanding.
- Minimize application of salt for ice control.
- Clean periodically (1-2 times per year) using a sweeper or vacuum sweeper. Vacuum sweeping is the preferred method.

LITTER / TRASH REMOVAL:

- Routinely patrol site for litter pick up.

DE-ICING AGENTS:

- To address the concerns associated with the application of chlorides and other deicing materials, NHDES recommends that the Owner/Operator develop a Road Salt and Deicing Minimization Plan for the parking lots and roadways. The plan should develop the policies that the development will keep in place to minimize salt and other deicer use after the project has been completed. The plan should include tracking the use of salt and other deicers for each storm event and compiling salt use data annually. (See Anti-Icing Data Form in the appendix).
- Use sand as primary agent for driveway and access way safety during ice and snow conditions
- Minimize the use of salt during the winter
- Use de-icing or anti-caking agents, added to enhance performance and application characteristics of sand mixtures, only as necessary and at minimum application rates.
- Recommend using a certified Winter Operator (Green SnowPro Trained) for applying de-icing agents.
- Monitor weather and apply de-icing agents based on weather conditions and temperatures.
- See attached "Winter Maintenance Guidelines for Porous Pavements" for de-icing agent recommendations.

ANTI-ICING AND SALT MINIMIZATION:

- Owner to develop a Road Salt and Deicing Minimization Plan

- Provide a written policy that the "Development" will keep in place to minimize salt and other deicer use after the project has been completed.
- Use the attached form to track the use of salt and other deicers for each storm event and compiling salt use data annually.
- See attached "Winter Maintenance Guidelines for Porous Pavements" for sanding and salting recommendations.

Inspection & Maintenance Table

System Component / BMP	Minimum Inspection Frequency	Minimum Inspection Requirements	Maintenance / Cleanout Threshold
Pipes/Culverts	Annually	• Check for sediment accumulation • Check for erosion • Ensure swale is stabilized • Maintain healthy stand of veg., 4" minimum • Inspect for invasive species	≥ 1 in. sediment Repair immediately Restore veg. in-kind Mow twice per year Remove/Dispose of accordingly
Outlet Structure(s)	No sanding Limit 2-4 x's Year Periodically Periodically	• No sanding • Minimize salt use for ice • Vacuum to prevent tracking issues and clogging • Monitor to ensure surface drains effectively • Check for trash/debris • See attached for winter maintenance	No sanding Minimize as Req. 2-4 x's a year Remove when noticed
Energy Dissipation (ED) Structures (Rip Rap)	Annually	• Check for displaced stones • Check for woody vegetation	Replace immediately Remove annually
Catch Basins	Annually	• Check for sediment accumulation • Check for floatable contaminants	≥ 1 ft. sediment depth Remove all floatables
Storm Chambers (ADS) JetVac (Jetting & Vactoring)	Annually	• Conduct annually or when inspection shows that maintenance is necessary	≥ 3 in. sediment depth
Contech Filterra Bioscape	Annually	• Check for trash, debris, and accumulated sediments • Check for ponding • Check for overly saturated soil/mulch • Check for excessive plan growth • Check for cracking	Remove as necessary Trim/prune as necessary Seal cracks as necessary Contact manufacturer whenever necessary
Pavement • Sanding • Salt Applications • Sweep/Vacuum • Trash/Debris	Limit use As Req. 1 - 2 x's Year Periodically	• Minimize use to prevent tracking issues • RECORD APPLICATION RATES • Sweep or vacuum to prevent tracking issues • Check for trash/debris	Sweep to prevent issues Minimize as Req. Sweep/Vac as needed Remove when noticed
Litter / Trash Removal	Periodically	• Check for litter and trash	Remove when noticed

Inspection & Maintenance Checklist/Log

The following page contains a blank copy of the Stormwater Management System's Inspection & Maintenance Log and a Deicing Salt Quantity Use Log. These forms are provided to assist the owners with the inspection and maintenance of the aforementioned Stormwater Management System.

Stormwater Management System's Inspection & Maintenance Log

Date of Inspection/Maintenance: _____ Inspector: _____

System Component / BMP	Cleaning / Repair Needed (List Items / Comments)	Date of Cleaning/Repair	Performed By

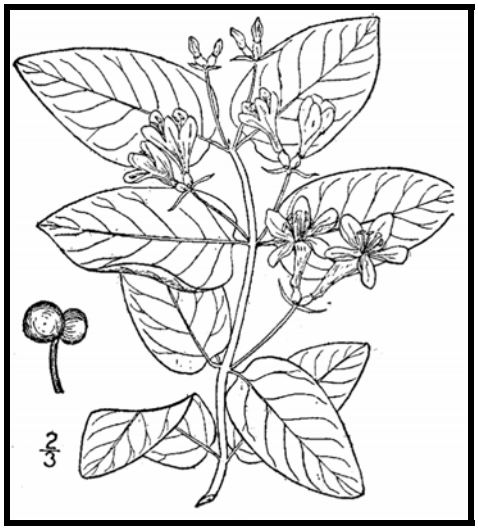
Deicing Salt Quantity Use Log

Date	Amount of Material Applied	Comments

University of New Hampshire Cooperative Extension

Methods for Disposing Non-Native Invasive Plants

Prepared by the Invasives Species Outreach Group, volunteers interested in helping people control invasive plants. Assistance provided by the Piscataquog Land Conservancy and the NH Invasives Species Committee. Edited by Karen Bennett, Extension Forestry Professor and Specialist.



Tatarian honeysuckle
Lonicera tatarica
USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 3: 282.

Non-native invasive plants crowd out natives in natural and managed landscapes. They cost taxpayers billions of dollars each year from lost agricultural and forest crops, decreased biodiversity, impacts to natural resources and the environment, and the cost to control and eradicate them.

Invasive plants grow well even in less than desirable conditions such as sandy soils along roadsides, shaded wooded areas, and in wetlands. In ideal conditions, they grow and spread even faster. There are many ways to remove these non-native invasives, but once removed, care is needed to dispose the removed plant material so the plants don't grow where disposed.

Knowing how a particular plant reproduces indicates its method of spread and helps determine the appropriate disposal method. Most are spread by seed and are dispersed by wind, water, animals, or people. Some reproduce by vegetative means from pieces of stems or roots forming new plants. Others spread through both seed and vegetative means.

Because movement and disposal of viable plant parts is restricted (see NH Regulations), viable invasive parts can't be brought to most transfer stations in the state. Check with your transfer station to see if there is an approved, designated area for invasives disposal. This fact sheet gives recommendations for rendering plant parts non-viable.

Control of invasives is beyond the scope of this fact sheet. For information about control visit www.nhinvasives.org or contact your UNH Cooperative Extension office.

New Hampshire Regulations

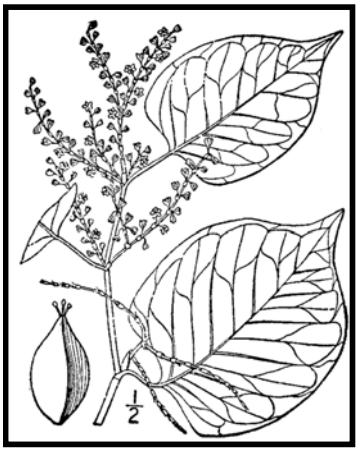
Prohibited invasive species shall only be disposed of in a manner that renders them nonliving and nonviable. (Agr. 3802.04)

No person shall collect, transport, import, export, move, buy, sell, distribute, propagate or transplant any living and viable portion of any plant species, which includes all of their cultivars and varieties, listed in Table 3800.1 of the New Hampshire prohibited invasive species list. (Agr 3802.01)

How and When to Dispose of Invasives?

To prevent seed from spreading remove invasive plants before seeds are set (produced). Some plants continue to grow, flower and set seed even after pulling or cutting. Seeds can remain viable in the ground for many years. If the plant has flowers or seeds, place the flowers and seeds in a heavy plastic bag "head first" at the weeding site and transport to the disposal site. The following are general descriptions of disposal methods. See the chart for recommendations by species.

Burning: Large woody branches and trunks can be used as firewood or burned in piles. For outside burning, a written fire permit from the local forest fire warden is required unless the ground is covered in snow. Brush larger than 5 inches in diameter can't be burned. Invasive plants with easily airborne seeds like black swallow-wort with mature seed pods (indicated by their brown color) shouldn't be burned as the seeds may disperse by the hot air created by the fire.



Japanese knotweed
Polygonum cuspidatum
USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 1: 676.

Bagging (solarization): Use this technique with softer-tissue plants. Use heavy black or clear plastic bags (contractor grade), making sure that no parts of the plants poke through. Allow the bags to sit in the sun for several weeks and on dark pavement for the best effect.

Tarping and Drying: Pile material on a sheet of plastic and cover with a tarp, fastening the tarp to the ground and monitoring it for escapes. Let the material dry for several weeks, or until it is clearly nonviable.

Chipping: Use this method for woody plants that don't reproduce vegetatively.

Burying: This is risky, but can be done with watchful diligence. Lay thick plastic in a deep pit before placing the cut up plant material in the hole. Place the material away from the edge of the plastic before covering it with more heavy plastic. Eliminate as much air as possible and toss in soil to weight down the material in the pit. Note that the top of the buried material should be at least three feet underground. Japanese knotweed should be at least 5 feet underground!

Drowning: Fill a large barrel with water and place soft-tissue plants in the water. Check after a few weeks and look for rotted plant material (roots, stems, leaves, flowers). Well-rotted plant material may be composted. A word of caution- seeds may still be viable after using this method. Do this before seeds are set. This method isn't used often. Be prepared for an awful stink!

Composting: Invasive plants can take root in compost. Don't compost any invasives unless you know there is no viable (living) plant material left. Use one of the above techniques (bagging, tarping, drying, chipping, or drowning) to render the plants nonviable before composting. Closely examine the plant before composting and avoid composting seeds.

Be diligent looking for seedlings for *years* in areas where removal and disposal took place.

Suggested Disposal Methods for Non-Native Invasive Plants

This table provides information concerning the disposal of removed invasive plant material. If the infestation is treated with herbicide and left in place, these guidelines don't apply. Don't bring invasives to a local transfer station, unless there is a designated area for their disposal, or they have been rendered non-viable. This listing includes wetland and upland plants from the New Hampshire Prohibited Invasive Species List. The disposal of aquatic plants isn't addressed.

<table>
<tr><th>Woody Plants</th><th>Method of Reproducing</th><th>Methods of Disposal</th></tr>
<tr><td rowspan="2">Norway maple
(Acer platanoides)
European barberry
(Berberis vulgaris)
Japanese barberry
(Berberis thunbergii)
autumn olive
(Elaeagnus umbellata)
burning bush
(Euonymus alatus)
Morrow's honeysuckle
(Lonicera morrowii)
Tatarian honeysuckle
(Lonicera tatarica)
showy bush honeysuckle
(Lonicera x bella)
common buckthorn
(Rhamnus cathartica)
glossy buckthorn
(Frangula alnus)</td><td rowspan="2">Fruit and Seeds
  </td><td>Prior to fruit/seed ripening
Seedlings and small plants
▪ Pull or cut and leave on site with roots exposed. No special care needed.
Larger plants
▪ Use as firewood.
▪ Make a brush pile.
▪ Chip.
▪ Burn.</td></tr>
<tr><td>After fruit/seed is ripe
Don't remove from site.
▪ Burn.
▪ Make a covered brush pile.
▪ Chip once all fruit has dropped from branches.
▪ Leave resulting chips on site and monitor.</td></tr>
<tr><td rowspan="2">oriental bittersweet
(Celastrus orbiculatus)
multiflora rose
(Rosa multiflora)</td><td rowspan="2">Fruits, Seeds, Plant Fragments
  </td><td>Prior to fruit/seed ripening
Seedlings and small plants
▪ Pull or cut and leave on site with roots exposed. No special care needed.
Larger plants
▪ Make a brush pile.
▪ Burn.</td></tr>
<tr><td>After fruit/seed is ripe
Don't remove from site.
▪ Burn.
▪ Make a covered brush pile.
▪ Chip – only after material has fully dried (1 year) and all fruit has dropped from branches. Leave resulting chips on site and monitor.</td></tr>
</table>

<table>
<tr><th>Non-Woody Plants</th><th>Method of Reproducing</th><th>Methods of Disposal</th></tr>
<tr><td rowspan="2">garlic mustard
(Alliaria petiolata)
spotted knapweed
(Centaurea maculosa)
▪ Sap of related knapweed can cause skin irritation and tumors. Wear gloves when handling.
black swallow-wort
(Cynanchum nigrum)
▪ May cause skin rash. Wear gloves and long sleeves when handling.
pale swallow-wort
(Cynanchum rossicum)
giant hogweed
(Heracleum mantegazzianum)
▪ Can cause major skin rash. Wear gloves and long sleeves when handling.
dame’s rocket
(Hesperis matronalis)
perennial pepperweed
(Lepidium latifolium)
purple loosestrife
(Lythrum salicaria)
Japanese stilt grass
(Microstegium vimineum)
mile-a-minute weed
(Polygonum perfoliatum)</td><td rowspan="2">Fruits and Seeds
  </td><td>Prior to flowering
Depends on scale of infestation
Small infestation
▪ Pull or cut plant and leave on site with roots exposed.

Large infestation
▪ Pull or cut plant and pile. (You can pile onto or cover with plastic sheeting).
▪ Monitor. Remove any re-sprouting material.</td></tr>
<tr><td>During and following flowering
Do nothing until the following year or remove flowering heads and bag and let rot.

Small infestation
▪ Pull or cut plant and leave on site with roots exposed.

Large infestation
▪ Pull or cut plant and pile remaining material. (You can pile onto plastic or cover with plastic sheeting).
▪ Monitor. Remove any re-sprouting material.</td></tr>
<tr><td>common reed
(Phragmites australis)
Japanese knotweed
(Polygonum cuspidatum)
Bohemian knotweed
(Polygonum x bohemicum)</td><td>Fruits, Seeds, Plant Fragments
Primary means of spread in these species is by plant parts. Although all care should be given to preventing the dispersal of seed during control activities, the presence of seed doesn’t materially influence disposal activities.</td><td>Small infestation
▪ Bag all plant material and let rot.
▪ Never pile and use resulting material as compost.
▪ Burn.

Large infestation
▪ Remove material to unsuitable habitat (dry, hot and sunny or dry and shaded location) and scatter or pile.
▪ Monitor and remove any sprouting material.
▪ Pile, let dry, and burn.</td></tr>
</table>

January 2010

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CIVILWORKS NEW ENGLAND

181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

TRAFFIC ASSESMENT MEMORANDUM

INTRODUCTION

Civilworks New England has prepared this traffic-assessment memorandum (TAM). This TAM regards TSB Properties, LLC. located on Production Drive in the City of Dover, New Hampshire.

This TAM includes:

- existing site description
- proposed project description
- road description
- public transit
- sight distances at the proposed driveways
- trip generation
- trip distribution/assignment
- potential traffic impacts

This TAM concludes that:

- relevant sight distances at the Production Drive/proposed driveway intersections will be adequate
- The proposed project is not anticipated to add significant new traffic to the area

EXISTING SITE DESCRIPTION

The site:

- is along the westerly side of Production Drive
- has an area of about 7.75 acres
- is presently wooded, vacant land
- Tax Map D, Lot 12-1

PROPOSED PROJECT DESCRIPTION

The project will provide:

- five self-storage unit buildings; building #1 is 10,800sf, building #2 is 9,720 sf, building #3/#5 is 1,200 sf, building #4 is 1,500 sf
- total gross floor area of 24,420 sf
- one unsignalized driveway intersecting the west side of Production Drive

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ROAD DESCRIPTION

Production Drive:

- is under the jurisdiction of the City
- is a 850 ft ± long local industrial street with a cul de sac
- Production Drive is oriented about north-south
- at the south end, intersects with Sixth Street, an arterial street serving the City
- includes a relatively straight horizontal alignment
- has minor vertical grades
- has bituminous concrete pavement in overall good condition
- has one travel lane per direction, with 30ft. wide pavement
- has unmarked pavement
- has a posted speed limit of 30 miles per hour
- has sloped granite curb encompassing the entire road
- has a bituminous concrete sidewalk that is on the easterly side of the road
- includes utility services
- currently has two industrial/ office buildings; 17 Production Drive, 27 Production Drive

PUBLIC TRANSIT

Collaborative Alliance for Seacoast Transportation (COAST) Route 33 provides service along nearby Venture Drive. Service is on non-holiday weekdays. The nearest stop to the site is on Sixth Street in-between Production Drive and Venture Drive 516 ft. (0.1 mi) from the site. Route 33 connects with:

- central Dover, to the southeast
- the Dover Transportation Center, to the southeast
- the New Hampshire Department of Transportation Park and Ride facility near Indian Brook Drive and Spaulding Turnpike interchange 9, to the east
- the Strafford County Complex, to the west

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SIGHT DISTANCES

The American Association of State Highway and Transportation Officials (AASHTO) has established authoritative policy for sight distances at intersections with no signal in terms of:

- stopping sight distance (SSD)

Production Drive services traffic from the abutters on the easterly side of the street: 17 Production Drive (RTH Mechanical Contractors), and 27 Production Drive (GM Nameplate Co). This proposed development will access from the westerly side of Production Drive. Due to very low traffic volume, and the short length (850ft.±) of Production Drive, there will be an adequate sight distance looking south down Production Drive.

CALCULATED TRIP GENERATION

The Institute of Transportation Engineers (ITE) compiles and publishes trip-generation information for a variety of land uses in *Trip Generation Manual*.[1] This authoritative guide for calculating site traffic includes information for light industrial, Land Use Code 151, based on floor area.[2] Table 1 shows calculated vehicle trip ends due to the proposed development as:

Table 1. Calculated Trip generation.

	Vehicle-Trips*		
Time Period	Total	In	Out
Weekday Daily	36	18	18
Weekday AM-Street-Peak Hour	4	2	2
Weekday PM-Street-Peak Hour	4	2	2
Saturday Daily	44	22	22
Saturday Site-Peak Hour	4	2	2

* ITE, *Trip Generation Manual*, Mini Warehouse, Land Use Code 151, 24,420-sf floor area.

- weekday daily, 36 (total of in and out)
- weekday AM-street-peak hour, 4 (2 in and 2 out)
- weekday PM-street-peak hour, 4 (2 in and 2 out)
- Saturday Daily, 44 (total of in and out)
- Saturday Site-Peak Hour, 4 (2 in and 2 out)

[1] ITE, *Trip Generation Manual,* 10th edition (Washington DC, September 2017).

[2] ITE, *Trip Generation Manual,* Volume 2, Data, Industrial (Land Uses 100-199), pages 1 to 19.

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TRIP DISTRIBUTION/ASSIGNMENT

Calculated trip generation is so low that area traffic operations are not sensitive to trip distribution/assignment. Vehicle-trips to and from the east may predominate largely due to connections with central Dover and the Spaulding Turnpike. All trips access the site from Sixth Street via Production Drive.

POTENTIAL TRAFFIC IMPACTS

The calculations show less than 100 peak-hour primary vehicle-trips, due to the proposed project. More specifically, tabulated peak-hour trip generation is:

- 4 vehicle-trips
- split entering versus exiting the site

Therefore, the proposed project is not anticipated to add significant new traffic to the Sixth Street or Production Drive.

CONCLUSION

In conclusion:

- sight distances at the Production Drive/proposed driveway intersections will be adequate
- the proposed project is not anticipated to add significant new traffic to the area

CIVILWORKS NEW ENGLAND

Sincerely,

_____
Stephen J. Haight, PE

cc. TSB Properties, LLC.

EVERSOURCE ENERGY

June 3, 2022

1700 Lafayette Road
Portsmouth, NH 03801

Michael J Busby
603-436-7708 x555-5678
michael.busby@eversource.com

Douglas LaRosa
Civilworks NE
181 Watson Road
Dover, NH 03820

Dear Jessica Smith:

I am responding to your request to confirm the availability of electric service for the proposed Production Drive Lot 12-1 project being constructed for/by TSB Properties, LLC.

The proposed project consists of a 5 warehouse buildings with 0 residential units approximately 24,420 s/f of warehouse space at the ground level. The proposed development will be constructed along Production Drive.

The developer will be responsible for the installation of all underground facilities and infrastructure required to service the new building. The service will be as shown on attached marked up Utility Plan 10. The proposed building service will be fed from existing underground electric as depicted on utility plan 10. The developer will work with Eversource to obtain all necessary easements and licenses for the proposed underground facilities listed above.

This letter serves as confirmation that Eversource has sufficient capacity in the area to provide service to this proposed development. The cost of extending service to the aforementioned location and any associated infrastructure improvements necessary to provide service will be borne by the developer unless otherwise agreed upon.

The attached drawing titled “Utility Plan” dated 8/18/2022, shows transformer locations to service your proposed project.

Eversource approves the locations shown; assuming the final installed locations meet all clearances, physical protection, and access requirements as outlined in Eversource’s “Information & Requirements For Electric Supply” (https://www.eversource.com/content/docs/default-source/pdfs/requirements-for-electric-service-connections.pdf?sfvrsn=2).

If you require additional information or I can be of further assistance please do not hesitate to contact me at our Portsmouth Office, 603-436-7708 Ext. 555-5678

Respectfully.

Michael J. Busby, PE
NH Eastern Regional Engineering and Design Manager, Eversource

cc: (via e-mail)
Thomas Boulter, Eastern Region Operations Manager, Eversource
Nickolai Kosko, Field Supervisor, Electric Design, Eversource

June 3rd, 2022

Michael Menary
Staff Engineer
Civilworks New England, PLLC.

Natural Gas to The Storage Barn on Production Drive Dover, NH 03820 Tax Map D, Lot 12-1

Hi Michael,

Unitil/Northern Utilities Natural Gas Division has reviewed the requested site for natural gas service:

Unitil hereby confirms that natural gas is available for the proposed building at Production Drive Dover, NH 03820 Tax Map D, Lot 12-1.

If you have any questions, please contact me at 603-534-2379.

Sincerely,



Dave MacLean
Senior Business Development Rep
Unitil
T 603.294.5261
M 603.534.2379
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Michael Menary

From: Michael Menary
Sent: Tuesday, August 2, 2022 11:34 AM
To: Mavrogeorge, Kenneth
Cc: Douglas LaRosa; Boulanger, Bill; DeGrace, Amelia
Subject: RE: CNE 21001-The Storage Barn - Production Drive, Dover, NH 03820 Tax Map D, Lot 12-1/ 12-2

Hello Ken,

After some development of the site plan we are proposing an E-one system with a 2" force main for sewer discharge, a 1" domestic water service, and 2 3" fire protection services to Lot 12-1. Sewer discharge is approximately 4 employees per day x 10 gal/employee = 40 GPD.

Please advise on the availability of water and sewer to the site. If you have any questions do not hesitate to contact me directly.

Thank you

Michael Menary
Staff Engineer
Civilworks New England, PLLC.
181 Watson Road
P.O. Box 1166
Dover, New Hampshire 03821
O: (603) 749-0443
C: (973) 907-0370

From: Mavrogeorge, Kenneth [mailto:K.Mavrogeorge@dover.nh.gov]
Sent: Friday, June 3, 2022 3:11 PM
To: Michael Menary <MMenary@civilworksne.com>
Cc: Douglas LaRosa <dlarosa@civilworksne.com>; Boulanger, Bill <B.Boulanger@dover.nh.gov>; DeGrace, Amelia <A.DeGrace@dover.nh.gov>
Subject: RE: CNE 21001-The Storage Barn - Production Drive, Dover, NH 03820 Tax Map D, Lot 12-1/ 12-2

Michael,

We have no concerns with the addition of a hydrant at this location.

Ken

Ken Mavrogeorge, PE
City Engineer
City of Dover, NH
271 Mast Rd.
Dover, NH 03820-4169
e: k.mavrogeorge@dover.nh.gov
p: 603.516.6454 | c: 603.534.8865

f: 603.516.6463

Dover: First in New Hampshire, First with you!
http://www.dover.nh.gov

From: Michael Menary <MMenary@civilworksne.com>
Sent: Thursday, June 2, 2022 12:33 PM
To: Mavrogeorge, Kenneth <K.Mavrogeorge@dover.nh.gov>
Cc: Douglas LaRosa <dlarosa@civilworksne.com>
Subject: CNE 21001-The Storage Barn - Production Drive, Dover, NH 03820 Tax Map D, Lot 12-1/ 12-2

Security Notice: External sender. Use caution with hyperlinks or attachments.

Hello Kenneth,

As previously stated, The Storage Barn is proposing to construct a commercial self-storage unit buildings on Production Drive on both Lots 12-1 and 12-2.

For both sites; there is no water service, no sprinklers, and no sewer service.

We are proposing fire hydrants on either site which will need water service. Attached are draft utility plans for lot 12-2 and draft site plan for lot 12-1 to give a better location and project intent.

Please advise on the availability of water to the site. If you have any questions do not hesitate to contact me directly.

Thank you for your time

Michael Menary
Staff Engineer
Civilworks New England, PLLC.
181 Watson Road
P.O. Box 1166
Dover, New Hampshire 03821
O: (603) 749-0443
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CIVILWORKS NEW ENGLAND
181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

Job:	21001 - Lot 12-1 Warehouse Facility
Calculated By:	MJM
Checked By:	DJL
Date:	8/18/2022

Pump System Design

Design Flow: $Warehouse = 2\ empl. x\ 10\ \frac{gal}{empl.} =$ 20 GPD

Avg. Flow: $20\ \frac{gal}{day}\ x\ \frac{1\ Day}{8\ hr}\ x\ \frac{1 hr}{60\ min} =$ 0.04 GPM

Peak Factor: 3 → Peak Discharge: 0.12 GPM

Total Dynamic Head (TDH)

$$TDH = H_s + H_L + \frac{V^2}{2g}$$

H_s = Static Head

H_L = Friction Head Loss Pipes (Pipe Length + Equiv. Fitting Length)

$V^2 / 2g$ = Velocity Head (g= 32.2 ft/s^2)

Static Head (H_s)

Sewer Manhole Inv. In =	189.53
Pump Chamber Inv. In =	187.99
Pump Chamber off elev. =	186.25
Static Head =	3.28

Dynamic Head

Force Main L =	690 ft
Length in Pump Chamber =	3 ft
Total Pipe L =	693 ft

Assume 1.5" HDPE SDR-11

Fitting	Pipe Dia. (in.)	Quantity	Equiv L (ea.)(see table 1)	Total Equiv. L (ft.)
90 ^{o} Elbow	0.125	4	30 *Dia	15.00
Check Valve	0.125	1	135 *Dia	16.88
Gate Valve	0.125	1	13 *Dia	1.63
Union/Enlarger	0.125	1	2 *Dia	0.25
45 ^{o} Elbow	0.125	2	16 *Dia	4.00
			Total =	38 ft

Total Effective L (TEL) = 693 pipe + 38 fitting = 731 ft

Flow (GPM)	H_f (ft/100)(see table 2)	H_L (H_fx TEL/100)	V (FPS) (see table 2)	$V^2/2g$	$H_L + V^2/2g$	H_s (ft)	TDH (ft)
8	0.54	3.95	1.35	0.028	3.97	3.28	7.25
10	0.82	5.99	1.69	0.044	6.04	3.28	9.32
12	1.15	8.40	2.03	0.064	8.47	3.28	11.75
15	1.74	12.72	2.54	0.100	12.82	3.28	16.10
18	2.43	17.76	3.05	0.144	17.90	3.28	21.18

Refer to SPD Pump Performance Curve

Operating Point: 13.75 TDH
13.5 GPM

Within "typical operating pressure"

Try E-One DH151 Package System with E-one SPD Grinder Pump (1 HP, 1725 RPM)

DH151 Tank Capacity: 150 Gal

Tank Dia: 38.8 in = 3.23 ft

Volume/ft = $\frac{\pi(Tank\ Dia)^2}{4} * 1'$ 8.21 ft^3

8.21 ft^3 x 7.48 gal/ft^3 = 61.4 gal/ft

DH151 Drawdown = 3 in = 0.25 ft

Drawdown Vol. = 15.35 gal

Drawdown Time = 1.14 min

E|ONE SPD PUMP PERFORMANCE CURVE

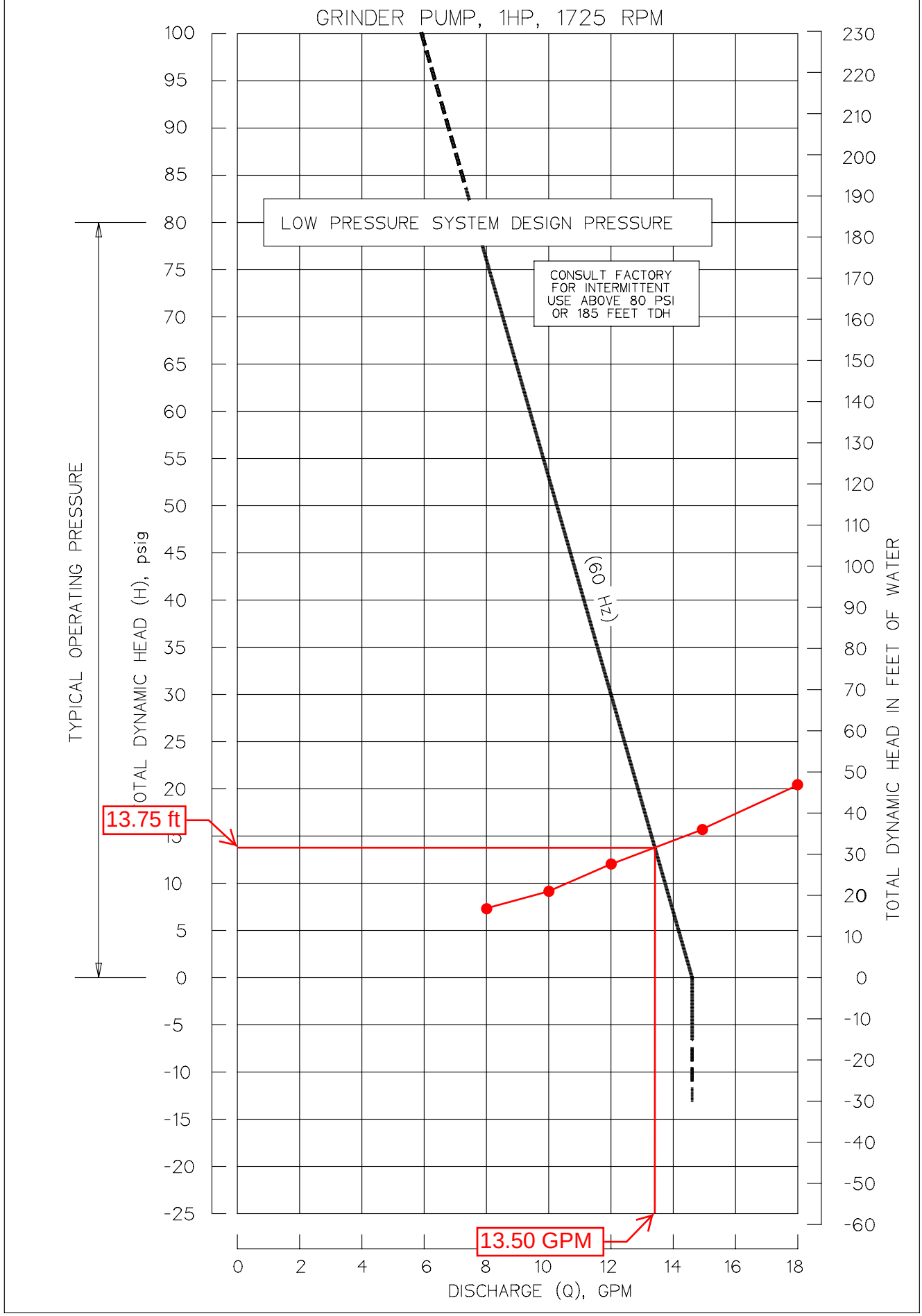


TABLE 1

A Staff Report

Valves, Pipe and Fittings

By JAMES A. EDWARDS, Field Editor, POLLUTION ENGINEERING

Valves and fittings that serve to direct and control the flow of fluids are the critical sections of a piping layout in a waste treatment process. Properly applied, they can provide either ON-OFF or proportional control, manual or automatic adjustment, good corrosion resistance, cleanouts in slurry lines, fluid blending, and backflow prevention. Good piping design depends on the proper application and use of valves and fittings through understanding of the equipment capability and how it was intended to be used.

Valves are available in a number of designs: **globe, ball, gate, plug, butterfly, diaphragm,** and **needle.** All of these types can be equipped with motor operators to automate the application. Despite the wide range of designs, all valves have only one purpose: to slow down or stop the flow of fluid. This is done by blocking the flow of the fluid with an obstruction that can be adjusted inside the pipe, with little leakage from the pipe to the outside.

Table 1. Representative Equivalent Length in Pipe Diameters (L/D) of Various Valves and Fittings

	Description of Product		Equivalent Length in Pipe Diameters (L/D)
Globe Valves	Stem Perpendicular to Run — With no obstruction in flat, bevel, or plug type seat	Fully open	340
	With wing or pin guided disc	Fully open	450
	Y-Pattern (No obstruction in flat, bevel, or plug type seat) — With stem 60 degrees from run of pipe line	Fully open	175
	— With stem 45 degrees from run of pipe line	Fully open	145
Angle Valves	With no obstruction in flat, bevel, or plug type seat	Fully open	145
	With wing or pin guided disc	Fully open	200
Gate Valves	Wedge Disc, Double Disc, or Plug Disc	Fully open	13
		Three-quarters open	35
		One-half open	160
		One-quarter open	900
	Pulp Stock	Fully open	17
		Three-quarters open	50
		One-half open	260
		One-quarter open	1200
Conduit Pipe Line Gate, Ball, and Plug Valves		Fully open	3**
Check Valves	Conventional Swing	0.5† ... Fully open	135
	Clearway Swing	0.5† ... Fully open	50
	Globe Lift or Stop — Stem Perpendicular to Run or Y-Pattern	2.0† ... Fully open	Same as Globe
	Angle Lift or Stop — 2.5 vertical and 0.25 horizontal	2.0† ... Fully open	Same as Angle
	In-Line Ball	Fully open	150
Foot Valves with Strainer	With poppet lift-type disc	0.3† ... Fully open	420
	With leather-hinged disc	0.4† ... Fully open	75
Butterfly Valves (8 inch and larger)		Fully open	40
Cocks	Straight-Through — Rectangular plug port area equal to 100% of pipe area	Fully open	18
	Three-Way — Rectangular plug port area equal to 80% of pipe area (fully open)	Flow straight through	44
		Flow through branch	140
Fittings	90 Degree Standard Elbow		30
	45 Degree Standard Elbow		16
	90 Degree Long Radius Elbow		20
	90 Degree Street Elbow		50
	45 Degree Street Elbow		26
	Square Corner Elbow		57
	Standard Tee — With flow through run		20
	With flow through branch		60
	Close Pattern Return Bend		50

Reprinted from Crane Technical Paper No. 410.

**Exact equivalent length is equal to the length between flange faces or welding ends.

†Minimum calculated pressure drop (psi) across valve to provide sufficient flow to lift disc fully.

TABLE 2

150 C	DR-11 200 PSI Poly Pipe IPS Size PE 4710													
Size:	1"		1-1/4"		1-1/2"		2"		2-1/2"		3"		4"	
GALS PER MIN	OD 1.315 Wall 0.120 ID 1.075		OD 1.660 Wall 0.151 ID 1.358		OD 1.900 Wall 0.173 ID 1.554		OD 2.375 Wall 0.216 ID 1.943		OD 2.875 Wall 0.261 ID 2.353		OD 3.500 Wall 0.318 ID 2.864		OD 4.500 Wall 0.409 ID 3.682	
	Vel	Loss	Vel	Loss	Vel	Loss	Vel	Loss	Vel	Loss	Vel	Loss	Vel	Loss
2	0.71	0.25	0.44	0.08										
4	1.41	0.90	0.89	0.29	0.68	0.15								
6	2.12	1.91	1.33	0.61	1.02	0.32								
8	2.83	3.25	1.77	1.04	1.35	0.54	0.87	0.18						
10	3.54	4.92	2.22	1.58	1.69	0.82	1.08	0.28						
12	4.24	6.90	2.66	2.21	2.03	1.15	1.30	0.39	0.89	0.15				
15	5.30	10.42	3.32	3.34	2.54	1.74	1.62	0.59	1.11	0.23				
18	6.36	14.61	3.99	4.69	3.05	2.43	1.95	0.82	1.33	0.32	0.90	0.12		
20	7.07	17.76	4.43	5.70	3.38	2.96	2.16	1.00	1.48	0.39	1.00	0.15	0.60	0.04
25	8.84	26.8	5.54	8.61	4.23	4.47	2.71	1.51	1.84	0.59	1.25	0.23	0.75	0.07
30	10.61	37.6	6.65	12.07	5.08	6.26	3.25	2.11	2.21	0.83	1.49	0.32	0.90	0.09
35	12.38	50.1	7.75	16.1	5.92	8.33	3.79	2.81	2.58	1.11	1.74	0.43	1.05	0.13
40	14.14	64.1	8.86	20.6	6.77	10.67	4.33	3.60	2.95	1.42	1.99	0.54	1.21	0.16
45			9.97	25.6	7.61	13.27	4.87	4.48	3.32	1.76	2.24	0.68	1.36	0.20
50			11.08	31.1	8.46	16.1	5.41	5.44	3.69	2.14	2.49	0.82	1.51	0.24
55			12.2	37.1	9.31	19.2	5.95	6.49	4.06	2.56	2.74	0.98	1.66	0.29
60			13.3	43.6	10.15	22.6	6.49	7.63	4.43	3.00	2.99	1.15	1.81	0.34
65			14.4	50.5	11.00	26.2	7.04	8.84	4.80	3.48	3.24	1.34	1.96	0.39
70			15.5	58.0	11.8	30.1	7.58	10.15	5.17	4.00	3.49	1.54	2.11	0.45
75					12.7	34.2	8.12	11.53	5.53	4.54	3.74	1.75	2.26	0.51
80					13.5	38.5	8.66	12.99	5.90	5.12	3.99	1.97	2.41	0.58
85					14.4	43.1	9.20	14.5	6.27	5.73	4.23	2.20	2.56	0.65
90					15.2	47.9	9.74	16.2	6.64	6.37	4.48	2.45	2.71	0.72
95							10.28	17.9	7.01	7.04	4.73	2.70	2.86	0.80
100							10.82	19.6	7.38	7.74	4.98	2.97	3.01	0.88
110							11.9	23.4	8.12	9.23	5.48	3.55	3.32	1.04
120							13.0	27.5	8.86	10.85	5.98	4.17	3.62	1.23
130							14.1	31.9	9.59	12.58	6.48	4.83	3.92	1.42
140							15.2	36.6	10.33	14.4	6.97	5.55	4.22	1.63
150									11.07	16.4	7.47	6.30	4.52	1.86
160									11.8	18.5	7.97	7.10	4.82	2.09
170									12.5	20.7	8.47	7.95	5.12	2.34
180									13.3	23.0	8.97	8.83	5.43	2.60
190									14.0	25.4	9.46	9.76	5.73	2.88
200									14.8	27.9	9.96	10.74	6.03	3.16
220									16.2	33.3	10.96	12.81	6.63	3.77
240											12.0	15.0	7.23	4.43
260											13.0	17.5	7.84	5.14
280											13.9	20.0	8.44	5.90
300											14.9	22.7	9.0	6.70
320											15.9	25.6	9.6	7.55
340													10.2	8.4
360													10.9	9.4
380													11.5	10.4
400													12.1	11.4
450													13.6	14.2
500													15.1	17.3
550													16.6	20.6

Vel = Velocity (ft/s)

Loss = Friction Loss (ft/100' of pipe)

1/18/2017

CIVILWORKS NEW ENGLAND

181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

August 1, 2022

Re: Wetland Bureau – Minimum Expedited Permit
Wetland Permit Application

Subject: Wetland Permit Application – Minimum Expedited Review
Tax Map D, Lot 12-1
Production Drive
Dover, NH 03820

Our Reference No. 21001

Dear NHDES Wetlands Bureau:

On behalf of, TSB Properties, LLC, we are pleased to submit (1) full size set of the attached Expedited Wetlands Permit plans and materials for wetland bureau consideration.

If you have any questions that we might be able to answer, please do not hesitate to contact our office.

Sincerely,

CIVILWORKS NEW ENGLAND



Stephen J Haight, PE

MINIMUM EXPEDITED WETLANDS PERMIT APPLICATION

For

TSB PROPERTIES, LLC
MAP D, LOT 12-1

Production Drive
Dover, NH
Strafford County

August 2022

Prepared For:

TSB PROPERTIES, LLC
385 Sixth Street
Dover, NH 03820

Prepared By:

CIVILWORKS NEW ENGLAND
P.O. Box 1166
181 Watson Road
Dover, New Hampshire 03820

Project Narrative

PROJECT NARRATIVE
ACCOMPANYING MINIMUM EXPEDITED WETLANDS PERMIT
for
TSB Properties, LLC
Production Drive
Dover, NH 03820
Tax Map D, Lot 12-1

PROJECT OVERVIEW

The applicant, TSB Properties, LLC, is proposing to construct a climate controlled warehouse facility consisting of one (1) 10,800 s.f. warehouse, one (1) 9,720 s.f. warehouse, two (2) 1,200 s.f. warehouses and one (1) 1,500 s.f. warehouse, with associated site improvements, such as, site access, grading, stormwater mitigation, and utilities. The project proposes 2,480 square feet of wetlands impact (filling) for the construction of culverts and paved roadway into the site. To minimize the unavoidable wetland impacts, the proposed roadway and culverts were designed in locations that minimize wetland impacts to the greatest extent practicable. No other jurisdictional areas or PRAs are impacted from the proposed development.

A NHB has been filed and the results showed no recorded occurrences for sensitive species near the proposed project area. No further consultation with the New Hampshire Fish & Game is required for this project. During construction, erosion control measures will be implemented around the perimeter of the site to prevent any silt from construction washing into nearby waterways or from leaving the site.

The proposed project is in accordance with the property line setbacks (Env-Wt 307.13). The avoidance and minimization checklist (Env-Wt 311.07) (attached). This is not a standard application and therefore, Env-Wt 313.01, does not apply. Attached are the erosion control notes and construction sequence. The applicant will be responsible for maintaining the completed project.

The work will impact less than 3,000 square feet of the wetlands; therefore, the project is eligible for a Minimum Expedited (EXP) Wetlands Permit. Total impact to the wetlands on the east of the site is approximately 2,480 square feet. This application will require the acceptance of the Town of Dover's Conservation Commission and a conditional use permit from the Town of Dover's Planning Board.

PROJECT LOCATION AND SITE CHARACTERISTICS

The project is located on Production Drive, Dover, NH, 03820. According to the Town of Dover's Residential Property Record Card for map block No. D-12-1, the lot size is +/- 7.75 acres. The lot is bounded by commercial lots to the north and northeast, Production Drive to the east, and residential lots to the south and west. The lot is an undeveloped commercial lot located within the Innovative Technology (IT) zone.

MIMIMUM IMPACT TYPE

The project involves alteration of less than 3,000 square feet in the wetlands located on the southeast side of the site. As verified using the Wetlands Permit Planning Tool (WPPT), the wetlands to be disturbed is not classified as Prime Wetlands or in a PRA. Therefore, this project is in conformance to the "Minimum Impact Projects" as described under Env-Wt 303.04 (f). Damon E. Burt, N.H.C.W.S #163, reviewed and verified the wetlands during, March 2021, in accordance with the 1987 Corps of Engineers Wetlands Delineation Manual. The proposed disturbance to the wetland will be 2,480 square feet for the construction of culverts and paved roadway into the site

Wetlands Permit Application

Env-Wt 310.01
EXPEDITED MINIMUM IMPACT (EXP)
WETLANDS PERMIT APPLICATION
Water Division/Land Resources Management
Wetlands Bureau

Check the Status of your Application

RSA/Rule: RSA 482-A/Env-Wt 100-900

APPLICANT'S NAME: TSB Properties, LLC **TOWN NAME:** Dover, NH

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

SECTION 1 - REQUIRED PLANNING FOR ALL PROJECTS (Env-Wt 306.05; Env-Wt 603.03; Env-Wt 603.05)

Please use the Wetland Permit Planning Tool (WPPT), the Natural Heritage Bureau (NHB) DataCheck Tool, the Aquatic Restoration Mapper, or other sources to assist in identifying key features such as: priority resource areas (PRAs), protected species or habitats, coastal areas, designated rivers, or designated prime wetlands.

Does the property contain a PRA? If yes, provide the following information:	☐ Yes ☒ No
• Does the project qualify for an Impact Classification Adjustment (e.g. NH Fish and Game Department (NHF&G) and NHB agreement for a classification downgrade) or a Project-Type Exception (e.g. Maintenance or Statutory Permit-by-Notification (SPN) project)? See Env-Wt 407.02 and Env-Wt 407.04).	☐ Yes ☒ No
• Protected species or habitat? o If yes, species or habitat name(s): o NHB Project ID #:	☐ Yes ☒ No
• Bog?	☐ Yes ☒ No
• Floodplain wetland contiguous to a tier 3 or higher watercourse?	☐ Yes ☒ No
• Designated prime wetland or duly-established 100-foot buffer?	☐ Yes ☒ No
• Sand dune, tidal wetland, tidal water, or undeveloped tidal buffer zone?	☐ Yes ☒ No
Is the property within a Designated River corridor? If yes, provide the following information: • Name of Local River Management Advisory Committee (LAC): • A copy of the application was sent to the LAC on Month: Day: Year:	☐ Yes ☒ No
For dredging projects, is the subject property contaminated? • If yes, list contaminant(s):	☐ Yes ☒ No
Is there potential to impact impaired waters, class A waters, or outstanding resource waters?	☐ Yes ☒ No
For stream crossing projects, provide watershed size (see Wetland Permit Planning Tool or Stream Stats): N/A	

SECTION 2 - ELIGIBILITY (Env-Wt 306.03; Env-Wt 310.01; Env-Wt 310.03)

You must confirm that your project meets **ALL** of the following statements to qualify for the EXP process:

- The project qualifies as minimum impact project (Env-Wt 306.03).
- The project does not include activities that are prohibited under RSA 482-A (Env-Wt 306.03(a)).
- The project does not include any work in a jurisdictional area that was started without first obtaining the applicable approval (Env-Wt 306.03(b)).
- No work has been done on the subject property pursuant to another EXP or a Statutory Permit-by-Notification (SPN) within 12 months of the date this EXP will be issued. Alternatively, if any work has been done on the subject property pursuant to another EXP or a SPN within 12 months of the date this EXP will be issued, then you are submitting information, including a plan, with this application demonstrating that:
  - The work proposed in this EXP application is wholly unrelated to and separate from the work already done under the EXP or SPN; and
  - The work proposed in this EXP application, when combined with work that has been done under previously issued EXPs or SPNs within the last 12 months, does not constitute a project for which a Standard Permit is required (Env-Wt 310.03(a)).
- If the project is located in a PRA, it also qualifies for an impact classification adjustment under Env-Wt 407.02 or a project-type exception (PTE) under Env-Wt 407.04 (Env-Wt 310.01(d)(6)).

☒ My project meets all statements above. Proceed to Section 3.

☐ My project does not meet all of the statements above. **Your project does not qualify for the EXP process. Your project either is not permittable or requires a Standard Permit.**

SECTION 3 - INFORMATION ON THE PROPOSED PROJECT (Env-Wt 310.01(c))

Identify the rule(s)/provision(s) which make the project a minimum impact project. Refer to the project list below and the Expedited Minimum Impact (EXP) Project Classification Guidance Document.

☐ Aquatic Vegetation Control Projects (Env-Wt 510.08(a))
☐ Water Access Structure Construction Projects (Env-Wt 511.06(a))
☐ Beach Replenishment Projects (Env-Wt 511.07(a))
☐ Deck or Patio Repair Projects (Env-Wt 511.08(a))
☐ Breakwater Maintenance and Repair Projects (Env-Wt 512.07(b))
☐ Docking and Accessory Docking Structure Construction, Repair, and Replacement Projects (Env-Wt 513.24(a))
☐ Docking Structure Modification Projects (Env-Wt 513.25(a))
☐ Accessory Docking Structure Installation, Construction, Modification, Repair, and Replacement Projects (Env-Wt 513.26(a))
☐ Canopy Projects (Env-Wt 513.27(a))
☐ Bank/Shoreline Stabilization Construction Projects (Env-Wt 514.07(a))
☐ Dug-in Basins and Boathouse Construction or Modification Projects (Env-Wt 515.06(a), (b))
☐ Dug-in Basins and Boathouse Maintenance and Repair Projects (Env-Wt 515.07(a))
☐ Intake and Outflow Structure Construction, Maintenance and Repair Projects (Env-Wt 516.05; Env-Wt 516.06(b))
☐ Trail or Pathway Projects (Env-Wt 517.06(a); Env-Wt 517.06(d))
☐ Boardwalk Projects (Env-Wt 517.07(a); (Env-Wt 517.09)
☐ Dry Hydrants and Other Non-Docking Structure Projects (Env-Wt 518.07(a)(1), (b))
☐ Pond Construction, Maintenance, and Repair Projects (Env-Wt 519.08(a), (b); Env-Wt 519.09(a))
☐ Residential Utility Installation Projects (Env-Wt 521.06(a)(7))

- ☐ Non-tidal Dredging Projects (Env-Wt 523.04(a))
- ☒ Residential, Commercial, and Industrial Development Projects (Env-Wt 524.06(b))
- ☐ Restoration/Enhancement Projects (Env-Wt 525.05)
- ☐ Dam Construction, Reconstruction, or Replacement Projects (Env-Wt 526.06(a))
- ☐ Dam Modification, Repair, or Maintenance Projects (Env-Wt 526.07(a))
- ☐ Pubic Highway Projects (Env-Wt 527.06; Env-Wt 527.07)
- ☐ Coastal Projects (Env-Wt 600)
- ☐ Stream Crossing Projects (Env-Wt 903.01(e))
- ☐ All Other Projects (Env-Wt 407.03)

Provide the project-specific information required by the rule(s)/provision(s). Refer to Chapters Env-Wt 400, Env-Wt 500, Env-Wt 600, and/or Env-Wt 900, as applicable, for project-specific application and design requirements.
Env-Wt 400: Wetlands delineated by Certified Wetland Scientist (Env-Wt 406.02); Jurisdictional area delineated (Env-Wt 406.05); Each wetland is classified in accordance with the federal classification method (Env-Wt 406.06); The project does not impact a PRA (Env-Wt 407.02); Proposed impact is less than 3000 s.f, therefore 'minimum' classification (Env-Wt 407.03).
Env-Wt 500: Project avoids and minimizes impacts to wetlands (Env-Wt 524.02); The project provides setbacks and water quality protection measures to protect private and public drinking water supplies, source water protection areas, and fisheries (Env-Wt 524.04); A construction notice will be filed at least 48 hours prior to commencing work (Env-Wt 524.05).
Env-Wt 600 and Env-Wt 900: N/A
Please see applicable Standard Project Specific Worksheets for guidance.

For projects located on waterbodies, provide the linear feet of shoreline frontage on the property: _____ linear feet
(☒ Not applicable)

Provide a brief description of the project and the purpose of the project, outlining the scope of work to be performed and whether impacts are temporary or permanent. DO NOT reply “See attached".
The applicant, TSB Properties, LLC, is proposing to construct a climate controlled warehouse facility consisting of one (1) 10,800 s.f. warehouse, one (1) 9,720 s.f. warehouse, two (2) 1,200 s.f. warehouses and one (1) 1,500 s.f. warehouse, with associated site improvements, such as, site access, grading, stormwater mitigation, and utilities. The project proposes 2,480 square feet of wetlands impact (filling) for the construction of culverts and paved roadway into the site. No other jurisdictional areas or PRAs are impacted from the proposed development.

Identify the type of jurisdictional resources to be impacted and the area of impact in square feet and/or linear feet:
The proposed project impacts 2,480 square feet of the wetlands located on the southeast side of the site.

(☐ Not applicable)

SECTION 4 - PROJECT LOCATION (Env-Wt 310.01(b))

ADDRESS: Production Drive

TOWN/CITY: Dover, NH

TAX MAP/LOT NUMBER: D/12-1

US GEOLOGICAL SURVEY (USGS) TOPO MAP WATERBODY NAME:
☒ N/A

LATITUDE/LONGITUDE in decimal degrees (to five decimal places): 43.2209° North
70.9139° West

SECTION 5 - APPLICANT (DESIRED PERMIT HOLDER) INFORMATION (Env-Wt 310.01(a))

If the applicant is a trust or a company, then the name of the trust or company should be written as the applicant's name.

NAME: TSB Properties, LLC

MAILING ADDRESS: 385 Sixth Street

TOWN/CITY: Dover	STATE: NH	ZIP CODE: 03820

PHONE: (603) 396-1637	EMAIL ADDRESS (OPTIONAL): jsmith@winsorbrook.com

ELECTRONIC COMMUNICATION: By initialing here: TSB, I hereby authorize NHDES to communicate all matters relative to this application electronically.

SECTION 6 - AUTHORIZED AGENT INFORMATION (Env-Wt 310.01(a))

If the agent is a company, then the name of the company should be written as the agent's name.

NAME: CIvilworks New England

MAILING ADDRESS: 181 Watson Road, P.O. Box 1166

TOWN/CITY: Dover	STATE: NH	ZIP CODE: 03821

PHONE: (603) 749-0443	EMAIL ADDRESS (OPTIONAL): shaight@civilworksne.com

ELECTRONIC COMMUNICATION: By initialing here: CNE, I hereby authorize NHDES to communicate all matters relative to this application electronically.

SECTION 7 - PROPERTY OWNER INFORMATION, IF DIFFERENT FROM APPLICANT (Env-Wt 310.01(a)) If the owner is a trust or a company, then the name of the trust or company should be written as the owner's name.		
NAME:		
MAILING ADDRESS:		
TOWN/CITY:	STATE:	ZIP CODE:
PHONE:	EMAIL ADDRESS (OPTIONAL):	
ELECTRONIC COMMUNICATION: By initialing here: , I hereby authorize NHDES to communicate all matters relative to this application electronically.		

SECTION 8 - APPLICATION FEE (RSA 482-A:3, I)
☒ $400 for minimum impact projects. Please make your check or money order payable to: "Treasurer - State of NH".

SECTION 9 - REQUIRED CERTIFICATIONS (Env-Wt 310.01(d))	
Initial each box below to certify:	
Initials: TSB	The proposed project meets the conditions and limits of the applicable minimum impact project rule.
Initials: TSB	All abutters have been notified.
Initials: TSB	If the project is to repair or replace a docking structure, the docking structure is an existing legal structure. (☒ N/A)
Initials: TSB	The proposal is the alternative with the least adverse impact to jurisdictional areas, as required by Env-Wt 310.01(d)(4).
Initials: TSB	The project is not an after-the-fact application.
Initials: TSB	The project is: • Not located in a PRA, or • Is located in a PRA but is subject to a classification adjustment under Env-Wt 407.02 or a project-type exception under Env-Wt 407.04.
Initials: TSB	The applicant is aware of the limits of the EXP and understands and will comply with all conditions in the EXP and all applicable conditions in Env-Wt 307.

Initials: JS TSB	To the best of the signer's knowledge and belief, all required notifications have been provided.
Initials: JS TSB	The information submitted on or with the application is true, complete, and not misleading to the best of the signer's knowledge and belief.
Initials: JS TSB	The signer understands that: • The submission of false, incomplete, or misleading information constitutes grounds for NHDES to: 1. Deny the application. 2. Revoke any approval that is granted based on the information. 3. If the signer is a certified wetland scientist, licensed surveyor, or professional engineer licensed to practice in New Hampshire, refer the matter to the joint board of licensure and certification established by RSA 310-A:1. • The signer is subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641. • The signature shall constitute authorization for the municipal conservation commission and the Department to inspect the site of the proposed project, except for minimum impact trail projects, where the signature shall authorize only the Department to inspect the site pursuant to RSA 482-A:6, II.
Initials: JS TSB	If the applicant is not the owner of the property, each property owner signature shall constitute certification by the signer that he or she is aware of the application being filed and does not object to the filing.

SECTION 10 - REQUIRED SIGNATURES (Env-Wt 310.01(d))

SIGNATURE (OWNER)*:	PRINT NAME LEGIBLY:	DATE:
Jessica Smith	TSB Properties, LLC	8/12/22

*Note: If the applicant is not the owner of the property, each property owner also shall sign and date the application provided that property owner signatures shall not be required for transportation projects adjacent to existing rights-of-way where an easement will be obtained prior to the start of construction (Env-Wt 311.11(d)). Check the following box if your project meets this exception: ☐.

SIGNATURE (APPLICANT, IF DIFFERENT FROM OWNER):	PRINT NAME LEGIBLY:	DATE:

SIGNATURE (AGENT, IF APPLICABLE):	PRINT NAME LEGIBLY:	DATE:
	Civilworks New England	8/12/22

SECTION 11 - CONSERVATION COMMISSION SIGNATURE (Env-Wt 310.01(h))**

The signed statement from the Conservation Commission may be submitted electronically.

The signature below certifies that the municipal Conservation Commission or, if there is no conservation commission, the local governing body, has reviewed this application and the municipality waives its right to intervene on the project, per RSA 482-A:11.

AUTHORIZED COMMISSION SIGNATURE:	PRINT NAME LEGIBLY:	DATE:
	William Hunt	

SECTION 12 - LOCAL RIVER MANAGEMENT ADVISORY COMMITTEE SIGNATURE (Env-Wt 310.01(i))**		
The signature below certifies that the LAC waives its right to intervene per RSA 482-A:11: (☒ N/A This project is **not** within a Designated River Corridor)		
AUTHORIZED LAC REPRESENTATIVE SIGNATURE:	PRINT NAME LEGIBLY:	DATE:

**Note: If the application is administratively complete, except for the signed statement from the Conservation Commission and/or LAC, the application will be processed under the application processing times established in RSA 482-A:3, XIV (Env-Wt 310.02(h)). The applicant may also indicate that they are applying for a minimum impact application under standard processing timelines.

SECTION 14 - TOWN / CITY CLERK SIGNATURE (Env-Wt 310.01(f))	
As required by RSA 482-A:3, I(a)(1), I hereby certify that the municipality has received four copies of the application, including all attachments.	
TOWN/CITY CLERK SIGNATURE:	PRINT NAME LEGIBLY: Susan Mistretta
TOWN/CITY: Dover, NH	DATE:

DIRECTIONS FOR TOWN/CITY CLERK:
Per RSA 482-A:3, I(a)(1)

1. IMMEDIATELY sign the original application form and four copies in the signature space provided above.
2. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
3. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board.
4. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:
Submit the single, original permit application form bearing the signature of the Town/City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery at the address at the bottom of this page.

Signed Check

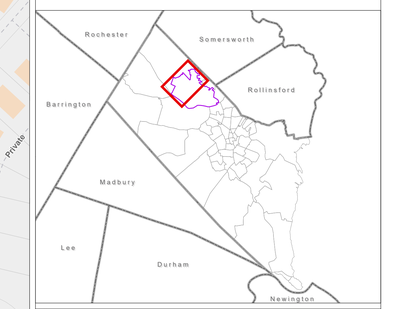
Tax Map

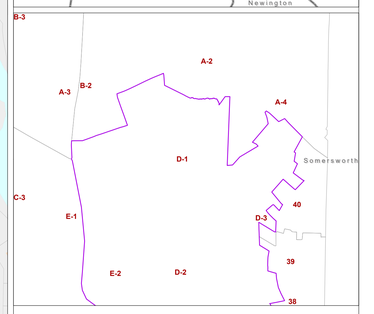
CITY OF DOVER
STAFFORD COUNTY NH
TAX ASSESSORS MAP

Map Page: D-1

SITE

Parcels
Parcel on Adjacent Maps
Buildings
Rail Road
Water Body
Swamp/Marsh
Streams
A-20-0-0 Parcel Number
0.24 AC Parcel Acreage
240 Address Number





400 200 0 400 Feet

1:2,400
1 " = 200 '

This map is for assessment and planning purposes only. It is not intended to be used for description, conveyance, authoritative definition of any legal boundary, or property title. This is not a survey product. Users are encouraged to examine the documentation associated with the data on which this map is based for information related to its accuracy, currentness and limitations.

Map Generated: Wednesday, March 21, 2018

AppGeo

Abutters List & Notifications

ABUTTERS LIST

for

MINIMUM EXPEDITED WETLANDS PERMIT

TSB PROPERTIES, LLC
PRODUCTION DRIVE
TAX MAP D, LOT 12-1
Prepared August 4, 2022

ABUTTERS

TAX MAP/ LOT NO	OWNER OF RECORD	MAILING ADDRESS
A-49-3	LANGELLOTTI, JODI F & CHRISTOPHER	453 SIXTH STREET DOVER, NH 03820
A-49-4	BROWN, NEVIN D & ROSE, EMILY G	7 QUAIL DRIVE DOVER, NH 03820
A-49-6	BANAIAN, JACOB C & KRISTEN	11 QUAIL DRIVE DOVER, NH 03820
A-49-13	PORTER, DOUGLAS W & YUKARI	29 QUAIL DRIVE DOVER, NH 03820
D-11-7	DOVER BUSINESS & IND DEV AUTHORITY F/K/A DOVER IND DEV AUTHORITY	288 CENTRAL AVENUE DOVER, NH 03820
D-12	TSB PROPERTIES, LLC (OWNER)	385 SITH STREET DOVER, NH 03820
D-12-2	TSB PROPERTIES, LLC (OWNER)	385 SITH STREET DOVER, NH 03820

CIVILWORKS NEW ENGLAND

181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

August 16, 2022

To: Langellotti, Jodi F & Christopher
453 Sixth Street
Dover, NH 03820

Ref: Minimum Expedited Wetlands Permit
TSB Properties, LLC
Tax Map D, Lot 12-1
Production Drive, Dover, NH 03820

CNE Reference No. 21001

Dear Abutter:

The purpose of this letter is to inform you that a permit application will be filed with the N.H. Department of Environmental Services for a Minimum Expedited Wetlands Permit associated with the above referenced project. Under state law RSA 483-B: 5-b, IV-a, I am required to notify you about the application.

A copy of the application, including plans, will be made available for your review at the Dover City offices and at the NH Department of Environmental Services Wetlands Bureau, 29 Hazen Drive, in Concord.

If you have any questions that we might be able to answer, please do not hesitate to contact our office.

Sincerely,



Stephen J. Haight, P.E.,
CIVILWORKS NEW ENGLAND
P.O. Box 1166, Dover, NH 03821
603.749.0443

CIVILWORKS NEW ENGLAND

181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

August 16, 2022

To: Brown, Nevin D & Rose, Emily G
7 Quail Drive
Dover, NH 03820

Ref: Minimum Expedited Wetlands Permit
TSB Properties, LLC
Tax Map D, Lot 12-1
Production Drive, Dover, NH 03820

CNE Reference No. 21001

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Sincerely,



Stephen J. Haight, P.E.,
CIVILWORKS NEW ENGLAND
P.O. Box 1166, Dover, NH 03821
603.749.0443

CIVILWORKS NEW ENGLAND

181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

August 16, 2022

To: Banaian, Jacob C & Kristen
11 Quail Drive
Dover, NH 03820

Ref: Minimum Expedited Wetlands Permit
TSB Properties, LLC
Tax Map D, Lot 12-1
Production Drive, Dover, NH 03820

CNE Reference No. 21001

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If you have any questions that we might be able to answer, please do not hesitate to contact our office.

Sincerely,



Stephen J. Haight, P.E.,
CIVILWORKS NEW ENGLAND
P.O. Box 1166, Dover, NH 03821
603.749.0443

CIVILWORKS NEW ENGLAND

181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

August 16, 2022

To: Porter, Douglas W & Yukari
29 Quail Drive
Dover, NH 03820

Ref: Minimum Expedited Wetlands Permit
TSB Properties, LLC
Tax Map D, Lot 12-1
Production Drive, Dover, NH 03820

CNE Reference No. 21001

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If you have any questions that we might be able to answer, please do not hesitate to contact our office.

Sincerely,



Stephen J. Haight, P.E.,
CIVILWORKS NEW ENGLAND
P.O. Box 1166, Dover, NH 03821
603.749.0443

CIVILWORKS NEW ENGLAND

181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

August 16, 2022

To: Dover Business & Ind Dev Authority, F/K/A
Dover Ind Dev Authority
288 Central Avenue
Dover, NH 03820

Ref: Minimum Expedited Wetlands Permit
TSB Properties, LLC
Tax Map D, Lot 12-1
Production Drive, Dover, NH 03820

CNE Reference No. 21001

Dear Abutter:

The purpose of this letter is to inform you that a permit application will be filed with the N.H. Department of Environmental Services for a Minimum Expedited Wetlands Permit associated with the above referenced project. Under state law RSA 483-B: 5-b, IV-a, I am required to notify you about the application.

A copy of the application, including plans, will be made available for your review at the Dover City offices and at the NH Department of Environmental Services Wetlands Bureau, 29 Hazen Drive, in Concord.

If you have any questions that we might be able to answer, please do not hesitate to contact our office.

Sincerely,



Stephen J. Haight, P.E.,
CIVILWORKS NEW ENGLAND
P.O. Box 1166, Dover, NH 03821
603.749.0443

CIVILWORKS NEW ENGLAND

181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

August 16, 2022

To: TSB Properties, LLC
385 Sixth Street
Dover, NH 03820

Ref: Minimum Expedited Wetlands Permit
TSB Properties, LLC
Tax Map D, Lot 12-1
Production Drive, Dover, NH 03820

CNE Reference No. 21001

Dear Abutter:

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A copy of the application, including plans, will be made available for your review at the Dover City offices and at the NH Department of Environmental Services Wetlands Bureau, 29 Hazen Drive, in Concord.

If you have any questions that we might be able to answer, please do not hesitate to contact our office.

Sincerely,



Stephen J. Haight, P.E.,
CIVILWORKS NEW ENGLAND
P.O. Box 1166, Dover, NH 03821
603.749.0443

CIVILWORKS NEW ENGLAND

181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

August 16, 2022

To: City of Dover
288 Central Avenue
Dover, NH 03820

Ref: Minimum Expedited Wetlands Permit
TSB Properties, LLC
Tax Map D, Lot 12-1
Production Drive, Dover, NH 03820

CNE Reference No. 21001

Dear City of Dover:

The purpose of this letter is to inform you that a permit application will be filed with the N.H. Department of Environmental Services for a Minimum Expedited Wetlands Permit associated with the above referenced project. Under state law RSA 483-B:5-b, iv-a, I am required to notify you about the application.

Sincerely,



Stephen J. Haight, P.E.,
CIVILWORKS NEW ENGLAND
P.O. Box 1166, Dover, NH 03821
603.749.0443

STATE NOTIFICATION FOR MINIMUM EXPEDITED WETLANDS PERMIT APPLICATION

VIA CERTIFIED MAIL

August 16, 2022

STATE OF NEW HAMPSHIRE
P.O. BOX 483
CONCORD, NH 03302-0483

Re: Minimum Expedited Wetlands Permit Application
TSB Properties, LLC
Tax Map D, Lot 12-1
Production Drive, Dover, NH 03820

Our Reference No. 21001

Dear Sir or Madam:

This letter is to inform you that a permit application will be filed with the N.H. Department of Environmental Services for a Minimum Expedited Wetlands Permit associated with the above referenced project. Under state law RSA 483-B:5-b, iv-a, I am required to notify you about the application, which proposes work abutting your property.

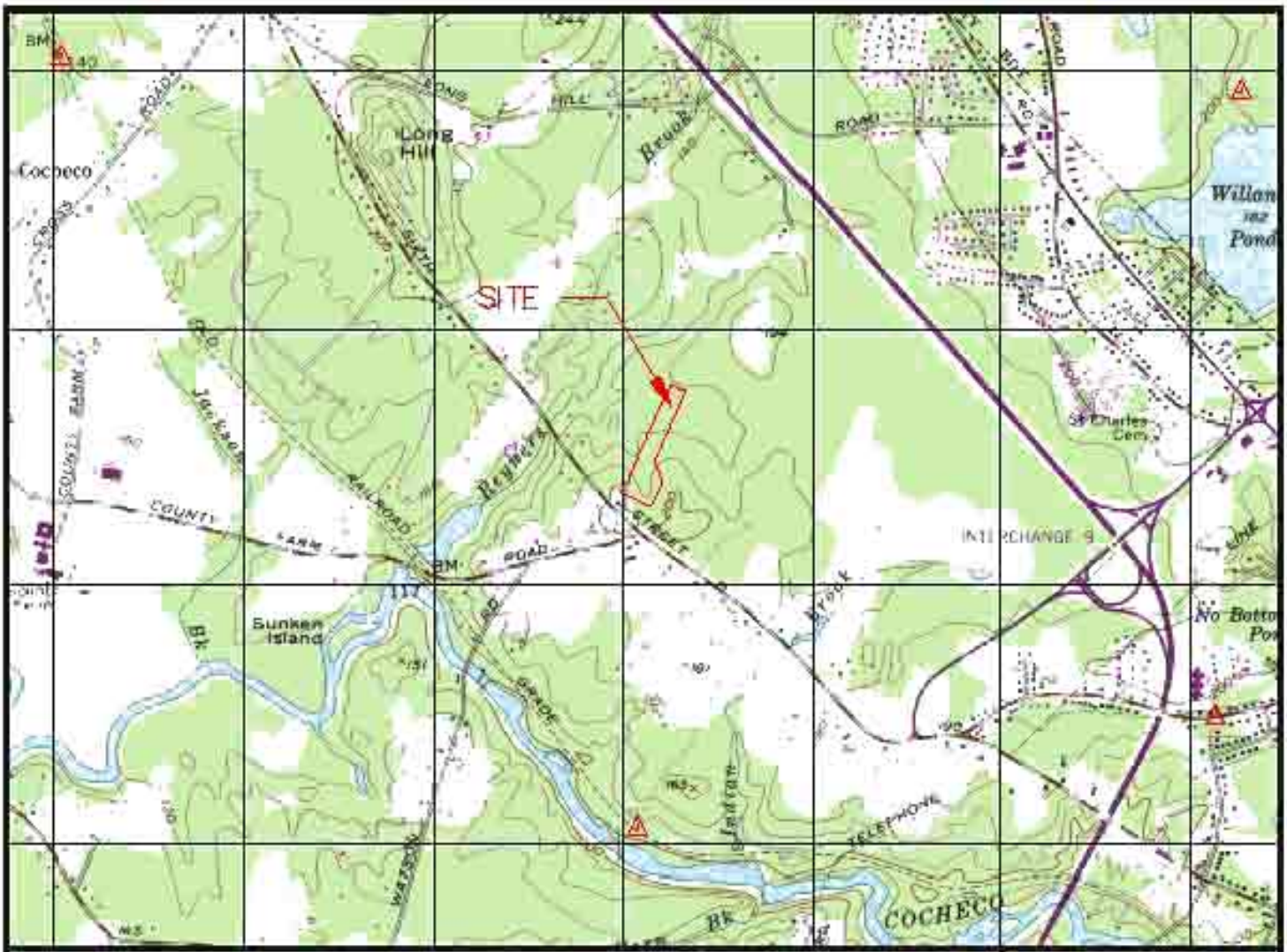
Once it is filed, the permit application, including plans that show the proposed project, will be available for viewing at the City of Dover Clerk's office.

Sincerely,



Stephen J. Haight, P.E.,
CIVILWORKS NEW ENGLAND
P.O. Box 1166, Dover, NH 03821
603.749.0443

USGS Map



DOVER WEST, N. H.

1956

GRAPHIC SCALE

2000 0 1000 2000 4000 8000

(IN FEET)

USGS MAP
1"=2000'

TSB PROPERTIES, LLC
385 SIXTH STREET
DOVER, NH 03820

CIVILWORKS NEW ENGLAND
151 Willand Road, PO Box 1505
Dover, New Hampshire 03821
(603)740-8488

DATE: 8-1-22

PROJECT No. 21001
FILE: 21001-USGS

USGS-080122-21001

Site Photographs



From Production Drive looking southwest into site.



From Production Drive looking west into site.



From Production Drive looking north into site.



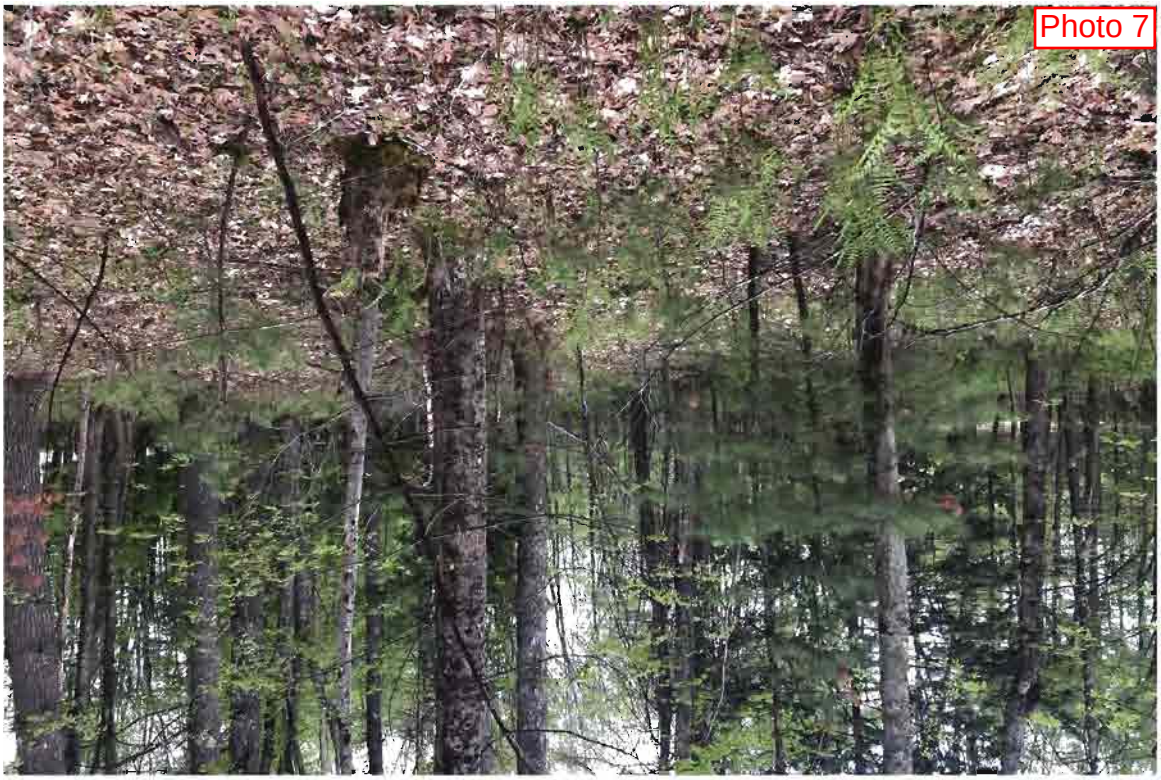
On the west side of the wetlands, looking southwest.



On the west side of the wetlands, looking north.



On the west side of the wetlands, looking north.



On the west side of the wetlands, looking east.



On the west side of the wetlands, looking south.

DWELLING

DWELLING

EXISTING DWELLING #447

D / 12
PARCEL AREA
90,417 S.F.
2.08 Ac.

APPROXIMATE LEACH FIELD

BUILDING SETBACK LINE (TYP.)

D / 12-1
PARCEL AREA
337,616 S.F.
7.75 Ac.

D / 12-2
PARCEL AREA
184,682 S.F.
4.24 Ac.

1 2 3 4 5 6 7 8

WV

EOP

EOP

SGC

PRODUCTION DRIVE

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

NO.	REVISION	APP'D	DATE

DATE: 8-5-22
SCALE: 1"=30'
DRAWN BY: GMS
DESIGN BY: D.L
APPROVED BY:SJH
PROJECT NO: 21001
FILE: 21001-PHOTOKEY 12-1

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

PHOTO LOCATION PLAN

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

THE STORAGE BARN
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

PM-1

NHB Datacheck

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

To: Michael Menary
181 Watson Road
Dover, NH 03820

From: NH Natural Heritage Bureau

Date: 4/20/2022 (This letter is valid through 4/20/2023)

Re: Review by NH Natural Heritage Bureau of request dated 4/20/2022

Permit Types: Stormwater Pollution Prevention
Dover

NHB ID: NHB22-1468

Applicant: Michael Menary

Location: Dover
Tax Map: D, Tax Lot: 12-1
Address: 447 Sixth Street

Proj. Description: Building a new storage unit facility off of Production drive, around 1.75 acres of disturbance.

The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

Based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

MAP OF PROJECT BOUNDARIES FOR: NHB22-1468



Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord NH 03301

Supporting Documents

AVOIDANCE AND MINIMIZATION CHECKLIST

Water Division/Land Resources Management
Wetlands Bureau

Check the Status of your Application

RSA/Rule: RSA 482-A/ Env-Wt 311.07(c)

This checklist can be used in lieu of the written narrative required by Env-Wt 311.07(a) to demonstrate compliance with requirements for Avoidance and Minimization (A/M), pursuant to RSA 482-A:1 and Env-Wt 311.07(c).

For the construction or modification of non-tidal shoreline structures over areas of surface waters without wetland vegetation, complete only Sections 1, 2, and 4 (or the applicable sections in Attachment A: Minor and Major Projects (NHDES-W-06-013).

The following definitions and abbreviations apply to this worksheet:

- "A/M BMPs" stands for Wetlands Best Management Practice Techniques for Avoidance and Minimization dated 2019, published by the New England Interstate Water Pollution Control Commission (Env-Wt 102.18).
- "Practicable" means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes (Env-Wt 103.62).

SECTION 1 - CONTACT/LOCATION INFORMATION	
APPLICANT LAST NAME, FIRST NAME, M.I.: TSB Properties, LLC	
PROJECT STREET ADDRESS: Production Drive	PROJECT TOWN: Dover, NH
TAX MAP/LOT NUMBER: D/12-1	

SECTION 2 - PRIMARY PURPOSE OF THE PROJECT		
Env-Wt 311.07(b)(1)	Indicate whether the primary purpose of the project is to construct a water-access structure or requires access through wetlands to reach a buildable lot or the buildable portion thereof.	☒ Yes ☐ No
If you answered "no" to this question, describe the purpose of the "non-access" project type you have proposed:		

SECTION 3 - A/M PROJECT DESIGN TECHNIQUES Check the appropriate boxes below in order to demonstrate that these items have been considered in the planning of the project. Use N/A (not applicable) for each technique that is not applicable to your project.		
Env-Wt 311.07(b)(2)	For any project that proposes new permanent impacts of more than one acre or that proposes new permanent impacts to a Priority Resource Area (PRA), or both, whether any other properties reasonably available to the applicant, whether already owned or controlled by the applicant or not, could be used to achieve the project's purpose without altering the functions and values of any jurisdictional area, in particular wetlands, streams, and PRAs.	☐ Check ☒ N/A
Env-Wt 311.07(b)(3)	Whether alternative designs or techniques, such as different layouts, construction sequencing, or alternative technologies could be used to avoid impacts to jurisdictional areas or their functions and values.	☒ Check ☐ N/A
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(1) Env-Wt 311.10(c)(2)	The results of the functional assessment required by Env-Wt 311.03(b)(10) were used to select the location and design for the proposed project that has the least impact to wetland functions.	☐ Check ☐ N/A
Env-Wt 311.07(b)(4) Env-Wt 311.10(c)(3)	Where impacts to wetland functions are unavoidable, the proposed impacts are limited to the wetlands with the least valuable functions on the site while avoiding and minimizing impacts to the wetlands with the highest and most valuable functions.	☒ Check ☐ N/A
Env-Wt 313.01(c)(1) Env-Wt 313.01(c)(2) Env-Wt 313.03(b)(1)	No practicable alternative would reduce adverse impact on the area and environments under the department's jurisdiction and the project will not cause random or unnecessary destruction of wetlands.	☒ Check ☐ N/A
Env-Wt 313.01(c)(3)	The project would not cause or contribute to the significant degradation of waters of the state or the loss of any PRAs.	☒ Check ☐ N/A
Env-Wt 313.03(b)(3) Env-Wt 904.07(c)(8)	The project maintains hydrologic connectivity between adjacent wetlands or stream systems.	☒ Check ☐ N/A
Env-Wt 311.10 A/M BMPs	Buildings and/or access are positioned away from high function wetlands or surface waters to avoid impact.	☒ Check ☐ N/A
Env-Wt 311.10 A/M BMPs	The project clusters structures to avoid wetland impacts.	☐ Check ☒ N/A
Env-Wt 311.10 A/M BMPs	The placement of roads and utility corridors avoids wetlands and their associated streams.	☐ Check ☒ N/A
A/M BMPs	The width of access roads or driveways is reduced to avoid and minimize impacts. Pullouts are incorporated in the design as needed.	☒ Check ☐ N/A
A/M BMPs	The project proposes bridges or spans instead of roads/driveways/trails with culverts.	☐ Check ☒ N/A

A/M BMPs	The project is designed to minimize the number and size of crossings, and crossings cross wetlands and/or streams at the narrowest point.	☒ Check ☐ N/A
Env-Wt 500 Env-Wt 600 Env-Wt 900	Wetland and stream crossings include features that accommodate aquatic organism and wildlife passage.	☐ Check ☒ N/A
Env-Wt 900	Stream crossings are sized to address hydraulic capacity and geomorphic compatibility.	☐ Check ☒ N/A
A/M BMPs	Disturbed areas are used for crossings wherever practicable, including existing roadways, paths, or trails upgraded with new culverts or bridges.	☐ Check ☒ N/A
SECTION 4 - NON-TIDAL SHORELINE STRUCTURES		
Env-Wt 313.03(c)(1)	The non-tidal shoreline structure has been designed to use the minimum construction surface area over surfaces waters necessary to meet the stated purpose of the structure.	☐ Check ☒ N/A
Env-Wt 313.03(c)(2)	The type of construction proposed for the non-tidal shoreline structure is the least intrusive upon the public trust that will ensure safe navigation and docking on the frontage.	☐ Check ☒ N/A
Env-Wt 313.03(c)(3)	The non-tidal shoreline structure has been designed to avoid and minimize impacts on the ability of abutting owners to use and enjoy their properties.	☐ Check ☒ N/A
Env-Wt 313.03(c)(4)	The non-tidal shoreline structure has been designed to avoid and minimize impacts to the public's right to navigation, passage, and use of the resource for commerce and recreation.	☐ Check ☒ N/A
Env-Wt 313.03(c)(5)	The non-tidal shoreline structure has been designed, located, and configured to avoid impacts to water quality, aquatic vegetation, and wildlife and finfish habitat.	☐ Check ☒ N/A
Env-Wt 313.03(c)(6)	The non-tidal shoreline structure has been designed to avoid and minimize the removal of vegetation, the number of access points through wetlands or over the bank, and activities that may have an adverse effect on shoreline stability.	☐ Check ☒ N/A

CIVILWORKS NEW ENGLAND

181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

Responses to Env-Wt 300:

Env-Wt 306.03

This project classifies as a minimum impact and is eligible for an expedited permit (EXP) application.

Env-Wt 306.05:

Env-Wt 306.05(a)(1)

The wetlands have been delineated by a certified wetland scientist.

Env-Wt 306.05(a)(2)(a)

The NHB DataCheck tool was utilized to find any documented occurrences of protected species and/or habitat. The DataCheck came back with no recorded occurrences of for sensitive species near the proposed project area.

Env-Wt 306.05(a)(2)(b)

There is no bog on or in the vicinity of the project property.

Env-Wt 306.05(a)(2)(c)

There is no floodplain wetland contiguous to a tier 3 or higher watercourse.

Env-Wt 306.05(a)(2)(d)

There is no prime wetland on or in the vicinity of the project property.

Env-Wt 306.05(a)(2)(e)

The proposed project is not located adjacent to a tidal watercourse.

Env-Wt 306.05(a)(3)(4)(5)(6)(7)

Not applicable.

Env-Wt 306.05(b)(1)

The WPPT was used to determine the location of impaired waters onsite. Erosion control devices will be implemented around the perimeter of the proposed project area to prevent any impact to impaired waters, class A waters, or outstanding resource waters.

Env-Wt 306.06

Abutters have been notified.

Env-Wt 307.02

Not applicable.

CIVILWORKS NEW ENGLAND

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Env-Wt 307.03

The proposed project is not anticipated to violate water quality standards. During construction an erosion control sock (Silt Sock) will be placed along the limits of work and at the toe of slope of all stockpiles to prevent silt from washing into the wetlands or off site.

Env-Wt 307.04

The proposed project is not anticipated to impact fisheries or breeding areas. During construction an erosion control sock (Silt Sock) will be placed along the limits of work and at the toe of slope of all stockpiles to prevent silt from washing into the wetlands or off site.

Env-Wt 307.05

There are no known invasive species within the proposed project area.

Env-Wt 307.06

The NHB DataCheck tool was utilized to find any documented occurrences of protected species and/or habitat. The DataCheck came back with no recorded occurrences of for sensitive species near the proposed project area. During construction an erosion control sock (Silt Sock) will be placed along the limits of work and at the toe of slope of all stockpiles to prevent silt from washing into the wetlands or off site.

Env-Wt 307.07

Not applicable.

Env-Wt 307.08

There are no designated prime wetlands located within the proposed project area.

Env-Wt 307.09

There are no proposed shoreline structures.

Env-Wt 307.10

Not applicable.

Env-Wt 307.11

The proposed project complies with all of Env-Wt 307.11. See application package for all supporting documentation. During all filling activities an erosion control sock (Silt Sock) will be placed along the limits of work to prevent turbidity from escaping the immediate fill area. The erosion control sock (Silt Sock) will remain in place until all fill areas have been stabilized. The total fill of onsite wetlands is approximately 2,480 sf. There are no known public water supplies or intakes near the project site.

Env-Wt 307.12

See erosion control notes sheet for seeding and mulching specifications.

CIVILWORKS NEW ENGLAND

181 WATSON ROAD
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PHONE: 603.749.0443 FAX: 603.749.7348

Env-Wt 307.13

The proposed project area complies with the property line setbacks as described in Env-Wt 307.13.

Env-Wt 307.14

Not applicable.

Env-Wt 307.15

No use of Heavy Equipment in wetlands is proposed from development besides the areas of fill. Timber and/or swamp mats will be installed to provide adequate support and minimize disturbance of wetland soil and vegetation. Total wetlands fill is 2,480 sf.

Env-Wt 307.16

Acknowledged.

Env-Wt 307.17

Acknowledged.

Env-Wt 307.18

Acknowledged.

Env-Wt 310.01

All application material has been provided within this submittal application.

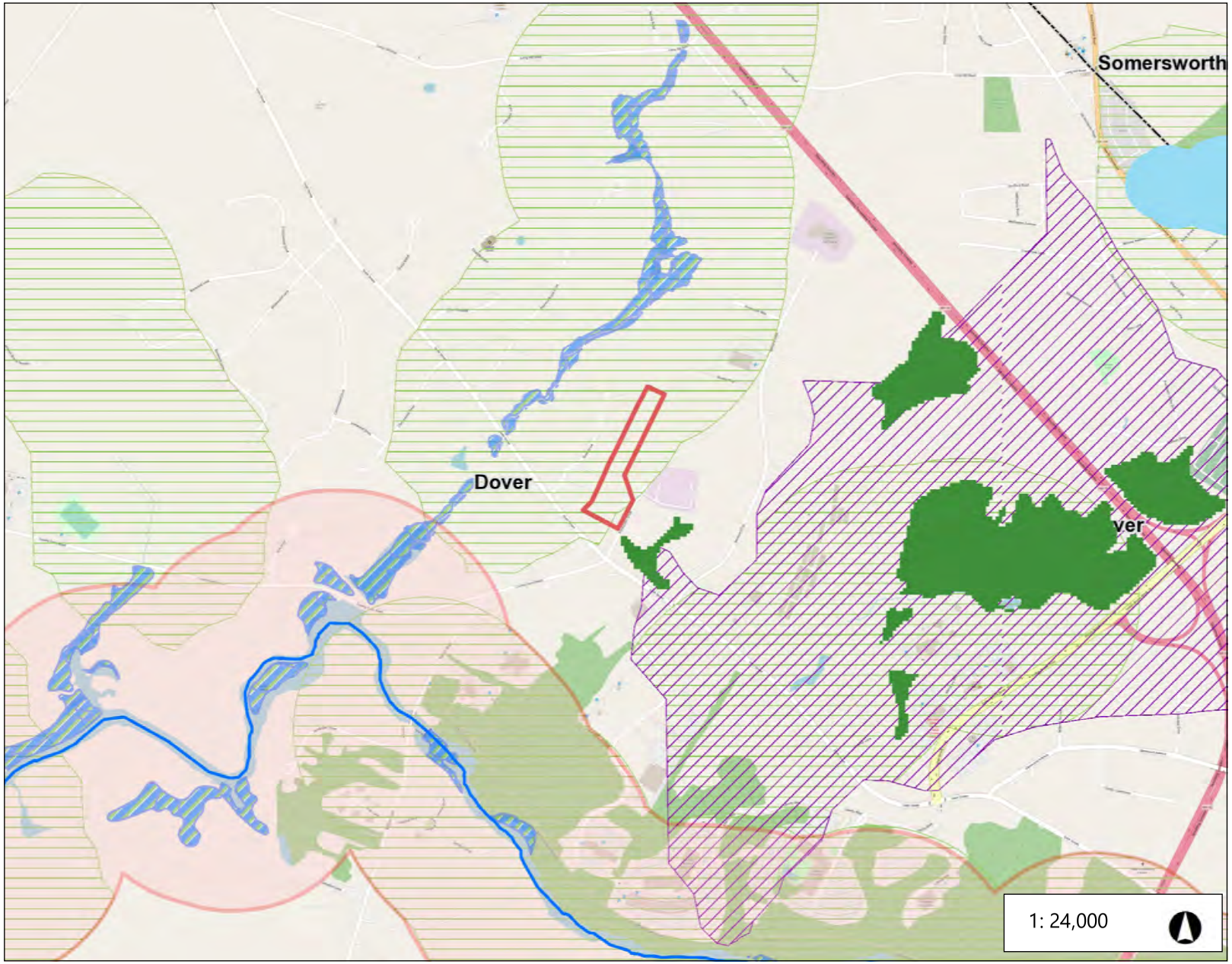
Env-Wt 310.02

Acknowledged.

Env-Wt 310.03

Acknowledged.

Your Organization | TSB Properties, LLC (12-1) - WPPT



Legend

- Wetland_Permits_points
- Shoreland Act Urban Exemptic
- 4th Order and Above Streams
  - 4
  - 5
  - 6
  - 7
- Shoreland Jurisdiction - Lakes
- NH City/Town Boundaries
- Flood Plain Wetlands Adjacent
- Prime Wetlands
- Prime Wetlands with 100 ft But
- Designated Rivers
  - Subject to SWQPA
  - Not Subject to SWQPA
- Sand Dunes
  - backdune
  - foredune
  - interdune
  - other
- Tidal Waters / Tidal Wetlands
  - Tidal wetland
  - Transitional salt marsh
  - Salt marsh
  - Mud flat
  - Tidal water

Notes

Prepared by: Civilworks New England

0.8 0 0.38 0.8 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

© Latitude Geographics Group Ltd.

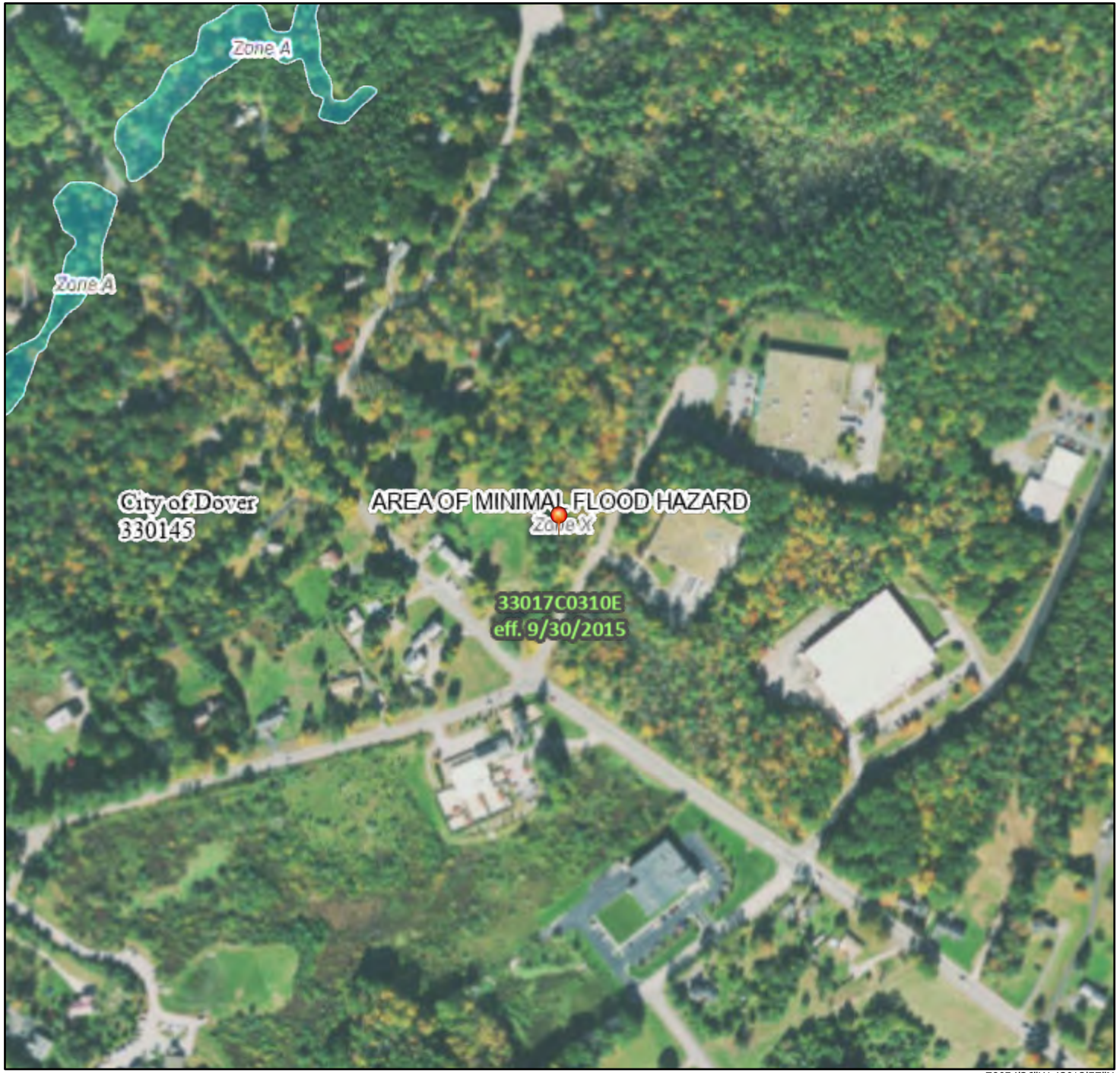
This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

National Flood Hazard Layer FIRMette

FEMA

70°55'13"W 43°13'23"N



70°54'36"W 43°12'57"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/29/2022 at 2:53 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

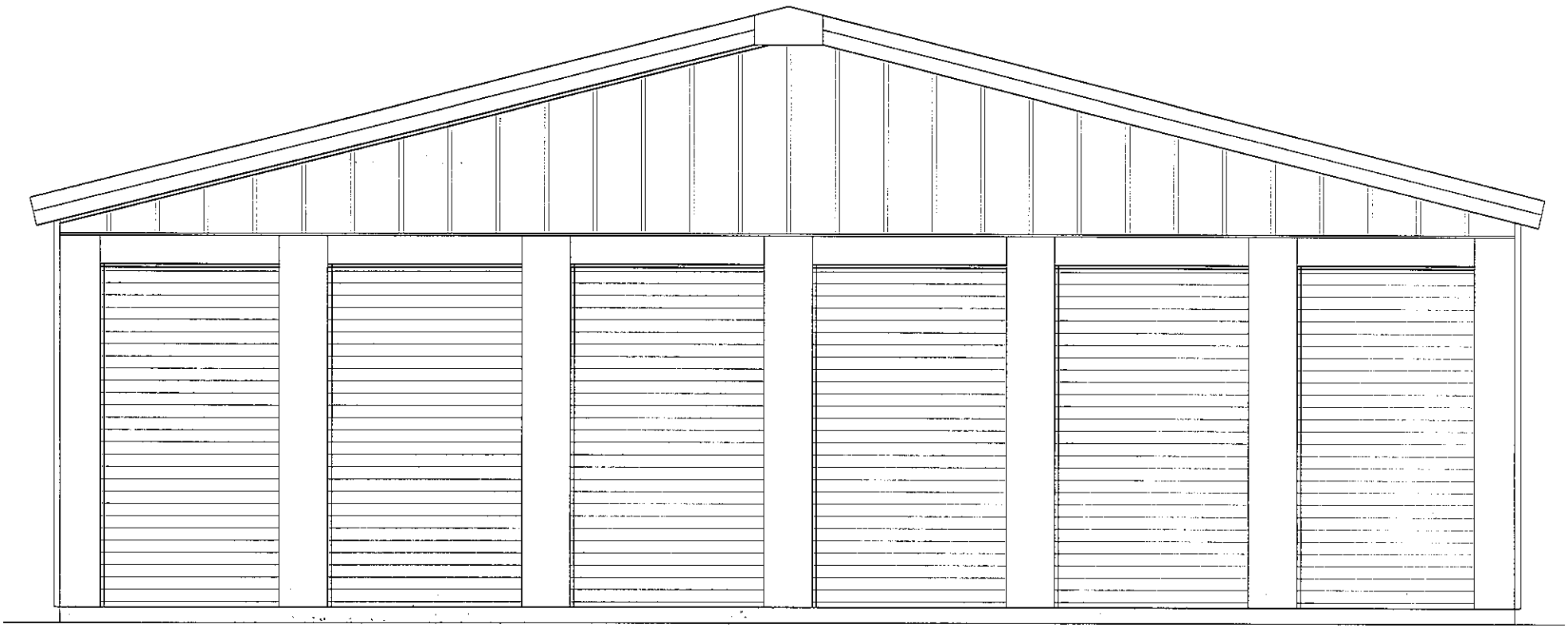
Design Plans

Site Plan

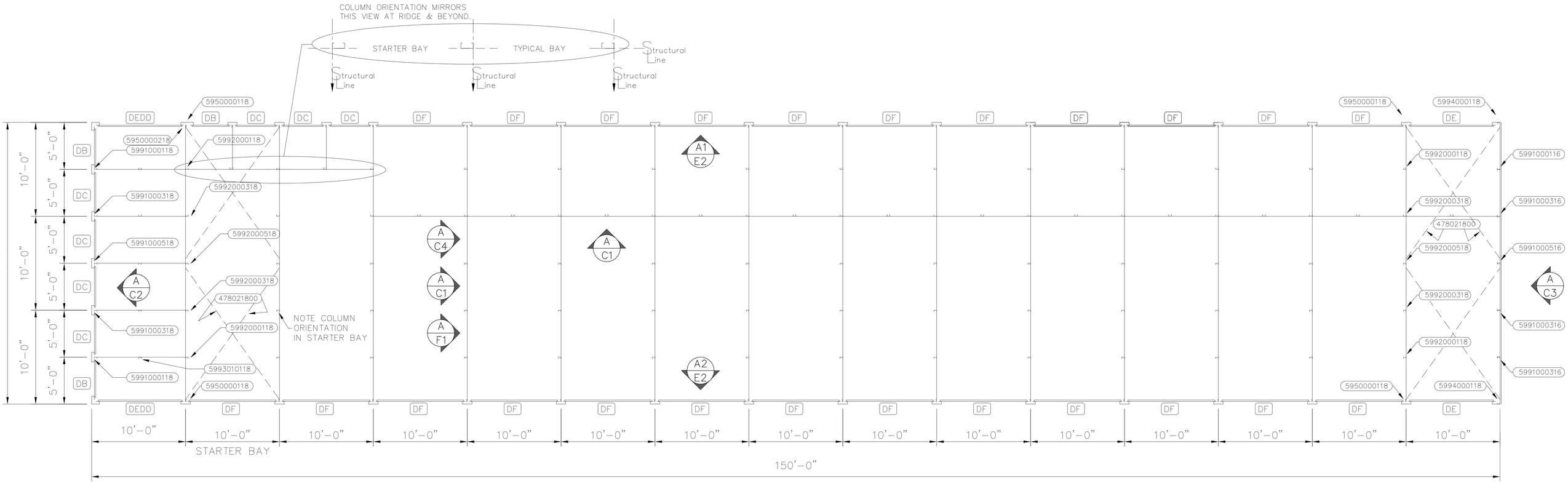
for
TSB Properties, LLC.
Production Drive
Tax Map D, Lot 12-1

August 2022

The applicant is not requesting a waiver from the City of Dover Chapter 153 Site Review regulations.



END WALL ELEVATION



FLOOR PLAN for 30'–0" X 150'–0" MINI STORAGE BUILDING – 1/4:12 PITCH

Landscape Best Management Practices
Operations and Maintenance Plan

TSB Properties, LLC.
Production Drive
Dover, New Hampshire 03820

Prepared for
Douglas LaRosa
Civilworks New England/Haight Engineering, PLLC
181 Watson Road
PO Box 1166
Dover, New Hampshire 03821

Prepared by
Ironwood Design Group, LLC
PO Box 873
Exeter, New Hampshire 03833



Ironwood
Landscape Architecture • Planning

Landscape Maintenance

Introduction

The landscape enhancements proposed for the Production Drive facility will require modest maintenance at various times throughout the year. For the site plantings, maintenance is most important during the first 1-2 years following installation when plants are becoming established. Anyone involved in the upkeep of the facility should become familiar with the landscape and its features. Identified below are basic, at minimum, maintenance tasks:

Weekly Tasks

1. Prune back any shrubs overhanging curbs or sidewalks.
2. Remove litter from plants bed.
3. Remove broken or fallen branches from trees.
4. Prune sucker growth from tree trunks.
5. Remove weeds larger than 2 inches high or wide from plant beds. Weeds 2 inches and larger must be removed, not just killed. **The application of herbicides such as Roundup is discouraged.**
6. Any invasive species seedlings observed should be removed and disposed of properly.
7. Replace bark mulch that may have been washed out of planting beds. Smooth mulch layer if it has been disturbed.
8. Check plants for signs of stress, pests or disease and notify Owner for authorization to replace.
9. If a significant decline in plant health is attributed to an insect pest, **apply an organic product and/or process** to control the pest.
10. Water plants that are dry and stressed.
11. Notify Owner for authorization to replace dead plants at the appropriate time (see annual tasks, September).
12. Identify other tasks listed on the Annual and Monthly checklist of tasks.

Annual Tasks

Early Spring

1. Prune winter damage such as broken tree branches that interfere with public safety.
2. Trim dead perennial foliage left in the fall for winter interest to within six inches of the ground.
3. Add new mulch to plant beds where the mulch depth has been reduced to less than 2 inches. Mulch depth shall not exceed two inches (top dressed). Mulch is not required where shrubs or groundcover completely hide the soil surface from view.
4. Gently prune shrubs at appropriate time of year based on species, for shape and form. **Do not shear.**
5. Energize the irrigation system, repair damaged components, test the system, adjust heads, and update programing.
6. Conduct a soil test to measure at a minimum, pH, phosphorus, potassium, calcium, and magnesium. Follow the recommendations provided with the soil test results.
7. Apply fertilizer only when required. A single application of fertilizer per year before Memorial Day is encouraged.

Monthly Tasks

June

No additional items

July

No additional items

August

No additional items

September

1. Inventory all plant materials, including an exact count of all shrubs and trees.
2. Replace any dead or missing plants.
3. Aerate lawn areas.
4. Apply pelletized lime at a rate of 80 lbs/1,000 square feet or as soil test dictates.

October

1. Winterize irrigation system.

November

1. Remove leaves from lawn areas and planting beds.
2. Remove perennial vegetation that has died back for the season.
3. Apply “WILT-PRUF” to broadleaf evergreens, according to label instructions, to protect shrubs from winter die back.

December

1. Prune any tree branches that interfere with public safety.
2. Prune street and parking lot trees yearly to encourage strong growth the following growing season. Trees adjacent to pedestrian sidewalks shall have branches pruned to 6-foot height.

Management Task or Activity	Time or Frequency						
	Weekly	Monthly	Spring	Summer	Fall	Winter	After Major Rain Events
Replace dead or dying plants			X				
Remove weeds	X		X	X	X		
Cut down grasses			X				
Remove accumulated leaves, litter, and plant debris		X					X

Stormwater Detention Facilities

Introduction

The stormwater facilities are used to attenuate flow and treat stormwater. The stormwater treatment areas consist of a large basin and linear swales seeded with a variety of native, adaptable, and rugged perennial grasses, and sometimes additional flowering plants. There are maintenance tasks associated with stormwater facilities.

Erosion

The soil in the facility and in areas draining to the facility shall be inspected for erosion. Eroded areas shall be filled with soil or mulch and seeded with the approved seed mix for the location.

Sediment Accumulation & Clogging

The accumulation of sediment within the facility may reduce its infiltration capacity and impair performance. The facility shall be inspected for accumulation of sediment and excessive sediment shall be removed with the area re-mulched and replanted as appropriate and necessary.

Outlet Structure Maintenance

The facility outlet structure requires monitoring. Periodically, the orifice on the outlet pipe may clog with debris. Any found debris should be removed and appropriately disposed of off-site.

Debris & Litter

Debris and litter should be removed monthly to maintain aesthetic appearance and public acceptance.

Plant Maintenance

Healthy vegetation contributes to the optimal operation of the stormwater facility. Planting area maintenance tasks include the removal of accumulated leaves, litter, and plant debris as needed. During the first 1-2 years after planting, the facility should be monitored for invasive species and weeded as needed and appropriate. Well-established facility vegetation should be mowed annually in the fall.

Snow Storage

Snow shall not be dumped directly onto the facility.

Chlorides

The stormwater facility is not suitable for treating chlorides. Chloride use on source surface areas tributary to the facility should be avoided if possible. In these locations, it would be prudent to eliminate or reduce application of chloride-containing deicing compounds, use alternative deicers, or apply clean sand as needed. Aggressive sweeping in these areas, along with pretreatment sumps and filter strips, will minimize the negative impact of the sand on the facility.

Management Task or Activity	Time or Frequency						
	Weekly	Monthly	Spring	Summer	Fall	Winter	After Major Rain Events
Inspect for erosion. Rake and redistribute/replenish any soil, rap, or mulch that has eroded		X					X
Inspect for standing water							X
Remove accumulated leaves, litter, and plant debris		X					X
Weed plant material		X					
Mow plant material					X		

August 18, 2022
TSB Properties, LLC., CNE#21001
Tax Map D, Lot 12-1, Production Drive, Dover, New Hampshire

From 170-27.1 (Wetland Protection District)

(a) Practicable Alternative: There is no practicable alternative that would have a less adverse impact on the area. **The proposed driveway, buildings, wall, side slopes, and BMP locations were chosen to minimize wetland and wetland buffer impacts. Note 9 on the approved subdivision plans states "An Access Easement from production drive, across D-12 or D-12-2, to benefit parcel D-12-1 will be created at the time parcel D-12-1 is presented for site plan approval. There will be no access through the frontage on D-12-1." From discussion with Consolidated Communication they denied access across their easement. This crossing has the least adverse impact on the area.**

(b) Avoidance: The potential impacts have been avoided to the maximum extent practicable. The APPLICANT will demonstrate by plan and example that the proposed construction represents the least impacting alternative. **No buildings are within the wetlands buffers or wetlands. The driveway impact to the wetland buffer and wetland has been avoided to the maximum extent possible. Side slope impacts to the wetland buffer and wetland have been reduced from the original proposal by proposing walls and designing steep side slopes. Underground stormwater management have been implemented to minimize impacts to the wetland buffer and wetlands.**

(c) Minimization: Any unavoidable impacts have been minimized. No reasonable Alternative to the proposed construction exists which does not impact a wetland or which has less detrimental impact on a wetland. Design, construction and maintenance methods will be prepared by a registered engineer to minimize detrimental impacts to the wetlands and will include restoration of the site as nearly as possible to its original grade. **All wetland buffer and wetland impacts have been minimized. The driveway has been located to minimize wetland buffer and wetland impact. An 18" culvert and 15" culvert will be implemented to mitigate the flow to the wetland in the pre and post construction conditions. Side slopes have been changed from 3:1 to 1:1 to minimize grading in the wetland buffer and wetland.**

(d) Mitigation: If the APPLICANT is required by State rules to prepare a compensatory mitigation plan, the APPLICANT shall provide the Conservation Commission and PLANNING BOARD with one copy each of said plan for their review.

Mitigation is not required for the relatively small wetland impact.

(e) Approval for the wetlands impact has been received from the NHDES Wetlands Bureau pursuant to Section G (3), below. **An NHDES Expedited Minimum Impact Wetlands Permit Application will be submitted.**

Michael Menary

From: Douglas LaRosa
Sent: Thursday, August 18, 2022 10:05 AM
To: Michael Menary
Subject: FW: Cne#21001 Lot 2, Right of Way/Access question

From: Millar, Jaye [mailto:Jaye.Millar@consolidated.com]
Sent: Wednesday, May 18, 2022 3:12 PM
To: Douglas LaRosa <dlarosa@civilworksne.com>
Cc: Steve Haight <shaight@civilworksne.com>; Millar, Jaye <Jaye.Millar@consolidated.com>
Subject: RE: Cne#21001 Lot 2, Right of Way/Access question

Doug,

I made a site visit and talked with my counterparts regarding your request, the access across our easement will not be granted sorry I am unable to help you.

Thank you,
Jane (Jaye) Millar | Manager, Right of Way - NNE & NY - East & NY, NNE OSPE Process Support
D: 603.226.1429 | C: 603.340.3856 | F: 603.226.1413
64 Regional Dr. Concord, NH 03301
jaye.millar@consolidated.com
consolidated.com | NASDAQ: CNSL



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From: Douglas LaRosa <dlarosa@civilworksne.com>
Sent: Monday, May 9, 2022 4:15 PM
To: Millar, Jaye <Jaye.Millar@consolidated.com>
Cc: Steve Haight <shaight@civilworksne.com>
Subject: Cne#21001 Lot 2, Right of Way/Access question

[This email comes from outside of your organization. Please be cautious opening or clicking on any attachments or links.]

Good Afternoon Jaye,

My Name is Douglas LaRosa with Civilworks NE. We are working for the owners of Tax Map D Lot 12 on Sixth Street and Production Drive in Dover, NH. The Parcel is subject to an Easement Granted to New England Telephone and Telegraph Company, dated February 10, 1984 and described in S.C.R.D. Volume 1124, page 676, attached.

We would like to place an access driveway across your easement. Please let me know if this is permissible ?

Attached is a copy of the latest plan with a copy of the easement.

Thank you in advance for your assistance,

Doug

Douglas J. LaRosa
Project Manager
Civilworks New England/Haight Engineering, PLLC
181 Watson Road
P.O. Box 1166
Dover, New Hampshire 03821
O: 603.749-0443
F: 603.749.7348
dlarosa@civilworksne.com
www.civilworksne.com

DRAINAGE ANALYSIS

for

WAREHOUSE FACILITY
Map D, Lot 12-1
Production Drive
Dover, NH 03820

AUGUST 18, 2022

Prepared For:

TSB Properties, LLC.
386 Sixth Street
Dover, NH 03820

Prepared By:

Civilworks New England
181 Watson Road, P.O. Box 1166
Dover, NH 03820

Stephen J. Haight, PE

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2.0 DRAINAGE ANALYSIS
2.1 DRAINAGE DESIGN PARAMETERS
2.1.1 Watersheds
2.1.2 Soils
2.1.3 Rainfall Data
2.1.4 Runoff Curve Numbers
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2.3 DEVELOPED CONDITIONS
2.3.1 Table B – Developed Conditions Hydrology
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- NRCC Precipitation Data
- Web Soil Survey

A-1 Existing Watersheds

- Routing Diagram
- Area Listing
- Soil Listing
- Node Listing – 2-yr
- Node Listing – 10-yr
- Storm Summary – 10-yr
- Node Listing – 25-yr
- Node Listing – 50-yr

A-2 Developed Watersheds

- Routing Diagram
- Area Listing
- Soil Listing
- Node Listing – 2-yr
- Node Listing – 10-yr
- Storm Summary – 10-yr
- Node Listing – 25-yr
- Node Listing – 50-yr

4.0 APPENDIX B – Watershed Plans
B-1 Pre-Developed Conditions
B-2 Post-Developed Conditions

1.0 INTRODUCTION

This is a hydrologic analysis of the subject parcel, Tax Map D – Lot 12-1. The parcel is located on Production Drive, Dover, NH. The parcel is approximately 7.75 acres in size. The applicant is proposing five (5) self-storage unit facility; totaling 24,420 s.f., with associated site access, grading and drainage, and utility improvements.

The majority of the parcel slopes towards the north of the site to large existing wetland, while some of the site drains to a smaller wetland on the east of site that is connected by a stream channel to the large wetland. The site was broken into 2 Discharge Points (1 & 2), both discharge points are along the subcatchment boundary along the large wetland. The same Discharge Points were implemented in the pre and post drainage analysis allowing for direct comparison.

To accommodate the proposed buildings and associate site improvements, three (3) stormwater best management practice (BMP) has been proposed. An ADS underground infiltration system has been proposed to treat and mitigate stormwater runoff and storage. Two Contech Filtera Bioscapes have been proposed. All stormwater runoff from the proposed impervious areas will be captured by deep sump catch basins that direct the water to the ADS underground infiltration system.

The proposed project will have a reduction in peak flow rates and volume of runoff.

2.0 DRAINAGE ANALYSIS

A comprehensive hydrologic study of this site has been performed utilizing nationally recognized runoff estimating techniques developed by the USDA, Soil Conservation Services (SCS). The technique and runoff models are described in various SCS publications and references as follows:

"Stormwater Management and Erosion Sediment Control Handbook for Urban and Developing Areas in New Hampshire"

"New Hampshire Stormwater Manual Volume 2 - Post-Construction Best Management Practices Selection & Design"

"Civil Engineering Reference Manual, Fifth Edition"

"Open-Channel Hydraulics" Chow.

"Stormwater Modeling System" HydroCAD Ver. 10.10-5a

2.1 DRAINAGE DESIGN PARAMETERS

A brief review of the procedures and parameters used in the drainage study follows:

2.1.1 Watersheds

The watershed and subcatchment areas were delineated using topographic and boundary data provided by McEneaney Survey Associates of New England.

2.1.2 Soils

Onsite soil information used to estimate the runoff curve numbers was provided: by the USDA Natural Resources Conservation Service (NRCS) Web Soil Survey tool.

Hydrologic Drainage Class A:
HcB – Hollis-Charlton fine sandy loam, 3-8 percent slopes

Hydrologic Drainage Class C/D:
HcB/HcC – Hollis-Charlton fine sandy loam, 3-8 percent slopes
Sb – Saugatuck loamy sand

2.1.3 Rainfall Data

Extreme precipitation estimate values from the Northeast Regional Climate Center (NRCC) were utilized in this analysis. As such, the analysis has been performed for the 2-year, 10-year, 25-year, and 50-year storm events with 3.13", 4.71", 5.96", and 7.11" rainfall depths respectively. The extended detention wet pond has been sized to accommodate the 50-yr storm event.

2.1.4 Runoff Curve Numbers

The SCS runoff curve numbers were used and are summarized within each subcatchment drainage summary in Appendix A.

2.2 EXISTING CONDTIONS

For purposes of this analysis the subject parcel was analyzed as 4 sub-watershed areas that are all analyzed with the summing points as described above.

2.2.1 Table A – Existing Conditions (2, 10, 25, and 50-year storm events)

Watershed	**Pre-Development Volume (af)**	**Pre Development Peak Flows (cfs)**			
Discharge Point	**2-yr**	**2-yr**	**10-yr**	**25-yr**	**50-yr**
1	0.21	1.82	4.21	6.16	8.03
2	0.40	2.81	5.70	7.99	10.15

2.3 DEVELOPED CONDITIONS

The post development watershed was analyzed with 13 sub-watershed areas. Post development watersheds have the same summing points as the pre development analysis.

2.3.1 Table B – Developed Conditions (2, 10, 25, and 50-year storm events)

Watershed	**Post-Development Volume (af)**	**Post Development Peak Flows (cfs)**			
Discharge Point	**2-yr**	**2-yr**	**10-yr**	**25-yr**	**50-yr**
1	0.18	1.70	3.99	6.12	7.97
2	0.37	2.67	5.37	7.49	9.51

2.4 COMPARISION CHART

2.4.1 Table C – Existing vs. Developed Conditions Hydrology

Watershed	Pre**/Post-Development Volume (af)**	Pre/**Post Development Peak Flows (cfs)**			
Discharge Point	**2-yr**	**2-yr**	**10-yr**	**25-yr**	**50-yr**
1	0.21/**0.18**	1.82/**1.70**	4.21/**3.99**	6.16/**6.12**	8.03/**7.97**
2	0.40/**0.37**	2.81/**2.67**	5.70/**5.37**	7.99/**7.49**	10.15/**9.51**
Total Volume	0.61/**0.55**				

2.5 POLUTANT REMOVAL

2.5.1 Pollutant Removal Efficacy per Appendix E

Runoff of impervious surfaces shall be treated to provide 80% removal of total suspended solids (TSS) and 50% removal of both total nitrogen and phosphorus. Removal rates shall be determined using approved manufacturer's pollutant removal efficiency analysis or the pollutant removal efficiencies outlined in the New Hampshire Stormwater Management Manual Volume 1, Appendix E (December 2008 or current revision), a copy of which is available from the NHDES website.

The site stormwater design utilizes an “ADS Underground Infiltration System”; Infiltration Basin (>75 ft from surface water). TSS removal as listed in Appendix E above is 90%; total Nitrogen removal is 60%; and Total Phosphorous is 65%.

The site stormwater design utilizes a “Contech Filtera Bioscape”; Tree Box Filter. TSS removal as listed in Contech website is 86%; total Nitrogen removal is 34%; and Total Phosphorous is 70%.

From Weighted Averages the total TSS removal is 89.57%, TP removal is 65.54%, and TN removal is 57.18%. This is in compliance with the City of Dover Site Plan Requirements for Stormwater Treatment (153-13 & 153-14 (3)(b)[1]).

$$weighted\ average = \left(rate\ of\ removal\right) * \frac{(area\ treated)}{(total\ impervious\ area)}$$

Total Impervious Area: 61126 sf

TSS Removal:

Device	Area	Rate	Weighted Average
Contech Bioscape 1	4242	86%	5.97%
Contech Bioscape 2	2396	86%	3.37%
ADS Chambers	54488	90%	80.23%
		Total:	89.57%

Phosphorus Removal:

Device	Area	Rate	Weighted Average
Contech Bioscape 1	4242	70%	4.86%
Contech Bioscape 2	2396	70%	2.74%
ADS Chambers	54488	65%	57.94%
		Total:	65.54%

Nitrogen Removal:

Device	Area	Rate	Weighted Average
Contech Bioscape 1	4242	34%	2.36%
Contech Bioscape 2	2396	34%	1.33%
ADS Chambers	54488	60%	53.48%
		Total:	57.18%

APPENDIX A

HYDROLOGIC CALCULATIONS

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	New Hampshire
Location	
Longitude	70.910 degrees West
Latitude	43.221 degrees North
Elevation	0 feet
Date/Time	Sun, 04 Aug 2019 09:20:25 -0400

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.81	1.03	**1yr**	0.70	0.98	1.20	1.54	1.99	2.59	2.86	**1yr**	2.29	2.75	3.15	3.88	4.44	**1yr**
2yr	0.32	0.49	0.61	0.80	1.01	1.28	**2yr**	0.87	1.17	1.50	1.91	2.44	3.13	3.49	**2yr**	2.77	3.36	3.85	4.59	5.22	**2yr**
5yr	0.37	0.57	0.72	0.96	1.23	1.58	**5yr**	1.06	1.44	1.85	2.38	3.06	3.95	4.47	**5yr**	3.50	4.30	4.92	5.78	6.54	**5yr**
10yr	0.40	0.63	0.80	1.09	1.42	1.85	**10yr**	1.22	1.69	2.18	2.82	3.64	4.71	5.39	**10yr**	4.17	5.18	5.93	6.90	7.75	**10yr**
25yr	0.46	0.74	0.94	1.30	1.72	2.27	**25yr**	1.49	2.09	2.69	3.52	4.58	5.96	6.91	**25yr**	5.27	6.64	7.58	8.71	9.72	**25yr**
50yr	0.52	0.83	1.06	1.48	2.00	2.66	**50yr**	1.73	2.45	3.18	4.17	5.46	7.11	8.34	**50yr**	6.29	8.02	9.14	10.40	11.54	**50yr**
100yr	0.58	0.94	1.21	1.71	2.32	3.12	**100yr**	2.01	2.88	3.74	4.94	6.49	8.49	10.07	**100yr**	7.52	9.68	11.02	12.42	13.71	**100yr**
200yr	0.64	1.05	1.36	1.96	2.71	3.67	**200yr**	2.33	3.39	4.42	5.87	7.74	10.15	12.16	**200yr**	8.98	11.70	13.29	14.83	16.29	**200yr**
500yr	0.76	1.25	1.63	2.36	3.31	4.54	**500yr**	2.86	4.21	5.50	7.35	9.74	12.85	15.62	**500yr**	11.37	15.02	17.03	18.78	20.48	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.24	0.37	0.45	0.60	0.74	0.90	1yr	0.64	0.88	0.92	1.25	1.54	2.05	2.46	1yr	1.82	2.36	2.94	3.42	4.10	1yr
2yr	0.31	0.49	0.60	0.81	1.00	1.18	2yr	0.86	1.15	1.36	1.82	2.35	3.05	3.39	2yr	2.70	3.26	3.74	4.46	5.08	2yr
5yr	0.35	0.54	0.67	0.91	1.16	1.40	5yr	1.00	1.37	1.61	2.14	2.77	3.69	4.11	5yr	3.26	3.95	4.59	5.39	6.09	5yr
10yr	0.38	0.59	0.73	1.02	1.31	1.60	10yr	1.13	1.56	1.81	2.44	3.12	4.24	4.77	10yr	3.75	4.58	5.30	6.21	6.97	10yr
25yr	0.44	0.66	0.83	1.18	1.55	1.91	25yr	1.34	1.87	2.11	2.84	3.64	5.08	5.76	25yr	4.50	5.54	6.47	7.50	8.35	25yr
50yr	0.48	0.73	0.91	1.31	1.77	2.19	50yr	1.52	2.14	2.36	3.20	4.08	5.83	6.64	50yr	5.16	6.39	7.51	8.63	9.55	50yr
100yr	0.54	0.81	1.02	1.47	2.02	2.51	100yr	1.74	2.45	2.65	3.58	4.55	6.69	7.65	100yr	5.92	7.35	8.72	9.94	10.90	100yr
200yr	0.60	0.90	1.14	1.65	2.30	2.87	200yr	1.98	2.81	2.96	4.02	5.07	7.66	8.80	200yr	6.78	8.46	10.12	11.45	12.46	200yr
500yr	0.70	1.04	1.33	1.94	2.75	3.46	500yr	2.38	3.39	3.44	4.67	5.87	9.13	10.59	500yr	8.08	10.18	12.32	13.81	14.81	500yr

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.53	0.71	0.87	1.08	1yr	0.75	1.05	1.23	1.73	2.20	2.82	3.07	1yr	2.49	2.95	3.37	4.17	4.74	1yr
2yr	0.33	0.51	0.62	0.84	1.04	1.24	2yr	0.90	1.22	1.47	1.95	2.51	3.24	3.61	2yr	2.86	3.47	3.98	4.73	5.39	2yr
5yr	0.39	0.60	0.75	1.03	1.31	1.58	5yr	1.13	1.54	1.85	2.49	3.19	4.21	4.83	5yr	3.73	4.64	5.27	6.20	6.96	5yr
10yr	0.46	0.70	0.87	1.21	1.57	1.91	10yr	1.35	1.87	2.22	3.03	3.84	5.18	6.02	10yr	4.58	5.79	6.63	7.60	8.47	10yr
25yr	0.55	0.84	1.05	1.50	1.97	2.46	25yr	1.70	2.41	2.87	3.94	4.94	6.81	8.08	25yr	6.03	7.77	8.86	10.01	11.03	25yr
50yr	0.64	0.97	1.21	1.75	2.35	2.97	50yr	2.03	2.90	3.48	4.80	5.99	8.37	10.12	50yr	7.41	9.73	11.07	12.30	13.48	50yr
100yr	0.75	1.13	1.41	2.04	2.80	3.58	100yr	2.42	3.50	4.22	5.87	7.28	10.30	12.68	100yr	9.12	12.19	13.81	15.14	16.48	100yr
200yr	0.87	1.30	1.65	2.39	3.33	4.34	200yr	2.88	4.24	5.13	7.18	8.84	12.71	15.90	200yr	11.25	15.29	17.25	18.63	20.18	200yr
500yr	1.06	1.58	2.03	2.95	4.19	5.56	500yr	3.62	5.44	6.62	9.38	11.45	16.80	21.45	500yr	14.87	20.62	23.17	24.55	26.40	500yr

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Augur Boring LOG

Prepared for Storage Barn Production (21001 – Storage Barn Production)

Augur Boring conducted by: Guillermo M. Sepulveda and Douglas J. LaRosa
Dated: May 26, 2022

Augur Boring #1 ELEVATION = 162.0 ESHWT = 21" Refusal = None

0 – 10"	10YR3/4	FSL, Massive, Friable
10 – 21"	10YR5/4	FSL, Massive, Very Friable
21 – 36"	10YR5/3	FSL, Massive, Very Friable

Redox = 21"
Observed Water = None

Augur Boring #2 ELEVATION = 150.0 ESHWT = 16" Refusal = None

0 – 13"	10YR3/2	FSL, Massive, Friable
13 – 25"	2.5Y5/3	FSL, Massive, Friable
25-36"	2.5Y4/3	FSL, Blocky, Firm

Redox = 16"
Observed Water = None

Test Pit: 1A **Date:** 6/7/2022

Depth (in)	Color	Texture	Structure	Consistence	Redox Features	Notes
0-8	10 YR 3/3	Fine Sandy Loam	Massive	Friable		Roots 3C
8-23	10 YR 6/4	Loamy Sand	Single Grain	Friable		Roots 3C
23-28	10 YR 4/4	Fine Sandy Loam	Massive	Friable		Roots 3C to 28"
28-72	5 Y 4/3	Silt Loam	Blocky	Firm	5 Y 4/4 3C	

Seasonal High Water (in): 28
Observed Water (in): None
Restrictive Layer (in): None
Bedrock/Refusal (in): None

Soil Series: Hollis-Charlton
NHDES Soil Group: 4
Hydrologic Soil Group: C

Percolation Test

Depth	Perc Test	Inches Per Hour
NA		NA

Notes:

Test Pit: 2A **Date:** 6/7/2022

Depth (in)	Color	Texture	Structure	Consistence	Redox Features	Notes
0-8	10 YR 3/3	Fine Sandy Loam	Massive	Friable		
8-19	10 YR 4/4	Silt Loam	Massive	Friable		Roots 3C @ 18"
19-68	5 Y 4/4	Silt Loam	Blocky	Firm	5YR 4/4 3C	

Seasonal High Water (in): 18
Observed Water (in): None
Restrictive Layer (in): None
Bedrock/Refusal (in): None

Soil Series: Hollis-Charlton
NHDES Soil Group: 4
Hydrologic Soil Group: C

Percolation Test

Depth	Perc Test	Inches Per Hour
NA		NA

Notes:

Test Pit: 3A **Date:** 6/7/2022

Depth (in)	Color	Texture	Structure	Consistence	Redox Features	Notes
0-7	10 YR 3/3	Fine Sandy Loam	Massive	Friable		
7-30	10 YR 4/6	Loamy Sand	Massive	Friable	30% Cobbles	Roots 3C @ 29"
30-62	5 Y 4/4	Silt Loam	Blocky	Firm	30" + 5 Y 4/4	

Seasonal High Water (in): 30
Observed Water (in): None
Restrictive Layer (in): None
Bedrock/Refusal (in): None

Soil Series: Hollis-Charlton
NHDES Soil Group: 4
Hydrologic Soil Group: C

Percolation Test

Depth	Perc Test	Inches Per Hour
NA		NA

Notes:

Test Pit: 4A **Date:** 6/7/2022

Depth (in)	Color	Texture	Structure	Consistence	Redox Features	Notes
0-9	10 YR 3/3	Fine Sandy Loam	Massive	Friable		
9-18	10 YR 4/4	Loamy Sand	Massive	Friable	10% Cobbles	Roots to 17"
18-84	5 Y 4/4	Silt Loam	Blocky	Firm	5 Y 4/4	

Seasonal High Water (in): 18"
Observed Water (in): None
Restrictive Layer (in): None
Bedrock/Refusal (in): None

Soil Series: Hollis-Charlton
NHDES Soil Group: 4
Hydrologic Soil Group: C

Percolation Test

Depth	Perc Test	Inches Per Hour
NA		NA

Notes:

Test Pit: 5A **Date:** 6/7/2022

Depth (in)	Color	Texture	Structure	Consistence	Redox Features	Notes
0-4	10 YR 3/3	Fine Sandy Loam	Massive	Friable		
4-24	10 YR 6/4	Loamy Sand	Granular	Friable	10% Cobbles	Roots
24-78	5 Y 4/4	Silt Loam	Blocky	Firm	5 Y 4/4 3C	Roots to 23"

Seasonal High Water (in): 23"
Observed Water (in): 78"
Restrictive Layer (in): None
Bedrock/Refusal (in): 78"

Soil Series: Hollis-Charlton
NHDES Soil Group: 4
Hydrologic Soil Group: C

Percolation Test

Depth	Perc Test	Inches Per Hour
NA		NA

Notes:

Test Pit: 6A **Date:** 6/7/2022

Depth (in)	Color	Texture	Structure	Consistence	Redox Features	Notes
0-2	10 YR 3/3	Fine Sandy Loam	Massive	Friable		
2-28	10 YR 4/6	Loamy Sand	Granular	Friable	15% Cobbles	Roots to 28"
28-72	10 YR 4/4	Silt Loam	Blocky	Firm	5 Y 4/4	Rotten Rock @ 60"

Seasonal High Water (in): 28"
Observed Water (in): None
Restrictive Layer (in): None
Bedrock/Refusal (in): 72"

Soil Series: Hollis-Charlton
NHDES Soil Group: 4
Hydrologic Soil Group: C

Percolation Test

Depth	Perc Test	Inches Per Hour
NA		NA

Notes:

GENERAL CALCULATIONS - WQV and WQF
(optional worksheet)

This worksheet may be useful when designing a BMP **that does not fit into one of the specific worksheets already provided** (i.e. for a technology which is not a stormwater wetland, infiltration practice, etc.)

Water Quality Volume (WQV)

1.40	ac	A = Area draining to the practice
1.25	ac	A_I = Impervious area draining to the practice
0.89	decimal	I = Percent impervious area draining to the practice, in decimal form
0.85	unitless	Rv = Runoff coefficient = 0.05 + (0.9 x I)
1.20	ac-in	WQV= 1" x Rv x A
4,338	cf	WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")

Water Quality Flow (WQF)

1	inches	P = Amount of rainfall. For WQF in NH, P = 1".
0.85	inches	Q = Water quality depth. Q = WQV/A
99	unitless	CN = Unit peak discharge curve number. $CN = 1000/(10+5P+10Q-10*[Q^2 + 1.25*Q*P]^{0.5})$
0.1	inches	S = Potential maximum retention. S = (1000/CN) - 10
0.027	inches	Ia = Initial abstraction. Ia = 0.2S
	minutes	T_c = Time of Concentration
	$cfs/mi^2/in$	q_u is the unit peak discharge. Obtain this value from TR-55 exhibits 4-II and 4-III.
-	cfs	WQF = q_u x WQV. Conversion: to convert "$cfs/mi^2/in$ * ac-in" to "cfs" multiply by $1mi^2/640ac$.

Designer's Notes: ADS infiltration system

GENERAL CALCULATIONS - WQV and WQF
(optional worksheet)

This worksheet may be useful when designing a BMP **that does not fit into one of the specific worksheets already provided** (i.e. for a technology which is not a stormwater wetland, infiltration practice, etc.)

Water Quality Volume (WQV)

0.09	ac	A = Area draining to the practice
0.09	ac	A_I = Impervious area draining to the practice
1.00	decimal	I = Percent impervious area draining to the practice, in decimal form
0.95	unitless	Rv = Runoff coefficient = 0.05 + (0.9 x I)
0.09	ac-in	WQV= 1" x Rv x A
310	cf	WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")

Water Quality Flow (WQF)

1	inches	P = Amount of rainfall. For WQF in NH, P = 1".
0.95	inches	Q = Water quality depth. Q = WQV/A
100	unitless	CN = Unit peak discharge curve number. $CN = 1000/(10+5P+10Q-10*[Q^2 + 1.25*Q*P]^{0.5})$
0.0	inches	S = Potential maximum retention. S = (1000/CN) - 10
0.009	inches	Ia = Initial abstraction. Ia = 0.2S
	minutes	T_c = Time of Concentration
	$cfs/mi^2/in$	q_u is the unit peak discharge. Obtain this value from TR-55 exhibits 4-II and 4-III.
-	cfs	WQF = q_u x WQV. Conversion: to convert "$cfs/mi^2/in$ * ac-in" to "cfs" multiply by $1mi^2/640ac$.

Designer's Notes: Contech Filtera Bioscape #1

GENERAL CALCULATIONS - WQV and WQF
(optional worksheet)

This worksheet may be useful when designing a BMP **that does not fit into one of the specific worksheets already provided** (i.e. for a technology which is not a stormwater wetland, infiltration practice, etc.)

Water Quality Volume (WQV)

0.05	ac	A = Area draining to the practice
0.05	ac	A_I = Impervious area draining to the practice
1.00	decimal	I = Percent impervious area draining to the practice, in decimal form
0.95	unitless	Rv = Runoff coefficient = 0.05 + (0.9 x I)
0.05	ac-in	WQV= 1" x Rv x A
172	cf	WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")

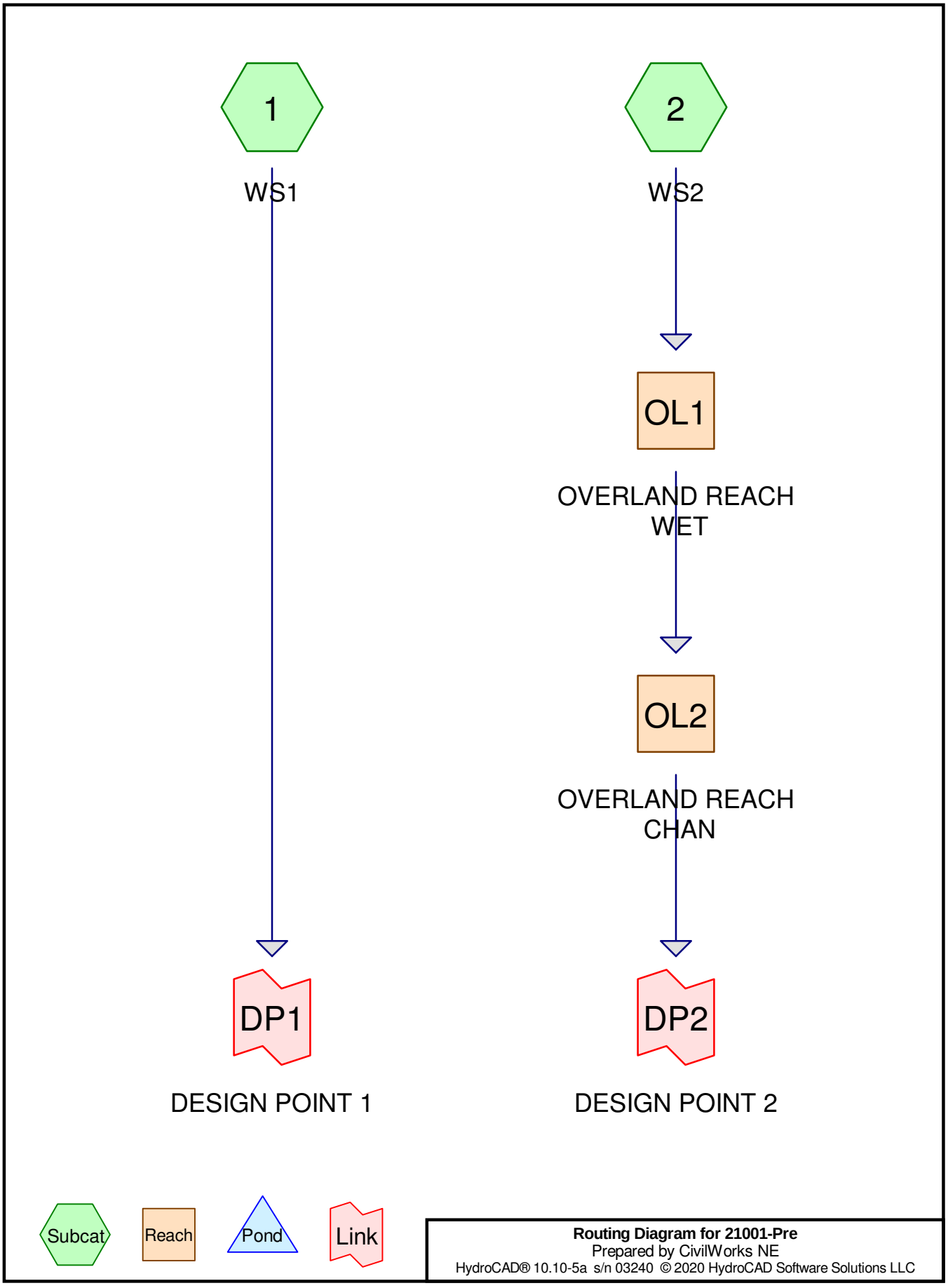
Water Quality Flow (WQF)

1	inches	P = Amount of rainfall. For WQF in NH, P = 1".
0.95	inches	Q = Water quality depth. Q = WQV/A
100	unitless	CN = Unit peak discharge curve number. CN =1000/(10+5P+10Q–10*[Q^2 + 1.25*Q*P] $^{0.5}$)
0.0	inches	S = Potential maximum retention. S = (1000/CN) - 10
0.009	inches	Ia = Initial abstraction. Ia = 0.2S
	minutes	T_c = Time of Concentration
	cfs/mi^2/in	q_u is the unit peak discharge. Obtain this value from TR-55 exhibits 4-II and 4-III.
-	cfs	WQF = q_u x WQV. Conversion: to convert "cfs/mi^2/in * ac-in" to "cfs" multiply by 1mi^2/640ac.

Designer's Notes: Contech Filtera Bioscape #2

A-1

EXISTING WATERSHEDS



Routing Diagram for 21001-Pre
Prepared by CivilWorks NE
HydroCAD® 10.10-5a s/n 03240 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
104,987	74	>75% Grass cover, Good, HSG C (1, 2)
1,106	80	>75% Grass cover, Good, HSG D (2)
2,876	89	Gravel roads, HSG C (2)
5,405	98	Paved parking, HSG C (2)
1,813	98	Roofs, HSG C (2)
186,176	70	Woods, Good, HSG C (1, 2)
35,172	77	Woods, Good, HSG D (1, 2)
337,535	**73**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
301,257	HSG C	1, 2
36,278	HSG D	1, 2
0	Other	
337,535		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Subcatch Numbers
0	0	104,987	1,106	0	106,093	>75% Grass cover, Good	
0	0	2,876	0	0	2,876	Gravel roads	
0	0	5,405	0	0	5,405	Paved parking	
0	0	1,813	0	0	1,813	Roofs	
0	0	186,176	35,172	0	221,348	Woods, Good	
0	**0**	**301,257**	**36,278**	**0**	**337,535**	**TOTAL AREA**	

A – 1

NODE LISTING – 2-YR

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: WS1 Runoff Area=138,330 sf 0.00% Impervious Runoff Depth=0.79"
Flow Length=742' Tc=12.3 min CN=70 Runoff=1.82 cfs 9,080 cf

Subcatchment 2: WS2 Runoff Area=199,205 sf 3.62% Impervious Runoff Depth=1.05"
Flow Length=831' Tc=22.4 min CN=75 Runoff=2.88 cfs 17,377 cf

Reach OL1: OVERLAND REACH WET Avg. Flow Depth=0.28' Max Vel=1.39 fps Inflow=2.88 cfs 17,377 cf
n=0.080 L=260.0' S=0.0512 '/' Capacity=42.56 cfs Outflow=2.81 cfs 17,377 cf

Reach OL2: OVERLAND REACH CHAN Avg. Flow Depth=0.28' Max Vel=3.57 fps Inflow=2.81 cfs 17,377 cf
n=0.035 L=208.0' S=0.0678 '/' Capacity=43.82 cfs Outflow=2.81 cfs 17,377 cf

Link DP1: DESIGN POINT 1 Inflow=1.82 cfs 9,080 cf
Primary=1.82 cfs 9,080 cf

Link DP2: DESIGN POINT 2 Inflow=2.81 cfs 17,377 cf
Primary=2.81 cfs 17,377 cf

Total Runoff Area = 337,535 sf Runoff Volume = 26,457 cf Average Runoff Depth = 0.94"
97.86% Pervious = 330,317 sf 2.14% Impervious = 7,218 sf

A – 1

NODE LISTING – 10-YR

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: WS1 Runoff Area=138,330 sf 0.00% Impervious Runoff Depth=2.77"
Flow Length=742' Tc=12.3 min CN=70 Runoff=6.16 cfs 31,971 cf

Subcatchment 2: WS2 Runoff Area=199,205 sf 3.62% Impervious Runoff Depth=3.25"
Flow Length=831' Tc=22.4 min CN=75 Runoff=8.08 cfs 53,918 cf

Reach OL1: OVERLAND REACH WET Avg. Flow Depth=0.46' Max Vel=1.91 fps Inflow=8.08 cfs 53,918 cf
n=0.080 L=260.0' S=0.0512 '/' Capacity=42.56 cfs Outflow=8.00 cfs 53,918 cf

Reach OL2: OVERLAND REACH CHAN Avg. Flow Depth=0.45' Max Vel=4.91 fps Inflow=8.00 cfs 53,918 cf
n=0.035 L=208.0' S=0.0678 '/' Capacity=43.82 cfs Outflow=7.99 cfs 53,918 cf

Link DP1: DESIGN POINT 1 Inflow=6.16 cfs 31,971 cf
Primary=6.16 cfs 31,971 cf

Link DP2: DESIGN POINT 2 Inflow=7.99 cfs 53,918 cf
Primary=7.99 cfs 53,918 cf

Total Runoff Area = 337,535 sf Runoff Volume = 85,890 cf Average Runoff Depth = 3.05"
97.86% Pervious = 330,317 sf 2.14% Impervious = 7,218 sf

A – 1

STORM SUMMARY – 10-YR

Summary for Subcatchment 1: WS1

Runoff = 4.21 cfs @ 12.12 hrs, Volume= 21,026 cf, Depth= 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
21041 24-hr S1 10-yr Rainfall=4.71"

Area (sf)	CN	Description
133,322	70	Woods, Good, HSG C
1,224	74	>75% Grass cover, Good, HSG C
3,784	77	Woods, Good, HSG D
138,330	70	Weighted Average
138,330		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	27	0.1481	0.13		**Sheet Flow, 1** Woods: Light underbrush n= 0.400 P2= 3.13"
0.9	91	0.1099	1.66		**Shallow Concentrated Flow, 2** Woodland Kv= 5.0 fps
0.9	84	0.0952	1.54		**Shallow Concentrated Flow, 3** Woodland Kv= 5.0 fps
2.4	144	0.0417	1.02		**Shallow Concentrated Flow, 4** Woodland Kv= 5.0 fps
1.1	102	0.0980	1.57		**Shallow Concentrated Flow, 5** Woodland Kv= 5.0 fps
1.1	62	0.0323	0.90		**Shallow Concentrated Flow, 6** Woodland Kv= 5.0 fps
0.3	40	0.1500	1.94		**Shallow Concentrated Flow, 7** Woodland Kv= 5.0 fps
2.2	192	0.0813	1.43		**Shallow Concentrated Flow, 8** Woodland Kv= 5.0 fps
12.3	742	Total			

Summary for Subcatchment 2: WS2

Runoff = 5.78 cfs @ 12.27 hrs, Volume= 36,791 cf, Depth= 2.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
21041 24-hr S1 10-yr Rainfall=4.71"

Area (sf)	CN	Description
52,854	70	Woods, Good, HSG C
103,763	74	>75% Grass cover, Good, HSG C
2,876	89	Gravel roads, HSG C
1,813	98	Roofs, HSG C
5,405	98	Paved parking, HSG C
31,388	77	Woods, Good, HSG D
1,106	80	>75% Grass cover, Good, HSG D
199,205	75	Weighted Average
191,987		96.38% Pervious Area
7,218		3.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	115	0.0696	0.20		**Sheet Flow, 1** Grass: Dense n= 0.240 P2= 3.13"
0.4	64	0.1250	2.47		**Shallow Concentrated Flow, 2** Short Grass Pasture Kv= 7.0 fps
1.4	110	0.0364	1.34		**Shallow Concentrated Flow, 3** Short Grass Pasture Kv= 7.0 fps
0.5	56	0.0714	1.87		**Shallow Concentrated Flow, 4** Short Grass Pasture Kv= 7.0 fps
1.4	89	0.0449	1.06		**Shallow Concentrated Flow, 5** Woodland Kv= 5.0 fps
8.9	397	0.0219	0.74		**Shallow Concentrated Flow, 6** Woodland Kv= 5.0 fps
22.4	831	Total			

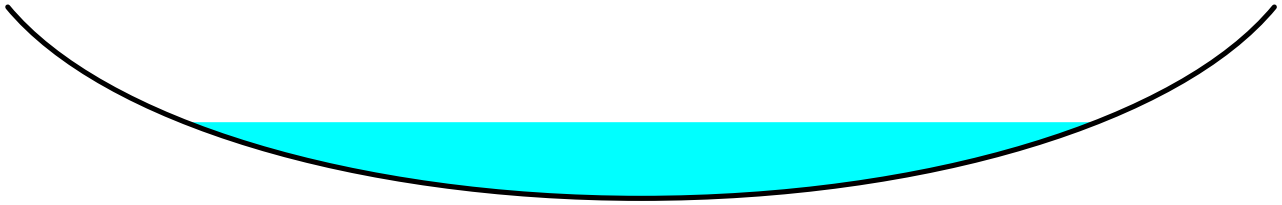
Summary for Reach OL1: OVERLAND REACH WET

Inflow Area = 199,205 sf, 3.62% Impervious, Inflow Depth = 2.22" for 10-yr event
Inflow = 5.78 cfs @ 12.27 hrs, Volume= 36,791 cf
Outflow = 5.71 cfs @ 12.29 hrs, Volume= 36,791 cf, Atten= 1%, Lag= 1.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 1.72 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 0.67 fps, Avg. Travel Time= 6.5 min

Peak Storage= 861 cf @ 12.29 hrs
Average Depth at Peak Storage= 0.40' , Surface Width= 12.57'
Bank-Full Depth= 1.00' Flow Area= 13.3 sf, Capacity= 42.56 cfs

20.00' x 1.00' deep Parabolic Channel, n= 0.080 Earth, long dense weeds
Length= 260.0' Slope= 0.0512 '/'
Inlet Invert= 179.30', Outlet Invert= 166.00'



‡

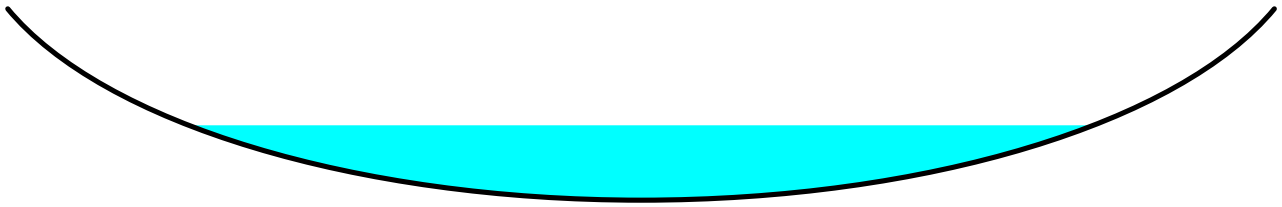
Summary for Reach OL2: OVERLAND REACH CHAN

Inflow Area = 199,205 sf, 3.62% Impervious, Inflow Depth = 2.22" for 10-yr event
Inflow = 5.71 cfs @ 12.29 hrs, Volume= 36,791 cf
Outflow = 5.70 cfs @ 12.30 hrs, Volume= 36,791 cf, Atten= 0%, Lag= 0.6 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 4.44 fps, Min. Travel Time= 0.8 min
Avg. Velocity = 1.76 fps, Avg. Travel Time= 2.0 min

Peak Storage= 267 cf @ 12.30 hrs
Average Depth at Peak Storage= 0.39' , Surface Width= 4.98'
Bank-Full Depth= 1.00' Flow Area= 5.3 sf, Capacity= 43.82 cfs

8.00' x 1.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 208.0' Slope= 0.0678 '/'
Inlet Invert= 166.00', Outlet Invert= 151.90'



‡

Summary for Link DP1: DESIGN POINT 1

Inflow Area = 138,330 sf, 0.00% Impervious, Inflow Depth = 1.82" for 10-yr event
Inflow = 4.21 cfs @ 12.12 hrs, Volume= 21,026 cf
Primary = 4.21 cfs @ 12.12 hrs, Volume= 21,026 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Link DP2: DESIGN POINT 2

Inflow Area = 199,205 sf, 3.62% Impervious, Inflow Depth = 2.22" for 10-yr event
Inflow = 5.70 cfs @ 12.30 hrs, Volume= 36,791 cf
Primary = 5.70 cfs @ 12.30 hrs, Volume= 36,791 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

A – 1

NODE LISTING – 25-YR

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: WS1 Runoff Area=138,330 sf 0.00% Impervious Runoff Depth=2.77"
Flow Length=742' Tc=12.3 min CN=70 Runoff=6.16 cfs 31,971 cf

Subcatchment 2: WS2 Runoff Area=199,205 sf 3.62% Impervious Runoff Depth=3.25"
Flow Length=831' Tc=22.4 min CN=75 Runoff=8.08 cfs 53,918 cf

Reach OL1: OVERLAND REACH WET Avg. Flow Depth=0.46' Max Vel=1.91 fps Inflow=8.08 cfs 53,918 cf
n=0.080 L=260.0' S=0.0512 '/' Capacity=42.56 cfs Outflow=8.00 cfs 53,918 cf

Reach OL2: OVERLAND REACH CHAN Avg. Flow Depth=0.45' Max Vel=4.91 fps Inflow=8.00 cfs 53,918 cf
n=0.035 L=208.0' S=0.0678 '/' Capacity=43.82 cfs Outflow=7.99 cfs 53,918 cf

Link DP1: DESIGN POINT 1 Inflow=6.16 cfs 31,971 cf
Primary=6.16 cfs 31,971 cf

Link DP2: DESIGN POINT 2 Inflow=7.99 cfs 53,918 cf
Primary=7.99 cfs 53,918 cf

Total Runoff Area = 337,535 sf Runoff Volume = 85,890 cf Average Runoff Depth = 3.05"
97.86% Pervious = 330,317 sf 2.14% Impervious = 7,218 sf

A – 1

NODE LISTING – 50-YR

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: WS1 Runoff Area=138,330 sf 0.00% Impervious Runoff Depth=3.71"
Flow Length=742' Tc=12.3 min CN=70 Runoff=8.03 cfs 42,767 cf

Subcatchment 2: WS2 Runoff Area=199,205 sf 3.62% Impervious Runoff Depth=4.25"
Flow Length=831' Tc=22.4 min CN=75 Runoff=10.24 cfs 70,494 cf

Reach OL1: OVERLAND REACH WET Avg. Flow Depth=0.52' Max Vel=2.06 fps Inflow=10.24 cfs 70,494 cf
n=0.080 L=260.0' S=0.0512 '/' Capacity=42.56 cfs Outflow=10.16 cfs 70,494 cf

Reach OL2: OVERLAND REACH CHAN Avg. Flow Depth=0.51' Max Vel=5.29 fps Inflow=10.16 cfs 70,494 cf
n=0.035 L=208.0' S=0.0678 '/' Capacity=43.82 cfs Outflow=10.15 cfs 70,494 cf

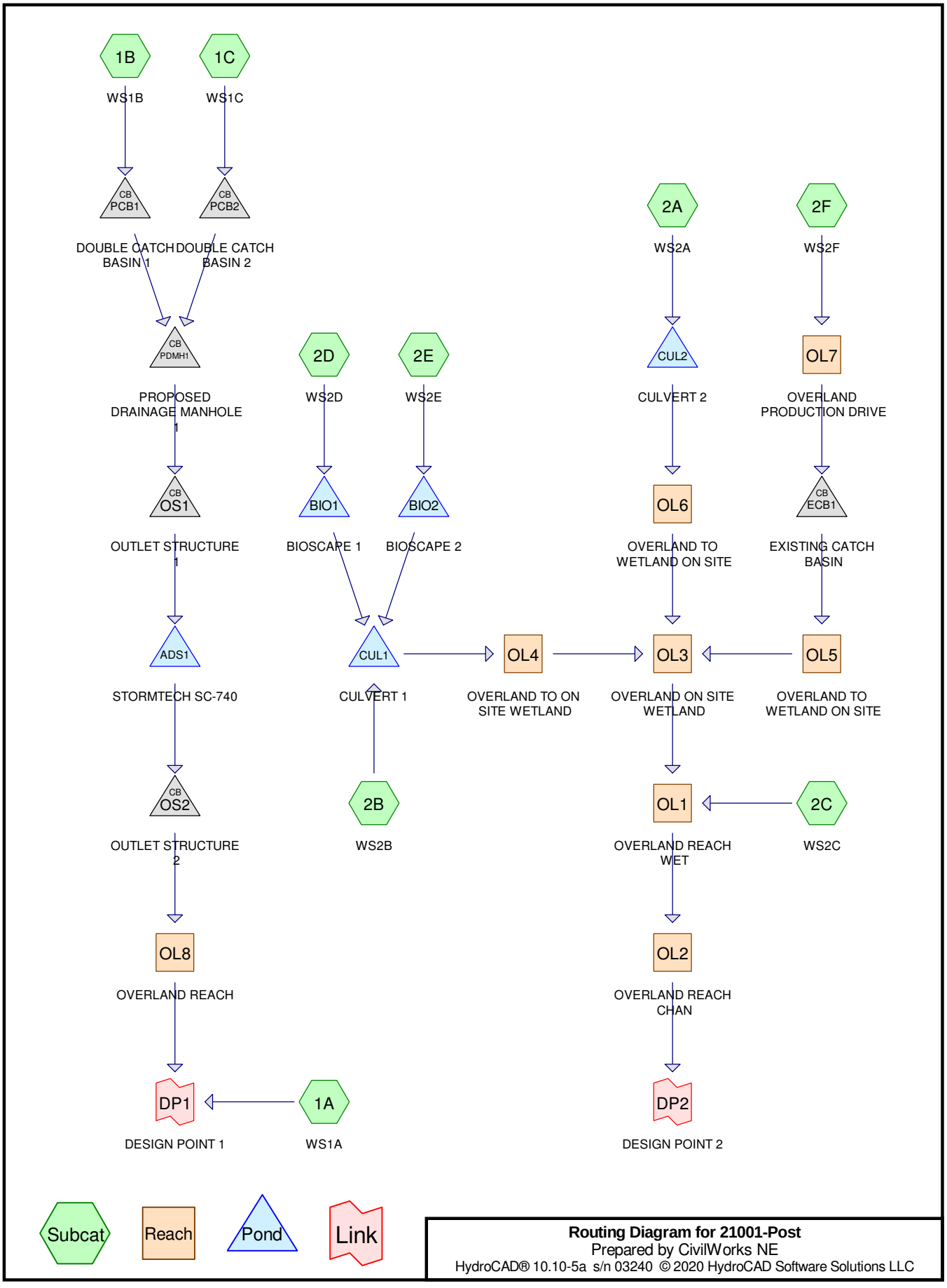
Link DP1: DESIGN POINT 1 Inflow=8.03 cfs 42,767 cf
Primary=8.03 cfs 42,767 cf

Link DP2: DESIGN POINT 2 Inflow=10.15 cfs 70,494 cf
Primary=10.15 cfs 70,494 cf

Total Runoff Area = 337,535 sf Runoff Volume = 113,261 cf Average Runoff Depth = 4.03"
97.86% Pervious = 330,317 sf 2.14% Impervious = 7,218 sf

A-2

DEVELOPED WATERSHEDS



Routing Diagram for 21001-Post
Prepared by CivilWorks NE
HydroCAD® 10.10-5a s/n 03240 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
107,590	74	>75% Grass cover, Good, HSG C (1A, 1B, 2A, 2B, 2C, 2D, 2E)
1,958	80	>75% Grass cover, Good, HSG D (2B, 2C)
2,876	96	Gravel surface, HSG C (2B)
45,617	98	Paved parking, HSG C (1B, 1C, 2B, 2D, 2E, 2F)
604	98	Paved parking, HSG D (2D)
26,235	98	Roofs, HSG C (1A, 1B, 1C, 2A, 2B)
287	98	Unconnected pavement, HSG C (1B, 2A, 2D, 2E)
118,652	70	Woods, Good, HSG C (1A, 1B, 2C)
33,716	77	Woods, Good, HSG D (1A, 2C)

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
301,257	HSG C	1A, 1B, 1C, 2A, 2B, 2C, 2D, 2E, 2F
36,278	HSG D	1A, 2B, 2C, 2D
0	Other	

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Subcatch Numbers
0	0	107,590	1,958	0	109,548	>75% Grass cover, Good	
0	0	2,876	0	0	2,876	Gravel surface	
0	0	45,617	604	0	46,221	Paved parking	
0	0	26,235	0	0	26,235	Roofs	
0	0	287	0	0	287	Unconnected pavement	
0	0	118,652	33,716	0	152,368	Woods, Good	

A – 2

NODE LISTING – 2-YR

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1A: WS1A Runoff Area=108,659 sf 3.59% Impervious Runoff Depth=0.89"
Flow Length=740' Tc=12.2 min CN=72 Runoff=1.70 cfs 8,027 cf

Subcatchment 1B: WS1B Runoff Area=35,283 sf 82.94% Impervious Runoff Depth=2.48"
Flow Length=394' Tc=5.7 min CN=94 Runoff=2.25 cfs 7,280 cf

Subcatchment 1C: WS1C Runoff Area=25,355 sf 100.00% Impervious Runoff Depth=2.90"
Flow Length=289' Tc=2.6 min CN=98 Runoff=2.00 cfs 6,123 cf

Subcatchment 2A: WS2A Runoff Area=33,320 sf 1.13% Impervious Runoff Depth=0.99"
Flow Length=336' Tc=11.9 min CN=74 Runoff=0.61 cfs 2,754 cf

Subcatchment 2B: WS2B Runoff Area=56,506 sf 12.36% Impervious Runoff Depth=1.22"
Flow Length=352' Tc=7.4 min CN=78 Runoff=1.63 cfs 5,756 cf

Subcatchment 2C: WS2C Runoff Area=71,430 sf 0.00% Impervious Runoff Depth=0.99"
Flow Length=923' Tc=21.0 min CN=74 Runoff=1.00 cfs 5,903 cf

Subcatchment 2D: WS2D Runoff Area=4,335 sf 97.65% Impervious Runoff Depth=2.79"
Flow Length=138' Tc=1.6 min CN=97 Runoff=0.34 cfs 1,007 cf

Subcatchment 2E: WS2E Runoff Area=2,396 sf 99.33% Impervious Runoff Depth=2.90"
Flow Length=102' Tc=1.2 min CN=98 Runoff=0.19 cfs 579 cf

Subcatchment 2F: WS2F Runoff Area=251 sf 100.00% Impervious Runoff Depth=2.90"
Flow Length=15' Slope=0.0233 '/' Tc=0.3 min CN=98 Runoff=0.02 cfs 61 cf

Reach OL1: OVERLAND REACH WET Avg. Flow Depth=0.18' Max Vel=1.03 fps Inflow=2.82 cfs 16,047 cf
n=0.080 L=260.0' S=0.0512 '/' Capacity=106.79 cfs Outflow=2.68 cfs 16,047 cf

Reach OL2: OVERLAND REACH CHAN Avg. Flow Depth=0.21' Max Vel=2.97 fps Inflow=2.68 cfs 16,047 cf
n=0.035 L=208.0' S=0.0678 '/' Capacity=351.03 cfs Outflow=2.67 cfs 16,047 cf

Reach OL3: OVERLAND ON SITE WETLAND Avg. Flow Depth=0.10' Max Vel=0.96 fps Inflow=2.29 cfs 10,144 cf
n=0.035 L=342.0' S=0.0196 '/' Capacity=66.65 cfs Outflow=1.93 cfs 10,144 cf

Reach OL4: OVERLAND TO ON SITE Avg. Flow Depth=0.11' Max Vel=1.11 fps Inflow=1.81 cfs 7,330 cf
n=0.035 L=79.0' S=0.0233 '/' Capacity=51.91 cfs Outflow=1.79 cfs 7,330 cf

Reach OL5: OVERLAND TO WETLAND ON SITE Avg. Flow Depth=0.02' Max Vel=0.47 fps Inflow=0.02 cfs 61 cf
n=0.035 L=35.5' S=0.0513 '/' Capacity=30.78 cfs Outflow=0.02 cfs 61 cf

Reach OL6: OVERLAND TO WETLAND ON Avg. Flow Depth=0.09' Max Vel=1.26 fps Inflow=0.61 cfs 2,753 cf
n=0.035 L=114.0' S=0.0397 '/' Capacity=27.10 cfs Outflow=0.60 cfs 2,753 cf

Reach OL7: OVERLAND PRODUCTION DRIVE Avg. Flow Depth=0.02' Max Vel=0.36 fps Inflow=0.02 cfs 61 cf
n=0.016 L=65.6' S=0.0037 '/' Capacity=13.48 cfs Outflow=0.02 cfs 61 cf

Reach OL8: OVERLAND REACH Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0 cf
n=0.030 L=398.0' S=0.0859 '/' Capacity=46.46 cfs Outflow=0.00 cfs 0 cf

Pond ADS1: STORMTECH SC-740 Peak Elev=190.69' Storage=2,197 cf Inflow=4.11 cfs 13,403 cf
Discarded=0.85 cfs 13,405 cf Primary=0.00 cfs 0 cf Outflow=0.85 cfs 13,405 cf

Pond BIO1: BIOSCAPE 1 Peak Elev=191.76' Storage=50 cf Inflow=0.34 cfs 1,007 cf
Outflow=0.36 cfs 1,005 cf

Pond BIO2: BIOSCAPE 2 Peak Elev=191.70' Storage=49 cf Inflow=0.19 cfs 579 cf
Outflow=0.16 cfs 577 cf

Pond CUL1: CULVERT 1 Peak Elev=188.96' Storage=123 cf Inflow=1.84 cfs 7,338 cf
18.0" Round Culvert n=0.013 L=43.0' S=0.0116 '/' Outflow=1.81 cfs 7,330 cf

Pond CUL2: CULVERT 2 Peak Elev=191.38' Storage=27 cf Inflow=0.61 cfs 2,754 cf
15.0" Round Culvert n=0.013 L=33.0' S=0.0148 '/' Outflow=0.61 cfs 2,753 cf

Pond ECB1: EXISTING CATCH BASIN Peak Elev=192.47' Inflow=0.02 cfs 61 cf
Outflow=0.02 cfs 61 cf

Pond OS1: OUTLET STRUCTURE 1 Peak Elev=190.69' Inflow=4.11 cfs 13,403 cf
24.0" Round Culvert n=0.013 L=3.0' S=0.0100 '/' Outflow=4.11 cfs 13,403 cf

Pond OS2: OUTLET STRUCTURE 2 Peak Elev=187.00' Inflow=0.00 cfs 0 cf
24.0" Round Culvert n=0.013 L=40.0' S=0.0608 '/' Outflow=0.00 cfs 0 cf

Pond PCB1: DOUBLE CATCH BASIN 1 Peak Elev=191.92' Inflow=2.25 cfs 7,280 cf
Outflow=2.25 cfs 7,280 cf

Pond PCB2: DOUBLE CATCH BASIN 2 Peak Elev=191.12' Inflow=2.00 cfs 6,123 cf
Outflow=2.00 cfs 6,123 cf

Pond PDMH1: PROPOSED DRAINAGE MANHOLE 1 Peak Elev=190.73' Inflow=4.11 cfs 13,403 cf
24.0" Round Culvert n=0.013 L=22.0' S=0.0200 '/' Outflow=4.11 cfs 13,403 cf

Link DP1: DESIGN POINT 1 Inflow=1.70 cfs 8,027 cf
Primary=1.70 cfs 8,027 cf

Link DP2: DESIGN POINT 2 Inflow=2.67 cfs 16,047 cf
Primary=2.67 cfs 16,047 cf

Total Runoff Area = 337,535 sf Runoff Volume = 37,489 cf Average Runoff Depth = 1.33"
78.45% Pervious = 264,792 sf 21.55% Impervious = 72,743 sf

A – 2

NODE LISTING – 10-YR

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1A: WS1A Runoff Area=108,659 sf 3.59% Impervious Runoff Depth=1.98"
Flow Length=740' Tc=12.2 min CN=72 Runoff=3.64 cfs 17,902 cf

Subcatchment 1B: WS1B Runoff Area=35,283 sf 82.94% Impervious Runoff Depth=4.02"
Flow Length=394' Tc=5.7 min CN=94 Runoff=3.07 cfs 11,826 cf

Subcatchment 1C: WS1C Runoff Area=25,355 sf 100.00% Impervious Runoff Depth=4.47"
Flow Length=289' Tc=2.6 min CN=98 Runoff=2.60 cfs 9,452 cf

Subcatchment 2A: WS2A Runoff Area=33,320 sf 1.13% Impervious Runoff Depth=2.14"
Flow Length=336' Tc=11.9 min CN=74 Runoff=1.23 cfs 5,929 cf

Subcatchment 2B: WS2B Runoff Area=56,506 sf 12.36% Impervious Runoff Depth=2.47"
Flow Length=352' Tc=7.4 min CN=78 Runoff=2.95 cfs 11,618 cf

Subcatchment 2C: WS2C Runoff Area=71,430 sf 0.00% Impervious Runoff Depth=2.14"
Flow Length=923' Tc=21.0 min CN=74 Runoff=2.05 cfs 12,710 cf

Subcatchment 2D: WS2D Runoff Area=4,335 sf 97.65% Impervious Runoff Depth=4.36"
Flow Length=138' Tc=1.6 min CN=97 Runoff=0.44 cfs 1,574 cf

Subcatchment 2E: WS2E Runoff Area=2,396 sf 99.33% Impervious Runoff Depth=4.47"
Flow Length=102' Tc=1.2 min CN=98 Runoff=0.25 cfs 893 cf

Subcatchment 2F: WS2F Runoff Area=251 sf 100.00% Impervious Runoff Depth=4.47"
Flow Length=15' Slope=0.0233 '/' Tc=0.3 min CN=98 Runoff=0.03 cfs 94 cf

Reach OL1: OVERLAND REACH WET Avg. Flow Depth=0.25' Max Vel=1.28 fps Inflow=5.57 cfs 32,806 cf
n=0.080 L=260.0' S=0.0512 '/' Capacity=106.79 cfs Outflow=5.38 cfs 32,806 cf

Reach OL2: OVERLAND REACH CHAN Avg. Flow Depth=0.29' Max Vel=3.68 fps Inflow=5.38 cfs 32,806 cf
n=0.035 L=208.0' S=0.0678 '/' Capacity=351.03 cfs Outflow=5.37 cfs 32,806 cf

Reach OL3: OVERLAND ON SITE WETLAND Avg. Flow Depth=0.13' Max Vel=1.18 fps Inflow=4.23 cfs 20,097 cf
n=0.035 L=342.0' S=0.0196 '/' Capacity=66.65 cfs Outflow=3.77 cfs 20,097 cf

Reach OL4: OVERLAND TO ON SITE Avg. Flow Depth=0.14' Max Vel=1.32 fps Inflow=3.19 cfs 14,075 cf
n=0.035 L=79.0' S=0.0233 '/' Capacity=51.91 cfs Outflow=3.16 cfs 14,075 cf

Reach OL5: OVERLAND TO WETLAND ON SITE Avg. Flow Depth=0.02' Max Vel=0.51 fps Inflow=0.02 cfs 94 cf
n=0.035 L=35.5' S=0.0513 '/' Capacity=30.78 cfs Outflow=0.02 cfs 94 cf

Reach OL6: OVERLAND TO WETLAND ON Avg. Flow Depth=0.12' Max Vel=1.57 fps Inflow=1.23 cfs 5,928 cf
n=0.035 L=114.0' S=0.0397 '/' Capacity=27.10 cfs Outflow=1.22 cfs 5,928 cf

Reach OL7: OVERLAND PRODUCTION DRIVE Avg. Flow Depth=0.03' Max Vel=0.39 fps Inflow=0.03 cfs 94 cf
n=0.016 L=65.6' S=0.0037 '/' Capacity=13.48 cfs Outflow=0.02 cfs 94 cf

Reach OL8: OVERLAND REACH Avg. Flow Depth=0.07' Max Vel=1.87 fps Inflow=0.67 cfs 1,227 cf
n=0.030 L=398.0' S=0.0859 '/' Capacity=46.46 cfs Outflow=0.65 cfs 1,227 cf

Pond ADS1: STORMTECH SC-740 Peak Elev=191.57' Storage=3,328 cf Inflow=5.50 cfs 21,278 cf
Discarded=0.99 cfs 20,055 cf Primary=0.67 cfs 1,227 cf Outflow=1.66 cfs 21,282 cf

Pond BIO1: BIOSCAPE 1 Peak Elev=191.78' Storage=50 cf Inflow=0.44 cfs 1,574 cf
Outflow=0.44 cfs 1,573 cf

Pond BIO2: BIOSCAPE 2 Peak Elev=191.74' Storage=49 cf Inflow=0.25 cfs 893 cf
Outflow=0.27 cfs 892 cf

Pond CUL1: CULVERT 1 Peak Elev=189.20' Storage=209 cf Inflow=3.25 cfs 14,083 cf
18.0" Round Culvert n=0.013 L=43.0' S=0.0116 '/' Outflow=3.19 cfs 14,075 cf

Pond CUL2: CULVERT 2 Peak Elev=191.55' Storage=48 cf Inflow=1.23 cfs 5,929 cf
15.0" Round Culvert n=0.013 L=33.0' S=0.0148 '/' Outflow=1.23 cfs 5,928 cf

Pond ECB1: EXISTING CATCH BASIN Peak Elev=192.47' Inflow=0.02 cfs 94 cf
Outflow=0.02 cfs 94 cf

Pond OS1: OUTLET STRUCTURE 1 Peak Elev=191.59' Inflow=5.50 cfs 21,278 cf
24.0" Round Culvert n=0.013 L=3.0' S=0.0100 '/' Outflow=5.50 cfs 21,278 cf

Pond OS2: OUTLET STRUCTURE 2 Peak Elev=187.33' Inflow=0.67 cfs 1,227 cf
24.0" Round Culvert n=0.013 L=40.0' S=0.0608 '/' Outflow=0.67 cfs 1,227 cf

Pond PCB1: DOUBLE CATCH BASIN 1 Peak Elev=192.15' Inflow=3.07 cfs 11,826 cf
Outflow=3.07 cfs 11,826 cf

Pond PCB2: DOUBLE CATCH BASIN 2 Peak Elev=191.61' Inflow=2.60 cfs 9,452 cf
Outflow=2.60 cfs 9,452 cf

Pond PDMH1: PROPOSED DRAINAGE MANHOLE 1 Peak Elev=191.60' Inflow=5.50 cfs 21,278 cf
24.0" Round Culvert n=0.013 L=22.0' S=0.0200 '/' Outflow=5.50 cfs 21,278 cf

Link DP1: DESIGN POINT 1 Inflow=3.93 cfs 19,129 cf
Primary=3.93 cfs 19,129 cf

Link DP2: DESIGN POINT 2 Inflow=5.37 cfs 32,806 cf
Primary=5.37 cfs 32,806 cf

Total Runoff Area = 337,535 sf Runoff Volume = 71,998 cf Average Runoff Depth = 2.56"
78.45% Pervious = 264,792 sf 21.55% Impervious = 72,743 sf

A – 2

STORM SUMMARY – 10-YR

Summary for Subcatchment 1A: WS1A

Runoff = 3.64 cfs @ 12.12 hrs, Volume= 17,902 cf, Depth= 1.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
21041 24-hr S1 10-yr Rainfall=4.71"

Area (sf)	CN	Description
92,537	70	Woods, Good, HSG C
8,173	74	>75% Grass cover, Good, HSG C
3,900	98	Roofs, HSG C
4,049	77	Woods, Good, HSG D
108,659	72	Weighted Average
104,759		96.41% Pervious Area
3,900		3.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.4	27	0.1481	0.13		**Sheet Flow, 1** Woods: Light underbrush n= 0.400 P2= 3.13"
0.5	49	0.1224	1.75		**Shallow Concentrated Flow, 2** Woodland Kv= 5.0 fps
1.1	104	0.0962	1.55		**Shallow Concentrated Flow, 3** Woodland Kv= 5.0 fps
0.7	58	0.0690	1.31		**Shallow Concentrated Flow, 4** Woodland Kv= 5.0 fps
1.2	65	0.0308	0.88		**Shallow Concentrated Flow, 5** Woodland Kv= 5.0 fps
0.6	41	0.0488	1.10		**Shallow Concentrated Flow, 6** Woodland Kv= 5.0 fps
1.1	102	0.0980	1.57		**Shallow Concentrated Flow, 7** Woodland Kv= 5.0 fps
1.1	62	0.0323	0.90		**Shallow Concentrated Flow, 8** Woodland Kv= 5.0 fps
0.3	40	0.1500	1.94		**Shallow Concentrated Flow, 9** Woodland Kv= 5.0 fps
2.2	192	0.0813	1.43		**Shallow Concentrated Flow, 10** Woodland Kv= 5.0 fps
12.2	740	Total			

Summary for Subcatchment 1B: WS1B

Runoff = 3.07 cfs @ 12.03 hrs, Volume= 11,826 cf, Depth= 4.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
21041 24-hr S1 10-yr Rainfall=4.71"

Area (sf)	CN	Description
858	70	Woods, Good, HSG C
5,163	74	>75% Grass cover, Good, HSG C
10,260	98	Roofs, HSG C
128	98	Unconnected pavement, HSG C
18,874	98	Paved parking, HSG C
35,283	94	Weighted Average
6,021		17.06% Pervious Area
29,262		82.94% Impervious Area
128		0.44% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.8	23	0.1739	0.14		**Sheet Flow, 1** Woods: Light underbrush n= 0.400 P2= 3.13"
0.2	31	0.1290	2.51		**Shallow Concentrated Flow, 2** Short Grass Pasture Kv= 7.0 fps
0.1	26	0.4231	4.55		**Shallow Concentrated Flow, 3** Short Grass Pasture Kv= 7.0 fps
0.1	21	0.0238	3.13		**Shallow Concentrated Flow, 4** Paved Kv= 20.3 fps
0.4	50	0.0100	2.03		**Shallow Concentrated Flow, 5** Paved Kv= 20.3 fps
1.8	210	0.0095	1.98		**Shallow Concentrated Flow, 6** Paved Kv= 20.3 fps
0.3	33	0.0100	2.03		**Shallow Concentrated Flow, 7** Paved Kv= 20.3 fps
5.7	394	Total			

Summary for Subcatchment 1C: WS1C

Runoff = 2.60 cfs @ 12.00 hrs, Volume= 9,452 cf, Depth= 4.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
21041 24-hr S1 10-yr Rainfall=4.71"

Area (sf)	CN	Description
10,261	98	Roofs, HSG C
15,094	98	Paved parking, HSG C
25,355	98	Weighted Average
25,355		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	47	0.0213	1.20		**Sheet Flow, 1** Smooth surfaces n= 0.011 P2= 3.13"
1.6	200	0.0100	2.03		**Shallow Concentrated Flow, 2** Paved Kv= 20.3 fps
0.3	42	0.0119	2.21		**Shallow Concentrated Flow, 3** Paved Kv= 20.3 fps
2.6	289	Total			

Summary for Subcatchment 2A: WS2A

Runoff = 1.23 cfs @ 12.12 hrs, Volume= 5,929 cf, Depth= 2.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
21041 24-hr S1 10-yr Rainfall=4.71"

Area (sf)	CN	Description
32,943	74	>75% Grass cover, Good, HSG C
242	98	Roofs, HSG C
135	98	Unconnected pavement, HSG C
33,320	74	Weighted Average
32,943		98.87% Pervious Area
377		1.13% Impervious Area
135		35.81% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	115	0.0696	0.20		**Sheet Flow, 1** Grass: Dense n= 0.240 P2= 3.13"
0.4	64	0.1250	2.47		**Shallow Concentrated Flow, 2** Short Grass Pasture Kv= 7.0 fps
1.4	110	0.0364	1.34		**Shallow Concentrated Flow, 3** Short Grass Pasture Kv= 7.0 fps
0.2	27	0.0741	1.91		**Shallow Concentrated Flow, 4** Short Grass Pasture Kv= 7.0 fps
0.1	20	0.1490	2.70		**Shallow Concentrated Flow, 5** Short Grass Pasture Kv= 7.0 fps
11.9	336	Total			

Summary for Subcatchment 2B: WS2B

Runoff = 2.95 cfs @ 12.05 hrs, Volume= 11,618 cf, Depth= 2.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
21041 24-hr S1 10-yr Rainfall=4.71"

Area (sf)	CN	Description
46,324	74	>75% Grass cover, Good, HSG C
2,876	96	Gravel surface, HSG C
1,572	98	Roofs, HSG C
5,413	98	Paved parking, HSG C
321	80	>75% Grass cover, Good, HSG D
56,506	78	Weighted Average
49,521		87.64% Pervious Area
6,985		12.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	49	0.1275	0.21		**Sheet Flow, 1** Grass: Dense n= 0.240 P2= 3.13"
1.7	130	0.0333	1.28		**Shallow Concentrated Flow, 2** Short Grass Pasture Kv= 7.0 fps
0.4	38	0.0437	1.46		**Shallow Concentrated Flow, 3** Short Grass Pasture Kv= 7.0 fps
0.2	20	0.1000	2.21		**Shallow Concentrated Flow, 4** Short Grass Pasture Kv= 7.0 fps
1.2	115	0.0492	1.55		**Shallow Concentrated Flow, 5** Short Grass Pasture Kv= 7.0 fps
7.4	352	Total			

Summary for Subcatchment 2C: WS2C

Runoff = 2.05 cfs @ 12.25 hrs, Volume= 12,710 cf, Depth= 2.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
21041 24-hr S1 10-yr Rainfall=4.71"

Area (sf)	CN	Description
25,257	70	Woods, Good, HSG C
14,869	74	>75% Grass cover, Good, HSG C
29,667	77	Woods, Good, HSG D
1,637	80	>75% Grass cover, Good, HSG D
71,430	74	Weighted Average
71,430		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	50	0.1016	0.13		**Sheet Flow, 1** Woods: Light underbrush n= 0.400 P2= 3.13"
7.0	557	0.0702	1.32		**Shallow Concentrated Flow, 2** Woodland Kv= 5.0 fps
6.2	240	0.0167	0.65		**Shallow Concentrated Flow, 3** Woodland Kv= 5.0 fps
1.3	76	0.0355	0.94		**Shallow Concentrated Flow, 4** Woodland Kv= 5.0 fps
21.0	923	Total			

Summary for Subcatchment 2D: WS2D

Runoff = 0.44 cfs @ 12.00 hrs, Volume= 1,574 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
21041 24-hr S1 10-yr Rainfall=4.71"

Area (sf)	CN	Description
102	74	>75% Grass cover, Good, HSG C
15	98	Unconnected pavement, HSG C
3,614	98	Paved parking, HSG C
604	98	Paved parking, HSG D
4,335	97	Weighted Average
102		2.35% Pervious Area
4,233		97.65% Impervious Area
15		0.35% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	8	0.1333	0.15		**Sheet Flow, 1** Grass: Dense n= 0.240 P2= 3.13"
0.1	16	0.0625	5.08		**Shallow Concentrated Flow, 2** Paved Kv= 20.3 fps
0.1	21	0.0557	4.79		**Shallow Concentrated Flow, 3** Paved Kv= 20.3 fps
0.0	11	0.0750	5.56		**Shallow Concentrated Flow, 4** Paved Kv= 20.3 fps
0.3	63	0.0317	3.61		**Shallow Concentrated Flow, 5** Paved Kv= 20.3 fps
0.2	19	0.0050	1.44		**Shallow Concentrated Flow, 6** Paved Kv= 20.3 fps
1.6	138	Total			

Summary for Subcatchment 2E: WS2E

Runoff = 0.25 cfs @ 11.99 hrs, Volume= 893 cf, Depth= 4.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
21041 24-hr S1 10-yr Rainfall=4.71"

Area (sf)	CN	Description
16	74	>75% Grass cover, Good, HSG C
9	98	Unconnected pavement, HSG C
1,841	98	Paved parking, HSG C
530	98	Paved parking, HSG C
2,396	98	Weighted Average
16		0.67% Pervious Area
2,380		99.33% Impervious Area
9		0.38% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	40	0.0140	0.98		**Sheet Flow, 1** Smooth surfaces n= 0.011 P2= 3.13"
0.4	52	0.0096	1.99		**Shallow Concentrated Flow, 2** Paved Kv= 20.3 fps
0.1	10	0.0105	2.08		**Shallow Concentrated Flow, 3** Paved Kv= 20.3 fps
1.2	102	Total			

Summary for Subcatchment 2F: WS2F

Runoff = 0.03 cfs @ 11.99 hrs, Volume= 94 cf, Depth= 4.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
21041 24-hr S1 10-yr Rainfall=4.71"

Area (sf)	CN	Description
251	98	Paved parking, HSG C
251		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	15	0.0233	0.99		**Sheet Flow, 1** Smooth surfaces n= 0.011 P2= 3.13"

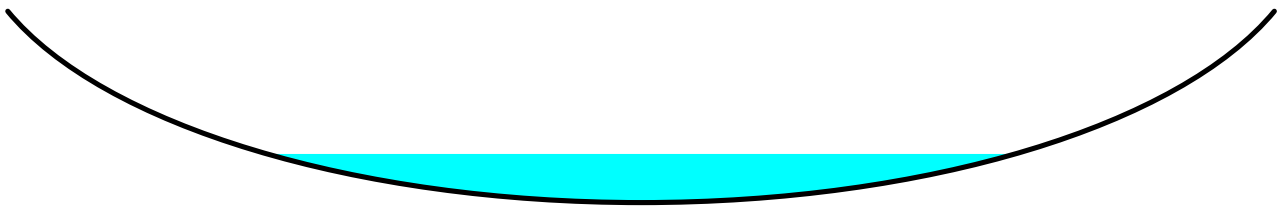
Summary for Reach OL1: OVERLAND REACH WET

Inflow Area = 168,238 sf, 8.46% Impervious, Inflow Depth = 2.34" for 10-yr event
Inflow = 5.57 cfs @ 12.17 hrs, Volume= 32,806 cf
Outflow = 5.38 cfs @ 12.22 hrs, Volume= 32,806 cf, Atten= 3%, Lag= 2.8 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 1.28 fps, Min. Travel Time= 3.4 min
Avg. Velocity = 0.40 fps, Avg. Travel Time= 10.8 min

Peak Storage= 1,094 cf @ 12.22 hrs
Average Depth at Peak Storage= 0.25' , Surface Width= 25.08'
Bank-Full Depth= 1.00' Flow Area= 33.3 sf, Capacity= 106.79 cfs

50.00' x 1.00' deep Parabolic Channel, n= 0.080 Earth, long dense weeds
Length= 260.0' Slope= 0.0512 '/'
Inlet Invert= 179.30', Outlet Invert= 166.00'



‡

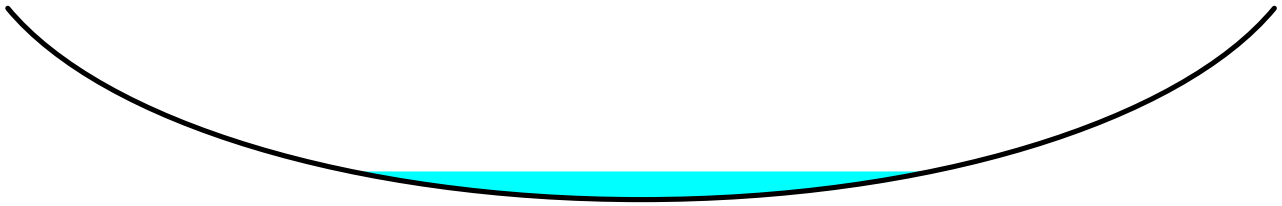
Summary for Reach OL2: OVERLAND REACH CHAN

Inflow Area = 168,238 sf, 8.46% Impervious, Inflow Depth = 2.34" for 10-yr event
Inflow = 5.38 cfs @ 12.22 hrs, Volume= 32,806 cf
Outflow = 5.37 cfs @ 12.23 hrs, Volume= 32,806 cf, Atten= 0%, Lag= 0.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 3.68 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 1.26 fps, Avg. Travel Time= 2.8 min

Peak Storage= 304 cf @ 12.23 hrs
Average Depth at Peak Storage= 0.29' , Surface Width= 7.59'
Bank-Full Depth= 2.00' Flow Area= 26.7 sf, Capacity= 351.03 cfs

20.00' x 2.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 208.0' Slope= 0.0678 '/'
Inlet Invert= 166.00', Outlet Invert= 151.90'



‡

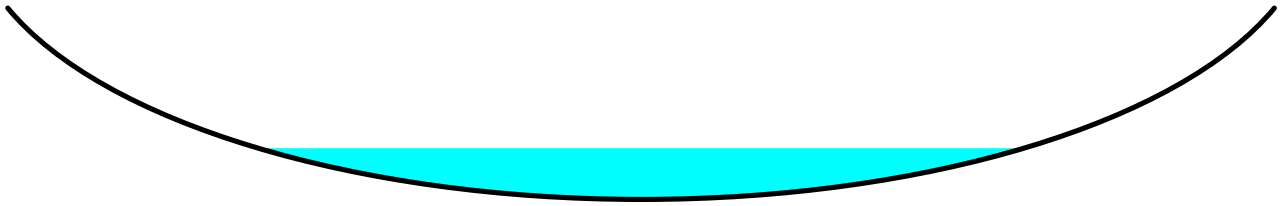
Summary for Reach OL3: OVERLAND ON SITE WETLAND

Inflow Area = 96,808 sf, 14.70% Impervious, Inflow Depth = 2.49" for 10-yr event
Inflow = 4.23 cfs @ 12.09 hrs, Volume= 20,097 cf
Outflow = 3.77 cfs @ 12.15 hrs, Volume= 20,097 cf, Atten= 11%, Lag= 3.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 1.18 fps, Min. Travel Time= 4.8 min
Avg. Velocity = 0.36 fps, Avg. Travel Time= 15.7 min

Peak Storage= 1,092 cf @ 12.15 hrs
Average Depth at Peak Storage= 0.13' , Surface Width= 36.07'
Bank-Full Depth= 0.50' Flow Area= 23.3 sf, Capacity= 66.65 cfs

70.00' x 0.50' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 342.0' Slope= 0.0196 '/'
Inlet Invert= 186.00', Outlet Invert= 179.30'



‡

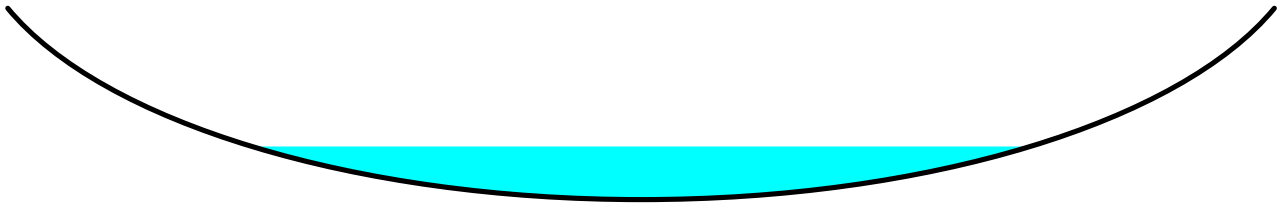
Summary for Reach OL4: OVERLAND TO ON SITE WETLAND

Inflow Area = 63,237 sf, 21.50% Impervious, Inflow Depth = 2.67" for 10-yr event
Inflow = 3.19 cfs @ 12.07 hrs, Volume= 14,075 cf
Outflow = 3.16 cfs @ 12.08 hrs, Volume= 14,075 cf, Atten= 1%, Lag= 0.7 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 1.32 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 0.42 fps, Avg. Travel Time= 3.2 min

Peak Storage= 190 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.14' , Surface Width= 26.21'
Bank-Full Depth= 0.50' Flow Area= 16.7 sf, Capacity= 51.91 cfs

50.00' x 0.50' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 79.0' Slope= 0.0233 '/'
Inlet Invert= 187.84', Outlet Invert= 186.00'



‡

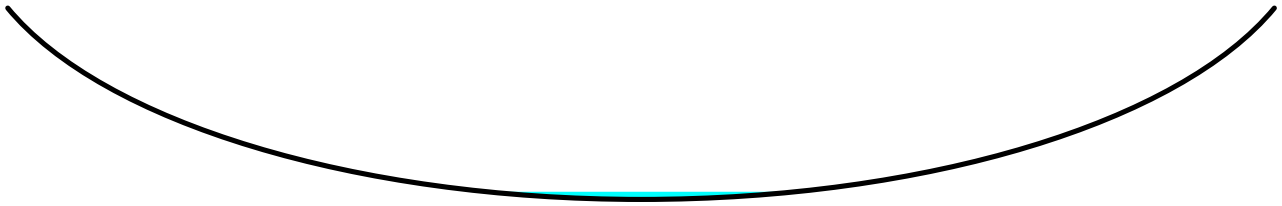
Summary for Reach OL5: OVERLAND TO WETLAND ON SITE

Inflow Area = 251 sf,100.00% Impervious, Inflow Depth = 4.47" for 10-yr event
Inflow = 0.02 cfs @ 12.00 hrs, Volume= 94 cf
Outflow = 0.02 cfs @ 12.00 hrs, Volume= 94 cf, Atten= 3%, Lag= 0.5 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 0.51 fps, Min. Travel Time= 1.2 min
Avg. Velocity = 0.22 fps, Avg. Travel Time= 2.6 min

Peak Storage= 2 cf @ 12.00 hrs
Average Depth at Peak Storage= 0.02' , Surface Width= 3.81'
Bank-Full Depth= 0.50' Flow Area= 6.7 sf, Capacity= 30.78 cfs

20.00' x 0.50' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 35.5' Slope= 0.0513 '/'
Inlet Invert= 187.82', Outlet Invert= 186.00'



‡

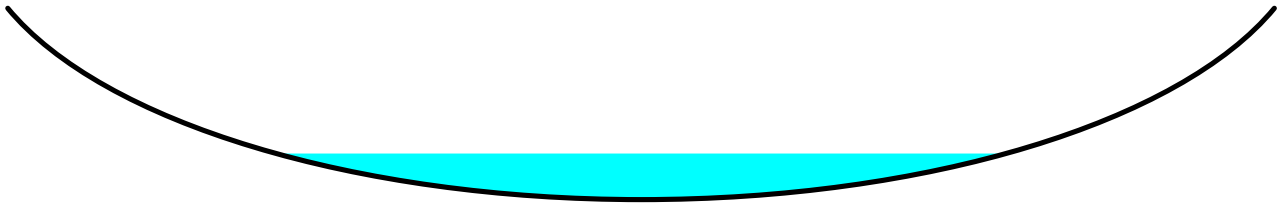
Summary for Reach OL6: OVERLAND TO WETLAND ON SITE

Inflow Area = 33,320 sf, 1.13% Impervious, Inflow Depth = 2.13" for 10-yr event
Inflow = 1.23 cfs @ 12.13 hrs, Volume= 5,928 cf
Outflow = 1.22 cfs @ 12.14 hrs, Volume= 5,928 cf, Atten= 1%, Lag= 0.9 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 1.57 fps, Min. Travel Time= 1.2 min
Avg. Velocity = 0.61 fps, Avg. Travel Time= 3.1 min

Peak Storage= 89 cf @ 12.14 hrs
Average Depth at Peak Storage= 0.12' , Surface Width= 9.77'
Bank-Full Depth= 0.50' Flow Area= 6.7 sf, Capacity= 27.10 cfs

20.00' x 0.50' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 114.0' Slope= 0.0397 '/'
Inlet Invert= 190.53', Outlet Invert= 186.00'



‡

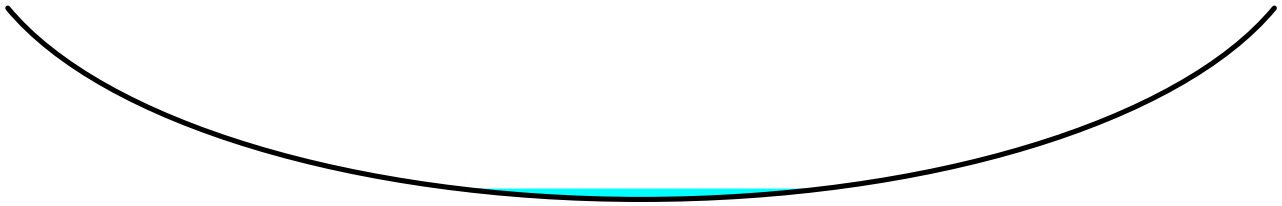
Summary for Reach OL7: OVERLAND PRODUCTION DRIVE

Inflow Area = 251 sf,100.00% Impervious, Inflow Depth = 4.47" for 10-yr event
Inflow = 0.03 cfs @ 11.99 hrs, Volume= 94 cf
Outflow = 0.02 cfs @ 12.00 hrs, Volume= 94 cf, Atten= 5%, Lag= 0.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 0.39 fps, Min. Travel Time= 2.8 min
Avg. Velocity = 0.14 fps, Avg. Travel Time= 7.6 min

Peak Storage= 4 cf @ 12.00 hrs
Average Depth at Peak Storage= 0.03' , Surface Width= 3.49'
Bank-Full Depth= 0.50' Flow Area= 5.0 sf, Capacity= 13.48 cfs

15.00' x 0.50' deep Parabolic Channel, n= 0.016 Asphalt, rough
Length= 65.6' Slope= 0.0037 '/'
Inlet Invert= 192.71', Outlet Invert= 192.47'



‡

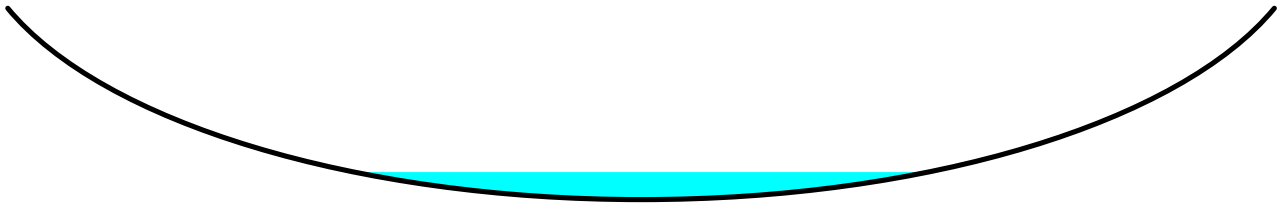
Summary for Reach OL8: OVERLAND REACH

Inflow Area = 60,638 sf, 90.07% Impervious, Inflow Depth = 0.24" for 10-yr event
Inflow = 0.67 cfs @ 12.23 hrs, Volume= 1,227 cf
Outflow = 0.65 cfs @ 12.29 hrs, Volume= 1,227 cf, Atten= 3%, Lag= 3.4 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Max. Velocity= 1.87 fps, Min. Travel Time= 3.5 min
Avg. Velocity = 0.73 fps, Avg. Travel Time= 9.0 min

Peak Storage= 138 cf @ 12.29 hrs
Average Depth at Peak Storage= 0.07' , Surface Width= 7.46'
Bank-Full Depth= 0.50' Flow Area= 6.7 sf, Capacity= 46.46 cfs

20.00' x 0.50' deep Parabolic Channel, n= 0.030 Earth, grassed & winding
Length= 398.0' Slope= 0.0859 '/'
Inlet Invert= 184.57', Outlet Invert= 150.40'



‡

Summary for Pond ADS1: STORMTECH SC-740

Inflow Area = 60,638 sf, 90.07% Impervious, Inflow Depth = 4.21" for 10-yr event
Inflow = 5.50 cfs @ 12.01 hrs, Volume= 21,278 cf
Outflow = 1.66 cfs @ 12.23 hrs, Volume= 21,282 cf, Atten= 70%, Lag= 13.2 min
Discarded = 0.99 cfs @ 12.23 hrs, Volume= 20,055 cf
Primary = 0.67 cfs @ 12.23 hrs, Volume= 1,227 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 191.57' @ 12.23 hrs Surf.Area= 2,771 sf Storage= 3,328 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 13.9 min (782.3 - 768.4)

Volume	Invert	Avail.Storage	Storage Description
#1	189.17'	4,394 cf	**25.25'W x 108.75'L x 4.00'H Prismatoid** 10,984 cf Overall x 40.0% Voids
#2	189.18'	689 cf	**ADS_StormTech SC-740 +Cap** x 15 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap 15 Chambers in 5 Rows
		5,083 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	190.71'	**6.0" Round Culvert** L= 10.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 190.71' / 190.66' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#2	Discarded	189.17'	**8.500 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 185.17'

Discarded OutFlow Max=0.99 cfs @ 12.23 hrs HW=191.57' (Free Discharge)
└**2=Exfiltration** (Controls 0.99 cfs)

Primary OutFlow Max=0.67 cfs @ 12.23 hrs HW=191.57' TW=187.33' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 0.67 cfs @ 3.41 fps)

Summary for Pond BIO1: BIOSCAPE 1

Inflow Area = 4,335 sf, 97.65% Impervious, Inflow Depth = 4.36" for 10-yr event
Inflow = 0.44 cfs @ 12.00 hrs, Volume= 1,574 cf
Outflow = 0.44 cfs @ 12.00 hrs, Volume= 1,573 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.44 cfs @ 12.00 hrs, Volume= 1,573 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 191.78' @ 12.00 hrs Surf.Area= 16 sf Storage= 50 cf
Flood Elev= 191.90' Surf.Area= 16 sf Storage= 52 cf

Plug-Flow detention time= 5.0 min calculated for 1,573 cf (100% of inflow)
Center-of-Mass det. time= 4.1 min (761.2 - 757.1)

Volume	Invert	Avail.Storage	Storage Description
#1	188.65'	52 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
188.65	16	0	0
191.90	16	52	52

Device	Routing	Invert	Outlet Devices
#1	Primary	188.73'	**15.0" Round Culvert** L= 90.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 188.73' / 188.28' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Device 1	188.75'	**6.0" Round UNDERDRAIN** L= 3.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 188.75' / 188.73' S= 0.0054 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#3	Device 1	191.65'	**10.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 2	188.65'	**140.000 in/hr Exfiltration over Surface area**

Primary OutFlow Max=0.44 cfs @ 12.00 hrs HW=191.78' TW=189.08' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.44 cfs of 7.76 cfs potential flow)
  ├─**2=UNDERDRAIN** (Passes 0.05 cfs of 1.55 cfs potential flow)
  │ └─**4=Exfiltration** (Exfiltration Controls 0.05 cfs)
  └─**3=Orifice/Grate** (Weir Controls 0.39 cfs @ 1.17 fps)

Summary for Pond BIO2: BIOSCAPE 2

Inflow Area = 2,396 sf, 99.33% Impervious, Inflow Depth = 4.47" for 10-yr event
Inflow = 0.25 cfs @ 11.99 hrs, Volume= 893 cf
Outflow = 0.27 cfs @ 11.98 hrs, Volume= 892 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.27 cfs @ 11.98 hrs, Volume= 892 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 191.74' @ 11.98 hrs Surf.Area= 16 sf Storage= 49 cf
Flood Elev= 191.90' Surf.Area= 16 sf Storage= 52 cf

Plug-Flow detention time= 6.5 min calculated for 892 cf (100% of inflow)
Center-of-Mass det. time= 5.1 min (751.9 - 746.8)

Volume	Invert	Avail.Storage	Storage Description
#1	188.65'	52 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
188.65	16	0	0
191.90	16	52	52

Device	Routing	Invert	Outlet Devices
#1	Primary	188.73'	**15.0" Round Culvert** L= 80.4' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 188.73' / 187.93' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Device 1	188.75'	**6.0" Round UNDERDRAIN** L= 3.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 188.75' / 188.73' S= 0.0054 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.20 sf
#3	Device 2	188.65'	**140.000 in/hr Exfiltration over Surface area**
#4	Device 1	191.65'	**10.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.26 cfs @ 11.98 hrs HW=191.73' TW=189.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.26 cfs of 8.57 cfs potential flow)
  ├─**2=UNDERDRAIN** (Passes 0.05 cfs of 1.56 cfs potential flow)
  │ └─**3=Exfiltration** (Exfiltration Controls 0.05 cfs)
  └─**4=Orifice/Grate** (Weir Controls 0.21 cfs @ 0.95 fps)

Summary for Pond CUL1: CULVERT 1

Inflow Area = 63,237 sf, 21.50% Impervious, Inflow Depth = 2.67" for 10-yr event
Inflow = 3.25 cfs @ 12.05 hrs, Volume= 14,083 cf
Outflow = 3.19 cfs @ 12.07 hrs, Volume= 14,075 cf, Atten= 2%, Lag= 0.9 min
Primary = 3.19 cfs @ 12.07 hrs, Volume= 14,075 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 189.20' @ 12.07 hrs Surf.Area= 412 sf Storage= 209 cf

Plug-Flow detention time= 2.5 min calculated for 14,072 cf (100% of inflow)
Center-of-Mass det. time= 2.2 min (847.3 - 845.0)

Volume	Invert	Avail.Storage	Storage Description
#1	188.25'	723 cf	**P (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
188.25	74	37.0	0	0	74
190.00	907	190.0	723	723	2,845

Device	Routing	Invert	Outlet Devices
#1	Primary	188.34'	**18.0" Round Culvert** L= 43.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 188.34' / 187.84' S= 0.0116 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf

Primary OutFlow Max=3.18 cfs @ 12.07 hrs HW=189.20' TW=187.98' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 3.18 cfs @ 4.38 fps)

Summary for Pond CUL2: CULVERT 2

Inflow Area = 33,320 sf, 1.13% Impervious, Inflow Depth = 2.14" for 10-yr event
Inflow = 1.23 cfs @ 12.12 hrs, Volume= 5,929 cf
Outflow = 1.23 cfs @ 12.13 hrs, Volume= 5,928 cf, Atten= 0%, Lag= 0.5 min
Primary = 1.23 cfs @ 12.13 hrs, Volume= 5,928 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 191.55' @ 12.13 hrs Surf.Area= 142 sf Storage= 48 cf

Plug-Flow detention time= 1.5 min calculated for 5,928 cf (100% of inflow)
Center-of-Mass det. time= 1.2 min (884.0 - 882.8)

Volume	Invert	Avail.Storage	Storage Description
#1	191.00'	138 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
191.00	41	29.5	0	0	41
192.00	269	72.5	138	138	394

Device	Routing	Invert	Outlet Devices
#1	Primary	191.02'	**15.0" Round Culvert** L= 33.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 191.02' / 190.53' S= 0.0148 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.23 cfs @ 12.13 hrs HW=191.55' TW=190.65' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.23 cfs @ 2.48 fps)

Summary for Pond ECB1: EXISTING CATCH BASIN

Inflow Area = 251 sf,100.00% Impervious, Inflow Depth = 4.47" for 10-yr event
Inflow = 0.02 cfs @ 12.00 hrs, Volume= 94 cf
Outflow = 0.02 cfs @ 12.00 hrs, Volume= 94 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.02 cfs @ 12.00 hrs, Volume= 94 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 192.47' @ 12.00 hrs
Flood Elev= 192.46'

Device	Routing	Invert	Outlet Devices
#1	Primary	188.58'	**12.0" Round Culvert** L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 188.58' / 187.82' S= 0.0633 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	192.46'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.02 cfs @ 12.00 hrs HW=192.47' TW=187.84' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.02 cfs of 6.96 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 0.02 cfs @ 0.32 fps)

Summary for Pond OS1: OUTLET STRUCTURE 1

Inflow Area = 60,638 sf, 90.07% Impervious, Inflow Depth = 4.21" for 10-yr event
Inflow = 5.50 cfs @ 12.01 hrs, Volume= 21,278 cf
Outflow = 5.50 cfs @ 12.01 hrs, Volume= 21,278 cf, Atten= 0%, Lag= 0.0 min
Primary = 5.50 cfs @ 12.01 hrs, Volume= 21,278 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 191.59' @ 12.23 hrs
Flood Elev= 194.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	189.21'	**24.0" Round Culvert** L= 3.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 189.21' / 189.18' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=5.49 cfs @ 12.01 hrs HW=190.76' TW=190.56' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 5.49 cfs @ 2.90 fps)

Summary for Pond OS2: OUTLET STRUCTURE 2

Inflow Area = 60,638 sf, 90.07% Impervious, Inflow Depth = 0.24" for 10-yr event
Inflow = 0.67 cfs @ 12.23 hrs, Volume= 1,227 cf
Outflow = 0.67 cfs @ 12.23 hrs, Volume= 1,227 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.67 cfs @ 12.23 hrs, Volume= 1,227 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 187.33' @ 12.23 hrs
Flood Elev= 194.10'

Device	Routing	Invert	Outlet Devices
#1	Primary	187.00'	**24.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 187.00' / 184.57' S= 0.0608 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=0.67 cfs @ 12.23 hrs HW=187.33' TW=184.64' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 0.67 cfs @ 1.96 fps)

Summary for Pond PCB1: DOUBLE CATCH BASIN 1

Inflow Area = 35,283 sf, 82.94% Impervious, Inflow Depth = 4.02" for 10-yr event
Inflow = 3.07 cfs @ 12.03 hrs, Volume= 11,826 cf
Outflow = 3.07 cfs @ 12.03 hrs, Volume= 11,826 cf, Atten= 0%, Lag= 0.0 min
Primary = 3.07 cfs @ 12.03 hrs, Volume= 11,826 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 192.15' @ 12.04 hrs
Flood Elev= 193.67'

Device	Routing	Invert	Outlet Devices
#1	Primary	191.15'	**15.0" Round Culvert** L= 130.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 191.15' / 189.85' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Primary	193.67'	**48.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.08 cfs @ 12.03 hrs HW=192.15' TW=191.10' (Dynamic Tailwater)
├**1=Culvert** (Outlet Controls 3.08 cfs @ 4.03 fps)
└**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond PCB2: DOUBLE CATCH BASIN 2

Inflow Area = 25,355 sf,100.00% Impervious, Inflow Depth = 4.47" for 10-yr event
Inflow = 2.60 cfs @ 12.00 hrs, Volume= 9,452 cf
Outflow = 2.60 cfs @ 12.00 hrs, Volume= 9,452 cf, Atten= 0%, Lag= 0.0 min
Primary = 2.60 cfs @ 12.00 hrs, Volume= 9,452 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2

Peak Elev= 191.61' @ 12.23 hrs
Flood Elev= 193.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	190.37'	**15.0" Round Culvert** L= 13.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 190.37' / 189.85' S= 0.0400 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Primary	193.50'	**48.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.57 cfs @ 12.00 hrs HW=191.32' TW=190.97' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 2.57 cfs @ 3.55 fps)
└─**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond PDMH1: PROPOSED DRAINAGE MANHOLE 1

Inflow Area = 60,638 sf, 90.07% Impervious, Inflow Depth = 4.21" for 10-yr event
Inflow = 5.50 cfs @ 12.01 hrs, Volume= 21,278 cf
Outflow = 5.50 cfs @ 12.01 hrs, Volume= 21,278 cf, Atten= 0%, Lag= 0.0 min
Primary = 5.50 cfs @ 12.01 hrs, Volume= 21,278 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 191.60' @ 12.23 hrs
Flood Elev= 193.85'

Device	Routing	Invert	Outlet Devices
#1	Primary	189.75'	**24.0" Round Culvert** L= 22.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 189.75' / 189.31' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=4.78 cfs @ 12.01 hrs HW=191.04' TW=190.76' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 4.78 cfs @ 3.18 fps)

Summary for Link DP1: DESIGN POINT 1

Inflow Area = 169,297 sf, 34.56% Impervious, Inflow Depth = 1.36" for 10-yr event
Inflow = 3.93 cfs @ 12.14 hrs, Volume= 19,129 cf
Primary = 3.93 cfs @ 12.14 hrs, Volume= 19,129 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Link DP2: DESIGN POINT 2

Inflow Area = 168,238 sf, 8.46% Impervious, Inflow Depth = 2.34" for 10-yr event
Inflow = 5.37 cfs @ 12.23 hrs, Volume= 32,806 cf
Primary = 5.37 cfs @ 12.23 hrs, Volume= 32,806 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

A – 2

NODE LISTING – 25-YR

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1A: WS1A Runoff Area=108,659 sf 3.59% Impervious Runoff Depth=2.96"
Flow Length=740' Tc=12.2 min CN=72 Runoff=5.21 cfs 26,807 cf

Subcatchment 1B: WS1B Runoff Area=35,283 sf 82.94% Impervious Runoff Depth=5.26"
Flow Length=394' Tc=5.7 min CN=94 Runoff=3.68 cfs 15,457 cf

Subcatchment 1C: WS1C Runoff Area=25,355 sf 100.00% Impervious Runoff Depth=5.72"
Flow Length=289' Tc=2.6 min CN=98 Runoff=3.05 cfs 12,090 cf

Subcatchment 2A: WS2A Runoff Area=33,320 sf 1.13% Impervious Runoff Depth=3.15"
Flow Length=336' Tc=11.9 min CN=74 Runoff=1.73 cfs 8,750 cf

Subcatchment 2B: WS2B Runoff Area=56,506 sf 12.36% Impervious Runoff Depth=3.54"
Flow Length=352' Tc=7.4 min CN=78 Runoff=3.96 cfs 16,686 cf

Subcatchment 2C: WS2C Runoff Area=71,430 sf 0.00% Impervious Runoff Depth=3.15"
Flow Length=923' Tc=21.0 min CN=74 Runoff=2.89 cfs 18,758 cf

Subcatchment 2D: WS2D Runoff Area=4,335 sf 97.65% Impervious Runoff Depth=5.60"
Flow Length=138' Tc=1.6 min CN=97 Runoff=0.52 cfs 2,025 cf

Subcatchment 2E: WS2E Runoff Area=2,396 sf 99.33% Impervious Runoff Depth=5.72"
Flow Length=102' Tc=1.2 min CN=98 Runoff=0.29 cfs 1,142 cf

Subcatchment 2F: WS2F Runoff Area=251 sf 100.00% Impervious Runoff Depth=5.72"
Flow Length=15' Slope=0.0233 '/' Tc=0.3 min CN=98 Runoff=0.03 cfs 120 cf

Reach OL1: OVERLAND REACH WET Avg. Flow Depth=0.29' Max Vel=1.42 fps Inflow=7.73 cfs 47,469 cf
n=0.080 L=260.0' S=0.0512 '/' Capacity=106.79 cfs Outflow=7.51 cfs 47,469 cf

Reach OL2: OVERLAND REACH CHAN Avg. Flow Depth=0.34' Max Vel=4.07 fps Inflow=7.51 cfs 47,469 cf
n=0.035 L=208.0' S=0.0678 '/' Capacity=351.03 cfs Outflow=7.49 cfs 47,469 cf

Reach OL3: OVERLAND ON SITE WETLAND Avg. Flow Depth=0.15' Max Vel=1.30 fps Inflow=5.72 cfs 28,711 cf
n=0.035 L=342.0' S=0.0196 '/' Capacity=66.65 cfs Outflow=5.20 cfs 28,711 cf

Reach OL4: OVERLAND TO ON SITE Avg. Flow Depth=0.16' Max Vel=1.44 fps Inflow=4.22 cfs 19,842 cf
n=0.035 L=79.0' S=0.0233 '/' Capacity=51.91 cfs Outflow=4.20 cfs 19,842 cf

Reach OL5: OVERLAND TO WETLAND ON Avg. Flow Depth=0.02' Max Vel=0.54 fps Inflow=0.03 cfs 120 cf
n=0.035 L=35.5' S=0.0513 '/' Capacity=30.78 cfs Outflow=0.03 cfs 120 cf

Reach OL6: OVERLAND TO WETLAND ON Avg. Flow Depth=0.14' Max Vel=1.74 fps Inflow=1.72 cfs 8,749 cf
n=0.035 L=114.0' S=0.0397 '/' Capacity=27.10 cfs Outflow=1.71 cfs 8,749 cf

Reach OL7: OVERLAND PRODUCTION DRIVE Avg. Flow Depth=0.03' Max Vel=0.41 fps Inflow=0.03 cfs 120 cf
n=0.016 L=65.6' S=0.0037 '/' Capacity=13.48 cfs Outflow=0.03 cfs 120 cf

Reach OL8: OVERLAND REACH Avg. Flow Depth=0.09' Max Vel=2.20 fps Inflow=1.10 cfs 2,591 cf
n=0.030 L=398.0' S=0.0859 '/' Capacity=46.46 cfs Outflow=1.09 cfs 2,591 cf

Pond ADS1: STORMTECH SC-740 Peak Elev=192.32' Storage=4,145 cf Inflow=6.54 cfs 27,547 cf
Discarded=1.10 cfs 24,959 cf Primary=1.10 cfs 2,591 cf Outflow=2.20 cfs 27,549 cf

Pond BIO1: BIOSCAPE 1 Peak Elev=191.79' Storage=50 cf Inflow=0.52 cfs 2,025 cf
Outflow=0.52 cfs 2,023 cf

Pond BIO2: BIOSCAPE 2 Peak Elev=191.77' Storage=50 cf Inflow=0.29 cfs 1,142 cf
Outflow=0.41 cfs 1,141 cf

Pond CUL1: CULVERT 1 Peak Elev=189.37' Storage=284 cf Inflow=4.32 cfs 19,850 cf
18.0" Round Culvert n=0.013 L=43.0' S=0.0116 '/' Outflow=4.22 cfs 19,842 cf

Pond CUL2: CULVERT 2 Peak Elev=191.66' Storage=64 cf Inflow=1.73 cfs 8,750 cf
15.0" Round Culvert n=0.013 L=33.0' S=0.0148 '/' Outflow=1.72 cfs 8,749 cf

Pond ECB1: EXISTING CATCH BASIN Peak Elev=192.47' Inflow=0.03 cfs 120 cf
Outflow=0.03 cfs 120 cf

Pond OS1: OUTLET STRUCTURE 1 Peak Elev=192.34' Inflow=6.54 cfs 27,547 cf
24.0" Round Culvert n=0.013 L=3.0' S=0.0100 '/' Outflow=6.54 cfs 27,547 cf

Pond OS2: OUTLET STRUCTURE 2 Peak Elev=187.43' Inflow=1.10 cfs 2,591 cf
24.0" Round Culvert n=0.013 L=40.0' S=0.0608 '/' Outflow=1.10 cfs 2,591 cf

Pond PCB1: DOUBLE CATCH BASIN 1 Peak Elev=192.50' Inflow=3.68 cfs 15,457 cf
Outflow=3.68 cfs 15,457 cf

Pond PCB2: DOUBLE CATCH BASIN 2 Peak Elev=192.38' Inflow=3.05 cfs 12,090 cf
Outflow=3.05 cfs 12,090 cf

Pond PDMH1: PROPOSED DRAINAGE MANHOLE 1 Peak Elev=192.36' Inflow=6.54 cfs 27,547 cf
24.0" Round Culvert n=0.013 L=22.0' S=0.0200 '/' Outflow=6.54 cfs 27,547 cf

Link DP1: DESIGN POINT 1 Inflow=6.06 cfs 29,398 cf
Primary=6.06 cfs 29,398 cf

Link DP2: DESIGN POINT 2 Inflow=7.49 cfs 47,469 cf
Primary=7.49 cfs 47,469 cf

Total Runoff Area = 337,535 sf Runoff Volume = 101,835 cf Average Runoff Depth = 3.62"
78.45% Pervious = 264,792 sf 21.55% Impervious = 72,743 sf

A – 2

NODE LISTING – 50-YR

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1A: WS1A Runoff Area=108,659 sf 3.59% Impervious Runoff Depth=3.92"
Flow Length=740' Tc=12.2 min CN=72 Runoff=6.70 cfs 35,522 cf

Subcatchment 1B: WS1B Runoff Area=35,283 sf 82.94% Impervious Runoff Depth=6.40"
Flow Length=394' Tc=5.7 min CN=94 Runoff=4.27 cfs 18,810 cf

Subcatchment 1C: WS1C Runoff Area=25,355 sf 100.00% Impervious Runoff Depth=6.87"
Flow Length=289' Tc=2.6 min CN=98 Runoff=3.51 cfs 14,517 cf

Subcatchment 2A: WS2A Runoff Area=33,320 sf 1.13% Impervious Runoff Depth=4.14"
Flow Length=336' Tc=11.9 min CN=74 Runoff=2.20 cfs 11,490 cf

Subcatchment 2B: WS2B Runoff Area=56,506 sf 12.36% Impervious Runoff Depth=4.57"
Flow Length=352' Tc=7.4 min CN=78 Runoff=4.91 cfs 21,542 cf

Subcatchment 2C: WS2C Runoff Area=71,430 sf 0.00% Impervious Runoff Depth=4.14"
Flow Length=923' Tc=21.0 min CN=74 Runoff=3.68 cfs 24,632 cf

Subcatchment 2D: WS2D Runoff Area=4,335 sf 97.65% Impervious Runoff Depth=6.75"
Flow Length=138' Tc=1.6 min CN=97 Runoff=0.60 cfs 2,439 cf

Subcatchment 2E: WS2E Runoff Area=2,396 sf 99.33% Impervious Runoff Depth=6.87"
Flow Length=102' Tc=1.2 min CN=98 Runoff=0.33 cfs 1,372 cf

Subcatchment 2F: WS2F Runoff Area=251 sf 100.00% Impervious Runoff Depth=6.87"
Flow Length=15' Slope=0.0233 '/' Tc=0.3 min CN=98 Runoff=0.04 cfs 144 cf

Reach OL1: OVERLAND REACH WET Avg. Flow Depth=0.33' Max Vel=1.52 fps Inflow=9.78 cfs 61,607 cf
n=0.080 L=260.0' S=0.0512 '/' Capacity=106.79 cfs Outflow=9.53 cfs 61,607 cf

Reach OL2: OVERLAND REACH CHAN Avg. Flow Depth=0.38' Max Vel=4.38 fps Inflow=9.53 cfs 61,607 cf
n=0.035 L=208.0' S=0.0678 '/' Capacity=351.03 cfs Outflow=9.51 cfs 61,607 cf

Reach OL3: OVERLAND ON SITE WETLAND Avg. Flow Depth=0.17' Max Vel=1.40 fps Inflow=7.12 cfs 36,975 cf
n=0.035 L=342.0' S=0.0196 '/' Capacity=66.65 cfs Outflow=6.55 cfs 36,975 cf

Reach OL4: OVERLAND TO ON SITE Avg. Flow Depth=0.17' Max Vel=1.53 fps Inflow=5.19 cfs 25,342 cf
n=0.035 L=79.0' S=0.0233 '/' Capacity=51.91 cfs Outflow=5.16 cfs 25,342 cf

Reach OL5: OVERLAND TO WETLAND ON Avg. Flow Depth=0.02' Max Vel=0.57 fps Inflow=0.03 cfs 144 cf
n=0.035 L=35.5' S=0.0513 '/' Capacity=30.78 cfs Outflow=0.03 cfs 144 cf

Reach OL6: OVERLAND TO WETLAND ON Avg. Flow Depth=0.16' Max Vel=1.87 fps Inflow=2.19 cfs 11,489 cf
n=0.035 L=114.0' S=0.0397 '/' Capacity=27.10 cfs Outflow=2.17 cfs 11,489 cf

Reach OL7: OVERLAND PRODUCTION DRIVE Avg. Flow Depth=0.03' Max Vel=0.43 fps Inflow=0.04 cfs 144 cf
n=0.016 L=65.6' S=0.0037 '/' Capacity=13.48 cfs Outflow=0.03 cfs 144 cf

Reach OL8: OVERLAND REACH Avg. Flow Depth=0.10' Max Vel=2.37 fps Inflow=1.39 cfs 3,978 cf
n=0.030 L=398.0' S=0.0859 '/' Capacity=46.46 cfs Outflow=1.38 cfs 3,978 cf

Pond ADS1: STORMTECH SC-740 Peak Elev=193.12' Storage=5,030 cf Inflow=7.55 cfs 33,328 cf
Discarded=1.23 cfs 29,350 cf Primary=1.39 cfs 3,978 cf Outflow=2.62 cfs 33,328 cf

Pond BIO1: BIOSCAPE 1 Peak Elev=191.81' Storage=51 cf Inflow=0.60 cfs 2,439 cf
Outflow=0.60 cfs 2,438 cf

Pond BIO2: BIOSCAPE 2 Peak Elev=191.75' Storage=50 cf Inflow=0.33 cfs 1,372 cf
Outflow=0.34 cfs 1,370 cf

Pond CUL1: CULVERT 1 Peak Elev=189.51' Storage=363 cf Inflow=5.33 cfs 25,349 cf
18.0" Round Culvert n=0.013 L=43.0' S=0.0116 '/' Outflow=5.19 cfs 25,342 cf

Pond CUL2: CULVERT 2 Peak Elev=191.75' Storage=82 cf Inflow=2.20 cfs 11,490 cf
15.0" Round Culvert n=0.013 L=33.0' S=0.0148 '/' Outflow=2.19 cfs 11,489 cf

Pond ECB1: EXISTING CATCH BASIN Peak Elev=192.47' Inflow=0.03 cfs 144 cf
Outflow=0.03 cfs 144 cf

Pond OS1: OUTLET STRUCTURE 1 Peak Elev=193.15' Inflow=7.55 cfs 33,328 cf
24.0" Round Culvert n=0.013 L=3.0' S=0.0100 '/' Outflow=7.55 cfs 33,328 cf

Pond OS2: OUTLET STRUCTURE 2 Peak Elev=187.48' Inflow=1.39 cfs 3,978 cf
24.0" Round Culvert n=0.013 L=40.0' S=0.0608 '/' Outflow=1.39 cfs 3,978 cf

Pond PCB1: DOUBLE CATCH BASIN 1 Peak Elev=193.39' Inflow=4.27 cfs 18,810 cf
Outflow=4.27 cfs 18,810 cf

Pond PCB2: DOUBLE CATCH BASIN 2 Peak Elev=193.21' Inflow=3.51 cfs 14,517 cf
Outflow=3.51 cfs 14,517 cf

Pond PDMH1: PROPOSED DRAINAGE MANHOLE 1 Peak Elev=193.18' Inflow=7.55 cfs 33,328 cf
24.0" Round Culvert n=0.013 L=22.0' S=0.0200 '/' Outflow=7.55 cfs 33,328 cf

Link DP1: DESIGN POINT 1 Inflow=7.92 cfs 39,500 cf
Primary=7.92 cfs 39,500 cf

Link DP2: DESIGN POINT 2 Inflow=9.51 cfs 61,607 cf
Primary=9.51 cfs 61,607 cf

Total Runoff Area = 337,535 sf Runoff Volume = 130,468 cf Average Runoff Depth = 4.64"
78.45% Pervious = 264,792 sf 21.55% Impervious = 72,743 sf

APPENDIX B

WATERSHED PLANS

B – 1

PRE-DEVELOPED CONDITIONS

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

NO.	REVISION	APP'D	DATE

DATE: 8-18-22
SCALE: 1"=50'
DRAWN BY: MJM
DESIGN BY: MJM
APPROVED BY:SJH
PROJECT NO: 21001
FILE: 21001-SITE

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

DWELLING
DWELLING
DWELLING

HcC
HcB
Sb

D / 12
PARCEL AREA
90,417 S.F.
2.08 Ac.

75' WELL PROTECTIVE RADIUS

APPROXIMATE LEACH FIELD

D / 12-1
PARCEL AREA
337,616 S.F.
7.75 Ac.

D / 12-2
PARCEL AREA
184,682 S.F.
4.24 Ac.

WETLAND BUFFER
50'
EDGE OF WETLAND (TYP.)

TP#6A
TP#4A
TP#5A
TP#3A
TP#2A
TP#1A
AB#1
AB#2

DISCHARGE PT. 1
DISCHARGE PT. 2

INV. OUT: 187.82
EXISTING CB
RIM(APPROX.): 192.46
INV. OUT: 188.58

EOP
SGC
PRODUCTION DRIVE

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)

PRE-CONSTRUCTION WATERSHED PLAN

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

WS-1

B – 2

POST-DEVELOPED CONDITIONS

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

NO.	REVISION	APP'D	DATE

DATE: 8-18-22
SCALE: 1"=50'
DRAWN BY: MJM
DESIGN BY: MJM
APPROVED BY:SJH
PROJECT NO:21001
FILE: 21001-SITE

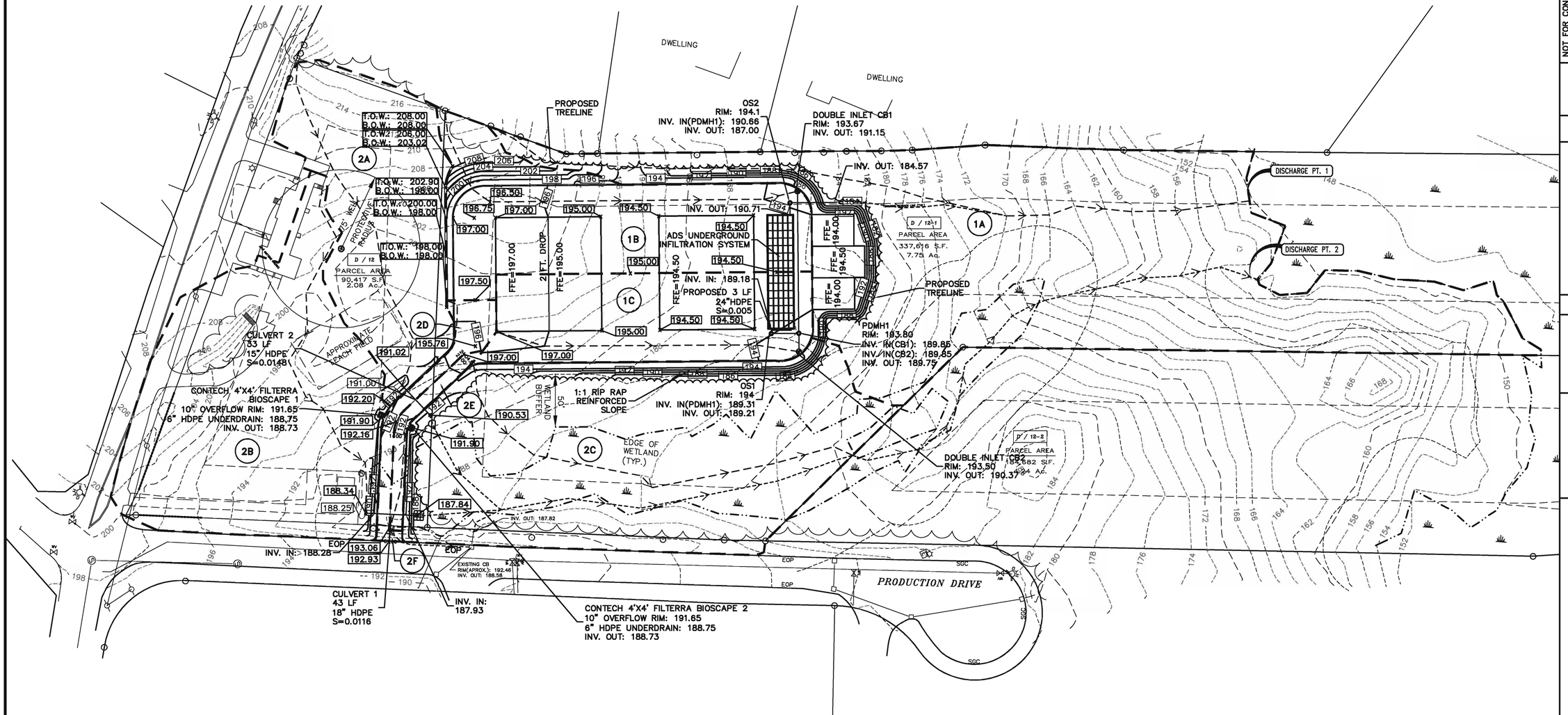
CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

POST-CONSTRUCTION WATERSHED PLAN

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

WS-2

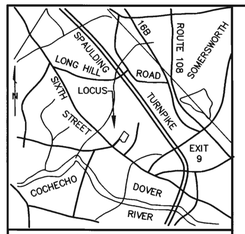


GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

Plan# 12433 06/30/2021 02:07:35 PM
Page 1 of 1
Register of Deeds, Strafford County
LCHIP STA181731 25.00



LOCATION PLAN
(NO SCALE)

No.	Bearing	Distance
L1	N37°29'45"W	25.98'
L2	N44°57'47"W	99.56'
L3	N24°09'52"E	29.37'
L4	N23°27'05"E	29.39'
L5	N21°01'25"E	69.29'
L6	N28°55'19"E	83.16'
L7	S67°25'51"E	65.22'
L8	S26°08'42"W	39.11'
L9	S67°25'51"E	53.85'

NH STATE PLANE MAD 83 - GPS OBS.

REFERENCE PLANS:

1.) AMENDED SUBDIVISION AND LOT LINE ADJUSTMENT PLAN PREPARED FOR GEORGE J. FOSTER & Co., INC. AND DOVER BUSINESS AND INDUSTRIAL DEVELOPMENT AUTHORITY, TAX MAP D, LOT Nos. 9A & 11–1, VENTURE DRIVE AND QUALITY WAY, DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE. SCALE: 1" = 100'; DATED: FEBRUARY 14, 2006, REVISED THROUGH 5/3/06; BY: McENEANEY SURVEY ASSOCIATES, INC. RECORDED S.C.R.D. PLAN 85–99 & 85–100.

2.) SUBDIVISION OF LAND PREPARED FOR DOVER INDUSTRIAL DEVELOPMENT AUTHORITY, TAX MAP H, LOT No. 11–1, VENTURE DRIVE, DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE. SCALE: 1" = 100'; DATED: FEBRUARY 28, 2005; BY: McENEANEY SURVEY ASSOCIATES, INC. RECORDED S.C.R.D. PLAN 79–87.

3.) LOT LINE ADJUSTMENT PREPARED FOR DOVER INDUSTRIAL DEVELOPMENT AUTHORITY AND CRAMER FABRICS, INC. SIXTH STREET, VENTURE & PRODUCTION DRIVES, DOVER, NEW HAMPSHIRE. SCALE: 1" = 80'; DATED: JULY 28, 1997; BY: McENEANEY SURVEY ASSOCIATES, INC. RECORDED S.C.R.D. PLAN 50–71.

4.) SUBDIVISION PLAN OF LAND OF QUAIL RUN FOR CLD INVESTMENT PROPERTIES, SIXTH STREET, COUNTY OF STRAFFORD, DOVER, N.H. SCALE: 1" = 50'; DATED: DECEMBER 16, 1988; BY: RICHARD P. MILLETTE AND ASSOCIATES. RECORDED S.C.R.D. PLAN 38–129.

5.) TAX MAP D, LOT 12 – EXISTING CONDITIONS PLAN – 447 SIXTH STREET, DOVER, NEW HAMPSHIRE, COUNTY OF STRAFFORD OWNED BY TSB PROPERTIES, LLC. SCALE: 1" = 60'; DATED: APRIL 18, 2018; BY: TFM MSC. NOT RECORDED.

SIXTH STREET {PUBLIC; VARIABLE WIDTH R.O.W.}

B / 1E
DEBRA A. DUNTON
CHARLENE R. CHANDLER
450 SIXTH STREET
DOVER, NH 03820
2072 / 214

A / 49–3
JODI F. LANGELLOTTI
CHRISTOPHER A. LANGELLOTTI
453 SIXTH STREET
DOVER, NH 03820
4362 / 13

A / 49–4
NEVIN D. BROWN
EMILY G. ROSE
7 QUAIL DRIVE
DOVER, NH 03820
2868 / 649

A / 49–6
JACOB C. BANAIAN
KRISTEN BANAIAN
11 QUAIL DRIVE
DOVER, NH 03820
1839 / 566

A / 49–13
DOUGLAS W. PORTER
YUKARI PORTER
29 QUAIL DRIVE
DOVER, NH 03820
4600 / 780

D / 11–8
DOVER BUSINESS & INDUSTRIAL DEVELOPMENT AUTHORITY
288 CENTRAL AVENUE
DOVER, NH 03820
1559 / 394

B / 1N
ISABELLA'S PLACE LLC
P.O. Box 4241
PORTSMOUTH, NH 03802
4620 / 688

D / 11–7
DOVER BUSINESS & INDUSTRIAL DEVELOPMENT AUTHORITY
288 CENTRAL AVENUE
DOVER, NH 03820
1559 / 394

B / 1
RICHARD MARONE
ADELE MARONE
500 SIXTH STREET
DOVER, NH 03820
4276 / 582

D / 12 REMAINING LAND
PARCEL AREA
90,417 S.F.
2.08 Ac.
(CONTIGUOUS UPLAND 2.00 Ac.)

D / 12–1
PARCEL AREA
337,616 S.F.
7.75 Ac.
(CONTIGUOUS UPLAND 3.81 Ac.)

D / 12–2
PARCEL AREA
184,682 S.F.
4.24 Ac.
(CONTIGUOUS UPLAND 2.43 Ac.)

D / 13–2
ATLANTIC AVENUE REALTY TRUST, LLC
17 PRODUCTION DRIVE
DOVER, NH 03820
4687 / 882

D / 13–3
SARNIA PROPERTIES, INC.
1 HAVEN COURT
PORTSMOUTH, NH 03801
4850 / 405

D/11–7SN1
DOVER BUSINESS & INDUSTRIAL DEVELOPMENT AUTHORITY
288 CENTRAL AVENUE
DOVER, NH 03820
1559 / 394

E / 32
FASTDOGS REALTY, LLC
432 SIXTH STREET
DOVER, NH 03820
3851 / 861

PRODUCTION DRIVE {PUBLIC; 50' WIDE R.O.W.}

BUILDING SETBACK LINE (TYP.)

ZONE LINE — R-40 IT

N44°37'47"E 149.64'
N44°37'47"E 122.07'
N24°23'10"E 154.61'
N24°35'13"E 114.88'
N27°05'33"E 131.55'
N25°41'40"E 192.94'
N25°30'40"E 355.38'
N26°51'30"E 111.72'
S65°11'22"E 119.60'
S65°43'34"E 123.16'
S25°48'36"W 898.74'
S25°55'25"W 181.73'
S21°20'46"W 180.57'
S26°08'39"W 528.05'
S26°08'39"W 200.00'
S27°26'57"W 281.95'
S27°26'57"W 286.07'
S62°33'03"E 395.40'
S19°26'30"E 262.36'
N44°55'39"W 336.98'

L1 L2 L3 L4 L5 L6 L7 L8 L9

I.P.(fnd) I.R.(fnd) I.R.(tbs) D.H.(fnd)

I.R.(tbs) N – 264,445.068 E – 1,184,901.071 (SEE NOTE 7)

I.P.(fnd) N – 263,966.927 E – 1,185,086.680 (SEE NOTE 7)

EXISTING DWELLING #447
75' WELL PROTECTIVE RADIUS
APPROXIMATE LEACH FIELD
WETLAND BUFFER 50'
EDGE OF WETLAND (TYP.)
SEE NOTE 11
DWELLING

APPROVED
DATE 6/22/21
City of Dover, N.H.
PLANNING BOARD
CHAIRMAN/DIRECTOR

LEGEND

I.P.(fnd) – IRON PIPE FOUND
I.R.(fnd) – IRON ROD FOUND
D.H.(fnd) – DRILL HOLE FOUND
I.R.(tbs) – IRON ROD TO BE SET

S.F. – SQUARE FEET
Ac. – ACRE
(TYP.) – TYPICAL
± – MORE OR LESS
ø – DIAMETER
S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
R.O.W. – RIGHT OF WAY
TBM – TEMPORARY BENCHMARK
N – – NORTHING
E – – EASTING
RIM = – RIM ELEVATION
UP – UTILITY POLE
CB – CATCH BASIN
SMH – SEWER MANHOLE
WG – WATER GATE VALVE
WSO – WATER SHUT–OFF (CURB STOP)
CONC. – CONCRETE
F.F. – FINISH FLOOR
W – WELL
+203.7 – EXISTING SPOT GRADE
202 – EXISTING CONTOUR (2 FOOT INTERVAL)
W – WATER SERVICE
S – SEWER SERVICE
PW – PROPOSED WATER SERVICE
PS – PROPOSED SEWER SERVICE
OH E/T – OVERHEAD ELECTRIC / TELEPHONE

NOTES:

1.) OWNER OF RECORD:
TSB PROPERTIES, LLC
385 SIXTH STREET
DOVER, NEW HAMPSHIRE
S.C.R.D. VOLUME 4545, PAGE 961

Jessica Smith
OWNER SIGNATURE

2.) D / 12 – DENOTES TAX MAP AND PARCEL NUMBER.

3.) TOTAL PARCEL AREA = 612,715 S.F. / 14.07 Ac.

4.) THE INTENT OF THIS PLAN IS TO DEPICT A SUBDIVISION OF THE SUBJECT PARCEL INTO THREE (3) LOTS AS SHOWN. PARCEL D / 12 IS CURRENTLY SERVED BY WELL AND INDIVIDUAL SUBSURFACE DISPOSAL SYSTEM. ALL THREE (3) LOTS WILL HAVE ACCESS TO MUNICIPAL SEWER AND WATER.

5.) ZONING DISTRICT IS INNOVATIVE TECHNOLOGY (IT)

DIMENSIONAL REQUIREMENTS:

MINIMUM LOT SIZE	= 2 ACRES
MINIMUM LOT COVERAGE	= 33 PERCENT
MINIMUM FRONTAGE	= 200 FEET
BUILDING SETBACK REQUIREMENTS:	
FRONT SETBACK	= 50 FEET
SIDE SETBACK	= 50 FEET
REAR SETBACK	= 50 FEET
MAXIMUM BUILDING HEIGHT	= 55 FEET MAXIMUM

6.) THE SUBJECT PARCEL IS LOCATED OUTSIDE OF THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0310; SUFFIX E; MAP NUMBER 33017C0310E; EFFECTIVE DATE SEPTEMBER 30, 2015.

7.) BASIS OF BEARING IS NH STATE PLANE (NAD83) BASED ON GPS OBSERVATION DATED MARCH 8, 2021.
VERTICAL DATUM IS NH STATE PLANE (NAVD88) BASED ON GPS OBSERVATION DATED MARCH 8, 2021.

8.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND DURING MARCH 2021 AND REFERENCE PLANS WITH AN ERROR NOT GREATER THAN 1 IN 10,000.

9.) AN ACCESS EASEMENT FROM PRODUCTION DRIVE, ACROSS D–12 OR D–12–2, TO BENEFIT PARCEL D–12–1 WILL BE CREATED AT THE TIME PARCEL D–12–1 IS PRESENTED FOR SITE PLAN APPROVAL. THERE WILL BE NO ACCESS THROUGH THE FRONTAGE ON D–12–1.

10.) WETLANDS SHOWN WERE TAKEN FROM REFERENCE PLAN No. 5 AND REVIEWED AND VERIFIED BY DAMON E. BURT, N.H.C.W.S. #163 OF FRAGGLE ROCK ENVIRONMENTAL SERVICES DURING MARCH 2021 IN ACCORDANCE WITH THE 1987 CORPS. OF ENGINEERS WETLANDS DELINEATION MANUAL AND LOCATED BY THIS OFFICE.

11.) THE PARCEL IS SUBJECT TO AN EASEMENT GRANTED TO NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY DATED FEBRUARY 10, 1984 AND DESCRIBED IN S.C.R.D. VOLUME 1124, PAGE 676.

12.) THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE FOR WHICH DEVELOPMENT IS PROPOSED.

13.) BUILDING ADDRESSES (INCLUDING APT/UNIT NUMBERS IF APPLICABLE) SHALL BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.

"I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL GROUND SURVEY PERFORMED WITH A TOTAL STATION, BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, SAID SURVEY MEETS OR EXCEEDS THE MINIMUM PRECISION REQUIREMENTS FOR SURVEY CLASSIFICATION "U" AS SET FORTH IN TABLE 500.1 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS."

NO.	DATE	DESCRIPTION	BY	CHK
		REVISIONS		

21–2340	SUBDIVISION	21–02	20–28
PROJECT NO	TYPE	FIELDBOOK & PAGES	

SUBDIVISION OF LAND
PREPARED FOR
TSB PROPERTIES, LLC
TAX MAP D, LOT No. 12
447 SIXTH STREET & PRODUCTION DRIVE
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DOVER PLANNING FILE No. P 21–32

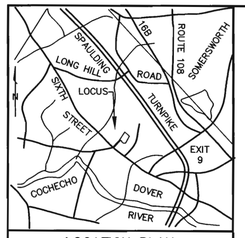
DRAWN BY: RJM	FILE: 2340\DWGS\21–2340R
SCALE: 1" = 60'	DATE: APRIL 15, 2021

60 30 0 30 60 120 180 240

STATE OF NEW HAMPSHIRE — No. 661 — KEVIN M. McENEANEY — LICENSED LAND SURVEYOR — SIGNATURE

McEneaney Survey Associates
of NEW ENGLAND
P.O. Box 681 – 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742–0911

SURVEYING – PLANNING – CONSULTING



LOCATION PLAN
(NO SCALE)

No.	Bearing	Distance
L1	N37°29'45"W	25.98'
L2	N44°57'47"W	99.56'
L3	N24°09'52"E	29.37'
L4	N23°27'05"E	29.39'
L5	N21°01'25"E	69.29'
L6	N28°55'19"E	83.16'
L7	S67°25'51"E	65.22'
L8	S26°08'42"W	39.11'
L9	S67°25'51"E	53.85'

NH STATE PLANE NAD 83 – GPS OBS.

REFERENCE PLANS:

1.) AMENDED SUBDIVISION AND LOT LINE ADJUSTMENT PLAN PREPARED FOR GEORGE J. FOSTER & Co., INC. AND DOVER BUSINESS AND INDUSTRIAL DEVELOPMENT AUTHORITY, TAX MAP D, LOT Nos. 9A & 11–1, VENTURE DRIVE AND QUALITY WAY, DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE. SCALE: 1" = 100'; DATED: FEBRUARY 14, 2006, REVISED THROUGH 5/3/06; BY: McENEANEY SURVEY ASSOCIATES, INC. RECORDED S.C.R.D. PLAN 85–99 & 85–100.

2.) SUBDIVISION OF LAND PREPARED FOR DOVER INDUSTRIAL DEVELOPMENT AUTHORITY, TAX MAP H, LOT No. 11–1, VENTURE DRIVE, DOVER, STRAFFORD COUNTY, NEW HAMPSHIRE. SCALE: 1" = 100'; DATED: FEBRUARY 28, 2005; BY: McENEANEY SURVEY ASSOCIATES, INC. RECORDED S.C.R.D. PLAN 79–87.

3.) LOT LINE ADJUSTMENT PREPARED FOR DOVER INDUSTRIAL DEVELOPMENT AUTHORITY AND CRAMER FABRICS, INC. SIXTH STREET, VENTURE & PRODUCTION DRIVES, DOVER, NEW HAMPSHIRE. SCALE: 1" = 80'; DATED: JULY 28, 1997; BY: McENEANEY SURVEY ASSOCIATES, INC. RECORDED S.C.R.D. PLAN 50–71.

4.) SUBDIVISION PLAN OF LAND OF QUAIL RUN FOR CLD INVESTMENT PROPERTIES, SIXTH STREET, COUNTY OF STRAFFORD, DOVER, N.H. SCALE: 1" = 50'; DATED: DECEMBER 16, 1988; BY: RICHARD P. MILLETTE AND ASSOCIATES. RECORDED S.C.R.D. PLAN 38–129.

5.) TAX MAP D, LOT 12 – EXISTING CONDITIONS PLAN – 447 SIXTH STREET, DOVER, NEW HAMPSHIRE, COUNTY OF STRAFFORD OWNED BY TSB PROPERTIES, LLC. SCALE: 1" = 60'; DATED: APRIL 18, 2018; BY: TFM MSC. NOT RECORDED.

SIXTH STREET {PUBLIC; VARIABLE WIDTH R.O.W.}

B / 1E
DEBRA A. DUNTON
CHARLENE R. CHANDLER
450 SIXTH STREET
DOVER, NH 03820
2072 / 214

A / 49–3
JODI F. LANGELLOTTI
CHRISTOPHER A. LANGELLOTTI
453 SIXTH STREET
DOVER, NH 03820
4362 / 13

A / 49–4
NEVIN D. BROWN
EMILY G. ROSE
7 QUAIL DRIVE
DOVER, NH 03820
2868 / 649

A / 49–6
JACOB C. BANAIAN
KRISTEN BANAIAN
11 QUAIL DRIVE
DOVER, NH 03820
1839 / 566

A / 49–13
DOUGLAS W. PORTER
YUKARI PORTER
29 QUAIL DRIVE
DOVER, NH 03820
4600 / 780

D / 11–8
DOVER BUSINESS & INDUSTRIAL DEVELOPMENT AUTHORITY
288 CENTRAL AVENUE
DOVER, NH 03820
1559 / 394

B / 1N
ISABELLA'S PLACE LLC
P.O. Box 4241
PORTSMOUTH, NH 03802
4620 / 688

B / 1
RICHARD MARONE
ADELE MARONE
500 SIXTH STREET
DOVER, NH 03820
4276 / 582

E / 32
FASTDOGS REALTY, LLC
432 SIXTH STREET
DOVER, NH 03820
3851 / 861

D / 11–7
DOVER BUSINESS & INDUSTRIAL DEVELOPMENT AUTHORITY
288 CENTRAL AVENUE
DOVER, NH 03820
1559 / 394

D / 11–7SN1
DOVER BUSINESS & INDUSTRIAL DEVELOPMENT AUTHORITY
288 CENTRAL AVENUE
DOVER, NH 03820
1559 / 394

D / 13–3
SARNIA PROPERTIES, INC.
1 HAVEN COURT
PORTSMOUTH, NH 03801
4850 / 405

D / 13–2
ATLANTIC AVENUE REALTY TRUST, LLC
17 PRODUCTION DRIVE
DOVER, NH 03820
4687 / 882

P / 12–1
PARCEL AREA
337,616 S.F.
7.75 Ac.
(CONTIGUOUS UPLAND 3.81 Ac.)

D / 12–2
PARCEL AREA
184,682 S.F.
4.24 Ac.
(CONTIGUOUS UPLAND/2.43 Ac.)

D / 12 REMAINING LAND
PARCEL AREA
90,417 S.F.
2.08 Ac.
(CONTIGUOUS UPLAND 2.00 Ac.)

PRODUCTION DRIVE {PUBLIC; 50' WIDE R.O.W.}

COUNTY FARM ROAD

ZONE LINE — R-40 — IT

BUILDING SETBACK LINE (TYP.)

EXISTING DWELLING #447

75' WELL PROTECTIVE RADIUS

APPROXIMATE LEACH FIELD

WETLAND BUFFER 50'

EDGE OF WETLAND (TYP.)

SEE NOTE 11

I.P.(fnd) I.R.(fnd) I.R.(tbs) I.P.(fnd) D.H.(fnd) I.R.(tbe)

I.R.(tbs) N – 264,445.068 E – 1,184,901.071 (SEE NOTE 7)

I.P.(fnd) N – 263,966.927 E – 1,185,086.680 (SEE NOTE 7)

APPROVED
DATE 6/22/21
City of Dover, N.H.
PLANNING BOARD
CHAIRMAN/DIRECTOR

LEGEND

I.P.(fnd) – IRON PIPE FOUND
I.R.(fnd) – IRON ROD FOUND
D.H.(fnd) – DRILL HOLE FOUND
I.R.(tbs) – IRON ROD TO BE SET

S.F. – SQUARE FEET
Ac. – ACRE
(TYP.) – TYPICAL
± – MORE OR LESS
ø – DIAMETER
S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
R.O.W. – RIGHT OF WAY
TBM – TEMPORARY BENCHMARK
N – – NORTHING
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RIM = – RIM ELEVATION
-o- UP – UTILITY POLE
□ CB – CATCH BASIN
S SMH – SEWER MANHOLE
WG – WATER GATE VALVE
WSO – WATER SHUT–OFF (CURB STOP)
CONC. – CONCRETE
F.F. – FINISH FLOOR
W – WELL
+203.7 – EXISTING SPOT GRADE
202 – EXISTING CONTOUR (2 FOOT INTERVAL)
W – WATER SERVICE
S – SEWER SERVICE
PW – PROPOSED WATER SERVICE
PS – PROPOSED SEWER SERVICE
OH E/T – OVERHEAD ELECTRIC / TELEPHONE
HcB – SOIL TYPE
– SOILS LINE

THE SOIL TYPES ON THE SITE ARE:
GsC GLOUCESTER VERY STONY FINE SANDY LOAM, 8 TO 15 PERCENT SLOPES
HcB HOLLIS–CHARLTON FINE SANDY LOAMS, 3 TO 8 PERCENT SLOPES
HcC HOLLIS–CHARLTON FINE SANDY LOAMS, 8 TO 15 PERCENT SLOPES
Sb SAUGATUCK LOAMY SAND
ScB SCANTIC SILT LOAM, 3 TO 8 PERCENT SLOPES

THE SOURCE FOR THE SOIL TYPE DATA IS USDA SCS SOIL SURVEY OF STRAFFORD COUNTY DATED MARCH 1973 & USDA NRCS WEB SOIL SURVEY
http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

NOTES:

1.) OWNER OF RECORD:
TSB PROPERTIES, LLC
385 SIXTH STREET
DOVER, NEW HAMPSHIRE
S.C.R.D. VOLUME 4545, PAGE 961

James Smith
OWNER SIGNATURE

2.) D / 12 – DENOTES TAX MAP AND PARCEL NUMBER.

3.) TOTAL PARCEL AREA = 612,715 S.F. / 14.07 Ac.

4.) THE INTENT OF THIS PLAN IS TO DEPICT A SUBDIVISION OF THE SUBJECT PARCEL INTO THREE (3) LOTS AS SHOWN. PARCEL D / 12 IS CURRENTLY SERVED BY WELL AND INDIVIDUAL SUBSURFACE DISPOSAL SYSTEM. ALL THREE (3) LOTS WILL HAVE ACCESS TO MUNICIPAL SEWER AND WATER.

5.) ZONING DISTRICT IS INNOVATIVE TECHNOLOGY (IT)

DIMENSIONAL REQUIREMENTS:

MINIMUM LOT SIZE	= 2 ACRES
MINIMUM LOT COVERAGE	= 33 PERCENT
MINIMUM FRONTAGE	= 200 FEET
BUILDING SETBACK REQUIREMENTS:	
FRONT SETBACK	= 50 FEET
SIDE SETBACK	= 50 FEET
REAR SETBACK	= 50 FEET
MAXIMUM BUILDING HEIGHT	= 55 FEET MAXIMUM

6.) THE SUBJECT PARCEL IS LOCATED OUTSIDE OF THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0310; SUFFIX E; MAP NUMBER 33017C0310E; EFFECTIVE DATE SEPTEMBER 30, 2015.

7.) BASIS OF BEARING IS NH STATE PLANE (NAD83) BASED ON GPS OBSERVATION DATED MARCH 8, 2021.
VERTICAL DATUM IS NH STATE PLANE (NAVD88) BASED ON GPS OBSERVATION DATED MARCH 8, 2021.

8.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND DURING MARCH 2021 AND REFERENCE PLANS WITH AN ERROR NOT GREATER THAN 1 IN 10,000.

9.) AN ACCESS EASEMENT FROM PRODUCTION DRIVE, ACROSS D–12 OR D–12–2, TO BENEFIT PARCEL D–12–1 WILL BE CREATED AT THE TIME PARCEL D–12–1 IS PRESENTED FOR SITE PLAN APPROVAL. THERE WILL BE NO ACCESS THROUGH THE FRONTAGE ON D–12–1.

10.) WETLANDS SHOWN WERE TAKEN FROM REFERENCE PLAN No. 5 AND REVIEWED AND VERIFIED BY DAMON E. BURT, N.H.C.W.S. #163 OF FRAGGLE ROCK ENVIRONMENTAL SERVICES DURING MARCH 2021 IN ACCORDANCE WITH THE 1987 CORPS. OF ENGINEERS WETLANDS DELINEATION MANUAL AND LOCATED BY THIS OFFICE.

11.) THE PARCEL IS SUBJECT TO AN EASEMENT GRANTED TO NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY DATED FEBRUARY 10, 1984 AND DESCRIBED IN S.C.R.D. VOLUME 1124, PAGE 676.

12.) THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE FOR WHICH DEVELOPMENT IS PROPOSED.

13.) BUILDING ADDRESSES (INCLUDING APT/UNIT NUMBERS IF APPLICABLE) SHALL BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.

"I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL GROUND SURVEY PERFORMED WITH A TOTAL STATION, BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, SAID SURVEY MEETS OR EXCEEDS THE MINIMUM PRECISION REQUIREMENTS FOR SURVEY CLASSIFICATION "U" AS SET FORTH IN TABLE 500.1 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS."

NO.	DATE	DESCRIPTION	BY	CHK
		REVISIONS		

21–2340	SUBDIVISION	21–02	20–28
PROJECT NO	TYPE	FIELDBOOK & PAGES	

TOPOGRAPHIC SUBDIVISION PLAN
PREPARED FOR
TSB PROPERTIES, LLC
TAX MAP D, LOT No. 12
447 SIXTH STREET & PRODUCTION DRIVE
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DOVER PLANNING FILE No. P 21–32

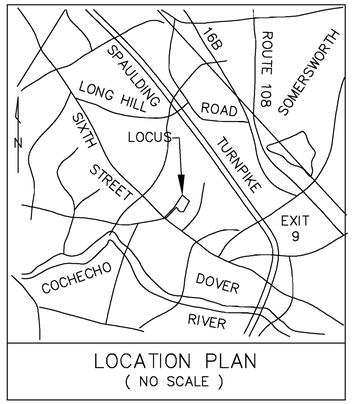
DRAWN BY: RJM	FILE: 2340\DWGS\21–2340R
SCALE: 1" = 60'	DATE: APRIL 15, 2021

60 30 0 30 60 120 180 240

STATE OF NEW HAMPSHIRE — No. 661 — KEVIN M. McENEANEY — LICENSED LAND SURVEYOR — SEAL

McEneaney Survey Associates of NEW ENGLAND
P.O. Box 681 – 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742–0911

SURVEYING – PLANNING – CONSULTING



LOCATION PLAN
(NO SCALE)

SITE PLAN
FOR
TSB PROPERTIES, LLC.
TAX MAP D, LOT 12-1
PRODUCTION DRIVE
DOVER, NH
AUGUST 18, 2022

OWNER

TSB PROPERTIES LLC.
385 SIXTH STREET
DOVER, NH 03820

_____ DATE

SITE CIVIL ENGINEER

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

LAND SURVEYOR

MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND
P.O. BOX 681
24 CHESTNUT STREET
DOVER, NH 03820
(603) 742–0911

WETLAND SCIENTIST

DAMON E. BURT
FRAGGLE ROCK ENVIRONMENTAL
38 GARLAND ROAD
STRAFFORD, NH 03884
(603) 969–5574

ARCHITECT

JOHN W. TUTTLE, AIA
TW DESIGNS
254 DRAKE HILL ROAD
STRAFFORD, NH 03884
(603) 664–2181

LANDSCAPE ARCHITECT

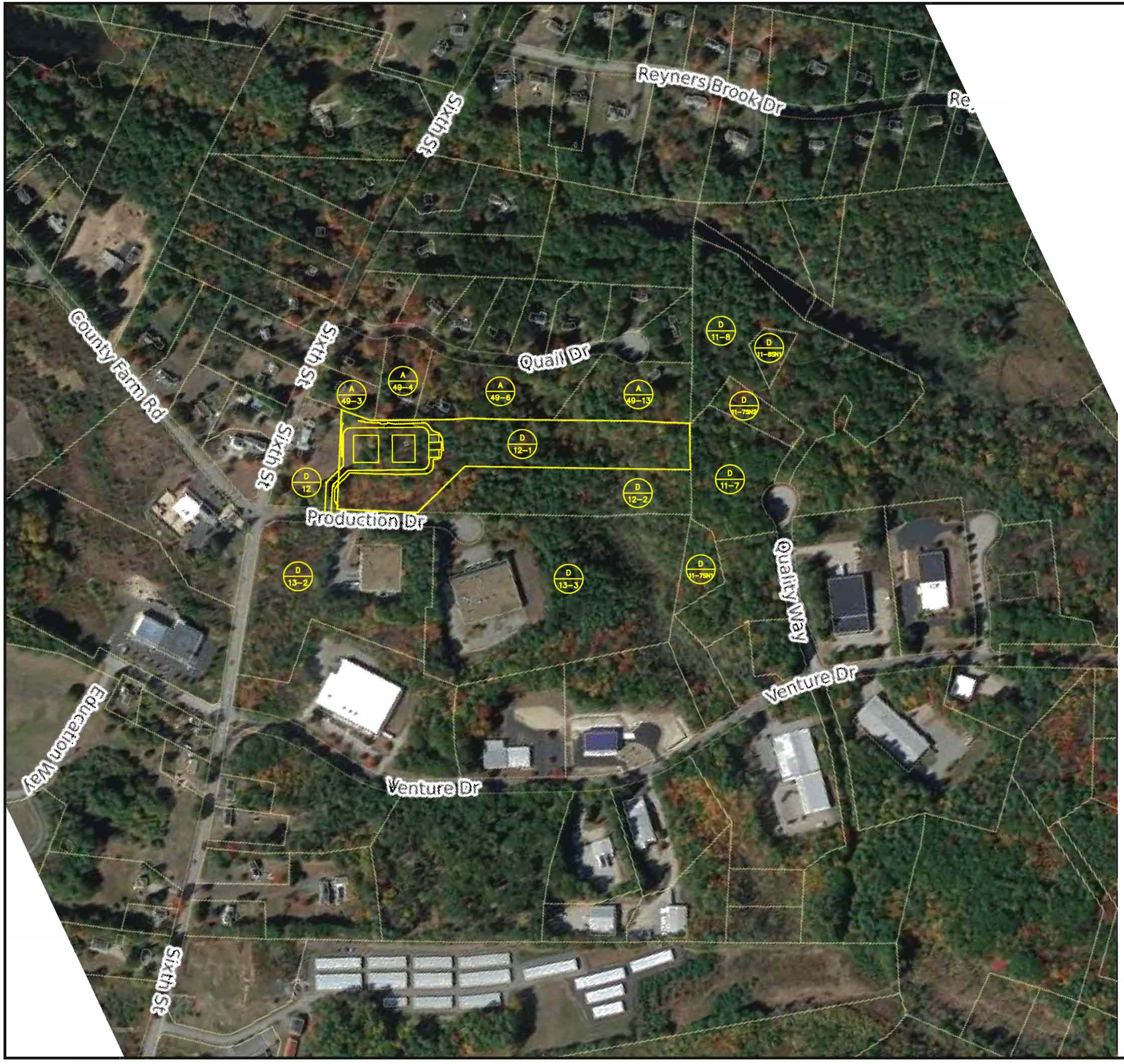
JEFFREY R. HYLAND
IRONWOOD DESIGN GROUP, LLC.
PO BOX 873
NEWMARKET, NH 03857
(603) 772–0590

SHEET INDEX	SHEET
COVER SHEET	1
NEIGHBORHOOD PLAN	2
EXISTING CONDITIONS PLAN - MCENEANEY SURVEY	3
NOTE SHEET	4
DEMOLITION PLAN	5
SITE PLAN	6
GRADING, DRAINAGE & EROSION CONTROL PLAN	7
DRIVEWAY PLAN & PROFILE	8
UTILITY PLAN	9
EROSION CONTROL NOTES	10
DETAILS	11 - 16
LIGHTING PLAN	17
DOVER LADDER TRUCK MOVEMENT PLAN	18
BOX TRUCK MOVEMENT PLAN	19
CONDITIONAL USE PERMIT & WETLAND IMPACT PLAN	CUP

ARCHITECTURAL PLANS	SHEET
ELEVATION PLAN (DRAFT)	A1
STREET SCAPE (PENDING)	A2

LANDSCAPE PLANS	SHEET
LANDSCAPE PLAN (DRAFT)	L1

SIGNATURE BOX



ABUTTERS LIST
(WITHIN 200 FT)

TAX MAP	LOT NO.	NAME & ADDRESS
D 12-2	12-2	TSB PROPERTIES LLC. 385 SIXTH ST. DOVER, NH 03820
D 12-1	12-1	TSB PROPERTIES LLC. 385 SIXTH ST. DOVER, NH 03820
D 12	12	TSB PROPERTIES LLC. 385 SIXTH ST. DOVER, NH 03820
A 49-3	49-3	LANGELLOTTI JODI F &, LANGELLOTTI CHRISTOPHER 453 SIXTH ST DOVER, NH 03820
A 49-4	49-4	BROWN NEVIN D &, ROSE EMILY G 7 QUAIL DR DOVER, NH 03820
A 49-6	49-6	BANAIAN JACOB C &, BANAIAN KRISTEN 11 QUAIL DR DOVER, NH 03820
A 49-13	49-13	PORTER DOUGLAS W &, PORTER YUKARI 29 QUAIL DR DOVER, NH 03820
D 11-8	11-8	DOVER BUSINESS & IND DEV AUTHORITY, F/K/A DOVER IND DEV AUTHORITY 288 CENTRAL AVE DOVER, NH 03820
D 11-7	11-7	DOVER BUSINESS & IND DEV AUTHORITY, F/K/A DOVER IND DEV AUTHORITY 288 CENTRAL AVE DOVER, NH 03820
D 11-8SN1	11-8SN1	DOVER BUSINESS & IND DEV AUTHORITY, F/K/A DOVER IND DEV AUTHORITY 288 CENTRAL AVE DOVER, NH 03820
D 11-7SN2	11-7SN2	DOVER BUSINESS & IND DEV AUTHORITY, F/K/A DOVER IND DEV AUTHORITY 288 CENTRAL AVE DOVER, NH 03820
D 11-7SN1	11-7SN1	DOVER BUSINESS & IND DEV AUTHORITY, F/K/A DOVER IND DEV AUTHORITY 288 CENTRAL AVE DOVER, NH 03820
D 13-3	13-3	SARNIA PROPERTIES INC, 1 HAVEN COURT PORTSMOUTH, NH 03801
D 13-2	13-2	ATLANTIC AVENUE REALITY TRUST LLC. 17 PRODUCTION DR DOVER, NH 03820

K / 26 — TAX MAP / LOT NUMBER

GRAPHIC SCALE
200 0 100 200 400 800
(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

NO.	REVISION	APP'D	DATE

DATE: 8-18-22
SCALE: 1"=200'
DRAWN BY: MJM
DESIGN BY: MJM
APPROVED BY:SJH
PROJECT NO: 21001
FILE: 21001-SITE

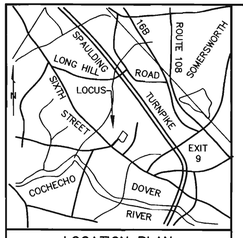
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CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
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603.749.0443

NEIGHBORHOOD PLAN

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

2



LOCATION PLAN
(NO SCALE)

No.	Bearing	Distance
L1	N37°29'45"W	25.98'
L2	N44°57'47"W	99.56'
L3	N24°09'52"E	29.37'
L4	N23°27'05"E	29.39'
L5	N21°01'25"E	69.29'
L6	N28°55'19"E	83.16'
L7	S67°25'51"E	65.22'
L8	S26°08'42"W	39.11'
L9	S67°25'51"E	53.85'

NH STATE PLANE NAD 83 - GPS OBS.

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N24°35'13"E 114.88'
N27°05'33"E 131.55'
N25°41'40"E 192.94'
N25°30'40"E 355.38'
N26°51'30"E 111.72'
S65°11'22"E 119.60'
S65°43'34"E 123.16'
S25°48'36"W 898.74'
S19°26'36"E 263.36'
S62°33'03"E 395.40'
S27°26'57"W 286.07'
S27°26'57"W 281.95'
S26°08'39"W 200.00'
S26°08'39"W 528.05'
S21°20'46"W 180.57'
S25°55'25"W 181.73'
L1 L2 L3 L4 L5 L6 L7 L8 L9
BUILDING SETBACK LINE (TYP.)
75' WELL PROTECTIVE RADIUS
EXISTING DWELLING #447
PERFORMANCE LEACH FIELD
WETLAND BUFFER
EDGE OF WETLAND (TYP.)
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TSB PROPERTIES, LLC
385 SIXTH STREET
DOVER, NEW HAMPSHIRE
S.C.R.D. VOLUME 4545, PAGE 961

James Smith
OWNER SIGNATURE

2.) D / 12 – DENOTES TAX MAP AND PARCEL NUMBER.

3.) TOTAL PARCEL AREA = 612,715 S.F. / 14.07 Ac.

4.) THE INTENT OF THIS PLAN IS TO DEPICT A SUBDIVISION OF THE SUBJECT PARCEL INTO THREE (3) LOTS AS SHOWN. PARCEL D / 12 IS CURRENTLY SERVED BY WELL AND INDIVIDUAL SUBSURFACE DISPOSAL SYSTEM. ALL THREE (3) LOTS WILL HAVE ACCESS TO MUNICIPAL SEWER AND WATER.

5.) ZONING DISTRICT IS INNOVATIVE TECHNOLOGY (IT)

DIMENSIONAL REQUIREMENTS:

MINIMUM LOT SIZE	= 2 ACRES
MINIMUM LOT COVERAGE	= 33 PERCENT
MINIMUM FRONTAGE	= 200 FEET
BUILDING SETBACK REQUIREMENTS:	
FRONT SETBACK	= 50 FEET
SIDE SETBACK	= 50 FEET
REAR SETBACK	= 50 FEET
MAXIMUM BUILDING HEIGHT	= 55 FEET MAXIMUM

6.) THE SUBJECT PARCEL IS LOCATED OUTSIDE OF THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANEL 0310; SUFFIX E; MAP NUMBER 33017C0310E; EFFECTIVE DATE SEPTEMBER 30, 2015.

7.) BASIS OF BEARING IS NH STATE PLANE (NAD83) BASED ON GPS OBSERVATION DATED MARCH 8, 2021.
VERTICAL DATUM IS NH STATE PLANE (NAVD88) BASED ON GPS OBSERVATION DATED MARCH 8, 2021.

8.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND DURING MARCH 2021 AND REFERENCE PLANS WITH AN ERROR NOT GREATER THAN 1 IN 10,000.

9.) AN ACCESS EASEMENT FROM PRODUCTION DRIVE, ACROSS D-12 OR D-12-2, TO BENEFIT PARCEL D-12-1 WILL BE CREATED AT THE TIME PARCEL D-12-1 IS PRESENTED FOR SITE PLAN APPROVAL. THERE WILL BE NO ACCESS THROUGH THE FRONTAGE ON D-12-1.

10.) WETLANDS SHOWN WERE TAKEN FROM REFERENCE PLAN No. 5 AND REVIEWED AND VERIFIED BY DAMON E. BURT, N.H.C.W.S. #163 OF FRAGGLE ROCK ENVIRONMENTAL SERVICES DURING MARCH 2021 IN ACCORDANCE WITH THE 1987 CORPS. OF ENGINEERS WETLANDS DELINEATION MANUAL AND LOCATED BY THIS OFFICE.

11.) THE PARCEL IS SUBJECT TO AN EASEMENT GRANTED TO NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY DATED FEBRUARY 10, 1984 AND DESCRIBED IN S.C.R.D. VOLUME 1124, PAGE 676.

12.) THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE FOR WHICH DEVELOPMENT IS PROPOSED.

13.) BUILDING ADDRESSES (INCLUDING APT/UNIT NUMBERS IF APPLICABLE) SHALL BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.

APPROVED
DATE 6/22/21
City of Dover, N.H.
PLANNING BOARD
CHAIRMAN / DIRECTOR

"I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL GROUND SURVEY PERFORMED WITH A TOTAL STATION, BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, SAID SURVEY MEETS OR EXCEEDS THE MINIMUM PRECISION REQUIREMENTS FOR SURVEY CLASSIFICATION "U" AS SET FORTH IN TABLE 500.1 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS."

NO.	DATE	DESCRIPTION	BY	CHK
		REVISIONS		

21-2340	SUBDIVISION	21-02	20-28
PROJECT NO	TYPE	FIELDBOOK & PAGES	

TOPOGRAPHIC SUBDIVISION PLAN
PREPARED FOR
TSB PROPERTIES, LLC
TAX MAP D, LOT No. 12
447 SIXTH STREET & PRODUCTION DRIVE
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DOVER PLANNING FILE No. P 21-32

DRAWN BY: RJM	FILE: 2340\DWGS\21-2340R
SCALE: 1" = 60'	DATE: APRIL 15, 2021

60 30 0 30 60 120 180 240

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 661 KEVIN M. McENEANEY SEAL

McEneaney Survey Associates of NEW ENGLAND
P.O. Box 681 - 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742-0911

SURVEYING - PLANNING - CONSULTING

GENERAL NOTES:

1. OWNERS OF RECORD:

   TSB PROPERTIES LLC.
   385 SIXTH STREET
   DOVER, NEW HAMPSHIRE 03820
   S.C.R.D. VOLUME 4545 PAGE 961

2. D / 12-1 – DENOTES TAX MAP AND PARCEL NUMBER.
3. ZONING DISTRICT IS IT (INNOVATIVE TECHNOLOGY)
4. TOTAL PARCEL AREA = 7.75 ACRES / 337,616 SQ.FT.
5. DIMENSIONAL REGULATIONS:

	REQUIRED	PROVIDED
MINIMUM LOT SIZE	= 2 ACRES	= 7.75 ACRES
MAXIMUM LOT COVERAGE	= 33 %	= 18%
MINIMUM FRONTAGE	= 200 FEET	= 321 FEET
MAXIMUM BUILDING HEIGHT	= 55 FEET	= 20 FEET
BUILDING SETBACK REQUIREMENTS:		
FRONT	= 50 FEET	= 188 FEET
ABUT A STREET	= 50 FEET	= 204 FEET
SIDE SETBACK	= 50 FEET	= RIGHT: 989FT LEFT: 52FT
REAR SETBACK	= 50 FEET	= 60 FEET
ABUT RESIDENTIAL	= 150 FEET	
WETLAND BUFFER	= 50 FEET	

6. VERTICAL DATUM IS USGS NAVD88. CONTOUR INTERVAL 2 FEET.
7. SUBJECT PARCEL IS NOT LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA, COMMUNITY PANEL 33017C0310E, EFFECTIVE DATE: SEPTEMBER 30, 2015.
8. TOPOGRAPHIC SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES ON APRIL 18, 2018.
9. WETLANDS WERE FLAGGED BY DAMON E. BURT, N.H.C.W.S. #163 OF FRAGGLE ROCK ENVIRONMENTAL SERVICES ON MARCH, 2021 AND LOCATED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND, IN ACCORDANCE WITH CHAPTER 170–27.1 OF ZONING ORDINANCE.
10. FOR APPLICABLE RIGHT OF WAY, CONSERVATION, SLOPE, CONSTRUCTION, POWER LINE, CROSS TRAVEL, OR OTHER EASEMENTS, SEE REFERENCE PLAN

DEMOLITION NOTES:

1. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
2. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL NOTIFY "DIG SAFE" PRIOR TO ANY DEMOLITION/ CONSTRUCTION ACTIVITIES. (811).
4. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, UTILITIES AND PAVEMENT ON THE SITE TO THE LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN.
5. IT IS THE CONTRACTORS RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
6. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS NOT ALREADY OBTAINED BY THE OWNER AND ARRANGE AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF–SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
8. THE LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATION IS NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
9. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF–SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES, AND CODES.
10. 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.

PERMIT SUMMARY:

1. THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY:
   EPA NOI CGP (PENDING)
   NHDES WETLAND EXP APPLICATION: (PENDING)
2. 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.

   SITE PLAN REVIEW APPLICATION: (PENDING)
   CONDITIONAL USE PERMIT–TO ALLOW WORK WITHIN WETLAND OVERLAY DISTRICT BUFFER: (PENDING)

WAIVERS GRANTED:

1. N/A

SITE NOTES

1. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A PLAN REFERENCED AND PREPARED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND, RECORDED AT S.C.R.D. #12433 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.
2. THE PURPOSE OF THIS PLAN IS TO DEPICT A WAREHOUSE UNIT FACILITY CONSISTING OF ONE (1) 10,800 S.F., ONE (1) 9,720 S.F., ONE (1) 1,500 S.F., AND ONE (2) 1,200 S.F. WAREHOUSE BUILDINGS AND ASSOCIATED DRIVE AND SITE IMPROVEMENTS.
3. EXTERIOR LIGHTING SHALL BE CUT–OFF TYPE FIXTURES PER CHAPTER 153–14–E AND SHALL PROVIDE LIGHTING DIRECTED ON–SITE ONLY.
4. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.
5. ALL CONSTRUCTION LAYOUT SHALL BE DONE BY A LICENSED SURVEYOR UNDER CONTRACT WITH THE CONTRACTOR.
6. SEE DETAILS FOR SIGN LEGENDS.
7. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS, AND THE AMERICAN WITH DISABILITIES ACT, LATEST EDITIONS.
8. THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE CONSTRUCTION PROCEDURES AND SEQUENCE TO ENSURE THE SAFETY OF THE FACILITIES AND THEIR COMPONENTS DURING DEMOLITION AND CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE OWNERS REPRESENTATIVE. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIE–DOWNS. SUCH MATERIALS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AT THE COMPLETION OF THE PROJECT.
9. METHODS OF DEMOLITION, CONSTRUCTION AND ERECTION ARE THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE SPECIFIED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AND MAINTAIN ENVIRONMENTAL CONTROLS AS REQUIRED BY FEDERAL, STATE AND MUNICIPAL REGULATIONS AND PERMITS. ENVIRONMENTAL CONTROLS SHALL INCLUDE BUT SHALL NOT BE LIMITED TO DUST CONTROL AND SILT BARRIERS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO STRUCTURES OR UTILITIES OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION PHASE CAUSED BY HIMSELF, HIS EMPLOYEES, HIS SUBCONTRACTORS OR EMPLOYEES OF SAME. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY FACILITIES FOR THE PROTECTION OF THE WORK, WORKERS AND PUBLIC SAFETY.
11. BUILDING ADDRESSES TO BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.
12. THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS AND NH RSA 155–A: 5. THE PROPOSED STRUCTURE WILL ALSO BE DESIGNED IN ACCORDANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS.
13. THE SITE SHALL BE MAINTAINED TO PROVIDE ACCESSIBILITY IN ALL WEATHER CONDITIONS.
14. COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM WITH DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.
15. THE SUBJECT PARCEL(S) IS (ARE) SERVED BY MUNICIPAL WATER.
16. 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 DISTURBANCE ACTIVITY OCCURRING.
17. 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.
18. SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY–FRIDAY 7 AM–6 PM, SATURDAY 9 AM–4 PM. NO CONSTRUCTION SHALL OCCUR ON SUNDAY OR DURING FEDERAL HOLIDAY HOURS. HOURS OF CONSTRUCTION MUST BE DOCUMENTED ON A SITE CONSTRUCTION SIGN ALONG WITH THE CONTACT INFORMATION FOR THE GENERAL CONTRACTOR AND THE SIGN SHALL NOTE THE THE ROADWAY IS PRIVATE. SAID SIGNAGE MUST BE LOCATED AND APPROVED BY THE CITY ENGINEER OR ASSISTANT CITY MANAGER.
19. 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.
20. 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.
21. ANY RETAINING WALL TALLER THAN FOUR FEET (4') REQUIRES ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
22. ANY FENCE TALLER THAN SEVEN FEET (7') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES. RETAINING WALL DESIGN SHALL BE STAMPED BY A NH PROFESSIONAL ENGINEER.
23. APPLICANT SHALL COMPLETE LAND USE DEVELOPMENT TRACKING FORM, MOST RECENTLY REVISED VERSION, UTILIZING THE ONLINE POLLUTION TRACKING AND ACCOUNTING PILOT PROJECT (PTAPP) PORTAL.
    HTTP://WWW.UNH.EDU/UNHSC/PTAPP.
24. 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.
25. THE OWNER OF RECORD SHALL RECORD AT THE REGISTRY OF DEEDS DOCUMENTATION SUFFICIENT TO PROVIDE NOTICE TO ALL PERSONS/ENTITIES 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.
26. FIRE DEPARTMENT ACCESS SHALL BE INSTALLED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS IN ALL WEATHER CONDITIONS AT ALL TIMES.
27. NO REFUSE WILL BE ON SITE.
28. SNOW STORAGE WILL BE ACCORDING TO THE OPERATION AND MAINTENANCE PLAN AND WITHIN AREAS AS INDICATED.
29. ALL EXTERIOR DOORS ARE MANUAL AND OPENED FROM THE INTERIOR BY PANIC HARDWARE AS APPLICABLE. ALL EXTERIOR DOORS SHALL COMPLY WITH ADA AND ALL LOCAL BUILDING CODE REQUIREMENTS.

UTILITY NOTES

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
2. SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION.
3. 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.
4. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
5. THE SUBJECT PARCEL(S) IS (ARE) SERVED BY MUNICIPAL WATER.
6. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.
7. ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, DOUBLE CEMENT LINED DUCTILE IRON PIPE OR TYPE "K" COPPER, OR CITY APPROVED MATERIAL.
8. ALL WATER MAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION PRIOR TO ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE CHLORINATION AND TESTING WITH THE CITY OF DOVER WATER DEPARTMENT.
9. EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE CITY OF DOVER COMMUNITY SERVICES DEPARTMENT STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES.
10. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.
11. THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE BUILDING DRAWINGS AND THE UTILITY COMPANIES.
12. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
13. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO THE COMPLETION OF THIS PROJECT.
14. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.
15. CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES. COORDINATE WITH GAS COMPANY.
16. A 10–FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18–INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER/SANITARY SEWER CROSSINGS.
17. THE CONTRACTOR SHALL CONTACT "DIG–SAFE" 72 HOURS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL HAVE THE "DIG–SAFE" NUMBER ON SITE AT ALL TIMES.
18. SAWCUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN
19. GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF DOVER.
20. COORDINATE TESTING OF WATER CONSTRUCTION WITH THE CITY OF DOVER.
21. CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFORMER CONSTRUCTION WITH POWER COMPANY.
22. CONTRACTOR SHALL PHASE UTILITY CONSTRUCTION, PARTICULARLY WATER MAIN AND GAS MAIN CONSTRUCTION AS TO MAINTAIN CONTINUOUS SERVICE TO ABUTTING PROPERTIES. CONTRACTOR SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
23. SITE LIGHTING SPECIFICATIONS, CONDUIT LAYOUT AND CIRCUITRY FOR PROPOSED SITE LIGHTING AND SIGN ILLUMINATION SHALL BE PREPARED BY THE PROJECT ELECTRICAL ENGINEER.
24. APPROVED BACKFLOW PREVENTORS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES (IF APPLICABLE).
25. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE CITY AND STATE CODES.
26. A SECURITY ALARM SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 45, ARTICLE I, SECTION 45–2 OF THE CODE OF THE CITY OF DOVER.
27. THE PROPOSED STRUCTURE SHALL COMPLY WITH CHAPTER 81, ARTICLE IV, SECTION 81–27 AND THE STATE BUILDING CODES OF THE CODE OF THE CITY OF DOVER.
28. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
29. SEWER DESIGN FLOW: WAREHOUSE = 2 EMPL. X 10 GAL/EMPL. = 20 GPD

GRADING NOTES:

1. ALL DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR CONSTRUCTION OF THE CITY OF DOVER, N.H. AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION", LATEST EDITION. THE MORE STRINGENT SPECIFICATION SHALL APPLY.
2. CONTRACTOR SHALL RETAIN A GEOTECHNICAL ENGINEERING CONSULTANT APPROVED BY THE OWNER, TO CONDUCT COMPACTION TESTING AND FILL GRADATION MONITORING PER THE ABOVE REFERENCED "STANDARD SPECIFICATIONS".
3. SEE EROSION CONTROL NOTES & DETAIL SHEET FOR TEMPORARY AND PERMANENT EROSION CONTROL MEASURES.
4. ALL DRAINAGE PIPES SHALL BE HDPE OR APPROVED EQUAL UNLESS OTHERWISE NOTED.
5. ALL DISTURBED AREAS NOT OTHERWISE CALLED FOR SURFACE TREATMENT SHALL RECEIVE 6" OF HIGH QUALITY LOAM AND SHALL BE SEEDED WITH GRASS.
6. ALL SITEWORK CONSTRUCTION SHALL BE ADVANCED USING "BEST MANAGEMENT PRACTICES" SANCTIONED BY THE USDA SCS AND NHDES.
7. TEMPORARY CONSTRUCTION ENTRANCE SHALL BE INSTALLED, UTILIZED AND MAINTAINED UNTIL BASE MATERIALS ARE CONSTRUCTED.
8. CONTRACTOR SHALL PROVIDE A FINISH GRADED SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE AND UNDER RAISED STRUCTURES.
9. DENSITY REQUIREMENTS:

LOCATION	MINIMUM DENSITY
BELOW PAVED OR CONCRETE AREAS	95%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREA	90%

   * ALL PERCENTAGES SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH AASHTO STANDARD 180, METHOD C. FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH AASHTO STANDARD T–191, T–204, OR T–238 AND T–239.

10. SEE GENERAL EROSION CONTROL NOTES ON DETAIL SHEET.
11. PROVIDE INLET PROTECTION BARRIERS AROUND ALL EXISTING AND PROPOSED STORM DRAINAGE INLETS WITHIN THE WORK LIMITS AND AS SHOWN ON PLAN. MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED AND UPSTREAM AREAS HAVE BEEN STABILIZED.
12. INSPECT SILT BARRIERS AFTER EACH RAIN STORM OF 1/4 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE STRUCTURE HEIGHT.
13. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED FOR THIS PROJECT. THE SWPPP MUST INCLUDE THE APPROPRIATE BEST MANAGEMENT PRACTICES (BMP'S) TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM THE SITE. PARTIES RESPONSIBLE FOR DEVELOPING THE SWPPP SHOULD REFER TO THE EPA NPDES CONSTRUCTION GENERAL PERMITS NOTICE OF INTENT FOR A COMPLETE OUTLINE OR REQUIRED ELEMENTS. THESE PLANS AND THE STORMWATER MANAGEMENT SYSTEM INSPECTION & MAINTENANCE PLAN PREPARED FOR THIS PROJECT MAY BE UTILIZED IN FULFILLING THE REQUIREMENTS.
14. LIMIT TREE CLEARING TO ONLY THE EXTENT NECESSARY FOR CONSTRUCTION.
15. PLACARDS SHALL BE INSTALLED EVERY 50' ALONG THE EDGE OF WETLAND PRIOR TO CONSTRUCTION.
16. THE EDGE OF WETLAND SHALL BE REFLAGGED PRIOR TO CONSTRUCTION.
17. PLACARDS SHALL BE PLACED EVERY 50' ALONG THE WETLAND BUFFER ALONG LIMITS OF IMPACTED WETLAND BUFFER.

LEGEND

I.R. (set) O – IRON ROD W/ I.D. CAP (SET)
O I.P. – IRON PIPE
□ G.B. – GRANITE BOUND
O I.R. – IRON ROD
O I.R.(fnd) – IRON ROD (FOUND)
D.H. – DRILL HOLE
S.F. – SQUARE FEET
Ac. – ACRE
(TYP.) – TYPICAL
± – MORE OR LESS
ø – DIAMETER
S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
–o– UP – UTILITY POLE
– · · · – EDGE OF WETLAND
O.A. – OVERALL
TBR – TO BE REMOVED
CCB – CAPE COD BERM
– TREELINE

R.O.W. – RIGHT OF WAY
Ⓓ DMH – DRAIN MANHOLE
□ CB – CATCH BASIN
Ⓢ SMH – SEWER MANHOLE
HYD. – FIRE HYDRANT
WV – WATER GATE VALVE
– TREE
GV – GAS VALVE
R=5' – PROPOSED PAVEMENT RADIUS
PW – PROPOSED WATER
PE – PROPOSED ELECTRIC
PS – PROPOSED SEWER
PD – PROPOSED DRAINAGE
PG – PROPOSED GAS
55 – PROPOSED FINISH GRADE
55 – PROPOSED SPOT GRADE

UTILITY CONTACTS

WATER: – CITY OF DOVER COMMUNITY SERVICES DEPARTMENT

CONTACT: KENNETH MAVROGEORGE
271 MAST ROAD
DOVER, NH 03820
TEL: (603)–516–6454
EMAIL: K.MAVROGEORGE@DOVER.NH.COM

ELECTRIC: – EVERSOURCE

CONTACT: TREVOR EMMONS
4 OLD DOVER ROAD
ROCHESTER, NH 03867
TEL: (603)–332–4227
EMAIL: TREVOR.EMMONS@EVERSOURCE.COM

NATURAL GAS: – UNITIL CORPORATION

CONTACT: DAVID MACLEAN
325 WEST ROAD
PORTSMOUTH, NH 03801
TEL: (603)–294–5261
EMAIL: MACLEAND@UNITIL.COM

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

NO.	REVISION	APP'D	DATE

DATE: 8–18–22
SCALE: NOTES
DRAWN BY: MJM
DESIGN BY: MJM
APPROVED BY: SJH
PROJECT NO: 21001
FILE: 21001–SITE

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NOTES SHEET

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12–1
DOVER, NH 03820

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

LEGEND

I.R. (set) o	– IRON ROD W/ I.D. CAP (SET)
o I.P.	– IRON PIPE
⊡ G.B.	– GRANITE BOUND
o I.R.	– IRON ROD
o I.R.(fnd)	– IRON ROD (FOUND)
D.H.	– DRILL HOLE
S.F.	– SQUARE FEET
Ac.	– ACRE
(TYP.)	– TYPICAL
±	– MORE OR LESS
ø	– DIAMETER
S.C.R.D.	– STRAFFORD COUNTY REGISTRY OF DEEDS
-o- UP	– UTILITY POLE
— · · —	– EDGE OF WETLAND
O.A.	– OVERALL
TBR	– TO BE REMOVED
VIF	– VERIFY IN FIELD
CCB	– CAPE COD BERM
	– TREELINE

R.O.W.	– RIGHT OF WAY
Ⓓ DMH	– DRAIN MANHOLE
▫ CB	– CATCH BASIN
Ⓢ SMH	– SEWER MANHOLE
HYD.	– FIRE HYDRANT
WV	– WATER GATE VALVE
	– TREE
GV	– GAS VALVE
R5'	– PROPOSED PAVEMENT RADIUS
PW	– PROPOSED WATER
PE	– PROPOSED ELECTRIC
UGE	– PROPOSED UNDERGROUND ELECTRIC
PS	– PROPOSED SEWER
PD	– PROPOSED DRAINAGE
PG	– PROPOSED GAS
55	– PROPOSED FINISH GRADE
55	– PROPOSED SPOT GRADE

DWELLING

LIMIT OF CLEARING

PROPOSED TREELINE

BUILDING SETBACK LINE (TYP.)

D / 12-1

PARCEL AREA

337,616 S.F.

7.75 Ac.

EXISTING BUILDING TBR

EXISTING TREELINE TBR

50' WETLAND BUFFER

EXISTING 75' WELL PROTECTIVE RADIUS

D / 12

PARCEL AREA

90,417 S.F.

2.08 Ac.

APPROXIMATE LEACH FIELD

SIXTH STREET

PROPOSED TREELINE

BUILDING SETBACK LINE

LIMIT OF CLEARING

LIMIT OF SAWCUT

LIMIT OF CURB REMOVAL

LIMIT OF SAWCUT

LIMIT OF SAWCUT

EXISTING 12" DIP

EDMH
RIM: 195.33
INV. IN(NEW): 189.53
INV IN.(EXISTING): 189.53
INV. OUT: 189.43

EXISTING CB
RIM(APROX.): 192.46
INV. OUT: 188.58

UGE&T

G

EOP

SGC

PRODUCTION DRIVE

EOP

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE

DATE: 8-18-22
SCALE: 1"=30'
DRAWN BY: MJM
DESIGN BY: MJM
APPROVED BY:SJH
PROJECT NO: 21001
FILE: 21001-SITE

DEMOLITION PLAN

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

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GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

PARKING CALCULATIONS

	MAX ALLOWED	PROPOSED
WAREHOUSE FACILITY: 24,420 SF	= 0	0
TOTAL PARKING	= 0	0

LEGEND

- I.R. (set) o – IRON ROD W/ I.D. CAP (SET)
- o I.P. – IRON PIPE
- ⊡ G.B. – GRANITE BOUND
- o I.R. – IRON ROD
- o I.R.(fnd) – IRON ROD (FOUND)
- D.H. – DRILL HOLE
- S.F. – SQUARE FEET
- Ac. – ACRE
- (TYP.) – TYPICAL
- ± – MORE OR LESS
- ø – DIAMETER
- S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
- -o- UP – UTILITY POLE
- – – – – – EDGE OF WETLAND
- O.A. – OVERALL
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- ~~~ – TREELINE

- R.O.W. – RIGHT OF WAY
- ⓓ DMH – DRAIN MANHOLE
- ▫ CB – CATCH BASIN
- Ⓢ SMH – SEWER MANHOLE
- HYD. – FIRE HYDRANT
- WV – WATER GATE VALVE
- – TREE
- GV – GAS VALVE
- R5' – PROPOSED PAVEMENT RADIUS
- PW – PROPOSED WATER
- PE – PROPOSED ELECTRIC
- UGE – PROPOSED UNDERGROUND ELECTRIC
- PS – PROPOSED SEWER
- PD – PROPOSED DRAINAGE
- PG – PROPOSED GAS
- 55 – PROPOSED FINISH GRADE
- 55 – PROPOSED SPOT GRADE

EXISTING 75' PROTECTIVE RADIUS WELL

D / 12

PARCEL AREA
90,417 S.F.
2.08 Ac.

APPROXIMATE LEACH FIELD

PROPOSED TRANSFORMER

SIXTH STREET

PROPOSED RETAINING WALL

SNOW STORAGE

CCB

R30'

CB1

OS2

30'

DWELLING

PROPOSED WOODEN GUARDRAIL

PROPOSED TREELINE

END CCB

BUILDING SETBACK LINE (TYP.)

D / 12-1

PARCEL AREA
337,616 S.F.
7.75 Ac.

100'

40'

108'

WAREHOUSE BUILDING #1
10,800 S.F.

PROPOSED LIGHT (TYP.)

55'

90'

PROPOSED UNDERGROUND INFILTRATION SYSTEM

WAREHOUSE BUILDING #2
9,720 S.F.

40'
WAREHOUSE BUILDING #3
1,200 S.F.

50'
WAREHOUSE BUILDING #4
1,500 S.F.

WAREHOUSE BUILDING #5
1,200 S.F.

50' WETLAND BUFFER

PROPOSED BOLLARD (TYP.)

OS1

PDMH1

CB2

R20'

NO UNATTENDED VEHICLES SIGN

PROPOSED CONSERVATION PLACARD (TYP.)

PROPOSED CONTECH FILTERA BIOSCAPE

START CCB

END CCB

R42'

R18'

R5'

PROPOSED WOODEN GUARDRAIL

20.00'

STABILIZED CONSTRUCTION ENTRANCE

END SGC
START CCB

PROPOSED CONSERVATION PLACARD (TYP.)

BUILDING SETBACK LINE

EDGE OF WETLAND (TYP.)

PROPERTY LINE (TYP.)

PROPOSED STOP SIGN

EXISTING CB
RIM(APROX.): 192.46
INV. OUT: 188.58

EDMH
RIM: 195.33
INV. IN(NEW): 189.53
INV IN.(EXISTING): 189.53
INV. OUT: 189.43

UGE&T

START SGC

EXISTING 12" DIP

PRODUCTION DRIVE

EOP

SGC

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DRAWN BY: MJM
DESIGN BY: MJM
APPROVED BY:SJH
PROJECT NO:21001
FILE: 21001-SITE

SITE PLAN

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

6

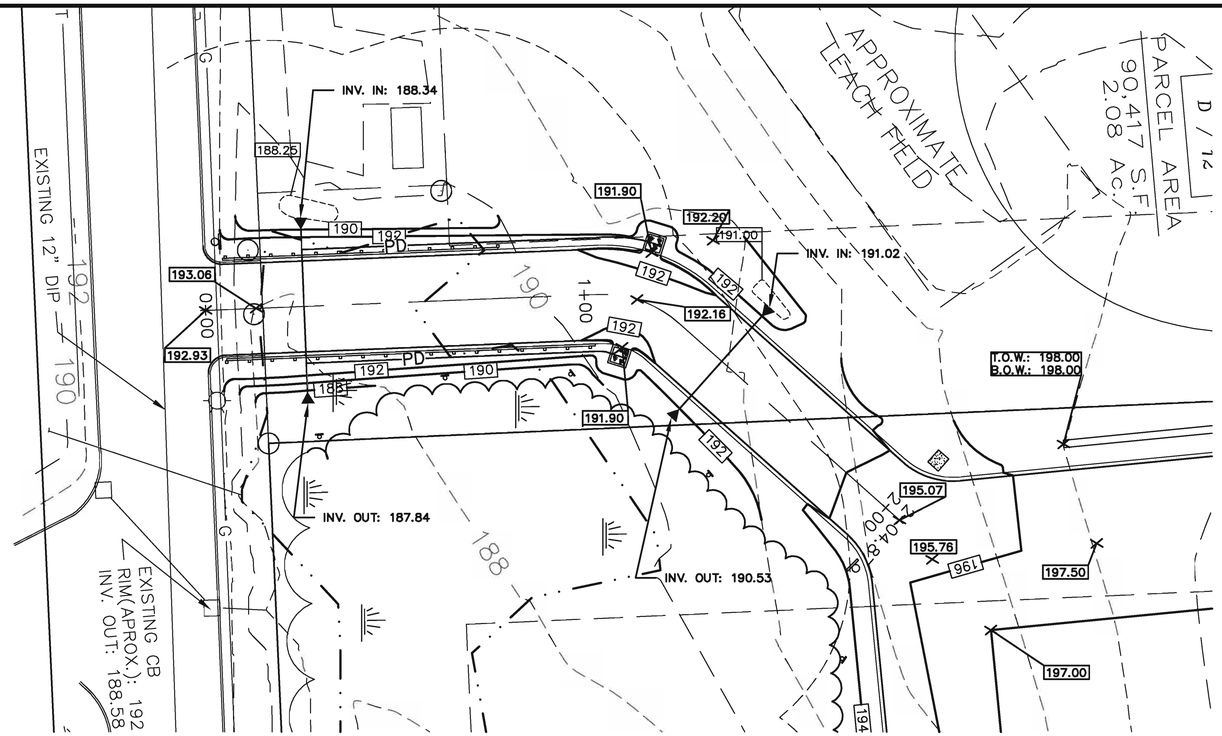
GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

LEGEND

I.R. (set) o – IRON ROD W/ I.D. CAP (SET)
o I.P. – IRON PIPE
□ G.B. – GRANITE BOUND
o I.R. – IRON ROD
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D.H. – DRILL HOLE
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S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
-o- UP – UTILITY POLE
– – – –

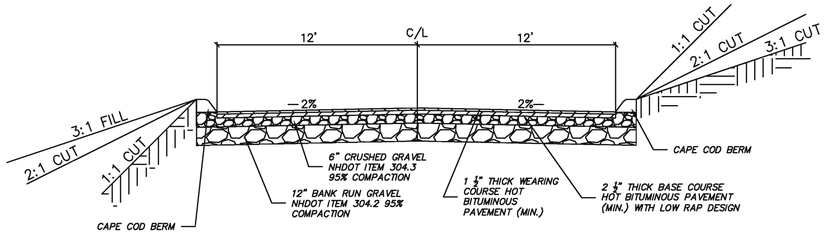


GRAPHIC SCALE

20 0 10 20 40 80

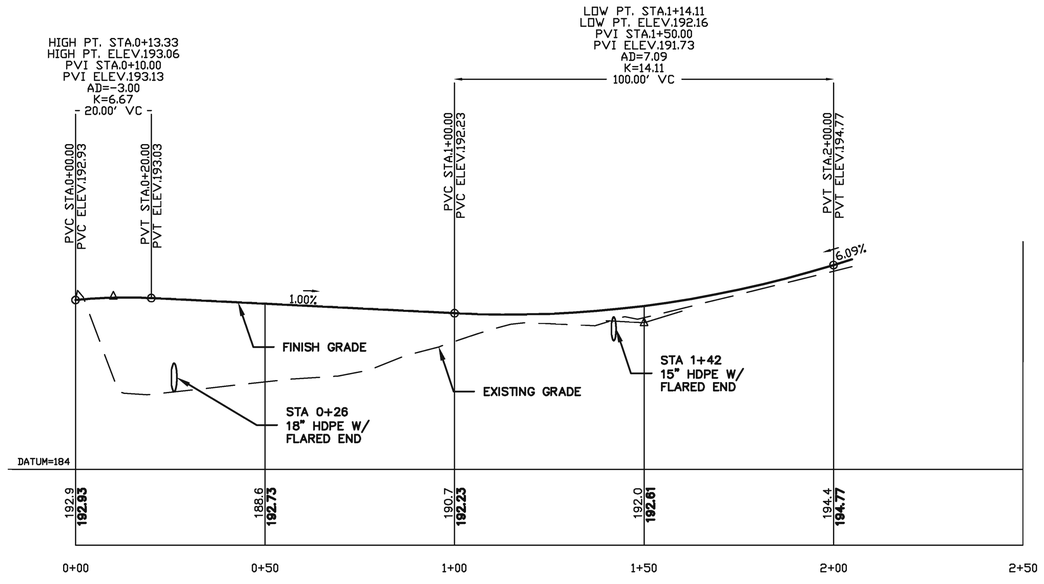
(IN FEET)

PLAN VIEW
SCALE: 1"=20'



DRIVEWAY CROSS SECTION

NOT TO SCALE



PROFILE VIEW
SCALE: HORIZONTAL: 1"=20'
VERTICAL: 1"=4'

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DRIVEWAY PLAN & PROFILE

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

8

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

LEGEND

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D.H. – DRILL HOLE
S.F. – SQUARE FEET
Ac. – ACRE
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-o- UP – UTILITY POLE
– – – – – – – EDGE OF WETLAND
O.A. – OVERALL
TBR – TO BE REMOVED
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– TREELINE

R.O.W. – RIGHT OF WAY
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– TREE
GV – GAS VALVE
R5' – PROPOSED PAVEMENT RADIUS
PW – PROPOSED WATER
PE – PROPOSED ELECTRIC
UGE – PROPOSED UNDERGROUND ELECTRIC
PS – PROPOSED SEWER
PD – PROPOSED DRAINAGE
PG – PROPOSED GAS
55 – PROPOSED FINISH GRADE
55 – PROPOSED SPOT GRADE

PROPOSED TREELINE
PROPOSED E-ONE SEWAGE EJECTOR PUMP STATION
RIM:195.11
INV IN (BUILDING 1):187.99
INV IN (BUILDING 2):187.99
INV OUT:
DWELLING
CLEANOUT (TYP.)
FM
PROPOSED 690 LF 1 ½" PVC SDR26
PROPOSED 51 LF 6" PVC SDR35 S=0.02
PS
PS
PROPOSED 51 LF 6" PVC SDR35 S=0.01
PD
BUILDING SETBACK LINE (TYP.)
INV. OUT: 189
INV. OUT: 188.50
WAREHOUSE BUILDING #1 10,800 S.F.
PROPOSED FIRE DEPARTMENT CONNECTION (FDC) (TYP.)
1" DOMESTIC SERVICE
FIRE SERVICE
PROPOSED ELECTRIC METER
PROPOSED GAS METER
UNDERGROUND COMMUNICATION SERVICE 3-4" CONDUIT
ADS UNDERGROUND INFILTRATION SYSTEM
WAREHOUSE BUILDING #2 9,720 S.F.
FIRE SERVICE
1" DOMESTIC SERVICE
WATER SHUT OFF (TYP.)
UGE,T&C
PG
WAREHOUSE BUILDING #3 1,200 S.F.
WAREHOUSE BUILDING #4 1,500 S.F.
WAREHOUSE BUILDING #5 1,200 S.F.
D / 12-1
PARCEL AREA
337,616 S.F.
7.75 Ac.
PROPOSED TREELINE
EXISTING 75' PROTECTIVE RADIUS WELL
D / 12
PARCEL AREA
90,417 S.F.
2.08 Ac.
APPROXIMATE LEACH FIELD
PROPOSED TRANSFORMER
THRUST BLOCK (TYP.)
PW
PROPOSED 6" CLDI
PROPOSED 6" CLDI
PROPOSED GATE VALVE (TYP.)
PROPOSED HYDRANT
SIXTH STREET
CULVERT 2
CONTECH 4'X4' FILTERRA BIOSCAPE 1
CONTECH 4'X4' FILTERRA BIOSCAPE 2
BUILDING SETBACK LINE
CULVERT 1
TAP EXISTING 12" CLDI W/ 6" STAINLESS STEEL TAPPING SLEEVE & GATE VALVE
G
UNDERGROUND COMMUNICATION SERVICE 3-4" CONDUIT
EXISTING CB
RIM(APROX.): 192.46
INV. OUT: 188.58
EDMH
RIM: 195.33
INV. IN(NEW): 189.53
INV IN.(EXISTING): 189.53
INV. OUT: 189.43
UGE&T
EXISTING 12" DIP
PRODUCTION DRIVE
EOP
SGC
WV

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UTILITY PLAN

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

DESCRIPTION

1. THE PURPOSE OF THIS PLAN IS TO DEPICT A WAREHOUSE UNIT FACILITY CONSISTING OF ONE (1) 10,800 S.F., ONE (1) 9,720 S.F., ONE (1) 1,500 S.F., AND ONE (2) 1,200 S.F. WAREHOUSE BUILDINGS AND ASSOCIATED DRIVE AND SITE IMPROVEMENTS.

PROJECT NAME AND LOCATION

TSB PROPERTIES LLC. — LATITUDE N43° 13' 15.3"
PRODUCTION DRIVE — LONGITUDE W70° 54' 50.2"
DOVER, NH

DISTURBED AREA

89,395 S.F.

NOTES:

1. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY TIME BEFORE DISTURBED AREAS ARE STABILIZED.
2. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.

SEQUENCE OF MAJOR ACTIVITIES

1. CONTRACTOR SHALL PREPARE THE SWPPP, FILE FOR AND OBTAIN THE NOI A MINIMUM OF 2 WEEKS PRIOR TO COMMENCEMENT OF SITE WORK.
2. PLACE TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S PRIOR TO EARTH MOVING ACTIVITIES.
3. ALL EROSION CONTROL AND PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO COMMENCING EARTH MOVING OPERATIONS.
4. SELECTIVE DEMOLITION.
5. REGRADE SITE TO SUBGRADE.
6. TEMPORARY WATER DIVERSION (SWALES, BASINS) MUST BE USED AS NECCESSARY UNTIL AREAS ARE STABILIZED.
7. SWALES AND PONDS (AS APPLICABLE) SHALL BE CONSTRUCTED EARLY ON IN THE CONSTRUCTION SEQUENCE AND BEFORE ROUGH GRADING OF THE SITE AND ALL DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
8. INSTALL DRAINAGE STRUCTURES AND CONTROLS.
9. INSTALL FOUNDATION FOOTINGS AND WALLS.
10. INSTALL UTILITIES.
11. PLACE GRAVELS AND FINE GRADE.
12. STABILIZE ROADWAYS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
13. ALL CUT AND FILL SLOPES SHALL BE LOAMED AND SEEDED (AS APPLICABLE) WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.
14. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EVERY 1/2" OF RAINFALL.
15. IN ALL CASES THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION AND IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
16. WHEN ALL SITE WORK IS COMPLETE AND ALL DISTURBED AREAS ARE STABILIZED REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND FILE THE EPA – N.O.T.

DEFINITIONS

AN AREA SHALL BE CONSIDERED STABLE OF ONE OF THE FOLLOWING HAS OCCURRED.

1. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED
2. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED
3. A MINIMUM OF 3" OF NON–EROSIVE MATERIAL SUCH AS STONE OR RIP–RAP HAS BEEN INSTALLED; OR
4. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED

INSTALLATION, MAINTENANCE, AND INSPECTION PROCEDURES OF EROSION AND SEDIMENT CONTROLS

A. SILT BARRIER

1. INSTALLATION
   a. USE SILT BARRIER AS PERIMETER CONTROLS, PARTICULARLY AT THE LOWER OR DOWN SLOPE EDGE OF A DISTURBED AREA.
   b. LEAVE SPACE FOR MAINTENANCE BETWEEN TOE AND SLOPE OF SILT BARRIER.
   c. TRENCH IN THE SILT BARRIER ON THE UPHILL SIDE (6 INCHES DEEP BY 6 INCHES WIDE).
   d. INSTALL STAKES ON THE DOWNHILL SIDE OF THE SILT BARRIER.
   e. CURVE THE END OF THE SILT BARRIER UP–GRADIENT TO HELP IT CONTAIN RUNOFF.
2. SEQUENCE OF INSTALLATION
   a. SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
3. MAINTENANCE
   a. SILT BARRIERS SHOULD BE INSPECTED AND MAINTAINED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
   b. SILT BARRIERS HAVE A USEFUL LIFE OF ONE SEASON. ON LONGER CONSTRUCTION PROJECTS, SILT BARRIERS SHOULD BE REPLACED PERIODICALLY TO MAINTAIN EFFECTIVENESS.
   c. REMOVE SEDIMENT WHEN IT REACHES ONE–THIRD (1/3) THE HEIGHT OF THE SILT BARRIER.
   d. REPLACE THE SILT BARRIERS WHERE THEY ARE TORN, WORN, OR OTHERWISED DAMAGED AND MONITOR PERFORMANCE TO ENSURE EFFECTIVE PERFORMANCE.
   e. RETRENCH OR REPLACE ANY SILT BARRIER THAT IS NOT PROPERLY ANCHORED TO THE GROUND.
   f. IF THERE IS EVIDENCE OF END FLOW ON PROPERLY INSTALLED BARRIERS, EXTEND BARRIERS UPHILL OR CONSIDER REPLACING THEM WITH OTHER MEASURES, SUCH AS TEMPORARY DIVERSIONS AND SEDIMENT TRAPS.
   g. SILT BARRIERS SHOULD BE REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SILT BARRIERS SHOULD BE REPLACED WITH A TEMPORARY CHECK DAM.

B. MULCHING

1. TIMING
   a. APPLY MULCH PRIOR TO ANY STORM EVENT. IT WILL BE NECESSARY TO CLOSELY MONITOR WEATHER PREDICTIONS TO HAVE ADEQUATE WARNING OF SIGNIFICANT STORMS.
   b. IN OTHER AREAS, THE TIME PERIOD CAN RANGE FROM 14 TO 30 DAYS OF INACTIVITY ON A AREA. THE LENGTH OF TIME VARYING WITH SITE CONDITIONS. PROFESSIONAL JUDGEMENT SHALL BE USED TO EVALUATE THE INTERACTION OF SITE CONDITIONS (SOIL ERODIBILITY, SEASON OF YEAR, EXTENT OF DISTURBANCE, PROXIMITY TO SENSITIVE RESOURCES, ETC.) AND THE POTENTIAL IMPACT OF EROSION ON ADJACENT AREAS TO CHOOSE AN APPROPRIATE TIME RESTRICTION.
   c. WITHIN 100 FEET OF RIVERS, STREAMS, WETLANDS, AND IN LAKE AND POND WATERSHEDS, THE TIME PERIOD OF WHICH MULCHING SHOULD TAKE OCCUR SHOULD BE NO GREATER THAN SEVEN (7) DAYS. THIS SEVEN DAY LIMIT SHOULD BE REDUCED FURTHER DURING WET WEATHER PERIODS.
2. APPLICATION RATE
   a. MULCH SHALL BE APPLIED AT A RATE OF BETWEEN 1.5 TO 2 TONS PER ACRE, OR 70 TO 90 POUNDS PER 1000 SQUARE FEET.
   b. GUIDELINES FOR WINTER MULCH APPLICATION. WHEN MULCH IS APPLIED TO PROVIDE PROTECTION OVER WINTER (PAST THE GROWING SEASON) IT SHALL BE AT A RATE OF 150–200 POUNDS OF HAY OR STRAW PER ACRE WITH ABOUT 4 INCHES IN DEPTH. A TACKIFIER MAY BE ADDED TO THE MULCH.
3. MAINTENANCE
   a. ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS. CHECK FOR SIGNS OF EROSION OR DISPLACEMENT OF THE MULCH. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED.
   b. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE AND SHOULD BE REPAIRED AS NECCESSARY.
   c. INSPECTIONS SHOULD TAKE PLACE UNTIL THE SITE IS ESTABLISHED.
   d. EROSION CONTROL MIX MULCH USED FOR TEMPORARY STABILIZATION SHOULD BE LEFT IN PLACE. VEGETATION ADDS STABILITY AND SHOULD BE PROMOTED.

C. TEMPORARY SEEDING

1. SEEDBED PREPARATION
   a. STONES AND TRASH SHOULD BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.
   b. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
   c. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS.
      i) APPLY FERTILIZER AT A RATE OF 600 POUNDS PER ACRE OR 13.8 POUNDS PER 1,000 SQUARE FEET OF LOW PHOSPHATE FERTILIZER OR EQUIVALENT.
      ii) APPLY LIMESTONE AT A RATE OF 3 TONS PER ACRE OR 138 POUNDS PER 1,000 SQUARE FEET.
2. SEEDING
   a. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SUMMARY INCLUDING SEED AND FERTILIZER) WITH A SEEDING DEPTH FROM A QUARTER (1/4) TO A HALF (1/2) INCH.
   b. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
   c. TEMPORARY SEEDING BETWEEN MAY 15TH AND AUGUST 15TH SHOULD BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE.
   d. VEGETATED GROWTH COVERING 85% OF THE DISTURBED AREA SHOULD BE ACHIEVED PRIOR TO OCTOBER 15TH.
3. MAINTENANCE
   a. TEMPORARY SEEDING SHALL BE INSPECTED PERIODICALLY. AT A MINIMUM, 85% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES USED IN THE INTERIM (MULCH, FILTER FABRICS, CHECK DAMS, ETC.).

D. PERMANENT SEEDING

1. BEDDING – STONES LARGER THAN 2 INCHES, TRASH, ROOTS, AND OTHER DEBRIS INTERFERRING WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA SHOULD BE REMOVED. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF 4" TO PREPARE A SEEDBED AND MIX FERTILIZER INTO THE SOIL.
2. FERTILIZER
   a. LIME AND FERTILIZER SHOULD BE WORKED INTO THE SOIL TO A DEPTH OF 4 INCHES USING A DISC, SPRING TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT PRIOR TO OR AT THE SAME TIME OF SEEDING.
   b. FERTILIZER SHOULD BE RESTRICTED TO A LOW PHOSPHATE, SLOW RELEASE NITORGEN FERTILIZER WHEN APPLIED TO AREAS BETWEEN 25 FEET AND 250 FEET FROM A SURFACE WATER BODY. NO FERTILIZER EXCEPT LIMESTONE SHOULD BE APPLIED WITHIN 25 FEET OF THE SURFACE WATER.
   c. 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 @ 138 LBS. PER 1,000 S.F.
      LOW PHOSPHATE (N–P205–K20) FERTILIZER @ 13.8 LBS. PER 1,000 S.F.
3. SEED MIXTURE (RECOMMENDED)
   RATE:

TYPE	LBS. PER ACRE	LBS. PER 1,000 S.F.
TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
BIRDSFOOT TREFOIL	8	0.20
TOTAL	48	1.10

4. SEEDING
   a. SPRING SEEDING USUALLY GIVES THE BEST RESULTS FOR ALL SEED MIXES OR WITH LEGUMES. PERMANENT SEEDING SHOULD BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST.
   b. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER) WITH A SEEDING DEPTH FROM A QUARTER (1/4) TO A HALF (1/2) INCH.
   c. VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED SHOULD BE ACHIEVED PRIOR TO OCTOBER 15TH. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT TEMPORARY STABILIZATION MEASURES FOR OVERWINTER PROTECTION.
5. HYDROSEEDING
   a. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. THE USE OF STRAW MULCH ON CRITICAL AREAS IS PREFERRED SINCE IT GRANTS BETTER SLOPE PROTECTION BY USING ADHESIVE MATERIALS.
   b. SLOPES MUST BE NO STEEPER THAN 2 TO 1 (2 FEET HORIZONTALLY TO 1 FOOT VERTICALLY).
   c. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
6. MAINTENANCE
   a. PERMANENT SEEDED AREAS SHOULD BE INSPECTED AT LEAST MONTHLY DURING THE COURSE OF CONSTRUCTION. INSPECTIONS, MAINTENANCE, AND CORRECTIVE ACTIONS SHOULD CONTINUE UNTIL THE OWNER ASSUMES PERMANENT OPERATION OF THE SITE.
   b. SEEDED AREAS SHOULD BE MOWED AS REQUIRED TO MAINTAIN A HEALTHY STAND OF VEGETATION, WITH MOWING HEIGHT AND FREQUENCY DEPENDENT ON TYPE OF GRASS COVER.
   c. BASED ON INSPECTION, AREAS SHOULD BE RESEEDED TO ACHIEVE FULL STABALIZATION OF EXPOSED SOILS.
   d. IF EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHOULD BE MADE AND AREAS RESEEDED. WITH OTHER TEMPORARY MEASURES USED TO PROVDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.
   e. AT A MINIMUM, 85% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION.

E. STORM DRAIN INLET PROTECTION

1. SPECIFICATIONS
   a. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE BARRIER SHOULD BE LESS THAN ONE ACRE.
   b. ANY RESULTANT PONDING OF STORMWATER MUST NOT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT AREAS OR STRUCTURES.
2. INSTALLATION
   a. INSTALL INLET PROTECTION AS SOON AS STORM DRAIN INLETS ARE INSTALLED AND BEFORE LAND–DISTURBANCE ACTIVITIES BEGIN IN AREAS WITH EXISTING STORM DRAIN SYSTEMS.
   b. PROTECT ALL INLETS THAT COULD RECEIVE STORMWATER FROM YOUR CONSTRUCTION PROJECT.
   c. USE IN CONJUNCTION WITH OTHER EROSION PREVENTION AND SEDIMENT CONTROL BMPS.
   d. DESIGN YOUR INLET PROTECTION TO HANDLE THE VOLUME OF WATER FROM THE AREA BEING DRAINED. ENSURE THAT THE DESIGN IS SIZED APPROPRIATELY.
3. MAINTENANCE
   a. INSPECT INLETS BARRIERS FREQUENTLY, BEFORE AND AFTER EACH RAINFALL EVENT AND REPAIR WHEN NECESSARY.
   b. SEDIMENT SHOULD BE REMOVED AND THE STORM DRAIN SEDIMENT BARRIER RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE BARRIER.
   c. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
   d. SWEEP STREETS, SIDEWALKS, AND OTHER PAVED AREAS REGULARLY.
   e. ALL CATCH BASINS AND STORM DRAIN INLETS MUST BE CLEANED AT THE END OF CONSTRUCTION AND AFTER THE SITE HAS BEEN FULLY STABILIZED

TIMING OF CONTROLS/MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES THE SILT BARRIERS SHALL BE INSTALLED PRIOR TO COMMENCING ANY CLEARING OR GRADING OF THE SITE. STRUCTURAL CONTROLS SHALL BE INSTALLED CONCURRENTLY WITH THE APPLICABLE ACTIVITY. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN TWENTY ONE (21) DAYS WILL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN FOURTEEN (14) DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, SILT FENCES AND ANY EARTH/DIKES WILL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED. ALL AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.

WASTE DISPOSAL

a. WASTE MATERIALS
   ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN A DUMPSTER. NO CONSTRUCTION WASTE MATERIALS WILL BE BURIED ON SITE. ALL PERSONEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
b. HAZARDOUS WASTE
   ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
c. SANITARY WASTE
   ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

MAINTENACE OF STORMWATER MANAGEMENT FACILITIES

THE PROJECT PROPONENT IS RESPONSIBLE FOR THE MAINTENANCE OF ALL STORMWATER FACILITIES DURING CONSTRUCTION AND THE PORPERTY OWNER IS RESPONSIBLE AFTER CONSTRUCTION IS COMPLETE.

CATCH BASINS & STORMWATER TREATMENT STRUCTURES

1. CATCH BASINS & STORMWATER TREATMENT STRUCTURES SHOULD BE INSPECTED ON A MONTHLY BASIS AND/OR AFTER A MAJOR RAINFALL EVENT TO ASSURE THAT DEBRIS OR SEDIMENTS DO NOT REDUCE THE EFFECTIVENESS OF THE SYSTEM.

SPILL PREVENTION

A. MATERIAL MANAGEMENT PRACTICES
THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL SANITARY EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:
GOOD HOUSEKEEPING:
THE FOLLOWING GOOD HOUSEKEEPING PRACTICES THAT WILL BE FOLLOWED ON SITE DURING
1. THE CONSTRUCTION PROJECT:
   a. AN EFFORT WILL BE MADE TO STORE ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB.
   b. ALL MATERIALS STORED ON SITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
   c. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
   d. THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.
   e. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
   f. WHENEVER POSSIBLE ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
2. HAZARDOUS PRODUCTS:
   a. THE FOLLOWING PRACTICES WILL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
   b. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
   c. ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION.
   d. SURPLUS PRODUCT THAT MUST BE DISPOSED OF WILL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.

B. PRODUCT SPECIFICATION PRACTICES
THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON SITE:
1. PETROLEUM PRODUCTS:
   a. ALL ON SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENACE TO REDUCE LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
2. FERTILIZERS:
   a. FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER. STORAGE WILL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
3. PAINTS:
   a. ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE DISPOSED OF PROPERLY ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
4. CONCRETE TRUCKS:
   a. CONCRETE TRUCKS WILL DISCHARGE AND WASH OUT SURPLUS CONCRETE OR DRUM WASH WATER IN A CONTAINED AREA ON SITE.

C. SPILL CONTROL PRACTICES
IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVOUS SECTION THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
   a. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
   b. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
   c. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
   d. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
   e. SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OF LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.
   f. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM RECURRING AND HOW TO CLEANUP THE SPILL IF IT OCCURS. A DESCRIPTION OF THE SPILL, ITS CAUSE, AND THE CLEANUP MEASURES WILL BE INCLUDED.
   g. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY–TO–DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.

THE PROJECT PROPONENT IS REQUIRED TO MANAGE CONSTRUCTION TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO CONTROLLING INVASIVE SPECIES AND CONTROLLING FUGITIVE DUST IN ACCORDANCE WITH ENV–A 1002.

AGR 3800 PROHIBITED INVASIVE PLANT SPECIES RULES

THE RULE, AGR 3800, STATES: 'NO PERSON SHALL COLLECT, TRANSPORT, IMPORT, EXPORT, MOVE, BUY SELL, DISTRIBUTE, PROPAGATE OR TRANSPLANT ANY LIVING AND VIABLE PORTION OF ANY PLANT SPECIES, WHICH INCLUDES ALL OF THEIR CULTIVARS AND VARIETIES LISTED IN TABLE 3800.1, NEW HAMPSHIRE PROHIBITED INVASIVE SPECIES LIST'. A COMPLETE COPY OF THE RULES CAN BE ACCESSED ON THE INTERNET AT
HTTP://AGRICULTURE.NH.GOV/TOPICS/PLANTS_INSECTS.HTM.

ENV–A 1002 FUGITIVE DUST: PRECAUTIONS TO PREVENT, ABATE, AND CONTROL FUGITIVE DUST.

a. ANY PERSON ENGAGED IN ANY ACTIVITY WITHIN THE STATE EMITS FUGITIVE DUST, OTHER THAT THOSE LISTED IN ENV–A 1002.02 (b), SHALL TAKE PRECAUTIONS THROUGHOUT THE DURATION OF THE ACTIVITY IN ORDER TO PREVENT, ABATE, AND CONTROL THE EMISSION OF FUGITIVE DUST.
b. PRECAUTIONS REQUIRED BY (a) ABOVE, SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
   i) THE USE OF WATER OR HYDROPHILIC MATERIAL ON OPERATIONS OR SURFACES, OR BOTH;
   ii) THE APPLICATION OF ASPHALT, WATER, OR HYDROPHILIC MATERIAL, OR TARPS OR OTHER SUCH COVERS TO MATERIAL STOCKPILES;
   iii) THE USE OF HOODS, FANS, FABRIC FILTERS, OR OTHER DEVICES TO ENCLOSE AND VENT AREAS WHERE MATERIALS PRONE TO PRODUCING FUGITIVE DUST ARE HANDLED;
   iv) THE USE OF CONTAINMENT METHODS FOR SANDBLASTING OR SIMILAR OPERATIONS; AND
   v) THE USE OF VACUUMS OR OTHER SUCTION DEVICES TO COLLECT AIRBORNE PARTICULATE MATTER.

PER 153–10 F:

ALL SITE IMPROVEMENTS WHICH REQUIRE BLASTING OF LAND SHALL MEET THE FOLLOWING REQUIRMENTS PRIOR TO ANY BLASTING OCCURING.

1. THE APPLICANT SHALL PREPARE A PRE–BLAST SURVEY OF ALL STRUCTURES WITHIN FIVE HUNDRED (500) FEET OF THE EXTERNAL BOUNDARIES OF THE PROPOSED LOT TO BE DEVELOPED. THIS SURVEY, ALONG WITH A MONITORING PLAN, SHALL BE ON FILE WITH THE DOVER FIRE AND RESCUE. UPON RECOMMENDATIONS OF THE CHIEF, THE PLANNING BOARD MAY REQUIRE A PRE–BLAST SURVEY OF ALL STRUCTURES WITHIN ONE THOUSAND (1000) FEET.
2. THE APPLICANT SHALL HOLD A NEIGHBORHOOD MEETING TO REVIEW THE BLASTING PLAN AND PRE–BLAST SURVEY, WITH REPRESENTATIVES OF THE FIRE AND RESCUE AND THE BLASTING COMPANY IN ATTENDANCE, PRIOR TO ANY ON–SITE BLASTING. ABUTTERS WITHIN ONE THOUSAND (1000) FEET OF THE EXTERNAL BOUNDARY OF THE PROJECT PARCEL SHALL BE NOTIFIED BY THE CERTIFIED MAIL (PAID FOR BY THE APPLICANT) OF THE MEETING NO LESS THAN TEN (10) DAYS PRIOR TO THE MEETING AND NO MORE THAN FIFTEEN (15) DAYS PRIOR TO THE MEETING. THE NOTICE SHALL STATE THE TIME AND DATE OF THE BLASTING AND CONTAIN A MAP SHOWING THE BLASTING AREA, THE 1,000–FOOT–RADIUS AREA, AND THE 500–FOOT–RADIUS AREA.
3. PERMIT HOLDERS SHALL BE IN COMPLIANCE WITH NFPA 495, EXPLOSIVE MATERIALS CODE. IN ADDITION TO ALL OTHER ORDINANCES AND CODES SET FORTH IN THE CITY OF DOVER CODE, § 153–14A, STORMWATER MANAGEMENT, EROSION CONTROL AND FLOOD HAZARDS, OF THIS CHAPTER AND THE CITY OF DOVER FIRE PREVENTION CODE, WHICH SPECIFICALLY PROHIBITS THE OVERNIGHT STORAGE OF EXPLOSIVES OR BLASTING AGENTS. FURTHER, ALL STORAGE MAGAZINES SHALL BE LOCKED IN THE OPEN POSITION AT THE END OF THE DAY'S OPERATION FOR EASY INSPECTION BY CITY OFFICIALS.
4. BLASTING PERMITS MAY BE OBTAINED BY CALLING THE DOVER FIRE AND RESCUE DURING NORMAL BUSINESS HOURS. THE PERMITS ARE ONLY ACTIVE FOR THE DATES AND TIME SPECIFIED ON THE PERMIT.
5. PERMIT HOLDERS SHALL HOLD INSURANCE AGAINST CLAIMS FOR DAMAGES FOR PERSONAL INJURY AND PROPERTY WHICH MAY ARISE FROM THE PERFORMANCE OF THE WORK.
6. HOURS OF OPERATION FOR THE BLASTING SHALL BE NO EARLIER THAN 8:00AM AND NO LATER THAN 6:00PM, MONDAY THROUGH FRIDAY, EXCLUDING FEDERAL HOLIDAYS.

WINTER CONSTRUCTION NOTES

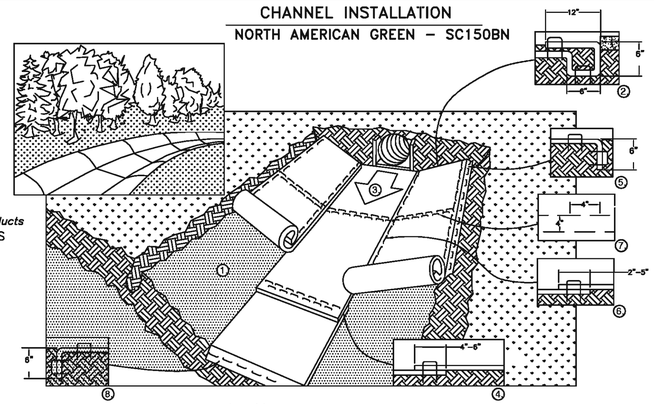
1. ALL PROPOSED POST–DEVELOPMENT VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF
   85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE PLACEMENT OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR
   ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT.
2. ALL SLOPES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS.
3. AFTER OCTOBER 15TH, INCOMPLETE ROAD SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3–INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 403.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT.

ENV–WQ 1510: BEST MANAGEMENT PRACTICES FOR BLASTING (IF REQUIRED)

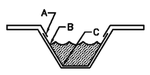
1) ALL ACTIVITIES ASSOCIATED WITH BLASTING NEED TO BE OPTIMIZED TO PREVENT THE RELEASE OF CHEMICALS ASSOCIATED WITH BLASTING ACTIVITIES TO THE ENVIRONMENT.
2) IF MORE THAN 5,000 CY OF ROCK REMOVAL IS REQUIRED DRINKING WATER WELLS MUST BE IDENTIFIED AND LOCATED WITHIN 2000 FEET OF THE PROPOSED BLASTING ACTIVITIES. DEVELOP A GROUNDWATER QUALITY SAMPLING PROGRAM TO MONITOR FOR NITRATE AND NITRITE EITHER IN THE DRINKING WATER SUPPLY WELLS OR IN OTHER WELLS THAT ARE REPRESENTATIVE OF THE DRINKING WATER SUPPLY WELLS IN THE AREA. THE PLAN MUST INCLUDE PRE AND POST BLAST WATER QUALITY MONITORING AND BE APPROVED BY NHDES PRIOR TO INITIATING BLASTING. THE GROUNDWATER SAMPLING PROGRAM MUST BE IMPLEMENTED ONCE APPROVED BY NHDES.
3) THE FOLLOWING BEST MANAGEMENT PROCEDURES FOR BLASTING SHALL BE COMPLIED WITH:
   (1) LOADING PRACTICES. THE FOLLOWING BLASTHOLE LOADING PRACTICES TO MINIMIZE ENVIRONMENTAL EFFECTS SHALL BE FOLLOWED:
      (A) DRILLING LOGS SHALL BE MAINTAINED BY THE DRILLER AND COMMUNICATED DIRECTLY TO THE BLASTER

CHANNEL INSTALLATION
NORTH AMERICAN GREEN – SC150BN

NORTH AMERICAN GREEN
EROSION CONTROL *Products Guaranteed* SOLUTIONS



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP's IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" ACROSS THE WIDTH OF THE RECP's.
3. ROLL CENTER RECP's IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE RECP's END OVER END (SHINGLE STYLE) WITH A 4" – 6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE RECP's.
5. FULL LENGTH EDGE OF RECP's AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP's MUST BE OVERLAPPED APPROXIMATELY 2" – 5" (DEPENDING ON RECP's TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECP's MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. NOTE: * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's. BE NECESSARY TO PROPERLY ANCHOR THE RECP's.



CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

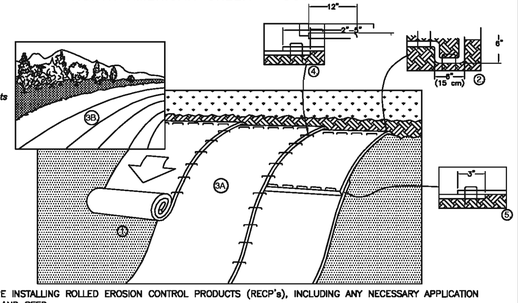
NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY

NOTE: THE USE OF WELDED PLASTIC OR BIODEGRADABLE PLASTIC NETTING OR THREAD IN EROSION CONTROL MATTING IS PROHIBITED. THE USE OF WILDLIFE FRIENDLY ORGANIC MATERIALS IS RECOMMENDED.

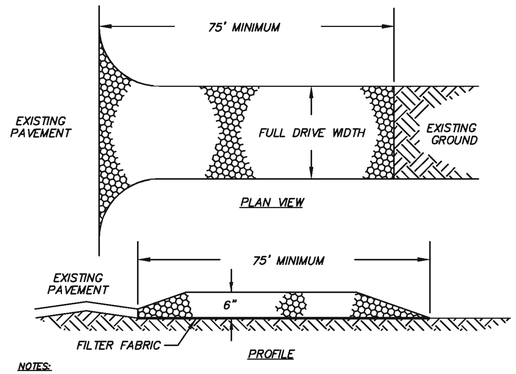
SLOPE INSTALLATION
NORTH AMERICAN GREEN – SC150BN

NORTH AMERICAN GREEN
EROSION CONTROL *Products Guaranteed* SOLUTIONS



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" – 5" (5 CM – 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH.
NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

NOTE: THE USE OF WELDED PLASTIC OR BIODEGRADABLE PLASTIC NETTING OR THREAD IN EROSION CONTROL MATTING IS PROHIBITED. THE USE OF WILDLIFE FRIENDLY ORGANIC MATERIALS IS RECOMMENDED.



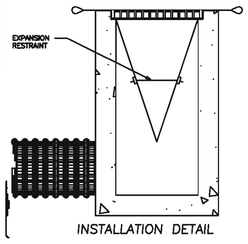
NOTES:
1. *SEE EROSION CONTROL NOTES BELOW FOR MATERIAL, INSTALLATION AND MAINTENANCE REQUIREMENTS.*
2. *TO BE INSTALLED AT EACH POINT OF EGRESS FROM THE WORK AREA.*

STABILIZED CONSTRUCTION ENTRANCE

1. SPECIFICATIONS
   A. AGGREGATE SIZE: USE THREE (3) INCHES STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
   B. AGGREGATE THICKNESS: NOT LESS THAN SIX (6) INCHES.
   C. WIDTH TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS.
   D. LENGTH: AS REQUIRED, BUT NOT LESS THAN SEVENTY-FIVE (75) FEET. PIPING OF SURFACE WATER UNDER ENTRANCE SHALL BE PROVIDED AS REQUIRED.
   E. GEOTEXTILE: TO BE PLACED OVER THE ENTIRE AREA TO BE COVERED WITH AGGREGATE.
   F. CRITERIA FOR GEOTEXTILE: THE FABRICS SHALL BE TREVIA SPUNBOND 1135, MIRAFI 600X OR EQUAL.

2. MAINTENANCE
   THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



OIL-ABSORBANT SILTSACK®

(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)
DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK® CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK®, WITH A WOVEN PILLOW INSERT.

SILTSACK®
SPECIFICATIONS

NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS. AS SUPPLIED BY AN HARRIS OF PORTSMOUTH OR APPROVED EQUAL

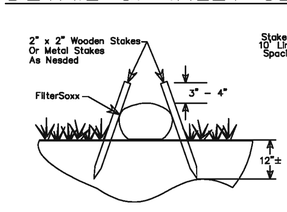
REGULAR FLOW SILTSACK®
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

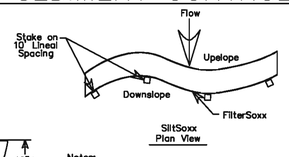
HI-FLOW SILTSACK®
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

DETAIL OF INLET SEDIMENT CONTROL DEVICE



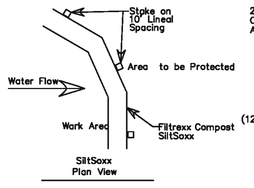
FilterSoxx Section
At Ends of Run
Crose Stakes



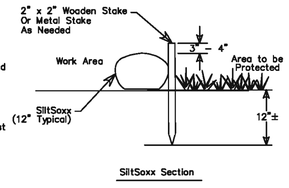
SiltSoxx
Plan View

Notes:
1. All material to meet Filtrexx specifications
2. FilterSoxx compost/soil/rock/ssed fill to meet application requirements.
3. Compost material to be dispersed on site, as determined by Engineer.

FilterSoxx Staking Details



SiltSoxx
Plan View



SiltSoxx Section

Notes:
1. All material to meet Filtrexx specifications
2. SiltSoxx compost/soil/rock/ssed fill to meet application requirements.
3. SiltSoxx depicted is for minimum slopes. Greater slopes may require larger socks per the Engineer.
4. Compost material to be dispersed on site, as determined by Engineer.

SILTSOXX DETAILS
NOT TO SCALE

SEEKING REPORTS OF RARE TURTLES

The NH Fish & Game Department is collecting observations of four turtle species:



Blanding's turtle (state endangered)
- Large, dark/black domed shell with lighter speckles
- Distinct yellow throat/chin
- Aquatic but often moves on land



Wood turtle (special concern)
- Sculpted, pyramidal brownish shell
- Orange around neck and limbs
- River/stream turtle spending many months on land



Eastern box turtle (state endangered)
- Small terrestrial turtle with highly domed shell
- Irregular yellow or orange markings over brown/black base



Spotted turtle (state threatened)
- Small, mostly aquatic with black or dark brown with yellow spots.
- Fairly flat shell compared to Blanding's turtle

Report sightings to RAARP@wildlife.nh.gov or 603-271-2461 *Please report promptly, noting specific location and date – Photographs strongly encouraged*

NOTES:
1. *ALL OUTSIDE CONSTRUCTION PERSONNEL SHALL RECEIVE TRAINING IN THE IDENTIFICATION OF RARE TURTLE SPECIES AND MADE AWARE OF THEIR PROTECTED STATUS.*
2. *THE USE OF WELDED PLASTIC OR 'BIODEGRADABLE PLASTIC' NETTING OR THREAD IN EROSION CONTROL MATTING IS PROHIBITED*
3. *THE USE OF EROSION CONTROL BERM, WHITE FILTREXX DEGRADABLE WOVEN SILT SOCK, OR 'WILDLIFE FRIENDLY' WOVEN ORGANIC MATERIAL (E.G. COCO OR JUTE MATTING SUCH AS NORTH AMERICAN GREEN SC150BN OR EQUIVALENT) ARE ACCEPTABLE FOR USE*
4. *IF WOOD, SPOTTED, OR BLANDING'S TURTLES ARE FOUND LAYING EGGS IN THE WORK AREA, PLEASE CONTACT MELISSA DOPERALSKI AT 271-1738 or JOSH MEGYESY AT 271-1125 FOR FURTHER INSTRUCTIONS.*

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NO.	REVISION	APP'D	DATE

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1168
Dover, New Hampshire 03821
603.749.0443

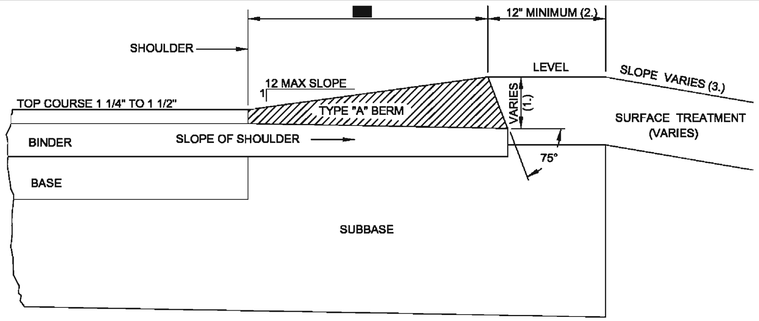
DATE: 8-18-22
SCALE: DETAIL
DRAWN BY: MJM
DESIGN BY: MJM
APPROVED BY: SJH
PROJECT NO: 21001
FILE: 21001-SITE

DETAIL SHEET

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

11



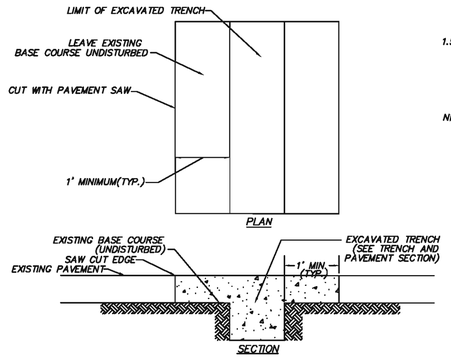
NOTES:

FOR MODIFIED BERM THE SLOPE REMAINS CONSTANT AT 1 (V) TO 12 (H)

1. THIS DIMENSIONS VARIES WITH THE THICKNESS OF THE TOP COURSE AND SLOPE OF BINDER.
2. SEE E401.1.1 FOR TYPICAL SECTION AT GUARDRAIL LOCATIONS.
3. SEE TYPICAL SECTIONS FOR PROJECT.

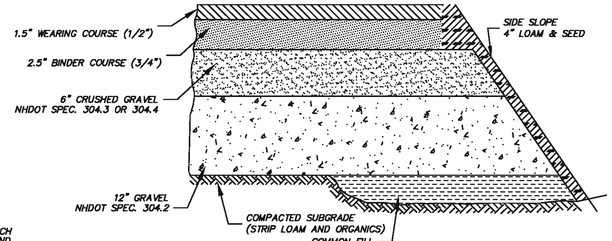
HOT MIX ASPHALT BERM (CAPE COD BERM) DETAIL

NOT TO SCALE



TRENCH PATCH

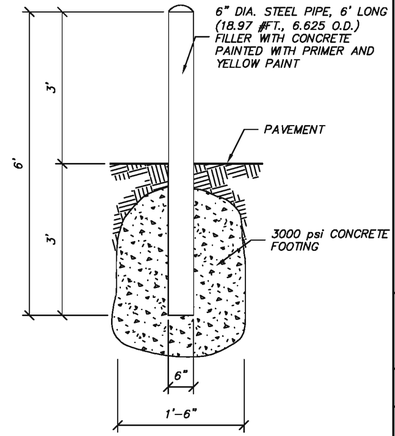
NOT TO SCALE



NOTE:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
3. GEOTEXTILE FABRIC MAYBE REQUIRED UNDER THE ROADWAY AND /OR THE PARKING AREAS AS REQUIRED BY THE ENGINEER BASED UPON SITE CONDITIONS.

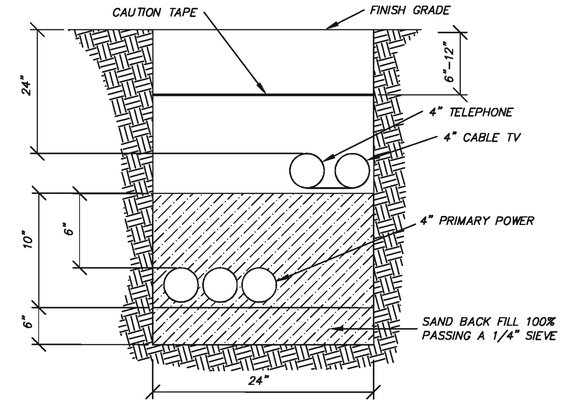
TYPICAL PAVEMENT SECTION

NOT TO SCALE



BOLLARD DETAIL

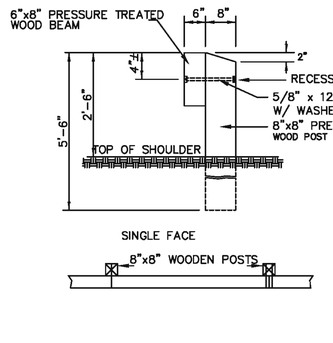
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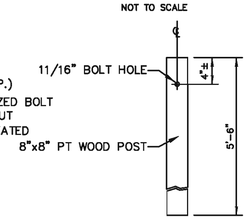
1. TELEPHONE CONDUIT SHALL BE 3" SCHEDULE 40 PVC, WITH STEEL SWEEPS AT RISER POLE, 90° BENDS AND AT BUILDING.
2. LEAVE PULL ROPE IN ALL CONDUITS FOR CABLE INSTALLATION.
3. FOR COMPLETE SPECIFICATIONS SEE "PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE CONSTRUCTION SPECIFICATIONS FOR UNDERGROUND CONDUIT SYSTEMS".
4. CONTRACTOR SHOULD VERIFY THE NUMBER & SIZE OF CONDUIT WITH THE APPROPRIATE UTILITIES.

UTILITY TRENCH

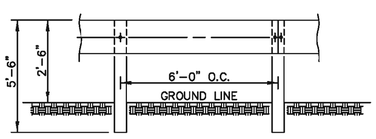
NOT TO SCALE



SINGLE FACE



POST DETAIL



NOTES:
1.) ALL NUTS, BOLTS & WASHERS ARE TO BE GALVANIZED.
2.) ALL SPLICES ARE TO BE MADE AT POSTS.

WOODEN GUARD RAIL DETAIL

NOT TO SCALE

PLAN

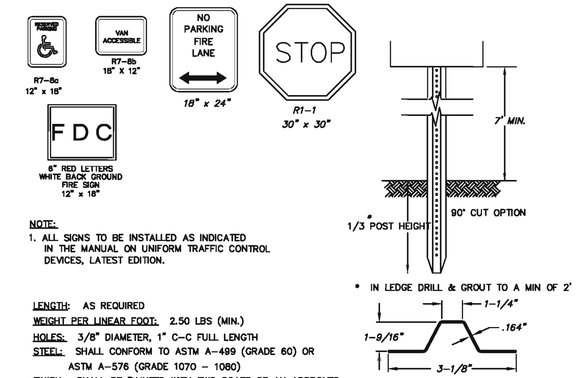
END ELEVATION

REINFORCING SCHEDULE (#6 BAR)			
Type	Qty	Length	Diagram
S1	4	47"	Straight
S2	4	29"	Straight
S3	6	40"	Straight
U1	2	74"	18 / 38 / 18

Total Foundation Weight, 1950 lbs.

SINGLE PHASE TRANSFORMER FOUNDATION 25-75 KVA(COORDINATE W/EVERSOURCE)

NOT TO SCALE



NOTE:
1. ALL SIGNS TO BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

LENGTH: AS REQUIRED
WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)
HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070 - 1080)
FINISH: SHALL BE PAINTED WITH TWO COATS OF AN APPROVED MEDIUM GREEN
BAKED ON OR AIR DRIED, PAINT OF WEATHER RESISTANT QUALITY.
ALL FABRICATION SHALL BE COMPLETE BEFORE PAINTING.

SIGN LEGEND & SIGN POST

NOT TO SCALE

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CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

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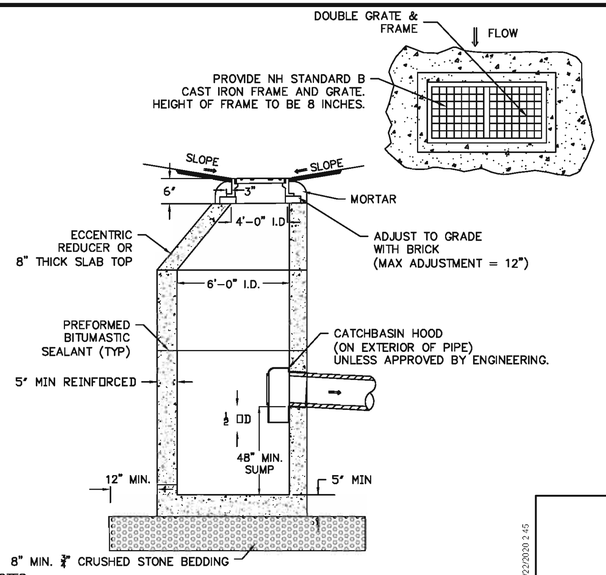
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DETAIL SHEET

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PRODUCTION DRIVE
MAP D, LOT 12-1
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12

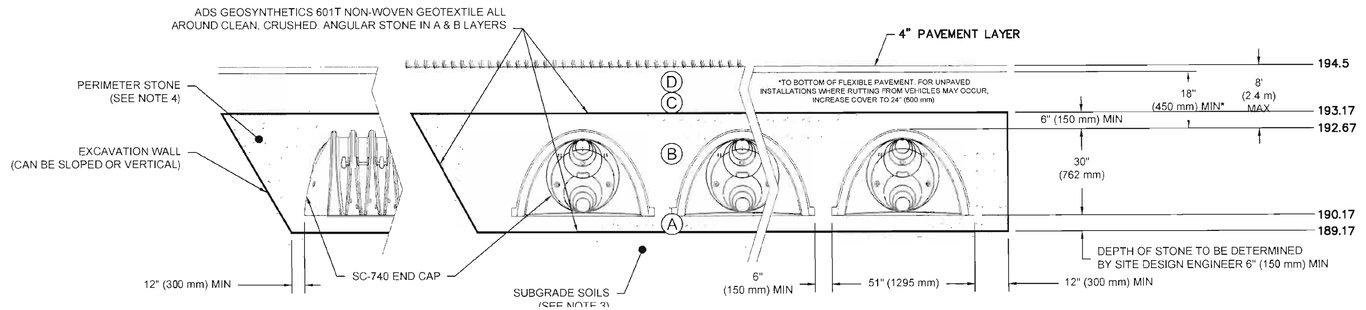


NOTES:

1. ENTIRE STRUCTURE SHALL BE H-20 LOAD RATED. PROVIDE MANUFACTURER REINFORCEMENT DETAILS TO THE CITY ENGINEER UPON REQUEST.

DOUBLE GRATE CATCH BASIN(6' DIA)

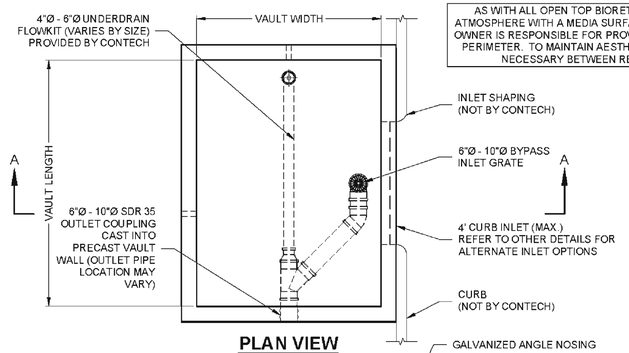
NOT TO SCALE



ADS UNDERGROUND INFILTRATION SYSTEM CROSS SECTION

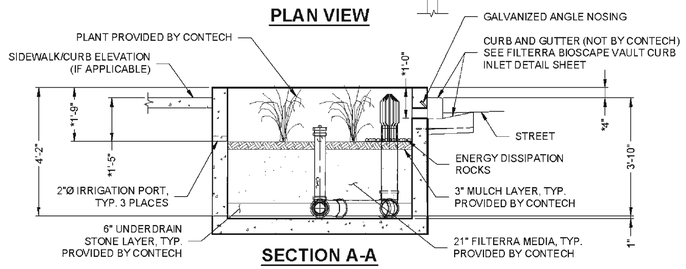
NOT TO SCALE

DIMENSIONS PRECEDED BY " * " ARE CRITICAL AND MAY NOT BE MODIFIED WITHOUT CONSULTING CONTECH



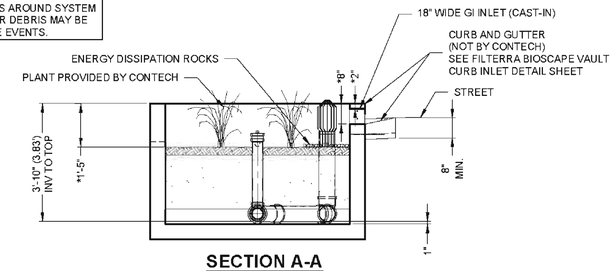
PLAN VIEW

AS WITH ALL OPEN TOP BIORETENTION SYSTEMS, FILTERRA BIOSCAPE IS OPEN TO THE ATMOSPHERE WITH A MEDIA SURFACE RECESSED BELOW FINISHED GRADE. CONTRACTOR OR OWNER IS RESPONSIBLE FOR PROVIDING ANY REQUIRED SAFETY MEASURES AROUND SYSTEM PERIMETER. TO MAINTAIN AESTHETICS, REMOVAL OF HEAVY STORMWATER DEBRIS MAY BE NECESSARY BETWEEN REGULAR FILTERRA SYSTEM MAINTENANCE EVENTS.



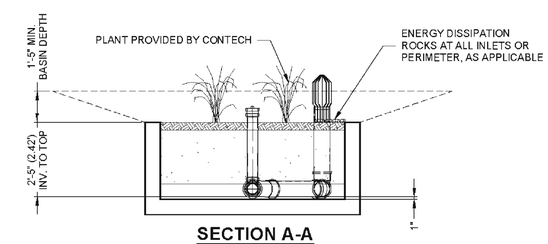
SECTION A-A

(SLOTTED THROAT INLET - TOP EXTENDS 4"
ABOVE CURB FOR ADJACENT SIDEWALKS)



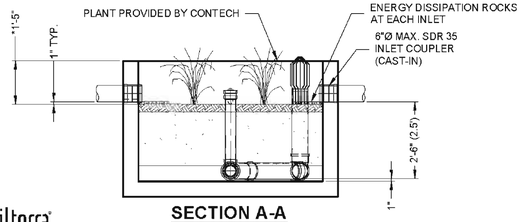
SECTION A-A

GREEN INFRASTRUCTURE INLET - TOP FLUSH WITH TOP OF
CURB, NOT INTENDED FOR SIDEWALK APPLICATIONS



SECTION A-A

BASIN - CURB INLET OR PIPE INLETS OPTIONAL



SECTION A-A

PIPE INLET

INTERNAL PIPE CONFIGURATION MAY
VARY DEPENDING ON VAULT SIZE.

FTBSVIB CONFIGURATION

(OPTIONS: BASIN "-B", GREEN INFRASTRUCTURE INLET "-I", PIPE INLET "-P", SLOTTED THROAT INLET "-T")

MEDIA BAY SIZE	VAULT SIZE (L x W)	LONG SIDE INLET DESIGNATION	SHORT SIDE INLET DESIGNATION	AVAILABILITY	MAX. OUTLET / BYPASS PIPE DIA.	MAX. BYPASS FLOW (CFS)	UNDERDRAIN PIPE DIA. (PERF)	MIN. NO. OF INLET PIPES (-P ONLY)
4 x 4	4 x 4	FTBSVIB0404	FTBSVIB0404	ALL	6" SDR 35	1.42	4" SDR 35	1
6 x 4	6 x 4	FTBSVIB0604	FTBSVIB0406	N/A CA	8" SDR 35	1.89	4" SDR 35	1
6.5 x 4	6.5 x 4	FTBSVIB06504	FTBSVIB04065	CA ONLY	8" SDR 35	1.89	4" SDR 35	1
7.83 x 4.5	7.83 x 4.5	FTBSVIB078045	FTBSVIB045078	DE,MD,NJ,PA,VA,WV ONLY	8" SDR 35	1.89	4" SDR 35	1
8 x 4	8 x 4	FTBSVIB0804	FTBSVIB0408	N/A DE,MD,NJ,PA,VA,WV	8" SDR 35	1.89	4" SDR 35	1
6 x 6	6 x 6	FTBSVIB0606	FTBSVIB0606	ALL	8" SDR 35	1.89	4" SDR 35	1
8 x 6	8 x 6	FTBSVIB0806	FTBSVIB0608	ALL	10" SDR 35	2.37	4" SDR 35	1
10 x 6	10 x 6	FTBSVIB1006	FTBSVIB0610	ALL	10" SDR 35	2.37	6" SDR 35	2
12 x 6	12 x 6	FTBSVIB1206	FTBSVIB0612	ALL	10" SDR 35	2.37	6" SDR 35	2
13 x 7	13 x 7	FTBSVIB1307	FTBSVIB0713	ALL	10" SDR 35	2.37	6" SDR 35	2
14 x 8	14 x 8	FTBSVIB1408†	N/A	ALL	10" SDR 35	2.37	6" SDR 35	3
16 x 8	16 x 8	FTBSVIB1608†	N/A	N/A OR, WA	10" SDR 35	2.37	6" SDR 35	3
15 x 9	15 x 9	FTBSVIB1509†	N/A	OR, WA ONLY	10" SDR 35	2.37	6" SDR 35	3
18 x 8	18 x 8	FTBSVIB1808†	N/A	CALL CONTECH	10" SDR 35	2.37	6" SDR 35	3
20 x 8	20 x 8	FTBSVIB2008†	N/A	CALL CONTECH	10" SDR 35	2.37	6" SDR 35	4
22 x 8	22 x 8	FTBSVIB2208†	N/A	CALL CONTECH	10" SDR 35	2.37	6" SDR 35	4

†UTILIZES (2) CURB OPENINGS WITH MIN 1' SPACING N/A = NOT AVAILABLE

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 7,201,814; 8,020,821; 7,351,341; 7,425,262; 7,513,711; 8,147,679 & PATENTS PENDING

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FILTERRA BIOSCAPE VAULT INTERNAL BYPASS
(FTBSVIB)
CONFIGURATION DETAIL

I:\STORMWATER\COMM\OPS\G4 FILTERRA\46 STANDARD DRAWINGS\FTBSVIB - FILTERRA BIOSCAPE VAULT INTERNAL BYPASS\LAYOUT DETAILS\DWG\FTBSVIB - FILTERRA BIOSCAPE VAULT INTERNAL BYPASS CONFIG DTL UPD DWG - 12/22/2020 2:45 PM

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NO.	REVISION	APP'D	DATE

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DRAWN BY: MJM
DESIGN BY: MJM
APPROVED BY:SJH
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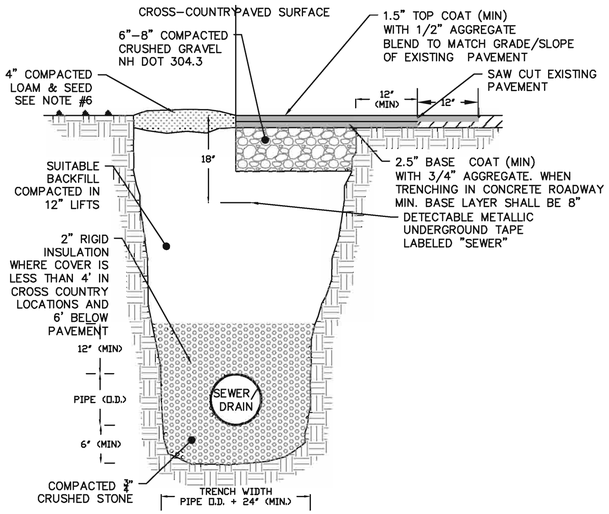
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181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

DETAIL SHEET

13

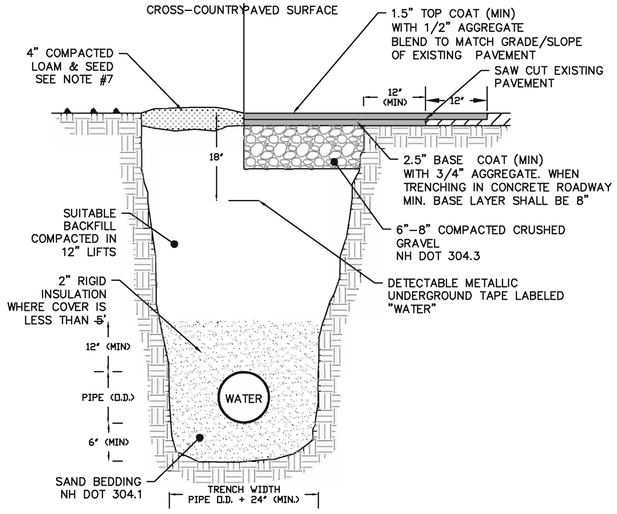


NOTES:

1. TRENCH SHALL BE COMPACTED TO 95% OPTIMUM DENSITY FOR EACH MATERIAL.
2. FOR CROSS-COUNTRY CONSTRUCTION 6" CRUSHED GRAVEL OR LOAM & SEED SHALL BE MOUNDED 6" ABOVE THE ORIGINAL GROUND SURFACE.
3. WHERE TRENCH IS LOCATED ON EXISTING LAWN OR GRAVEL SURFACE, TRENCH SHALL CONFORM TO MATCH ORIGINAL GROUND SURFACE.
4. MAINTAIN 10' (MIN.) HORIZONTAL AND 18" (MIN) VERTICAL SEPARATION BETWEEN WATER & SEWER MAINS (WATER ABOVE SEWER). HORIZONTAL DISTANCE MAY BE REDUCED TO 5' (MIN.) FOR SERVICES PROVIDED THE WATER SERVICE IS A CONTINUOUS PIPE WITHOUT JOINTS OR FITTINGS.
5. BACKFILL MATERIAL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE; DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, MUCK, PEAT AND ROCKS OVER 6" IN LARGEST DIMENSION
6. LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.

CITY OF DOVER-TYPICAL SEWER/DRAIN TRENCH

NOT TO SCALE

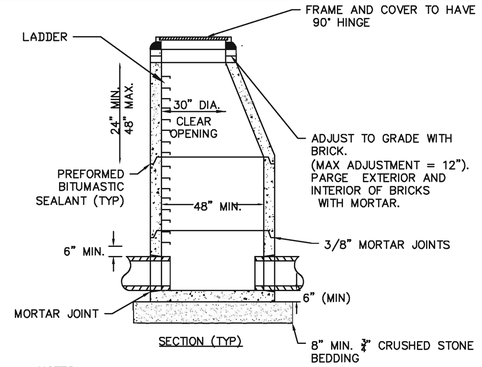


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6. PROVIDE MINIMUM 5' OF COVER. ENGINEERING APPROVAL REQUIRED FOR LESS THAN 5' OF COVER.
7. LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.

CITY OF DOVER-WATER TRENCH

NOT TO SCALE



NOTES:

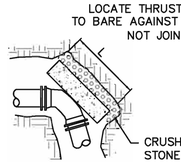
1. CORINGS TO BE SEPARATED BY 6" (MINIMUM) OF MONOLITHIC SECTION

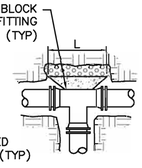
CITY OF DOVER-DRAINAGE MANHOLE

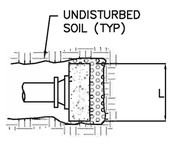
NOT TO SCALE

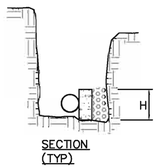
SPECIFICATIONS

1. All construction shall conform with the State of New Hampshire Department of Transportation (NHDOT), "Standard Specifications for Road and Bridge Construction"; hereinafter referred to as the "Standard Specifications".
2. Storm drains shall be ADS N12 or approved equal, and shall be jointed with neoprene "O" rings.
3. Catch basins and manholes shall be pre-cast reinforced concrete designed by an engineer registered in New Hampshire, and able to withstand loadings of 8 tons (H20 Loading).
4. Manholes shall have cast iron frames and covers with 30" inside diameter openings. A 3-inch (minimum) letter "D" for drain shall be plainly cast into the center of each cover.
5. Catch basins and manholes shall be adjusted to grade with courses of brick. Maximum adjustment to grade shall be 12 inches. Frames shall be set on a full bed of mortar, true to grade and concentric with the masonry. All voids between the top of the structure and the bottom flange of the frame shall be completely filled to make a watertight fit. A ring of mortar at least one inch thick and pitched to shed water away from the frame, shall be placed over and around the outside of the bottom flange. The mortar shall extend to the outer edge of the masonry all around its circumference and shall be finished smooth. No visible leakage will be permitted.
6. Invert channels of sewer manholes shall be formed smoothly to the largest pipe radius. Changes in grade shall be formed smoothly and evenly. The floor of the structure outside the channels shall be sloped towards the channels at approximately 1/2 inch per foot. The floor at the channel shall match the crown of the largest pipe.
7. Trench construction will conform with Section 603.3.1 of the Standard Specifications (1974).
8. Wood sheeting or a suitable trench box shall be used to support the trench as necessary. If wood sheeting is used, it shall be driven at a distance of 1 foot from the outside diameter of the pipe to a depth 6 inches below the invert of the pipe. Wood sheeting shall be cut off and left in place to an elevation not less than 1 foot above the top of the pipe, but not greater than 3 feet below the finished grade.
9. Bedding shall conform with Section 603.3.2 of the Standard Specifications (1974).
10. Backfill material will conform with Section 603.3.5 of the Standard Specifications (1974) and, in addition, shall exclude debris, pieces of pavement, organic matter, top soil, all wet or soft muck, peat or clay, all excavated ledge material, frozen material, all rocks over 6 inches in largest dimension, or any material which, as determined by the Engineer, will not provide sufficient support or maintain the completed construction in a stable condition. Backfill shall not be placed on frozen or previously frozen material.
11. All backfill and bedding compaction shall meet the requirements of AASHO T 99 Method C. Density shall be 95 percent. Compaction shall be 6 inch lifts for bedding and backfill to a plane 1 foot above the pipe and in 12 inch lifts thereafter by an approved mechanical compactor.
12. Should frozen material be encountered, it shall not be placed in the backfill nor shall backfill be placed upon frozen material. Previously frozen material shall be removed as required before new backfill is placed.
13. The Contractor shall be responsible for any damage to frames and grates during and from the time of removal from the existing structure to and during the time of resetting, and shall replace in kind any damaged frames or grates at no additional compensation.
14. All trenches will be covered and debris, including any rejected materials, shall be removed daily. Strict safety precautions shall be maintained at all times.
15. Location of utilities shown on the plans are approximate.
    a) The Contractor shall, 48 hours prior to construction, notify the utility companies and have all utilities in the vicinity of the construction marked in the field.
    b) After the utilities have been located and prior to construction, the Contractor with the Engineer, shall layout the proposed drainage system in the field and rectify any utility conflicts which may be found.
    c) Any conflicts with utilities found during construction by the Contractor shall be immediately brought to the attention of the Engineer and the Utility Company and properly rectified.
    d) The Contractor is responsible for the cost of repair for any utilities damaged during construction. The Contractor shall contact the Utility Company to repair any damages, however, the Contractor may make appropriate repairs with the Utility Company's permission.
16. Complete shop drawings for pipe, manholes, catch basins, frames, grates and covers shall be submitted in triplicate for approval by the Engineer prior to the start of construction. Each shop drawing shall be checked and initialized by the Contractor to indicate approval before it is submitted to the Engineer.
17. Shop drawings for flat concrete covers shall be stamped prior to submission for approval by a New Hampshire Registered Professional Engineer.
18. Brick masonry for setting frames and brick and mortar plugs shall conform to the Standard Specification Section 604.2.4.









THRUST BLOCK SCHEDULE
MINIMUM BEARING AREA (SQUARE FEET)

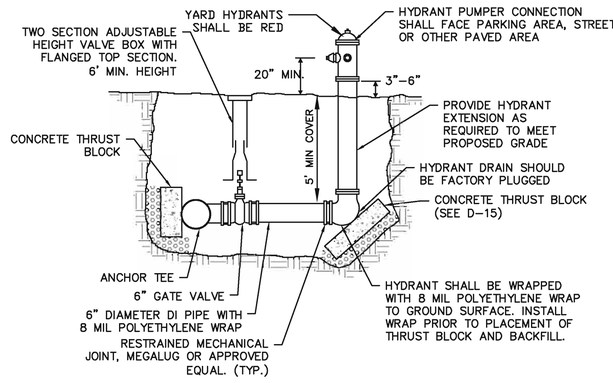
	PIPE SIZE					
Nominal Dia. (in)	4	6	8	10	12	16
Pipe Fittings	*	*	5.18	7.96	11.43	20.29
90 Degree Bends	*	4.11	7.33	11.26	16.17	28.69
45 Degree Bends	*	*	*	6.10	8.75	15.53
22-1/2 Degree Bends	*	*	*	*	4.46	7.92
11-1/4 Degree Bends	*	*	*	*	*	*
*SEE NOTE 2	System Pressure: 125 psi Safety Factor: 1.5 Soil Bearing Capacity: 2,000 psf					

NOTES:

1. ALL THRUST BLOCKS SHALL BE PRE-CAST CONCRETE UNLESS APPROVED BY THE CITY ENGINEER.
2. 2'X2'X2' MINIMUM THRUST BLOCK REQUIRED, ANY BEARING AREA OVER 4SF REQUIRES THRUST BLOCKS, RESTRAINED JOINTS AND CALCULATIONS ASSOCIATED WITH THE JOINT.
3. THE MINIMUM BEARING AREAS SHOWN IN THE THRUST BLOCK SCHEDULE ARE BASED ON A SYSTEM PRESSURE OF 125 PSI. IF THE SYSTEM PRESSURE IS ABOVE 125 PSI, INCREASE THE NOTED AREAS PROPORTIONALLY TO THE ACTUAL SYSTEM PRESSURE.
4. FOR MINIMUM BEARING AREAS OVER 4 SF, THE LENGTH (L) OF THE BLOCK IS APPROXIMATELY TWICE AS LONG AS THE HEIGHT (H).
5. PLACE CRUSHED STONE BEHIND THRUST BLOCK AGAINST UNDISTURBED SOIL.
6. PLACE THRUST BLOCK ALONG MAXIMUM LENGTH OF THE FITTING TO MAXIMIZE BEARING AREA.
7. CONCRETE COMPRESSIVE STRENGTH: 2,000 PSI MINIMUM.
8. USE OF THRUST BLOCKS DOES NOT ELIMINATE THE REQUIREMENT OF OTHER RESTRAINTS OR VICE VERSA.

CITY OF DOVER-TYPICAL SEWER/DRAIN TRENCH

NOT TO SCALE

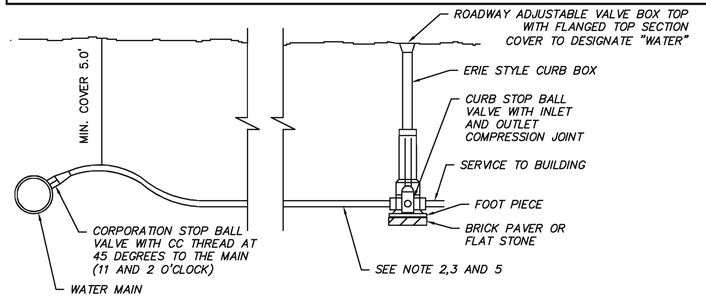


NOTES:

1. FIRE HYDRANTS SHALL BE FACTORY SEALED EDDY STYLE 2641.
2. HYDRANT SHALL BE PAINTED RED WITH EPOXY PAINT AS RECOMMENDED BY THE HYDRANT MANUFACTURER.
3. HYDRANT SHALL OPEN LEFT.

CITY OF DOVER-HYDRANT

NOT TO SCALE



NOTES:

1. ALL WATER LINES 4" OR GREATER SHALL BE DUCTILE IRON WITH AN 8 MIL POLYETHYLENE WRAP, INCLUDING TEE AND OTHER CONNECTIONS.
2. WATER SERVICE LINES SHALL BE COPPER TUBING (TYPE K) BETWEEN MAIN AND CURB STOP.
3. SERVICE BETWEEN CURB STOP AND BUILDING MAY BE (BLUE OR BLACK) CTS SDR 9 PLASTIC POLYETHYLENE RATED FOR 250 psi.
4. CAM-LOCK REQUIRED FOR CTS OR IPS, MJ ADAPTER REQUIRED FOR HDPE
5. ¾"- COPPER, CTS
   1"- COPPER, CTS
   2"- CTS, HDPE, IPS

CITY OF DOVER-WATER SERVICE CONNECTION

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

NO.	REVISION	APP'D	DATE

DATE: 8-18-22
SCALE: DETAILS
DRAWN BY: MJM
DESIGN BY: MJM
APPROVED BY:SJH
PROJECT NO: 21001
FILE: 21001-SITE

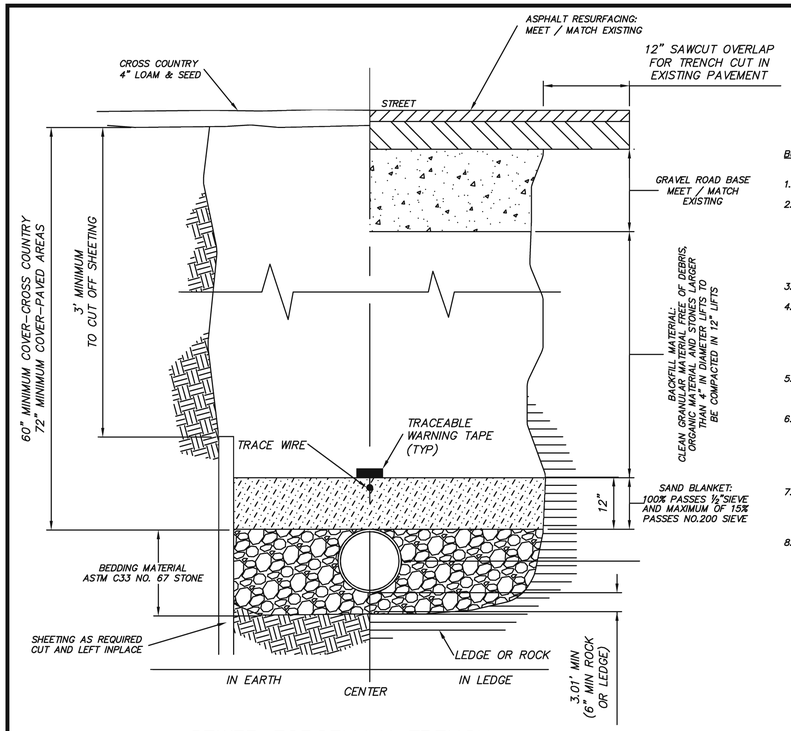
CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

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MAP D, LOT 12-1
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DETAIL SHEET

14

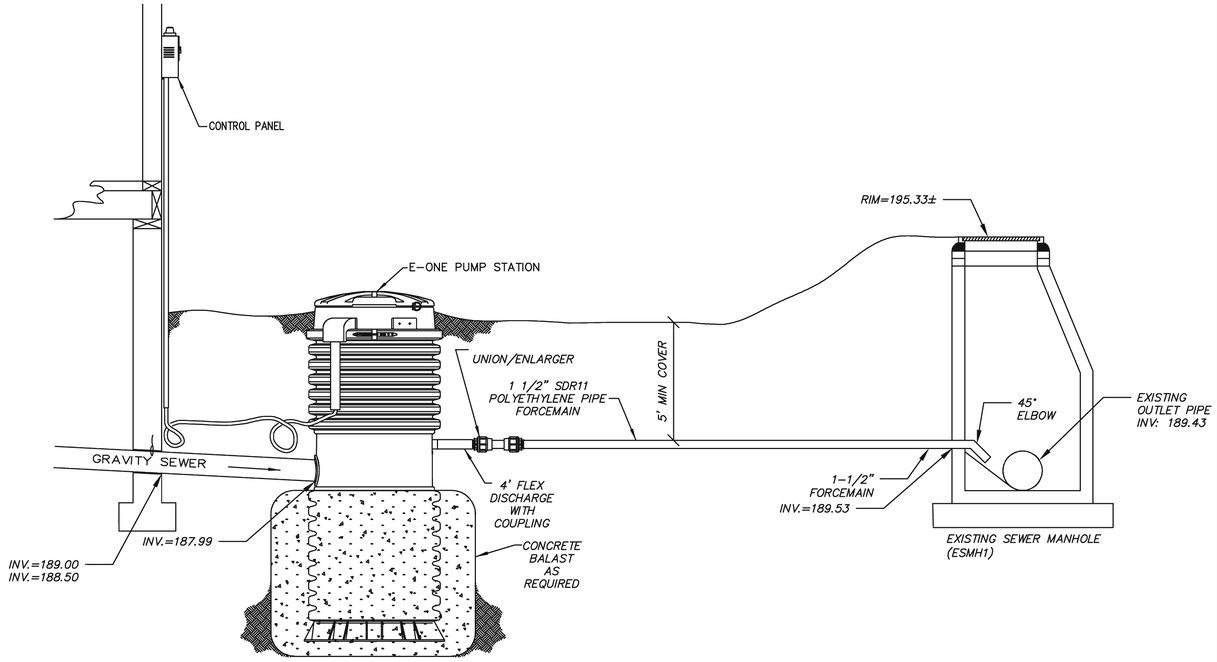


SEWER FORCEMAIN TRENCH

NOT TO SCALE

BURIED NON-METALLIC UTILITIES SHALL RECEIVE A TRACER WIRE.

1. THE TRACER WIRE SHALL BE INSTALLED ON TOP OF THE BURIED UTILITY CROWN.
2. THE TRACER WIRE SHALL BE POSITIVELY ATTACHED TO THE NON-METALLIC BURIED UTILITIES BY PLASTIC WIRE TIES OF SIMILAR TYPE OF ATTACHMENT EVERY 6 FEET FOR STRAIGHT RUN OF UTILITY AND AT ALL CHANGES OF DIRECTION. TAPE SHALL BE POLYKEN "930-35," PROTECTO-WRAP "310", OR EQUAL.
3. THE ENDS OF THE TRACER WIRE SHALL BE EXPOSED ABOVE THE FINISHED GRADE.
4. INSTALL APPROVED CAST IRON VALVE BOXES AT ALL LOCATIONS WHERE THE ENDS OF THE TRACER WIRE ARE EXPOSED ABOVE THE FINISHED GRADE. THE BOXES SHALL NOT BE MORE THAN 200 FEET APART AND SHALL CONTAIN A 24" COIL OF WIRE FROM EACH END OF THE TRACER WIRE.
5. TRACER WIRE SHALL BE CONTINUOUS BETWEEN BOXES AND SHALL BE TESTED FOR CONTINUITY IN THE PRESENCE OF THE INSPECTOR.
6. TRACER WIRE SHALL BE NO. 10 AWG, COPPER WIRE WITH TW INSULATION (BLUE IN COLOR FOR USE WITH POTABLE WATER, GREEN FOR USE WITH SEWER). CONNECTORS SHALL BE DRY-CON TYPE CONNECTORS FOR SPECIFIED WIRE GAGE AND SUITABLE FOR USE WITH BURIED TRACER WIRE.
7. TRACER WIRE SHALL BE EXPOSED ABOVE FINISHED GRADE IN THE CAST IRON BOXES AT THE TRANSITION WHERE THE NON-METALLIC BURIED UTILITY CONNECTS TO THE EXISTING METALLIC UTILITY.
8. EXTEND WIRE INTO VALVE BOXES AND TERMINATE WITH A WIRE CONNECTOR. TERMINATE WIRE FROM LINES EXTENDING FROM MAINS TO FIRE RISERS OR BUILDING SERVICES 12" (300MM) ABOVE GRADE AND CAP WITH A WIRE CONNECTOR.



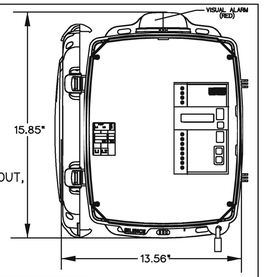
TYPICAL LATERAL INSTALLATION (E/ONE)

NOT TO SCALE

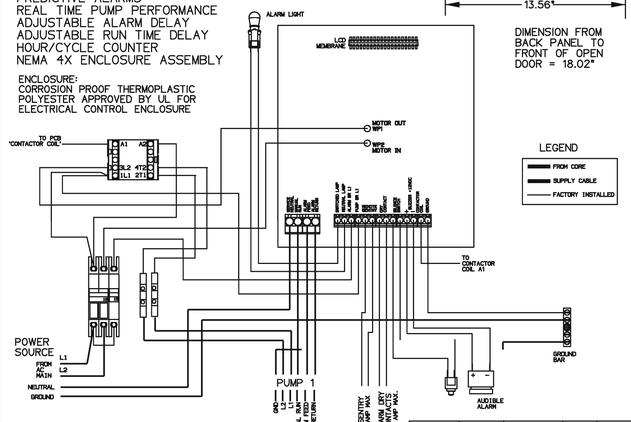
SENTRY PROTECT PLUS SIMPLEX

REDUNDANT RUN (HIGH LEVEL)
EXTERNAL VISUAL & AUDIBLE ALARM
REMOTE SENTRY DRY CONTACTS FOR
OPTIONAL POWER LOSS HIGH LEVEL ALARM (POWER LOSS ALARM FOR WIRELESS)
MANUAL ALARM SILENCE
MANUAL RUN
STATUS LED'S: NORMAL, PUMP RUNNING, HIGH LEVEL
TROUBLE INDICATIONS: RUN DRY, OVERPRESSURE, BROWNOUT, VOLTAGE, EXTENDED RUN TIME
DRY CONTACTS
CONFORMAL COATED CIRCUIT BOARD (BOTH SIDES)
PADLOCK
DEAD FRONT
PREDICTIVE ALARMS
REAL TIME PUMP PERFORMANCE
ADJUSTABLE ALARM DELAY
ADJUSTABLE RUN TIME DELAY
HOUR/CYCLE COUNTER
NEMA 4X ENCLOSURE ASSEMBLY

ENCLOSURE:
CORROSION PROOF THERMOPLASTIC POLYESTER APPROVED BY UL FOR ELECTRICAL CONTROL ENCLOSURE



DIMENSION FROM BACK PANEL TO FRONT OF OPEN DOOR = 18.02"



PIN	FUNCTION	2000S	EXTREME
1	MANUAL RUN	RED	BROWN
2	L1	BLACK	RED
3	L2	WHITE	BLACK
4	GND	GREEN	GRN/YEL
5	ALARM FEED	ORANGE	YELLOW
6	ALARM RETURN	BLUE	BLUE

CONTROL CABLE:
TYPE TC DIRECT BURIAL, SIX CONDUCTOR

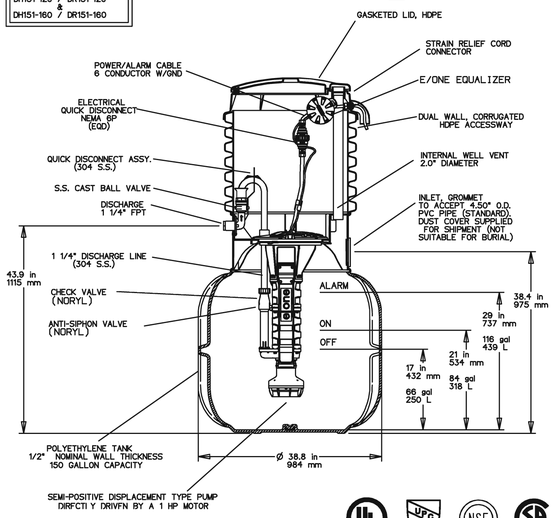
AD	12/14/07	DMS	C	06/23/11
DR BY	DATE	CHK'D	ISSUE	DATE

SENTRY PROTECT PLUS PANEL, SIMPLEX 240V 60Hz DOUBLE POLE POWER

NA0079P03

OPTIONS : ☒ DH151 (HARD WIRED LEVEL CONTROLS) ☐ DR151 (WIRELESS LEVEL CONTROLS)

FIELD JOINT REQUIRED FOR MODELS DH151-129 / DR151-129 & DH151-160 / DR151-160



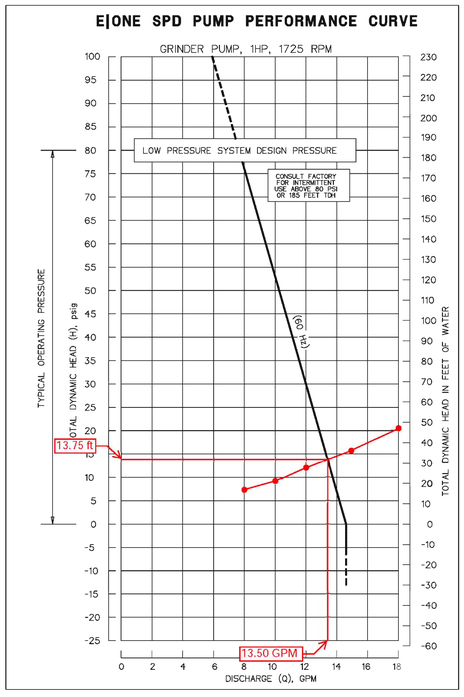
CONCRETE BALLAST MAY BE REQUIRED SEE INSTALLATION INSTRUCTIONS FOR DETAILS

NOTE: DIMENSIONS ARE FOR REFERENCE ONLY

KC	PD	09/30/19	F	
DR BY	CHK'D	DATE	ISSUE	SCALE

MODEL DH151 / DR151 DETAIL SHEET

NA0051P02



ESD 08-0022 REV. 2, 6/08

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NO.	REVISION	APP'D	DATE

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

DATE: 8-18-22
SCALE: NOTES
DRAWN BY: MJM
DESIGN BY: MJM
APPROVED BY:SJH
PROJECT NO: 21001
FILE: 21001-SITE

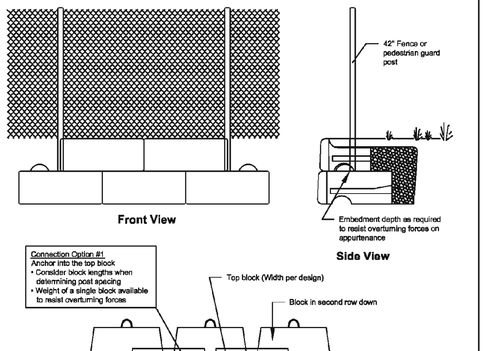
DETAIL SHEET

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385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
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15

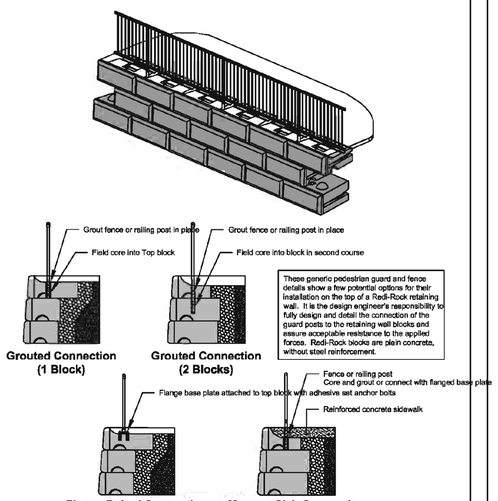
Fence or Pedestrian Guard Connection Locations



This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

DRAWN BY:	JRJ
APPROVED BY:	JRJ
DATE:	06-22-2015
SHEET:	1 of 1
TITLE:	Fence or Pedestrian Guard Connection Locations
FILE:	5 Fence or Pedestrian Guard Connection Locations 062215.dwg

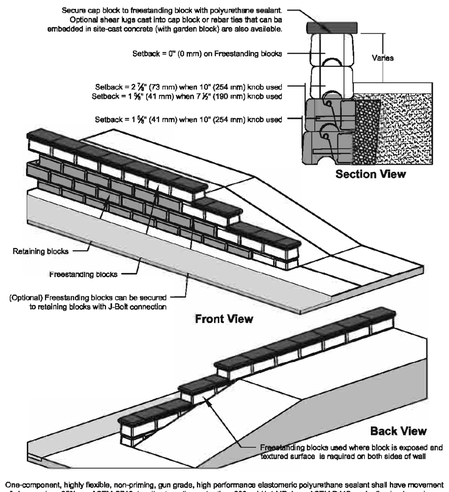
Fence or Pedestrian Guard Connection Options



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DRAWN BY:	JRJ
APPROVED BY:	JRJ
DATE:	06-22-2015
SHEET:	1 of 1
TITLE:	Fence or Pedestrian Guard Connection Options
FILE:	5 Fence or Pedestrian Guard Connection Options 062215.dwg

Freestanding Blocks with Cap at Top of Wall



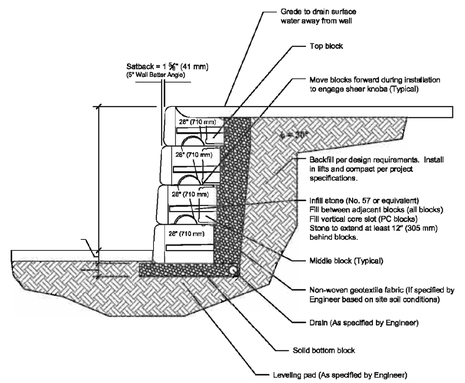
One-component, highly flexible, non-priming, gun grade, high performance elastomeric polyurethane sealant shall have movement of plus or minus 25% per ASTM C719, tensile strength greater than 200 psi (1.4 MPa) per ASTM D412, and adhesion to peel on concrete greater than 20 PLI per ASTM C794. Apply sealant in one end one half-inch (1.5") (38 mm) diameter round "hersey kiss" shaped dollops located in two rows at the top of the Freestanding blocks at 8" (203 mm) on center.

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DRAWN BY:	JRJ
APPROVED BY:	JRJ
DATE:	06-22-2015
SHEET:	1 of 1
TITLE:	Freestanding Blocks with Cap at Top of Wall
FILE:	3 Freestanding Blocks with Cap at Top of Wall 062215.dwg

LOAD CONDITION A | NO LIVE LOAD SURCHARGE, NO BACK SLOPE, NO TOE SLOPE

4 BLOCK HIGH SECTION
(4) 28" (710 mm) Blocks



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DRAWN BY:	C. Kruger
APPROVED BY:	J. Johnson
DATE:	June 8, 2015
SHEET:	1 of 1
TITLE:	**Preliminary Wall Section** Fine to Medium Sand or Silty Sand, $\phi = 30°$ No Live Load Surcharge, No Back Slope, No Toe Slope
FILE:	A_30_B_28_72_cad.dwg

CONTRACTOR TO COORDINATE WITH OWNER FOR FENCE STYLE

GENERAL NOTES

1. SEGMENTAL CONCRETE UNIT RETAINING WALL SHALL BE PROVIDED BY redi-rock ? OR SHEA WALL SYSTEMS OR APPROVED EQUAL.
2. RETAINING WALL DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S STANDARDS.
3. STRIP VEGETATION AND ORGANIC SOIL FROM WALL AND GEOSYNTHETIC ALIGNMENT.
4. BENCH CUT ALL EXCAVATED SLOPES.
5. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE SOIL ENGINEER TO REMOVE UNSUITABLE SOIL.
6. SITE SOILS ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
7. LEVELING PAD SHALL CONSIST OF COMPACTED COARSE SAND OR CRUSHED GRAVEL, 6" THICK MIN. AS STIPULATED BY THE MANUFACTURER.
8. CONTRACTOR MAY OPT FOR A LEAN CONCRETE PAD. CONCRETE PAD SHALL BE UNREINFORCED, 3" THICK MAXIMUM.
9. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 6" FOR WALL HEIGHTS UNDER 4 FT. AND 12" FOR WALLS OVER 4 FT. UNLESS SHOWN DIFFERENTLY.
10. FOR UNITS TO BE EMBEDDED, COMPACT FILL IN FRONT OF UNITS AT THE SAME TIME FILL BEHIND UNITS IS COMPACTED.
11. DRAINAGE AGGREGATE SHALL BE INSTALLED DIRECTLY BEHIND THE WALL WITHIN 12" OF THE TOP OF THE WALL. DRAINAGE AGGREGATE SHALL NOT EXTEND BELOW FINAL GRADE IN FRONT OF WALL.
12. COMPACTION SHALL BE TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.(ASTM D-698)
13. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF 3 TESTS PER WALL AND/OR AS DETERMINED BY THE SITE SOILS ENGINEER.
14. COMPACTION WITHIN 3 FT. OF WALL SHALL BE LIMITED TO HAND OPERATED EQUIPMENT.
15. IF REQUIRED SEE ELEVATION DRAWINGS FOR GEOSYNTHETIC TYPE, LENGTH AND LOCATION.
16. IF REQUIRED GEOSYNTHETIC SHALL BE PLACED WITH STRONGEST DIRECTION PERPENDICULAR TO WALL. FOLLOW GEOSYNTHETIC MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
17. CONTRACTOR SHALL DIRECT SURFACE RUNOFF TO AVOID DAMAGING WALL WHILE UNDER CONSTRUCTION.
18. ANY SURFACE DRAINAGE FEATURES, FINISH GRADING, PAVEMENT, OR TURF SHALL BE INSTALLED IMMEDIATELY AFTER WALL IS COMPLETED.
19. FOLLOW APPLICABLE PROVISIONS AS DICTATED BY THE MANUFACTURER.

1.4 REQUIREMENTS FOR CONTRACTOR PREPARED DESIGN AND PLANS

A. THE FINAL DESIGN TO BE SUBMITTED PRIOR TO AWARD OF CONTRACT AND SHALL INCLUDE DETAILED DESIGN COMPUTATIONS AND ALL DETAILS, DIMENSIONS, QUANTITIES AND CROSS SECTIONS NECESSARY TO CONSTRUCT THE WALL. THE DESIGN SHALL CONFORM TO ALL OF THE REQUIREMENTS OUTLINED IN SECTION 1.3 ABOVE. THE FULLY DETAILED PLANS SHALL BE ON PERMANENT, ARCHIVAL QUALITY, 24" X 36" DOUBLE MATTE MYLAR WITH PROJECT NAME, NUMBER AND DESIGN FIRM. THE PLANS TO BE SUBMITTED SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING ITEMS:

1. A PLAN AND ELEVATION SHEET OR SHEETS FOR EACH WALL, CONTAINING THE FOLLOWING:
   A. AN ELEVATION VIEW OF THE WALL WHICH SHALL INDICATE THE ELEVATION AT THE TOP OF THE WALL, AT ALL HORIZONTAL AND VERTICAL BREAK POINTS AND AT LEAST EVERY FIFTY (50) FEET ALONG THE WALL. ELEVATIONS AT THE TOP OF LEVELING PADS. THE DESIGNATION AS TO THE TYPE OF UNIT, AND THE LOCATION OF THE ORIGINAL AND FINAL GROUND LINE.
   B. A PLAN VIEW OF THE WALL WHICH SHALL INDICATE THE OFFSET FROM THE CONSTRUCTION CENTERLINE OR BASELINE TO THE FACE OF THE WALL AT ALL CHANGES IN HORIZONTAL ALIGNMENT AND THE LIMIT OF THE WIDEST UNIT.
   C. ANY GENERAL NOTES REQUIRED FOR DESIGN AND CONSTRUCTION OF THE WALL.
   D. ALL HORIZONTAL AND VERTICAL CURVE DATA AFFECTING WALL CONSTRUCTION.
2. ALL DETAILS FOR LEVELING PADS, AS WELL AS ALLOWABLE AND CALCULATED MAXIMUM BEARING PRESSURES.
3. DETAILED DESIGN COMPUTATIONS.
4. THE PLANS SHALL BE PREPARED, STAMPED AND SIGNED BY A NEW HAMPSHIRE LICENSED PROFESSIONAL ENGINEER.
5. FENCE HEIGHT TO BE 42".

RETAINING WALL SYSTEM

PART 1.0 – GENERAL

1.1 THIS WORK SHALL CONSIST OF FURNISHING ALL COMPONENTS AND ERECTING A RETAINING WALL SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN AND DIMENSIONS SHOWN ON THE PLANS OR AS ORDERED.

1.2 THIS FOLLOWING TYPE OF RETAINING WALL SYSTEMS ARE ACCEPTABLE TO BE USED ON THIS PROJECT:

REDI-ROCK	(603) 428-3218
SHEA WALL SYSTEMS	(800) 696-7432

1.3 STRUCTURAL AND GEOTECHNICAL DESIGN REQUIREMENTS

A. THE DESIGN OF THE WALL SYSTEM SHALL BE BY THE MANUFACTURER.
B. MINIMUM SAFETY FACTORS SHALL BE AS FOLLOWS:
   1. OVERTURNING: 2.0
   2. BASE SLIDING: 1.5
   3. GLOBAL STABILITY: 1.3
   4. GRID PULLOUT:
C. ALLOWABLE NET BEARING PRESSURE = 6 KIPS PER SQUARE FOOT MOIST SOIL UNIT WEIGHT = 125 POUNDS PER CUBIC FOOT FRICTION ANGLE = 32 DEGREES
D. DESIGN LOADING SHALL CONSIDER SEISMIC LOADS IN ACCORDANCE WITH THE NEW HAMPSHIRE STATE BUILDING CODE.

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

NO.	REVISION	APP'D	DATE

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

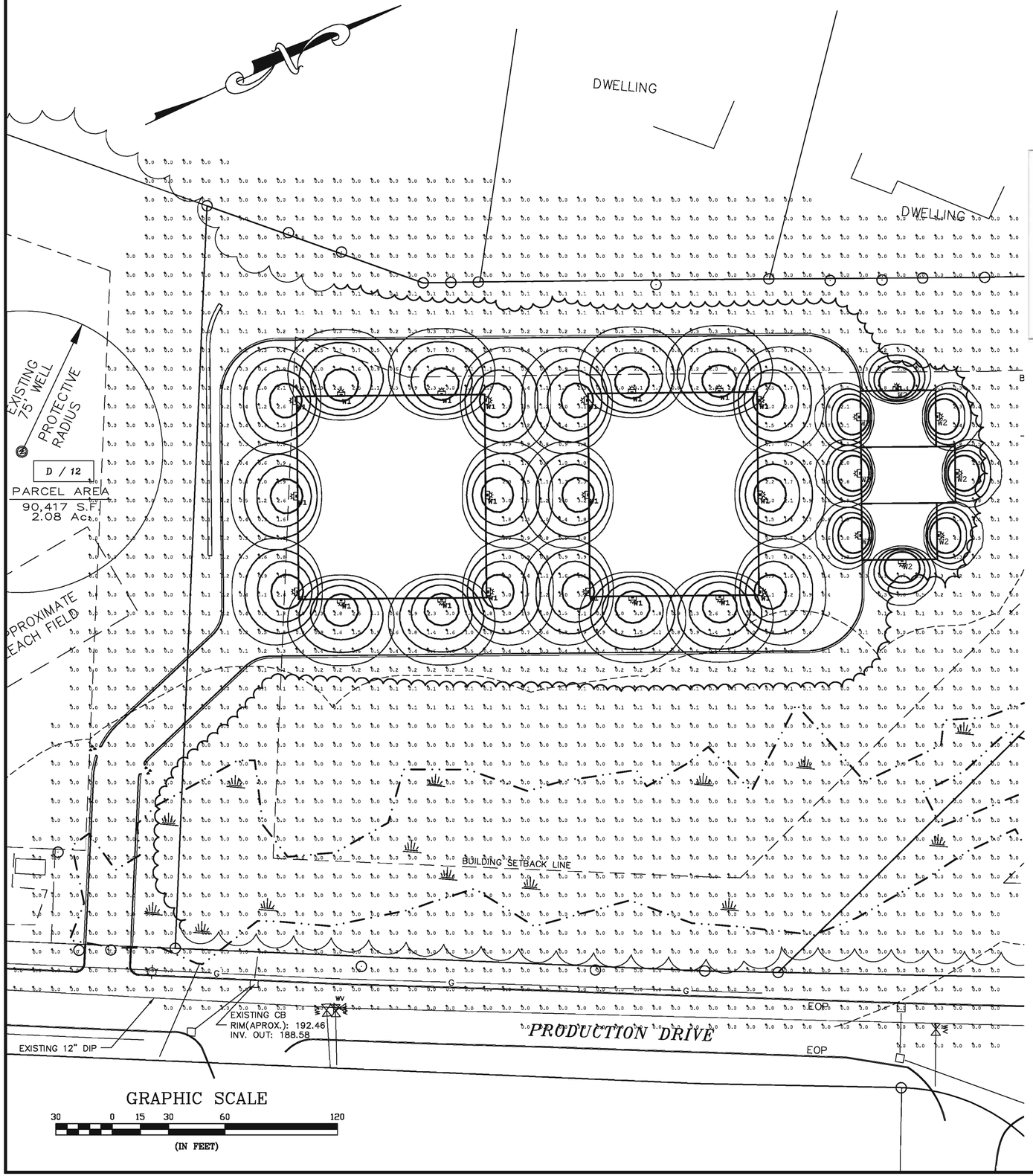
DATE: 8-18-22
SCALE: NOTES
DRAWN BY: MJM
DESIGN BY: MJM
APPROVED BY:SJH
PROJECT NO: 21001
FILE: 21001-SITE

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

DETAIL SHEET

16




```
Illuminance (Fc)
Average = 1.16
Maximum = 3.2
Minimum = 0.3
Avg/Min Ratio = 3.87
Max/Min Ratio = 10.67
```

Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
	8	W2	Single	AXCS1A
	20	W1	Single	AXCS2A



Lumark

Axcent

Wall Mount Luminaire

Product Features

Selectable lumens · DUSK-TO-DAWN · LumenSafe Technology · Light ARchitect™

Product Certifications

ISO 9001:2015 CERTIFIED · UL CERTIFIED · DLC LISTED · DLC PREMIUM · FC CLASS A CAN ICES-005 · IDA DARK SKY APPROVED · IP66 · 3G VIB · RoHS COMPLIANT · 5 YEAR · PROGRESS PROJECT · BAA BUY AMERICAN

Quick Facts

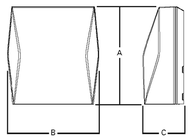
- Available in 14W - 123W (1,800 - 17,000 lumens) models
- Full cutoff and refractive lens models available
- Energy and maintenance savings up to 95% compared to HID
- Energy efficient illumination results in up to 144 LPW
- Replaces 70W up to 450W HID equivalents

Connected Systems

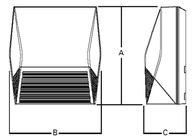
- WaveLinx Lite
- Enlighted

Dimensional Details

Full Cutoff



Refractive Lens



Deep Back Housing



Dimensional Data

	AXCS Small	AXCL Large
A	8" [202mm]	11-1/2" [292mm]
B	7-1/2" [190mm]	10-3/4" [273mm]
C	3-5/8" [94mm]	4-7/8" [124mm]
D	6-1/8" [155mm]	7-1/8" [181mm]

Model Series[1]			
Full Cutoff		Refractive Lens	
AXCS1A=14W	**AXCL10A**=102W	**AXCS1ARL**=14W	**AXCL10ARL**=102W
AXCS2A=21W	**AXCL12A**=123W	**AXCS2ARL**=21W	**AXCL12ARL**=123W
AXCS3A=27W	**AXCL6A-347V**=56W	**AXCS3ARL**=27W	**AXCL6ARL-347V**=56W
AXCS4A=44W	**AXCL8A-347V**=72W	**AXCS4ARL**=44W	**AXCL8ARL-347V**=72W
AXCS5A=52W	**AXCL10A-347V**=102W	**AXCS5ARL**=52W	**AXCL10ARL-347V**=102W
AXCL6A=56W	**AXCL12A-347V**=123W	**AXCL6ARL**=56W	**AXCL12ARL-347V**=123W
AXCL8A=72W		**AXCL8ARL**=72W	

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603.749.0443

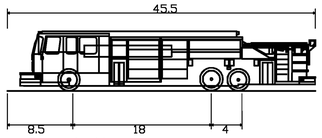
NO.	REVISION	APP'D	DATE

DATE: 8-18-22
SCALE: 1"=30'
DRAWN BY: MJM
DESIGN BY: MJM
APPROVED BY:SJH
PROJECT NO: 21001
FILE: 21001-SITE

LIGHTING PLAN

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820



Dover Ladder	
Overall Length	45.500ft
Overall Width	8.500ft
Overall Body Height	1.488ft
Min Body Ground Clearance	1.488ft
Track Width	8.500ft
Lock-to-lock time	6.00s
Max Wheel Angle	44.00°

LEGEND

I.R. (set) o – IRON ROD W/ I.D. CAP (SET)
o I.P. – IRON PIPE
□ G.B. – GRANITE BOUND
o I.R. – IRON ROD
o I.R.(fnd) – IRON ROD (FOUND)
D.H. – DRILL HOLE
S.F. – SQUARE FEET
Ac. – ACRE
(TYP.) – TYPICAL
± – MORE OR LESS
ø – DIAMETER
S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
-o- UP – UTILITY POLE
– – – – – – – – – – – EDGE OF WETLAND
O.A. – OVERALL
TBR – TO BE REMOVED
VIF – VERIFY IN FIELD
CCB – CAPE COD BERM
– TREELINE

R.O.W. – RIGHT OF WAY
Ⓓ DMH – DRAIN MANHOLE
□ CB – CATCH BASIN
Ⓢ SMH – SEWER MANHOLE
HYD. – FIRE HYDRANT
WV – WATER GATE VALVE
– TREE
GV – GAS VALVE
R=5' – PROPOSED PAVEMENT RADIUS
PW – PROPOSED WATER
PE – PROPOSED ELECTRIC
UGE – PROPOSED UNDERGROUND ELECTRIC
PS – PROPOSED SEWER
PD – PROPOSED DRAINAGE
PG – PROPOSED GAS
55 – PROPOSED FINISH GRADE
55 – PROPOSED SPOT GRADE

EXISTING 75' WELL
PROTECTIVE RADIUS
D / 12
PARCEL AREA
90,417 S.F.
2.08 Ac.
APPROXIMATE LEACH FIELD
SIXTH STREET
100'
108'
WAREHOUSE BUILDING #1
10,800 S.F.
90'
108'
WAREHOUSE BUILDING #2
9,720 S.F.
PROPOSED BOLLARD (TYP.)
40'
30'
WAREHOUSE BUILDING #3
1,200 S.F.
50'
30'
WAREHOUSE BUILDING #4
1,500 S.F.
30'
WAREHOUSE BUILDING #5
1,200 S.F.
40'
BUILDING SETBACK LINE (TYP.)
D / 12-1
PARCEL AREA
337,616 S.F.
7.75 Ac.
BUILDING SETBACK LINE
Old Dover Ladder
EDMH
RIM: 195.33
UGE&T
EXISTING CB
RIM(APROX.): 192.46
INV. OUT: 188.58
EXISTING 12" DIP
EOP
SGC
PRODUCTION DRIVE

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)

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NO.	REVISION	APP'D	DATE

DATE: 8-18-22
SCALE: 1"=30'
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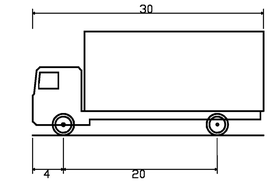
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DOVER LADDER TRUCK MOVEMENT PLAN

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

18



SU-30 - Single Unit Truck

Overall Length	30.000ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.367ft
Track Width	8.000ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	31.80°

LEGEND

I.R. (set) o	– IRON ROD W/ I.D. CAP (SET)
o I.P.	– IRON PIPE
⊡ G.B.	– GRANITE BOUND
o I.R.	– IRON ROD
o I.R.(fnd)	– IRON ROD (FOUND)
D.H.	– DRILL HOLE
S.F.	– SQUARE FEET
Ac.	– ACRE
(TYP.)	– TYPICAL
±	– MORE OR LESS
ø	– DIAMETER
S.C.R.D.	– STRAFFORD COUNTY REGISTRY OF DEEDS
-o- UP	– UTILITY POLE
— · · · —	– EDGE OF WETLAND
O.A.	– OVERALL
TBR	– TO BE REMOVED
VIF	– VERIFY IN FIELD
CCB	– CAPE COD BERM
	– TREELINE

R.O.W.	– RIGHT OF WAY
Ⓓ DMH	– DRAIN MANHOLE
⊡ CB	– CATCH BASIN
Ⓢ SMH	– SEWER MANHOLE
HYD.	– FIRE HYDRANT
WV	– WATER GATE VALVE
	– TREE
GV	– GAS VALVE
R=5'	– PROPOSED PAVEMENT RADIUS
PW	– PROPOSED WATER
PE	– PROPOSED ELECTRIC
UGE	– PROPOSED UNDERGROUND ELECTRIC
PS	– PROPOSED SEWER
PD	– PROPOSED DRAINAGE
PG	– PROPOSED GAS
55	– PROPOSED FINISH GRADE
55	– PROPOSED SPOT GRADE

EXISTING 75' WELL

PROTECTIVE RADIUS

D / 12

PARCEL AREA
90,417 S.F.
2.08 Ac.

APPROXIMATE LEACH FIELD

SIXTH STREET

100'

108'

WAREHOUSE BUILDING #1
10,800 S.F.

90'

108'

WAREHOUSE BUILDING #2
9,720 S.F.

PROPOSED BOLLARD (TYP.)

40'
30'
WAREHOUSE BUILDING #3
1,200 S.F.

50'
30'
WAREHOUSE BUILDING #4
1,500 S.F.

30'
WAREHOUSE BUILDING #5
1,200 S.F.
40'

BUILDING SETBACK LINE (TYP.)

D / 12-1

PARCEL AREA
337,616 S.F.
7.75 Ac.

BUILDING SETBACK LINE

EDMH
RIM: 195.33

UGE&T

EXISTING CB
RIM(APROX.): 192.46
INV. OUT: 188.58

PRODUCTION DRIVE

EOP

SGC

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)

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BOX TRUCK MOVEMENT PLAN

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

19

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

AREA OF DISTURBANCE

WETLAND BUFFER IMPACT
WETLAND IMPACT

PROPOSED
= 9,552 SF
= 2,480 SF

LEGEND

I.R. (set) O – IRON ROD W/ I.D. CAP (SET)
O I.P. – IRON PIPE
□ G.B. – GRANITE BOUND
O I.R. – IRON ROD
O I.R.(fnd) – IRON ROD (FOUND)
D.H. – DRILL HOLE
S.F. – SQUARE FEET
Ac. – ACRE
(TYP.) – TYPICAL
± – MORE OR LESS
ø – DIAMETER
S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
-o- UP – UTILITY POLE
– – – – – – – EDGE OF WETLAND
O.A. – OVERALL
TBR – TO BE REMOVED
VIF – VERIFY IN FIELD
CCB – CAPE COD BERM
– TREELINE

R.O.W. – RIGHT OF WAY
Ⓓ DMH – DRAIN MANHOLE
□ CB – CATCH BASIN
Ⓢ SMH – SEWER MANHOLE
HYD. – FIRE HYDRANT
WV – WATER GATE VALVE
– TREE
GV – GAS VALVE
R5' – PROPOSED PAVEMENT RADIUS
PW – PROPOSED WATER
PE – PROPOSED ELECTRIC
UGE – PROPOSED UNDERGROUND ELECTRIC
PS – PROPOSED SEWER
PD – PROPOSED DRAINAGE
PG – PROPOSED GAS
55 – PROPOSED FINISH GRADE
55 – PROPOSED SPOT GRADE

PROPOSED TREELINE
1:1 RIP RAP REINFORCED SLOPE
DWELLING
2:1 GRASSED SLOPE
PROPOSED RETAINING WALL
EXISTING 75' WELL PROTECTIVE RADIUS
D / 12
PARCEL AREA
90,417 S.F.
2.08 Ac.
WAREHOUSE BUILDING #1
10,800 S.F.
WAREHOUSE BUILDING #2
9,720 S.F.
ADS UNDERGROUND INFILTRATION SYSTEM
WAREHOUSE BUILDING #3
1,200 S.F.
WAREHOUSE BUILDING #4
1,500 S.F.
WAREHOUSE BUILDING #5
1,200 S.F.
PROPOSED WOODEN GUARDRAIL
BUILDING SETBACK LINE (TYP.)
D / 12-1
PARCEL AREA
337,616 S.F.
7.75 Ac.
PROPOSED TREELINE
APPROXIMATE LEACH FIELD
SIXTH STREET
191.00
188.25
BUFFER IMPACT AREA: 5070 S.F.
BUFFER IMPACT AREA: 203 S.F.
BUFFER IMPACT AREA: 3,333 S.F.
PROPOSED CONSERVATION PLACARD (TYP.)
PROPOSED WOODEN GUARDRAIL
1:1 RIP RAP REINFORCED SLOPE
WETLAND IMPACT AREA: 2,480 S.F.
BUILDING SETBACK LINE
BUFFER IMPACT AREA: 292 S.F.
BUFFER IMPACT AREA: 654 S.F.
EDMH
RIM: 195.33
INV. IN(NEW): 189.53
INV IN.(EXISTING): 189.53
INV. OUT: 189.43
UGE&T
EXISTING 12" DIP
EXISTING CB
RIM(APROX.): 192.46
INV. OUT: 188.58
PRODUCTION DRIVE
EOP
SGC

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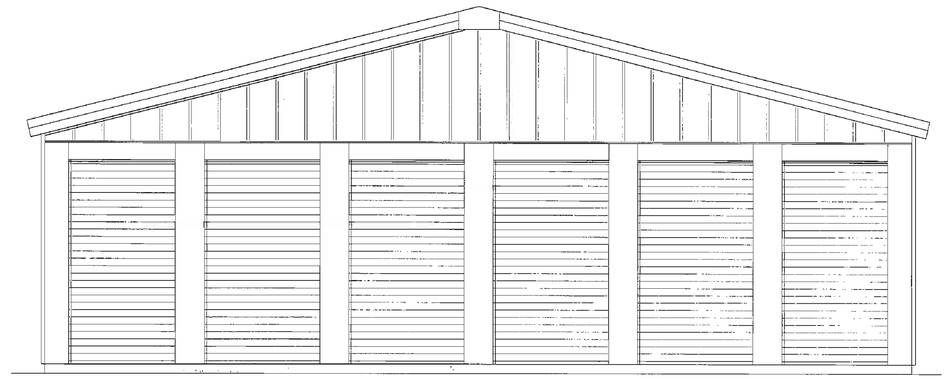
CONDITIONAL USE PERMIT & WETLAND IMPACT PLAN

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

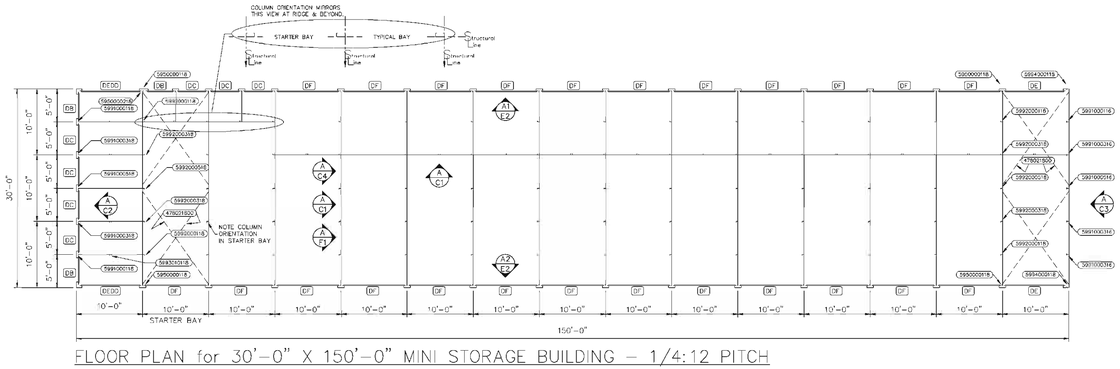
WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

CUP





END WALL ELEVATION



FLOOR PLAN for 30'-0" X 150'-0" MINI STORAGE BUILDING – 1/4:12 PITCH



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NO.	REVISION	APP'D	DATE

DATE: 8-18-22
SCALE: DETAIL
DRAWN BY: M.M
DESIGN BY: M.M
APPROVED BY: S.H
PROJECT NO: 21001
FILE: 21001-SITE

ELEVATION PLAN (DRAFT)

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

A1

LANDSCAPE PLAN

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Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE

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FILE: 21001-SITE

LANDSCAPE PLAN DRAFT

WAREHOUSE FACILITY
PRODUCTION DRIVE
MAP D, LOT 12-1
DOVER, NH 03820

TSB PROPERTIES, LLC.
385 SIXTH STREET
DOVER, NH 03820

L1

City of Dover, New Hampshire
SITE REVIEW APPLICATION

[Revision Date: July 1, 2021]

RECEIVED
Planning Office
AUG 17 2022
Dover, New Hampshire

Office Use Only	Project #:	P22-63	Date Received:	AUG 17 2022
	Amount Paid:		Time Received:	Dover, New Hampshire

APPLICANT AND OWNER INFORMATION

Name of Applicant: White Birch Armory Telephone # 603-330-0146 x-9050

Address of Applicant: 80 Industrial Park Drive Dover, NH 03820

E-Mail Address: sean@wbarmory.com

Name of Property Owner (*if different from applicant*): Recon Realty, LLC Telephone # 603-330-0146 x-9050

Address of Property Owner: 80 Industrial Park Drive Dover, NH 03820

PROPERTY INFORMATION

Address of Property: 80 Industrial Park Drive

Assessor's Map # G Lot(s) # 3-A1

Zoning District(s) CM Overlay District(s) N/A

Size of Parcel: 352,425 sq. ft. 8.09 ac. Property Deed: Book 4713 Page: 623

Existing Use of Property: Commercial Building w/Associated Parking

SITE PLAN INFORMATION

Describe Proposed Use: Expansion & Improvements to Existing Commercial Building & Parking

Area of Parcel to be Developed: 65,000± s.f. Additional Area - 135,000± s.f. Total Area sq. ft.

If Multi-family Residential: Number of Units N/A & Buildings Proposed N/A

If lodging: Number of Units N/A & number of Buildings N/A

Number of Parking Spaces: Existing 60 Proposed 74

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

Number of Employees Total: 25 In Maximum Shift: 2

Disposition of Parcel:

Building Footprint 20,287 sq. ft.

Total Building Area 23,273 sq. ft.

Paved Area 14,865 sq. ft.

Building Setbacks:

Front Yard 35 ft.

Rear Yard 10 ft.

Side Yard: Right 10 ft. Left 10 ft.

CIVILWORKS NEW ENGLAND

181 WATSON ROAD
P.O. BOX 1166
DOVER, NH 03821-1166
PHONE: 603.749.0443 FAX: 603.749.7348

August 16, 2022

RECEIVED
Planning Office
AUG 17 2022
Dover, New Hampshire

City of Dover
288 Central Ave
Dover, NH 03820

Donna Benton, Director of Planning and Community Development

Subject: Site Review, Conditional Use Permit Applications
80 Industrial Park Drive - Tax Map G, Lot 3-A-100
Civilworks New England Reference No. 19003

Dear Ms. Benton:

On behalf of our client, White Birch Armory, we are pleased to submit the following application(s) and associated materials. Seven (7) copies of all application materials listed (including the 11x17 copies of the plan set) are attached, Two (2) Copies of the Drainage Report, and One (1) full size (22x34) copy of the plan set. All materials have also been provided electronically to the Planning Department via the EnerGov portal:

1) Cover Letter
2) Site Review Application & Checklist
3) Conditional Use Permit Application
4) Owner's Authorization Letter
5) Covenant Restriction Release Letter
6) Project Narrative
7) Landscape Operation & Maintenance Plan
8) Stormwater Inspection and Maintenance Plan
9) Site Plans, Landscape Plan, Streetscape, Architectural Plans (floor plan and building elevations)
10) Drainage Report & Plans

We look forward to representing these applications at the September 8th, 2022 Technical Review Committee (TRC). Please do not hesitate to contact our office should you have any questions.

Sincerely,

Stephen J Haight, PE
CIVILWORKS NEW ENGLAND

SJH

City Water? X Yes ___ No How far is city water from the property? Existing on Site

City Sewer? X Yes ___ No How far is city sewer from the property? Existing on Site

TRANSFER OF DEVELOPMENT RIGHTS INFORMATION N/A

Type of TRANSFER OF DEVELOPMENT RIGHT REQUEST (Check All That Apply):

□ Residential □ Residential (reduced size) □ Industrial | □ Purchase □ Land Preservation

Relief sought (Check All That Apply):

□ Lot Size □ Frontage □ Setback □ 30' Buffer □ Increase by _____ units

Describe Proposed Use or Activity that requires TDR; describe any impacts and document mitigation:

BUILDING INFORMATION

Type of Building to be Built: Steel Construction

Height of Building: 27'6" Finished Floor Elevation: 108.7'

Number of Seats (where applicable) N/A

Estimated value of construction: $250,000 Refuse removal: Public/(Private) (circle one)

WAIVER REQUESTS

Expansion & Improvements to Existing Commercial Building & Parking

Site Review Regulations section(s) to be waived: None Requested

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

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kevin McEneaney, LLS McEneaney Survey Associates

Address 24 Chestnut Street Dover, NH 03820 Telephone #: 603-742-0911

Professional License #: Kevin McEneaney, LLS 661 E-mail address: kevin@surveynh.com

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Stephen J. Haight, PE Civilworks New England

Address P.O. Box 1166 Dover, NH 03821 Telephone #: 603-749-0443

Professional License #: Stephen J. Haight, PE #7978 E-mail address: shaight@civilworksne.com

ARCHITECT INFORMATION

Name of Architect and Company (Licensed in N.H.) John M. Tuttle, Architect TW Designs, LLC

Address 254 Drake Road Strafford, NH 03884 Telephone #: 603-664-2181

Professional License #: John M. Tuttle, NH Architect #4015 E-mail address: john@tw-designs.com

LANDSCAPE ARCHITECT INFORMATION

Name of Landscape Architect and Company (Licensed in N.H.) Jeffrey R. Hyland, Landscape Architect Ironwood Design Group, LLC

Address P.O. Box 873 Exeter, NH 03833 Telephone #: 603-772-0590

Professional License #: Jeffrey R. Hyland, Landscape Architect #00026 E-mail address: jhyland@fewood.com

SOIL SCIENTIST INFORMATION

Name of Soil Scientist and Company (Licensed in N.H.) Bruce A. Gilday, CSS, CWS BAG Land Consultants

Address 43 Rockingham Street Concord, NH 03301 Telephone #: 603-228-5775

Professional License #: Bruce A. Gilday, CWS #88 E-mail address: bagilday@comcast.net

CONSERVATION EASEMENT HOLDER

Name of Easement Holder: N/A Telephone #_____

Address Easement Holder: _____

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: 6/22/22

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

Signature of Agent: _____ Date: 6/22/22

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: 6/22/22

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: 6/22/22

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: 6/22/22

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

City of Dover, New Hampshire
SITE PLAN REVIEW SUBMISSION CHECKLIST

[Revision Date: June 4, 2019]

This site plan review checklist, as required by Chapter 153-6-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.

The first step would be to appear before the Technical Review Committee, to apply, eight (8) folded copies of the site plan with scale of not less than 1"=50' or 1" =100' for larger site plans, need to be provided, along with payment of plan review fees.

Two weeks prior to Planning Board, three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and materials, including response to TRC comments, will be due. Abutter/Notice Fees will be invoiced and need to be paid 28 hours 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: White Birch Armory File Number: P22-

PROJECT TITLE: Site Plan - White Birch Armory Building Addition

PROPERTY LOCATION: 80 Industrial Park Drive Tax Map: G Lot: 3A-1

	Where/How Provided	Reviewed
1. Completed and signed Application form	X	
2. Plan Review Fees are provided	X	
3. Electronic copy of the engineered/surveyed plan layout	X	
4. Electronic copy of supplementary materials and application	X	
5. Traffic Impact Assessment and Analysis (Standard or Advanced)	N/A	
6. Waiver requests to the Site Plan Review Regulations, with written justification	None Requested	
7. Conditional Use Permit applications	X	
8. A colored rendering of the streetscape that will be created along the existing public right-of-way	X	
9. A colored architectural plan showing all sides of buildings	X	
10. Folded 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:	1 Full Size Plan Set & 7 - 11x17 copies Delivered in Hand & via EnerGov portal	
Location map at appropriate scale	X	
Proposed Project name and title and Planning File #	X	
Date, north arrow and scale	X	
Names of all abutting property owners	X	
Name and address of owners and/or applicants	X	
Signature & stamp of NH licensed land surveyor and/or engineer	X	
Zoning District boundaries, including any special or overlay districts	N/A	
Location of Conservation District areas	N/A	
Location, names and widths of existing and proposed streets, including pavement widths, grades, curbs and crosswalks	X	
Location and widths of existing & proposed easements & right of ways	X	
Location and width of existing and proposed access/egress ways	X	

	Explain How Provided	Reviewed
Depict pedestrian walkways and accessible access	X	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	X	
Existing and proposed topographic information at two foot intervals	X	
Existing and proposed buildings and structure locations	X	
Minimum building setbacks or build to lines on all lots	X	
Location and size of existing and proposed electric, telephone, gas cable and other underground utilities	X	
Existing and proposed water lines and fire hydrants, including materials and capacity needed	X	
Location and materials of sanitary sewage facilities within project site and projected additional peak hour sewer load	X	
Existing and proposed stormwater lines and facilities	X	
Lighting plan depicting all existing and proposed exterior light fixtures and a lighting level analysis for parking lots	X	
Location of Flood Hazard Zone	N/A	
Location of all bodies of water and watercourses	N/A	
Location of wetlands and buffers	X	
Neighborhood plan with aerial underlay showing how project relates to abutting uses within the plan set	X	
Existing natural features and/or significant vegetation on property		
Depict existing contours up to 100 ft. beyond project limits	X	
Landscape plan depicting existing and proposed landscaping, prepared by a licensed Professional Landscape Architect	X	
Location of parking layout delineating spaces and arrangement; note addressing maximum required spaces	X	
Location, material and size of existing and proposed pavement area	X	
Location of proposed fire lanes	X	
Specify finished floor elevations of buildings	X	
Location of solid waste disposal facilities (dumpster, pad and screening, etc.), including required screening	X	
Depict all service, storage, loading bays and utility areas	X	
All applicable Dover Common Site Plan notes	X	
11. Additional Information if appropriate		
Stormwater Management Plan depicting the existing & proposed storm drainage system and engineered drainage analysis	X	
Stormwater Management System Operation and Maintenance Plan	X	
Letter to Serve from Public and Private Utilities	N/A	
Erosion and Sedimentation Control Plan	X	
Landscape Operation and Maintenance Plan	X	
Proposed restrictive covenants or homeowners association documents	N/A	
Dates and permit numbers of all required state and federal permits	pending (AoT)	
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	TBD	

REVIEWED BY: _____ DATE_____ TRC DATE_____

City of Dover, New Hampshire
CONDITIONAL USE PERMIT APPLICATION

[Revision Date: October 19, 2020]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: White Birch Armory Telephone # 603-330-0146

Address of Applicant: 80 Industrial Park Drive Dover, NH 03820

E-Mail Address: sean@wbarmory.com

Name of Property Owner (if different from applicant): Recon Realty, LLC Telephone # 603-330-0146

Address of Property Owner: 80 Industrial Park Drive Dover, NH 03820

PROPERTY INFORMATION

Assessor's Map # G Lot(s) # 3-A1

Address of Property: 80 Industrial Park Drive

Zoning District(s) CM Overlay District(s) N/A

Existing Use of Property: Commercial Building w/Associated Parking

CONDITIONAL USE PERMIT INFORMATION

Type of Conditional Use Permit (Check All That Apply):

☐ Conservation District	☐ RCM Use Overlay District	☐ Gateway District
☐ Groundwater Protection	☐ Off-Street Parking and Loading	☐ Alternative Treatment Center
☒ Wetland Protection District	☐ Central Business District	☐ Heritage Residential District

Describe Proposed Use or Activity That Requires Conditional Use Permit and Describe Any Impacts:

Wetland buffer impacts totaling 6,975 sf associated with expanded parking, additional drainage and necessary grading. No wetlands are being impacted.

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: ~~N/A~~

NH DES Alteration of Terrain Permit - Pending

Name of Professional That Prepared Plans: Stephen J. Haight, PE - Civilworks New England

Address P.O. Box 1166, Dover, NH 03821 Telephone #: 603-749-0443

Professional License #: Stephen J. Haight, PE #7978 E-mail address: shaight@civilworksne.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. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: 6/22/22

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

Signature of Agent: _____ Date: 6/22/22

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: 6/22/22

CITY OF DOVER CONDITIONAL USE
LIST OF ABUTTERS

Pursuant to RSA 676:4, the State Law of New Hampshire, the City of Dover is required to notify the applicant, abutters (including holders of conservation easements), and any professional whose seal is on the plan, of the public hearing by certified mail, return receipt requested. Staff will provide the abutter information, while the applicant must provide accurate contact information for the owner, applicant and professional agents representing the project.

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
G	3-A1	Recon Realty, LLC	80 Industrial Park Drive Dover, NH 03820

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS
	White Birch Armory	80 Industrial Park Drive Dover, NH 03820

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Stephen J. Haight, PE	Civilworks New England	P.O. Box 1166 Dover, NH 03821
Kevin McEneaney, LLS	McEneaney Survey Associates	24 Chestnut Street Dover, NH 03820

Conservation Easement Holder: N/A

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

RELEASE OF RESTRICTIONS

WHEREAS, the BUSINESS FINANCE AUTHORITY (a public body corporate and politic organized under the laws of the State of New Hampshire) of 2 Pillsbury Street, Suite 201, Concord, NH 03301, is the successor in interest to the Industrial Development Authority of New Hampshire ; and said Industrial Development Authority of New Hampshire, in turn, is the successor in interest to the Industrial Park Authority, which did make a restrictive covenant agreement dated November 21, 1958, recorded in Strafford County Registry of Deeds, Book 697, Page 325, and a certain Modification Agreement dated August 31, 1962, recorded in said Registry at book 759, Page 339 with respect to industrial park located at Littleworth Road and Industrial Park Road in the City of Dover; and

WHEREAS, 74 INDUSTRIAL PARK, LLC, a New Hampshire limited liability company, of 210 Commerce Way, Suite 210, Portsmouth, New Hampshire, 03801, is the owner of Lot #4 (Industrial Park Road, Dover, New Hampshire) as shown on plan entitled "Proposed Development, S.E.N.H Industrial Park Property, Dover, N.H"., C.L. Davis & Associates, Engineers, dated March 31, 1958, revised October 5, 1961, July 19, 1963, February 23, 1965, July 14, 1965, and December 15, 1965, a copy of which is recorded in the Strafford County Registry of Deeds, Pocket #6, Folder #2, as Plan #38C, which is subject to the covenants in the restrictive covenant agreement referenced above and which was conveyed to 74 Industrial Park, LLC, by Quitclaim Deed of Collins & Aikman Automotive Interiors, Inc., dated September 24, 2004, recorded at Strafford County Registry of Deeds at Book 3071, Page 131; and

WHEREAS, the Said Business Finance Authority and 74 Industrial Park, LLC have agreed to terminate the Building Set-Backs provisions as set forth in Paragraph III, C of restrictive covenant agreement recorded at Book 697, Page 325 with respect to said Lot #4, provided that any building or other improvements shall comply with City of Dover regulations and ordinances with respect to set-back requirements.

NOW THEREFORE, the undersigned hereby agrees that the building set-back provisions of the restrictive covenant agreement recorded at Book 697, Page 325 shall no longer apply to Lot #4 (Industrial Park Road, Dover, New Hampshire) in this industrial park.

Executed this 28 day of June, 2019.

White Birch Armory
80 Industrial Park Dr.
Dover, NH 03820

June 22, 2022

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

Ref: White Birch Armory
80 Industrial Park Dr, Tax Map G, Lot 3A-1
Dover, NH 03820

Re: Letter of Authorization

Sean Manning of White Birch Armory authorizes, Civilworks New England to represent the applicant to the State of New Hampshire, the City of Dover Planning Board and any other Dover Board or Committee relative to the pursuit of permits for the development of the subject parcel.

Sincerely,

Sean Manning – White Birch Armory

City of Dover, New Hampshire
CONDITIONAL USE PERMIT APPLICATION

[Revision Date: October 19, 2020]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: White Birch Armory Telephone # 603-330-0146

Address of Applicant: 80 Industrial Park Drive Dover, NH 03820

E-Mail Address: sean@wbarmory.com

Name of Property Owner (if different from applicant): Recon Realty, LLC Telephone # 603-330-0146

Address of Property Owner: 80 Industrial Park Drive Dover, NH 03820

PROPERTY INFORMATION

Assessor's Map # G Lot(s) # 3-A1

Address of Property: 80 Industrial Park Drive

Zoning District(s) CM Overlay District(s) N/A

Existing Use of Property: Commercial Building w/Associated Parking

CONDITIONAL USE PERMIT INFORMATION

Type of Conditional Use Permit (Check All That Apply):

☐ Conservation District	☐ RCM Use Overlay District	☐ Gateway District
☐ Groundwater Protection	☐ Off-Street Parking and Loading	☐ Alternative Treatment Center
☒ Wetland Protection District	☐ Central Business District	☐ Heritage Residential District

Describe Proposed Use or Activity That Requires Conditional Use Permit and Describe Any Impacts:

Wetland buffer impacts totaling 6,975 sf associated with expanded parking, additional drainage and necessary grading. No wetlands are being impacted.

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: ~~N/A~~

NH DES Alteration of Terrain Permit - Pending

Name of Professional That Prepared Plans: Stephen J. Haight, PE - Civilworks New England

Address P.O. Box 1166, Dover, NH 03821 Telephone #: 603-749-0443

Professional License #: Stephen J. Haight, PE #7978 E-mail address: shaight@civilworksne.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. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: 6/22/22

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

Signature of Agent: _____ Date: 6/22/22

AUTHORIZATION TO ENTER SUBJECT PROPERTY

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Signature of Property Owner: _____ Date: 6/22/22

CITY OF DOVER CONDITIONAL USE
LIST OF ABUTTERS

Pursuant to RSA 676:4, the State Law of New Hampshire, the City of Dover is required to notify the applicant, abutters (including holders of conservation easements), and any professional whose seal is on the plan, of the public hearing by certified mail, return receipt requested. Staff will provide the abutter information, while the applicant must provide accurate contact information for the owner, applicant and professional agents representing the project.

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
G	3-A1	Recon Realty, LLC	80 Industrial Park Drive Dover, NH 03820

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS
	White Birch Armory	80 Industrial Park Drive Dover, NH 03820

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Stephen J. Haight, PE	Civilworks New England	P.O. Box 1166 Dover, NH 03821
Kevin McEneaney, LLS	McEneaney Survey Associates	24 Chestnut Street Dover, NH 03820

Conservation Easement Holder: N/A

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

PROJECT NARRATIVE

for

White Birch Armory Building Addition

Site Plan

80 Industrial Park Drive
Tax Map G, Lot 3-A-100

August 2022

PROJECT OVERVIEW & SITE CHARACTERISTICS

The project parcel is shown on Tax Map G as Lot 3-A-100, is located within the CM District, consists of +/- 8.09 acres, and is currently developed with an existing +/- 19,500s.f. building housing an indoor range, retail, office and warehouse areas. The property is owned by Recon Realty, LLC and is home to White Birch Armory. The project applicant is proposing a +/- 20,287 s.f. addition to increase both office and warehouse space on site. The development will also include additional parking as well as landscaping, lighting and stormwater mitigation improvements.

The site is currently serviced by public water and sewer connections, underground electric service, and natural gas service. A small portion of grading, drainage, and pavement is proposed within the 50' wetland buffer with impacts of 6,975 s.f. (See Conditional Use Permit application). There are no proposed impacts to any wetlands.

The project site consists of the following general improvements:

- Clear the limits of work for construction.
- Construction of +/- 20,287 s.f. office/warehouse addition and associated parking.
- Construction of on-site stormwater detention and treatment system, grading, and other drainage requirements.
- Site utility construction.
- Landscape the site and stabilize remaining areas with loam and seed.

DRIVEWAY AND PARKING LOT

Employee and visitor parking will continue to be associated with the existing front parking areas. The proposed parking areas will primarily be for employees of the facility. A dedicated 30' wide x 125' long truck access area will ensure continued access to the existing loading docks. The parking area will have a 24' wide drive aisle with 18' long parking stalls. Lighting for the proposed parking lot and driveway will be per the Lighting Plan and will be LED fixtures that are dark sky compliant.

For the proposed development (inclusive of both existing building and the proposed addition) the City of Dover parking maximums allow for the following (105 spaces):

Required/Proposed:

• Industrial / Warehouse:	1 space per 800 s.f. (20,287 s.f.)	=	25 surface spaces
• Retail:	1 space per 275 s.f. (15,400 s.f.)	=	56 surface spaces
• Office:	1 space per 300 s.f. (7,086 s.f)	=	24 surface spaces

- Existing parking = 60 Surface Spaces (including 3 Accessible Spaces)
- Total proposed = **74 Surface Spaces (includes 3 Accessible Spaces)**

WETLAND SETBACK IMPACT TYPE

The project work requires a conditional use permit from the City of Dover. Approximately +/- 6,975 s.f. of the wetland buffer will be impacted. The project does not impact bogs, marshes, sand dunes, tidal wetlands, cedar swamps, undisturbed tidal buffer zone, or involve any work within 50 feet of a salt marsh. The project is not located within 100 feet of prime wetlands.

DRAINAGE

The parcel is located on the western side of Industrial Park Drive. The proposed development is surrounded by other commercial properties within a previously established industrial park. The site is developed and the groundcover primarily consists of grass and woody vegetation but also includes approximately +/- 1.4 acres of onsite impervious area from the existing building, driveway, and associated parking areas. The 8.32 acre watershed of the parcel includes the project site as well as a portion of Industrial Park Drive. On site soils are a mix of Udorthents, Sutton, Buxton, and Scantic soils. Portions of the Udorthents and Sutton soils are HSG B, with other portions of the Udorthents and Sutton as well as the Buxton, and Scantic soils classified as HSG C.

The project proposes +/- 65,000 s.f. of disturbance. The project will require permitting through NH DES Alteration of Terrain as the overall disturbance to the parcel within the past 10 years will meet permitting thresholds of greater than 100,000 s.f. The site has been designed in accordance with NH DES AoT requirements to treat the stormwater runoff from the full buildout of the site, including the existing building and impervious areas. The post development watershed is modeled utilizing the same points of analysis as the predevelopment watershed, allowing direct comparison of the peak runoff between the pre and post developed conditions (see drainage report).

UTILITIES

The project is currently serviced by City of Dover water and sewer as well as Unitil for natural gas, and Eversource for electricity. The project proposes minimal sewer improvements to provide sewer connection for the proposed addition. Sewer connections and any necessary upgrades will be made per the City's Community Services Utility Division and Fire Department requirements and standards.

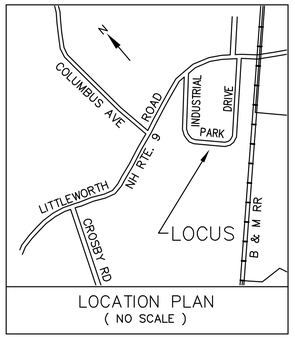
SITE PLAN
WHITE BIRCH ARMORY
BUILDING ADDITION
80 INDUSTRIAL PARK

TAX MAP G, LOT 3-A-100

INDUSTRIAL PARK DRIVE

DOVER, NH

AUGUST 15, 2022



LOCATION PLAN
(NO SCALE)

White Birch ARMORY

_____ _____
DATE

OWNER
RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NH

APPLICANT
WHITE BIRCH ARMORY
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

SITE CIVIL ENGINEER
CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

LAND SURVEYOR
MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND
P.O. BOX 681
24 CHESTNUT STREET
DOVER, NH 03820
(603) 742–0911

ARCHITECT
JOHN M. TUTTLE, ARCHITECT #04015
TW DESIGNS, LLC
254 DRAKE ROAD
STRAFFORD, NH 03884
(603) 664–2181

LANDSCAPE ARCHITECT
JEFFERY R. HYLAND, LANDSCAPE ARCHITECT #00026
IRONWOOD DESIGN GROUP, LLC
55 MAIN STREET
NEWMARKET, NH 03857

WETLAND SCIENTIST
BRUCE A. GILDAY, CWS #088
BAG LAND CONSULTANTS
43 ROCKINGHAM STREET
CONCORD, NH 03301

SOIL SCIENTIST
BRUCE A. GILDAY, CSS #012
BAG LAND CONSULTANTS
43 ROCKINGHAM STREET
CONCORD, NH 03301

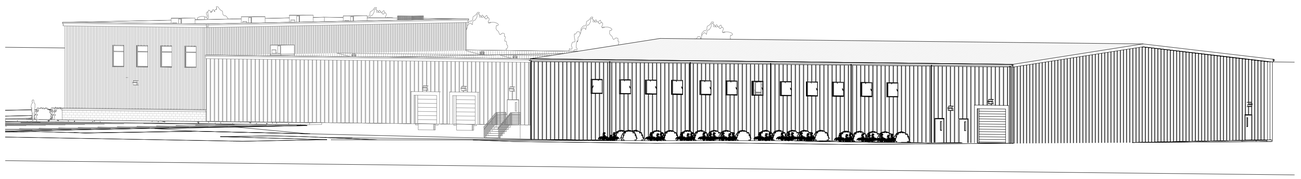
SHEET INDEX	SHEET
COVER SHEET	1
NEIGHBORHOOD PLAN	2
EXISTING CONDITIONS PLAN (BY MCENEANEY SURVEY)	3
NOTE SHEET	4
DEMOLITION PLAN	5
SITE PLAN	6
GRADING, DRAINAGE & EROSION CONTROL PLAN	7
UTILITY PLAN	8
EROSION CONTROL NOTES	9
EROSION CONTROL DETAILS	10
DETAIL SHEET	11-14
LIGHTING PLAN	15
LIGHTING DETAILS	16
DOVER LADDER TRUCK MOVEMENT PLAN	17
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3D RENDER	R-1
FLOOR PLANS	A1.1
EXTERIOR ELEVATIONS	A3.1
SECTIONS	A4.2
LANDSCAPE PLAN	
LANDSCAPE PLAN	L1.0
LANDSCAPE PLAN DETAILS	L2.0

PLANNING FILE NO.: P22–

White Birch Armory

80 Industrial Park Dr.
Dover, NH 03820

PLANNING BOARD SET
07/12/2022 (N.F.C.)

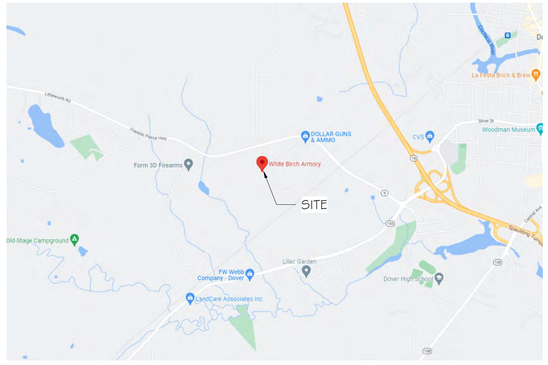


T | W DESIGNS
254 Drake Hill Rd. Strafford, NH
TW-Designs.com | 603.664.2181

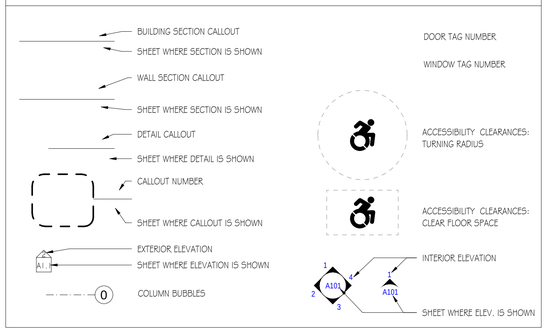
Revision Schedule

No.	Description	Date

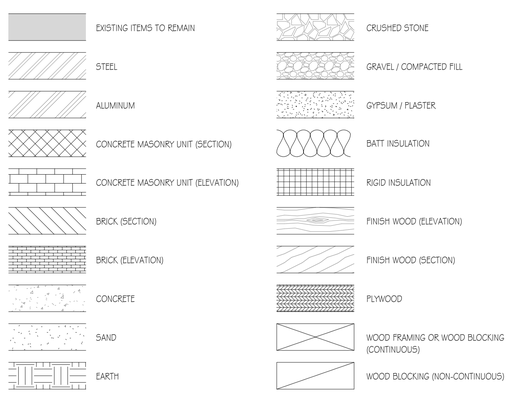
LOCUS MAP: (N.T.S.)



GRAPHIC SYMBOLS LEGEND



MATERIAL LEGEND



MASTER ABBREVIATION KEY:

AB	ANCHOR BOLT			LAM	LAMINATE	S	SOUTH
AC	AIR CONDITIONER	E	EAST	LAV	LAVATORY	S-TRAP	SEDIMENT TRAP
ACI	AMERICAN CONCRETE INSTITUTE	EJ	EXPANSION JOINT			SC	SOLID CORE
ACOUST	ACOUSTIC	EJC	EXPANSION JOINT COVER	MAS	MASONRY	SCED	SCHEDULE
AFF	ABOVE FINISH FLOOR	EL	ELEVATION	MAT	MATERIAL	SD	STORM DRAIN
ALT	ALTERNATE	ELEC	ELECTRICAL	MAX	MAXIMUM	SF	SQUARE FOOT
ALUM	ALUMINUM	ELEV	ELEVATOR	MECH	MECHANICAL	SH	SHOWER
ANCH	ANCHOR	EQ	EQUAL	MEM	MEMBRANE	SHT	SHEET
ANOD	ANODIZED	EQUIP	EQUIPMENT	MEP	MECHANICAL, ELECTRICAL, PLUMBING	SIM	SIMILAR
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	ER	EMERGENCY ROOM	METTP	METAL TOILET PARTITION	SL	SLIDING
		EST	ESTIMATE	MFR	MANUFACTURER	SMR	SINGLE PLY MEMBRANE ROOF
BD	BOARD	EWC	ELECTRICAL WATER COOLER	MH	MANHOLE	SP/PT/FIN	SPECIAL PAINT FINISH
BIT	BITUMINOUS	EXH	EXHAUST	MIN	MINIMUM	SPEC	SPECIFICATION
BL	BUILDING LINE	EXIST	EXISTING	MISC	MISCELLANEOUS	SPKR	SPEAKER
BLDG	BUILDING	EXP	EXPANSION	MO	MASONRY OPENING	SQ	SQUARE
BLK	BLOCK	EXPD	EXPANDED	MTL	METAL	SS	STAINLESS STEEL
BLKG	BLOCKING	EXT	EXTERIOR	MULL	MULLION	STA	STATION
BM	BEAM					STD	STANDARD
BOC	BOTTOM OF CURB	F/F	FACE OF FOUNDATION WALL	N	NORTH	STL	STEEL
BOF	BOTTOM OF FOOTING ELEVATION	FA	FRESH AIR	NAT	NATURAL	STOR	STORAGE
		FAP	FIRE ALARM PANEL	NEC	NECESSARY	STRG	STRINGER
BOT	BOTTOM	FD	FLOOR DRAIN	NIC	NOT IN CONTRACT	STRUCT	STRUCTURAL
BRG	BEARING	FE	FIRE EXTINGUISHER	NOM	NOMINAL	SU	SITE UTILITY
BRK	BRICK	FEC	FIRE EXTINGUISHER CABINET	NRC	NOISE REDUCTION COEFFICIENT	SUSP	SUSPEND (SUSPENDED)
BSMT	BASEMENT	FIN	FINISH	NTS	NOT TO SCALE	SYMM	SYMMETRICAL
BTW	BETWEEN	FL	FLOW LINE			SYS	SYSTEM
BUR	BUILT-UP ROOF	FLR	FLOOR	OC	ON CENTER	T	TREAD
		FND	FOUNDATION	OD	OUTSIDE DIAMETER	TAG	TONGUE & GROOVED
CAB	CABINET	FOF	FACE OF FINISH	OF/C	OUTSIDE FACE OF CONCRETE	T/FRM	TOP OF FRAME
CB	CATCH BASIN	FOM	FACE OF MASONRY	OH	OVERHEAD	T/SLB	TOP OF SLAB
CER	CERAMIC	FOS	FACE OF STUD	OPG	OPENING	TB	TACKBOARD
CF	CUBIC FOOT	FR	FIRE RATED	OPP	OPPOSITE	TEL	TELEPHONE
CI	CAST IRON	FS	FULL SIZE	OR	OPERATING ROOM	TEMP	TEMPORARY
CJ	CONTROL JOINT	FT	FOOT			TERR	TERRAZZO
CL	CLOSET	FTG	FOOTING	PBD	PARTICLE BOARD	THK	THICK
CLCB	CURBLESS CATCH BASIN	FUR	FURRED (FURRING)	PCF	POUNDS PER CUBIC FOOT	THLD	THRESHOLD
CLG	CEILING	FVC	FIRE VALVE CABINET			TOC	TOP OF CURB
CM	CONTRACT MANAGER			PL	PROPERTY LINE	TOF	TOP OF FOUNDATION
CMU	CONCRETE MASONRY UNIT	GA	GAUGE	PLAM	PLASTIC LAMINATE	TOS	TOP OF SLAB
CO	CLEAN OUT	GALV	GALVANIZED	PLAS	PLASTER	TOW	TOP OF WALL ELEVATION
COL	COLUMN	GC	GENERAL CONTRACTOR	PLYWD	PLYWOOD	TR	TO REMAIN
COMP	COMPACTED (COMPOSITION)	GEN	GENERAL	PNL	PANEL	TYP	TYPICAL
		GL	GLASS	PSF	POUNDS PER SQUARE FOOT	UH	UNIT HEATER
CONC	CONCRETE	GLZ	GLAZING	PSI	POUNDS PER SQUARE INCH	UL	UNDERWRITERS LABORATORIES, INC.
CONST	CONSTRUCTION	GRD	GRADE	PT	PAINT	UOD	UNDERSIDE OF DECK
CONT	CONTINUOUS	GYP	GYPSUM	PTD	PAINTED	UON	UNLESS OTHERWISE NOTED
CONTR	CONTRACTOR			PTN	PARTITION	UR	URINAL
CORR	CORRUGATED	H/V	HEATING & VENTILATING	PVC	POLYVINYL CHLORIDE	UV	UNIT VENTILATOR
CP	CONTROL PANEL	HC	HANDICAP			VAR	VARIES OR VARIABLE
CSG	CASING	HDWD	HARDWOOD	QT	QUARRY TILE	VB	VINYL BASE
CSMT	CASEMENT	HGT	HEIGHT			VCT	VINYL COMPOSITION TILE
CT	CERAMIC TILE	HM	HOLLOW METAL	R	RADIUS	VERT	VERTICAL
CTR	CENTER	HP	HIGH POINT	R/A	RETURN AIR	VEST	VESTIBULE
CY	CUBIC YARD	HVAC	HEATING, VENTILATION, AIR CONDITIONING	RC	REINFORCED CONCRETE	VIF	VERIFY IN FIELD
		HWH	HOT WATER HEATER	RD	ROOF DRAIN	VNR	VENEER
DF	DRINKING FOUNTAIN			REF	REFERENCE	VOL	VOLUME
DIA	DIAMETER	ID	INSIDE DIAMETER	REFR	REFRIGERATOR		
DIAG	DIAGONAL	IN	INCH	REINF	REINFORCE	W	WEST
DIM	DIMENSION	INSUL	INSULATION	REQD	REQUIRED	W/	WITH
DL	DEAD LOAD	INT	INTERIOR	RGH	ROUGH	WC	WATER CLOSET
DN	DOWN	INV	INVERT	RL	RAIN LEADER	WD	WOOD
DR	DOOR			RM	ROOM	WDW	WINDOW
DS	DOWNSPOUT	JC	JANITORS CLOSET	RO	ROUGH OPENING	WGL	WIRE GLASS
DSIC	DRIVE SIDE OF CURB	JST	JOIST	ROW	RIGHT OF WAY	WP	WEATHERPROOF (WATERPROOFING)
DTL	DETAIL	JT	JOINT	RQMT	REQUIREMENT		
DWG	DRAWING					WWF	WELDED WIRE FABRIC

DRAWING SHEET INDEX:

Sheet	Sheet Name	Issued	Rev
PCS	*PROJECT COVER SHEET*	*N.F.C.*	
R-1	*3D RENDER*	*N.F.C.*	
A1.1	*FLOOR PLANS*	*N.F.C.*	
A3.1	*EXTERIOR ELEVATIONS*	*N.F.C.*	
A4.2	*SECTIONS*	*N.F.C.*	

GENERAL NOTES:

1. DO NOT SCALE DRAWING OR DIMENSIONS. FOR MISSING DIMENSIONS OR DIMENSIONS IN CONFLICT, CONTACT THE CONTRACTOR IMMEDIATELY BEFORE CONTINUING WITH WORK.
2. ANY DISCREPANCIES IN THESE PLANS WILL BE BROUGHT TO THE CONTRACTOR'S ATTENTION IN WRITING IMMEDIATELY
3. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DESIGN-BUILD PLANS AND SPECIFICATION FOR LOCATIONS OF ALL BLOCK OUTS, INSERTS, OPENINGS, CURBS, BASES, & PADS THAT ARE NOT DIMENSIONED OR SHOWN ON CONTRACTOR'S DWG'S. OR STRUCTURAL DWG'S.
4. STRUCTURAL STEEL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION PLANS AND SPECIFICATION SHALL BE PROVIDED AND ARE THE RESPONSIBILITY OF THERE RESPECTIVE SUBCONTRACTORS IF NOT CARRIED IN ARCHITECTURAL SERVICES
5. ALL CONSTRUCTION SHALL CONFORM TO AND BE IN ACCORDANCE WITH THE REGULATOR REQUIREMENTS MANDATED BY ALL FEDERAL, STATE AND LOCAL AUTHORITIES HAVING JURISDICTION IN ACCORDANCE TO THE STATE IN WHICH THE WORK IS PERFORMED (STATE BUILDING CODE, STATE LIFE SAFETY & FIRE CODE ETC.)
6. THE CONTRACTOR SHALL REVIEW ALL DOCUMENTS AND VERIFY ALL DIMENSIONS AND FIELD CONDITIONS, AND SHALL CONFIRM WORK IS BUILDABLE AS SHOWN. ANY CONFLICTS OR OMISSIONS, ETC. SHALL BE IMMEDIATELY REPORTED IN WRITING TO THE ARCHITECT FOR CLARIFICATION
7. DIMENSIONS ARE FROM EXTERIOR FACE OF FOUNDATION, VENEER, OR WALL STUD AND TO CENTER OF ALL INTERIOR STUD WALLS OR FACE OF INTERIOR MASONRY. UNLESS NOTED OTHERWISE.
8. CLEAR DIMENSIONS ARE FROM FACE TO FACE OF WALL FINISH. UNLESS NOTED OTHERWISE
9. REFER TO MECHANICAL DRAWINGS / SPEC. FOR ALL SIZES AND LOCATIONS OF MECHANICAL DUCT WORK.
10. UNLESS OBVIOUSLY SHOWN OTHERWISE, DOOR LOCATIONS NOT DESIGNATED BY WRITTEN DIMENSION SHALL BE CENTERED IN THE WALL OR SHALL BE LOCATED FOUR (4) INCHES FROM FINISH WALL TO EDGE OF DOOR JAMB. PER PLAN.
11. PROVIDE METAL CORNER BEAD AT ALL OUTSIDE CORNERS OF PLASTERED OR DRYWALL SURFACES, UNLESS NOTED OTHERWISE.
12. PENETRATIONS OF ALL FIRE RATED ASSEMBLIES SHALL BE PROTECTED BY LIKE RATED CONSTRUCTION DAMPERS, SEALANTS, COLLARS, ETC., TYPICAL.
13. CONTRACTOR SHALL FURNISH, LOCATE AND INSTALL ALL ACCESS PANELS AS REQUIRED AFTER INSTALLATION OF MECHANICAL DUCTS, PLUMBING AND ELECTRICAL WORK, FIRE RATED AS REQUIRED.
14. FURNISH AND INSTALL SOLID BLOCKING BEHIND ALL WALL HUNG MILLWORK ITEMS, RAILS, FIXTURES,GRAB BARS, ETC . WHERE INDICATED OR REQUIRED.
15. CONTRACTOR SHALL LAYOUT OR MARK, ALL EQUIPMENT, SYSTEMS AND MILLWORK ON THE FLOOR FOR ARCHITECT OR OWNER'S APPROVAL PRIOR TO BEGINNING CEILING / OVER HEAD WORK.
16. ALL SPRINKLER HEAD LOCATIONS, MAINS, BRANCHES AND RISER PIPE LOCATIONS MUST BE COORDINATED WITH THE DESIGN / BUILD CONTRACTOR PRIOR TO WORK.
17. FURNISH AND INSTALL FIRE EXTINGUISHERS IN TYPE, QUANTITY, AND LOCATION PER LOCAL FIRE DEPARTMENT. TYPICAL
18. CONTRACTOR SHALL VERIFY, COORDINATE LOCATION WITH THE ARCHITECT ANY SMOKE, CARBON MONOXIDE DETECTOR OR FIRE ALARM DEVICE AS REQUIRED BY THE LOCAL FIRE DEPARTMENT.
19. FURNISH & INSTALL FIRE DAMPERS WITH FUSIBLE LOUVER WHEREVER DUCT WORK PENETRATES ONE OR TWO HOUR CEILINGS OR WALLS. TYPICAL UNLESS NOTED OTHERWISE.
20. PROVIDE PLASTER AND GYPSUM WALL BOARD CONTROL JOINTS AT 30'-0" ON CENTER FROM FLOOR TO CEILING, OR AS NOTED ON THE CONSTRUCTION DOCUMENTS. VERIFY IN FEILD WITH ARCHITECT PRIOR TO WORK.

Architect of Record:
T | W Designs, LLC
254 Drake Hill Rd.
Strafford, NH 03884
603-664-2181

Civil Engineer:
XXX

Structural Engineer:
XXX

Electrical Engineer:
XXX

Mechanical Engineer:
XXX

Fire Protection Eng.:
XXX

General Contractor:
XXX

Project Info:
White Birch Armory
80 Industrial Park Dr.
Dover, NH 03820

22017
PROJECT COVER SHEET

SHEET NUMBER
PCS

TW DESIGNS LLC
254 DRAKE HILL RD. STRAFFORD, NH
P: 603.664.2181 | F: 603.664.9508



PLANNING BOARD SET
7/12/2022

T:\3.Projects\22023-WBA Addition\22023c_WBA Addition.rvt

No. Description Date

Revision Schedule

Project Info:

White Birch Armory

80 Industrial Park Dr.
Dover, NH 03820

Sheet Status:

Latest Release:
Issued For: PLANNING BOARD SET
Org. Issue Date: 2/2022 (N.F.C.)

JOB NO: 22017
DRAFTED: Author
CHECKED: Checker

SCALE:

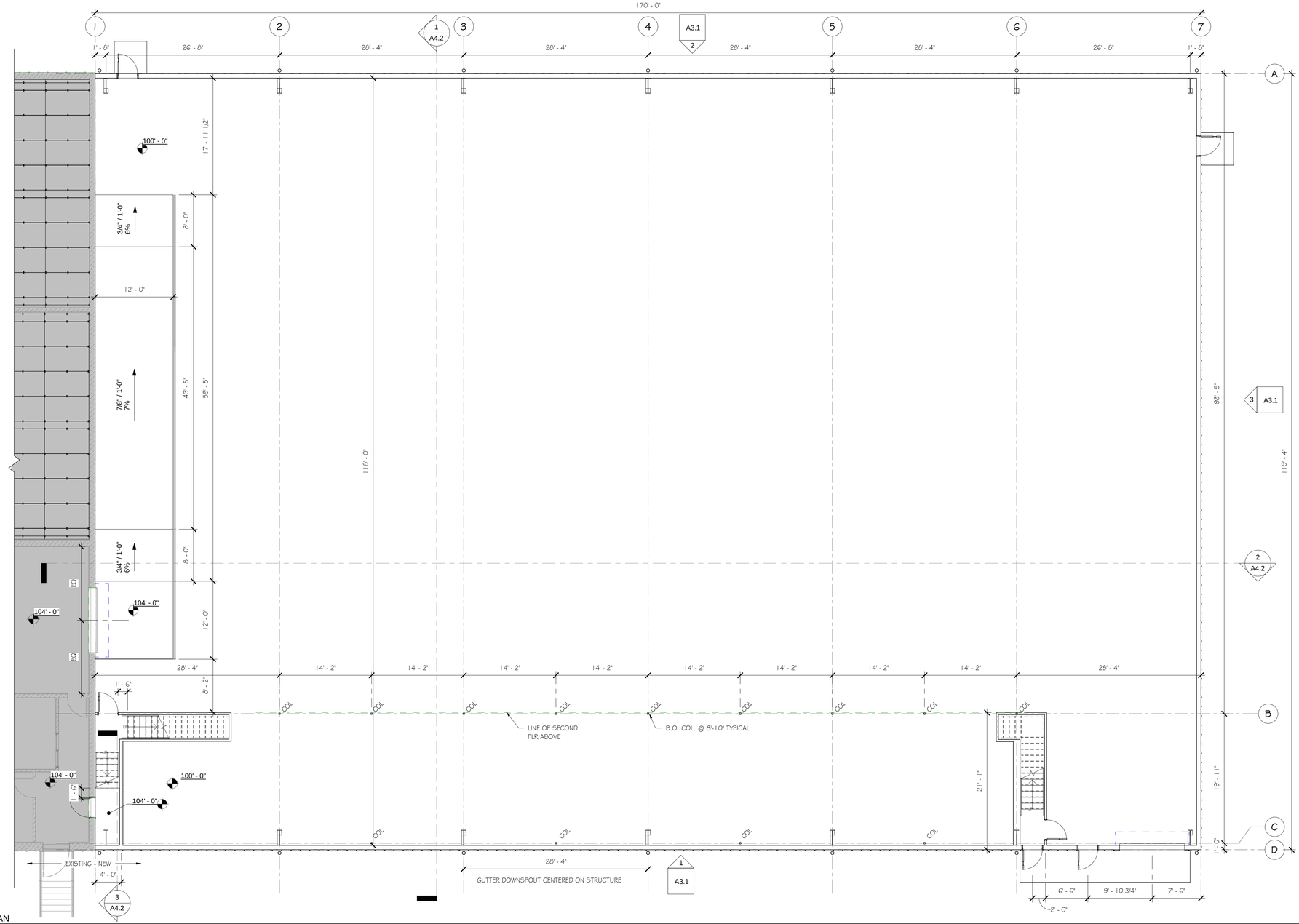
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3D RENDER

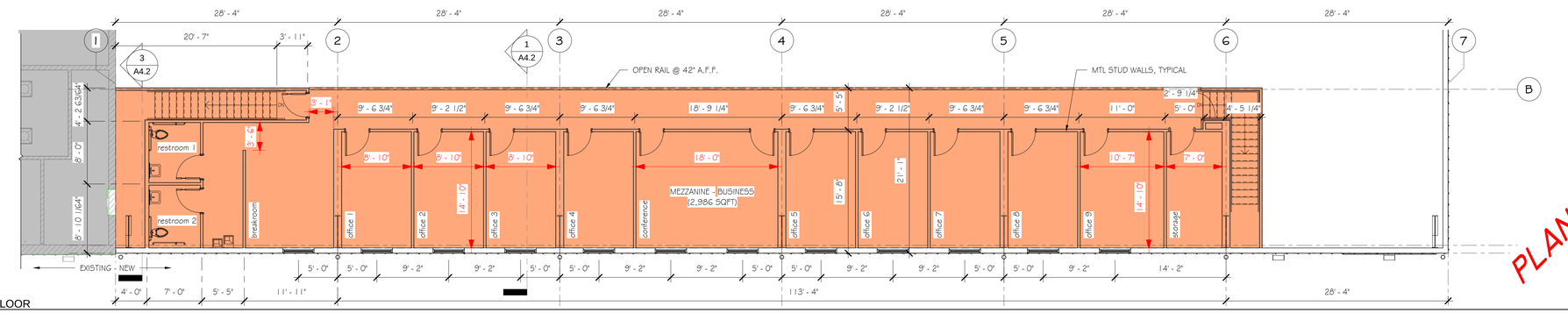
Sheet Number:

R-1

Printed on: 7/12/2022



1 FLOOR PLAN
1/8" = 1'-0"



2 SECOND FLOOR
1/8" = 1'-0"

T:\3 Projects\22023-WBA Addition\22023c_WBA Addition.rvt

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254 DRAKE HILL RD. STRAFFORD, NH
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SQ FOOTAGE
1ST FLOOR = 20,287 SQFT
2ND FLOOR = 2,986 SQFT

TOTAL SQFT = 23,273

No.	Description	Date

Revision Schedule

PLANNING BOARD SET
7/12/2022

True
PROJECT NORTH

Project Info:
White Birch Armory

80 Industrial Park Dr.
Dover, NH 03820

Sheet Status:
Latest Release:
Issued For: PLANNING BOARD SET2/2022 (N.F.C.)
Org. Issue Date:

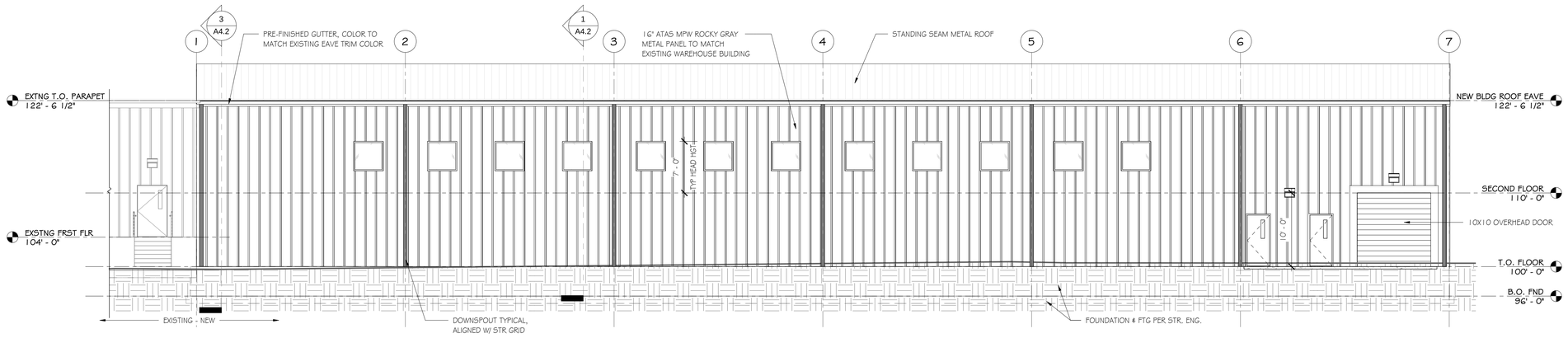
JOB NO: 22017
DRAFTED: SMP
CHECKED: JMT
SCALE: 1/8" = 1'-0"

Sheet Title:
FLOOR PLANS

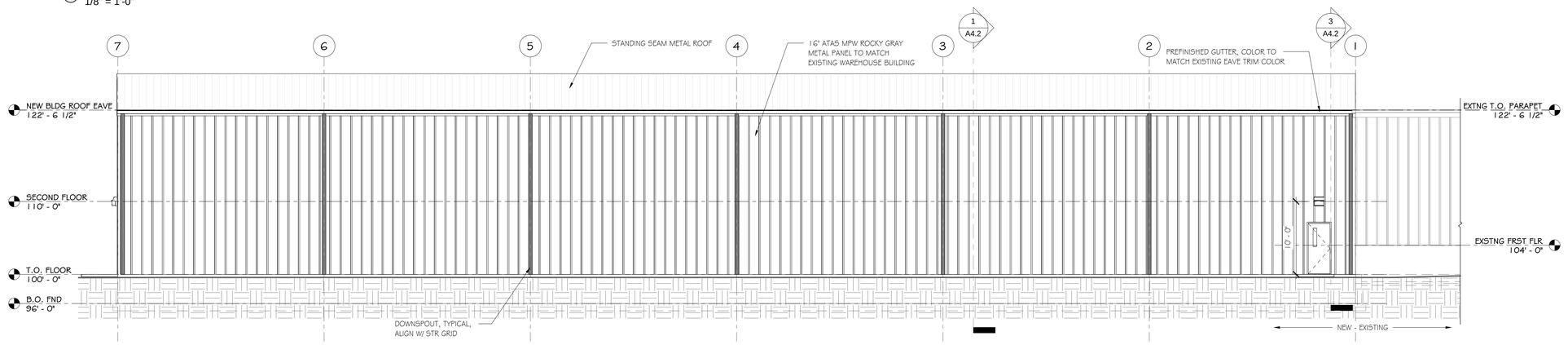
Sheet Number:
A1.1

Printed on: 7/12/2022

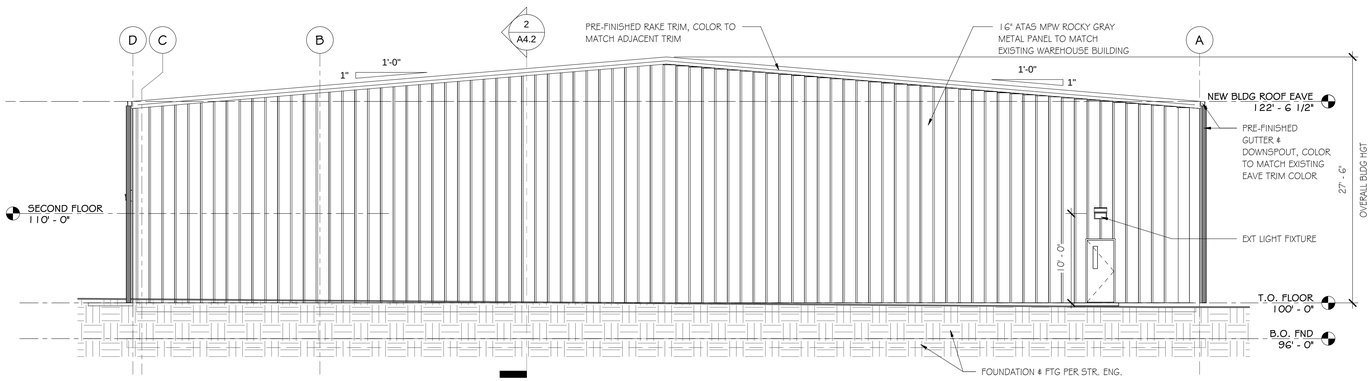
TW DESIGNS LLC
254 DRAKE HILL RD. STRAFFORD, NH
P: 603.664.2181 | F: 603.664.9508



1 FRONT ELEVATION
1/8" = 1'-0"



2 BACK ELEVATION
1/8" = 1'-0"



3 SIDE ELEVATION
1/8" = 1'-0"

T:\3.Projects\22023-WBA Addition\22023c_WBA Addition.rvt

No. Description Date

Revision Schedule

Project Info:

White Birch Armory

80 Industrial Park Dr.
Dover, NH 03820

Sheet Status:

Latest Release:
Issued For: PLANNING BOARD SET2/2022 (N.F.C.)
Org. Issue Date:

JOB NO. 22017
DRAFTED: SMP
CHECKED: JMT

SCALE: 1/8" = 1'-0"

Sheet Title:

EXTERIOR ELEVATIONS

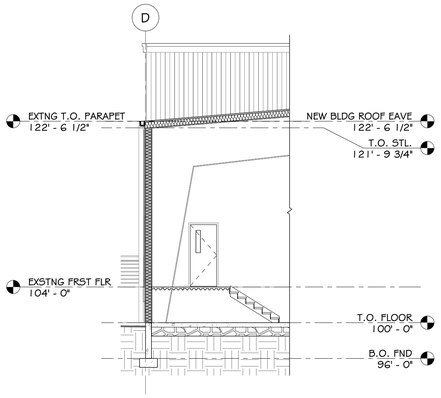
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A3.1

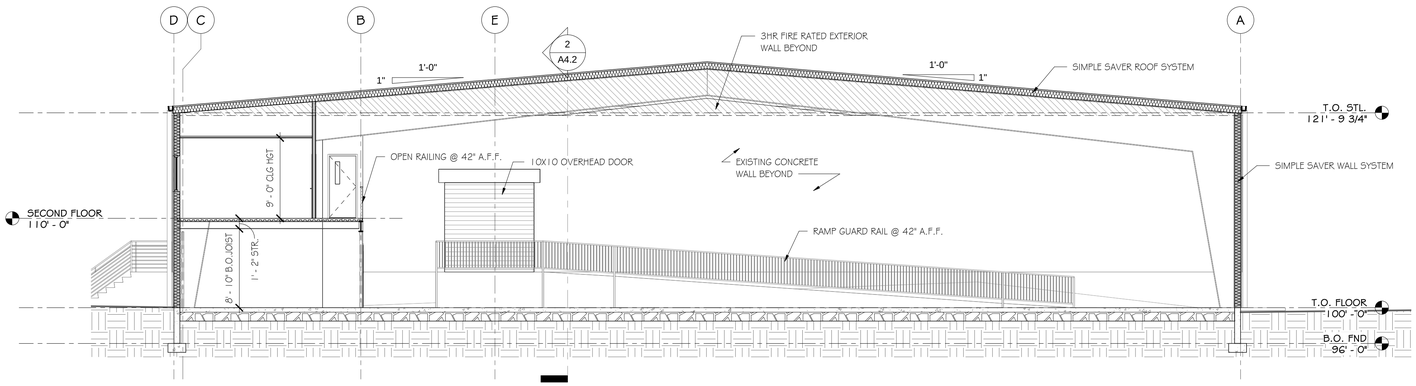
PLANNING BOARD SET
7/12/2022

Printed on: 7/12/2022

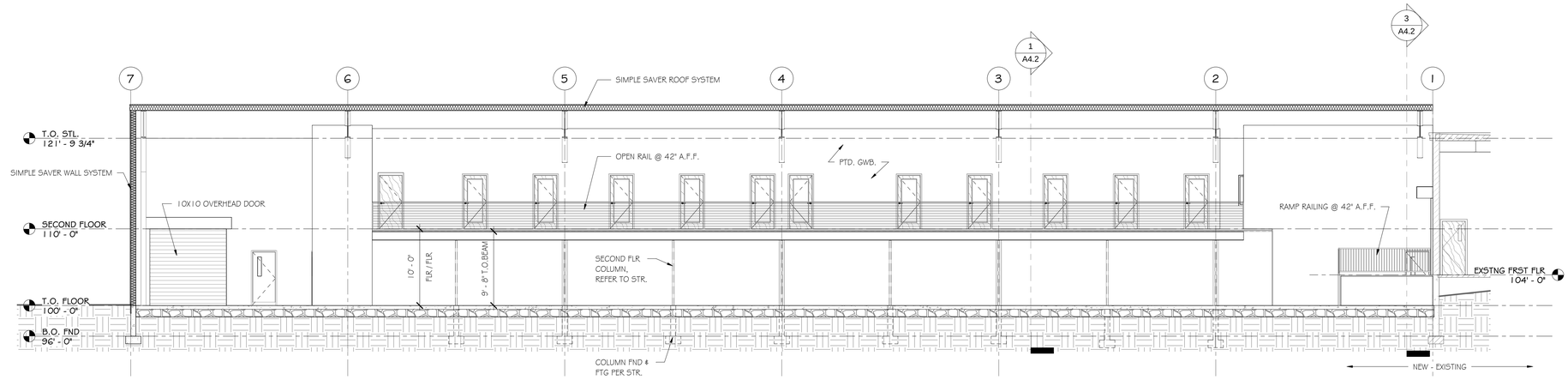
TW DESIGNS LLC
254 DRAKE HILL RD. STRAFFORD, NH
P: 603.664.2181 | F: 603.664.9508



3 SECTION 'A'
1/8" = 1'-0"



1 CROSS SECTION
1/8" = 1'-0"



2 LONGITUDINAL SECTION
1/8" = 1'-0"

PLANNING BOARD SET
7/12/2022

T:\3 Projects\22023-WBA Addition\22023c_WBA Addition.rvt

No. Description Date

Revision Schedule

Project Info:

White Birch Armory

80 Industrial Park Dr.
Dover, NH 03820

Sheet Status:

Latest Release:
Issued For: PLANNING BOARD SET
Org. Issue Date: 2/2022 (N.F.C.)

JOB NO: 22017
DRAFTED: SMP
CHECKED: JMT

SCALE: 1/8" = 1'-0"

Sheet Title:

SECTIONS

Sheet Number:

A4.2

Printed on: 7/12/2022



ABUTTERS LIST
(WITHIN 200 FT)

TAX MAP	LOT NO.	NAME & ADDRESS
G	G-3-A-101	JUMAJA SEACOAST LLC 74 INDUSTRIAL PARK ROAD DOVER, NH 03820
G	G-3-B-0	85 INDUSTRIAL PARK II LLC 273 CORPORATE DRIVE, SUITE 150 PORTSMOUTH, NH 03801
G	G-4-E-0	WILLMANCH CORP C/O/ BT-MEWYO LLC ATTN: CORP REAL ESTATE 55 GLENLAKE PARKWAY NE ATLANTA, GA 30328
G	G-41-0-0	BT-NEWYO LLC ATTNE CORP REAL ESTATE DEPT TAX MRG 55 GLENLAKE RARKWAY NE ATLANTA, GA 03028
G	G-2-0-0	WESTFIELD LLC 340 CENTRAL AVE, SUITE 202 DOVER, NH 03820

H / 33-E — TAX MAP / LOT NUMBER

W — N — E

MAGNETIC

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P22_

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE

DATE: 8-15-22
SCALE: 1"=100'
DRAWN BY: SRD
DESIGN BY: JPG
APPROVED BY:JH
PROJECT NO:19003
FILE: SITE-ADDITION

NEIGHBORHOOD PLAN

BUILDING ADDITION
WHITE BIRCH ARMORY
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

2

8/11/2022 10:45:50 File: \\CNEServer1\MSA Projects\2227 CNE 19003 White Birch\Drawings\22-2227 EC.dwg Layout: 22-2227 EC 2022

REFERENCE PLANS:

1.) SUBDIVISION PLAN 74 INDUSTRIAL PARK, LLC, 74 INDUSTRIAL PARK ROAD AND LITTLEWORTH ROAD, DOVER, NEW HAMPSHIRE. SCALE: 1" = 60'; DATED: JANUARY 6, 2010, REVISED THROUGH 1/22/2010; BY: TRITECH ENGINEERING CORPORATION. RECORDED S.C.R.D. PLAN 99-24.

2.) TOPOGRAPHIC PLAN - EXISTING CONDITIONS PLAN PREPARED FOR 74 INDUSTRIAL PARK, LLC TAX MAP G, LOT No. 3A-100 INDUSTRIAL PARK ROAD CITY of DOVER COUNTY of STRAFFORD STATE of NEW HAMPSHIRE. SCALE: 1" = 50'; DATED: MAY 20, 2019; BY: McENEANEY SURVEY ASSOCIATES.

3.) AS-BUILT SITE PLAN PREPARED FOR WHITE BIRCH ARMORY, LLC TAX MAP G, LOT No. 3A-100 80 INDUSTRIAL PARK ROAD CITY of DOVER COUNTY of STRAFFORD STATE of NEW HAMPSHIRE. SCALE: 1" = 20'; DATED: JULY 14, 2020, REVISED THROUGH 7/30/21; BY: McENEANEY SURVEY ASSOCIATES OF NEW ENGLAND.

14°37'29" MAG. OBS. 12/03/2018 — NH STATE PLANE GPS OBS. NOVEMBER 30, 2018

INDUSTRIAL PARK ROAD
PUBLIC 60'-WIDE R.O.W. - 743/244 & 759/141

CB RIM = 115.9'
15" RCP CULVERT INV. = 112.6'
MAG NAIL SET
NHHD BOUND FOUND
S35°12'35"E RADIAL
BITUMINOUS CONCRETE DRIVEWAY
SMH RIM = 115.1'
18" RCP CULVERT INV. = 110.0'
15" RCP CULVERT INV. = 112.1'
SMH RIM = 115.0'
8" PVC CULVERT INV. = 112.1'
CITY WATER MAIN EASEMENT REF. 540 / 315 & 288 / 603
C1
C2
EDGE OF PAVEMENT (TYP.)
S50°03'34"W RADIAL
SMH D
NHHD BOUND FOUND
S39°59'26"E 132.11'
IRON ROD FOUND N - 250,812.901 E - 1,187,241.155 (SEE NOTE 8)
S50°43'27"W 228.51'
WATER SERVICE: 6" FIRE PROTECTION 1" DOMESTIC
BITUMINOUS CONCRETE DRIVEWAY AND PARKING AREA
HEADWALL 12" HDPE INV. IN = 110.4 INV. OUT = 109.5
IRON ROD FOUND
256.16' S10°11'09"W
4" PVC INV. OUT = 104.0
10' SIDE/REAR ZONING SETBACK LINE (TYP.)
SMH RIM = 104.3'
IRON ROD FOUND
36" CULVERT INV. = 97.1'
S30°02'29"W 212.60'
SMH RIM = 102.4' GROUND = 97.4' SHELF @ IN = 93.7' (CONCRETE) SHELF @ OUT = 93.3' (CONCRETE) INV. IN = 93.2' 12" SDR INV. OUT = ~~92.7'~~ 12" SDR
IRON ROD FOUND

C / 3B
85 INDUSTRIAL PARK II LLC
273 CORPORATE DRIVE, SUITE 150
PORTSMOUTH, NH 03801
2390 / 453

C / 3C
SOLVETA SALES, INC
44 INDUSTRIAL PARK ROAD
DOVER, NH 03820
4459 / 516

C / 4E
WILLMANCH CORPORATION
c/o BT-NEWYO, LLC
ATTN: CORP REAL ESTATE
55 GLENLAKE PARKWAY NE
ATLANTA, GA 30328 1118 / 392

35' FRONT ZONING SETBACK LINE
20' WIDE WATER MAIN EASEMENT 743/244 & 759/141
STEEL FRAME BUILDING 19,680 S.F. F.F. ELEVATION = 112.7
RD 12" HDPE
CB 1
CB 3
D 12"HDPE
D 15"HDPE
CB 2
OS\1
FES 1 INV. = 104.3
FES 2 INV. = 101.8

C / 3A-1
PARCEL AREA
352,425 S.F.
8.09 Ac.

50' WETLAND BUFFER (TYP.)
18" CMP CULVERT INV. = 107.9'
N78°32'48"E 210.35'
N69°48'43"W 113.77'
N78°32'48"E 249.06'
IRON PIPE FOUND
EDGE OF WETLAND (TYP.)

C / 41
BT-NEWYO, LLC
ATTN: CORP REAL ESTATE
55 GLENLAKE PARKWAY NE
ATLANTA, GA 30328
2710 / 956

10' SIDE/REAR ZONING SETBACK LINE (TYP.)
20' WIDE WATER MAIN EASEMENT 859 / 63
N08°12'17"W 1099.34'
APPROXIMATE WATER MAIN LOCATION
24" HDPE CULVERT INV. IN = 102.7' INV. OUT = 102.6'
IRON PIPE FOUND N - 251,367.676 E - 1,186,699.120 (SEE NOTE 8)

C / 2
WESTFIELD, LLC
340 CENTRAL AVENUE, SUITE 202
DOVER, NH 03820
4733 / 471
906,049 S.F. / 20.80 Ac.

"LOT 4C"
N/F INDUSTRIAL PARK AUTHORITY
(AN AGENCY OF THE STATE OF NH)
CONCORD, NH
825 / 305

No.	Central Angle	Radius	Arc Length	Chord Length	Chord Bearing
C1	23°45'23"	531.09	220.20	218.63	N66°40'06"E
C2	94°46'51"	459.43	760.01	676.27	S07°23'59"W

NOTES:

1.) OWNER OF RECORD:
G/3A-100 RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOL. 4713, PAGE 625

2.) G/3A-100 - DENOTES TAX MAP AND PARCEL NUMBER.

3.) ZONING DISTRICT IS RURAL RESTRICTED INDUSTRIAL (I-2)

4.) DIMENSIONAL REGULATIONS:

MINIMUM LOT SIZE	= 20,000 S.F.
MAXIMUM LOT COVERAGE	= 50 PERCENT
MINIMUM FRONTAGE	= 100 FEET
BUILDING REQUIREMENTS:	
FRONT SETBACK	= 35 FEET MIN.
SIDE SETBACK	= 10 FEET
REAR SETBACK	= 10 FEET
MAXIMUM BUILDING HEIGHT	= 50 FEET

PER AGREEMENT BETWEEN THE INDUSTRIAL PARK AUTHORITY AND DOVER DEVELOPMENT CORPORATION RECORDED AT S.C.R.D. VOL. 697, PAGE 325 AND AMENDED IN VOL. 759, PAGE 339 THE FOLLOWING RESTRICTIVE COVENANTS ARE IN PLACE:

BUILDING SETBACKS:	
FRONT TO A RIGHT OF WAY	= 50 FEET
SIDE	= 30 FEET
REAR	= 50 FEET
RATIO OF LAND TO BUILDING	= AT LEAST 5 TO 1

5.) THE INTENT OF THIS PLAN IS TO DEPICT AND DESCRIBE THE SUBJECT PARCEL "EXISTING CONDITIONS". INFORMATION SHOWN IS BASED ON SURVEY FIELD DATA TAKEN DURING APRIL AND MAY 2019 BY THIS OFFICE.

6.) PARCEL AREA: 352,425 S.F. / 8.09 Ac.

7.) THE SUBJECT PARCEL IS LOCATED WITHIN AREAS DETERMINED TO BE OUTSIDE THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANELS 0310 & 0320; SUFFIX E; MAP NUMBERS 33017C0310E & 33017C0320E; EFFECTIVE DATE SEPTEMBER 30, 2015.

8.) BASIS OF BEARINGS IS NH STATE PLANE GRID FROM GPS OBSERVATION TAKEN ON NOVEMBER 30, 2018.

9.) VERTICAL DATUM IS NAVD88 FROM GPS OBSERVATION TAKEN ON NOVEMBER 30, 2018.

10.) WETLANDS ONSITE WERE IDENTIFIED UTILIZING THE 1987 FEDERAL TECHNICAL REPORT. THE DELINEATION WAS PERFORMED ON OCTOBER 5, 2021 BY BAG LAND CONSULTANTS (BRUCE A. GILDAY, CWS); 43 ROCKINGHAM STREET, CONCORD, NH 03301 AND FIELD LOCATED BY McENEANEY SURVEY ASSOCIATES, INC..

11.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES, INC. DURING APRIL AND MAY 2019 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.

12.) SEE REFERENCE No. 3 FOR EXISTING BUILDING INFORMATION.

SANITARY SEWER STRUCTURE SCHEDULE

SMH A (NOT SHOWN)
RIM = 115.2
INV. IN 8" PVC = 110.0 (ROADWAY NORTH)
INV. IN 8" PVC = 110.0 (U.P.S. SMH)
INV. OUT 8" PVC = 110.0 SMH B

SMH B (NOT SHOWN)
RIM = 116.3
INV. IN 8" PVC = 108.7 SMH A
INV. OUT 8" PVC = 108.7 SMH C

SMH C
RIM = 114.6
INV. IN 8" PVC = 108.1 SMH B
INV. OUT 8" PVC = 108.0 SMH D

SMH D
RIM = 115.0
INV. IN 8" PVC = 107.5 SMH C
INV. OUT 8" PVC = 107.4 (ROADWAY SOUTH)

DRAINAGE STRUCTURE SCHEDULE

CB 1
RIM = 110.35
INV. IN 12" PVC = 106.3 BUILDING
INV. OUT 12" HDPE = 106.2 CB 3
SUMP = 103.35

CB 2
RIM = 109.51
INV. OUT = 105.7 CB3
SUMP = 102.8

CB 3
RIM = 108.50
INV. IN = 105.0 CB 2
INV. IN = 105.2 CB 1
INV. OUT = 104.9 FES 1
SUMP = 101.6

OS 1
INV. IN = 103.4 POND
INV. IN = 104.7 POND
INV. IN = 105.6 POND
INV. OUT = 102.8 FES

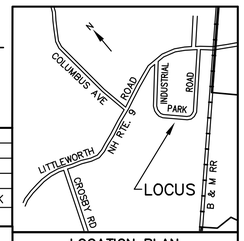
"I HEREBY CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL GROUND SURVEY PERFORMED WITH A TOTAL STATION, BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, SAID SURVEY MEETS OR EXCEEDS THE MINIMUM PRECISION REQUIREMENTS FOR SURVEY CLASSIFICATION "U" AS SET FORTH IN TABLE 500.1 OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES OF THE BOARD OF LICENSURE FOR LAND SURVEYORS."

ATTENTION:

HIGH PRESSURE GAS MAIN EXISTS WITHIN THE RIGHT OF WAY OF INDUSTRIAL PARK ROAD; PRIOR TO ANY EARTH MOVING ACTIVITY CONTACT DIGSAFE AT 1-888-344-7233 TO VERIFY LOCATION.

NO.	DATE	DESCRIPTION	BY	CHK
		REVISIONS		

19-2227	EXIST. COND.	19-03	66-69
PROJECT NO	TYPE	FIELDBOOK & PAGES	



LOCATION PLAN
(NO SCALE)

LEGEND

GAS - GAS MAIN AND / OR SERVICE
UGU - UNDERGROUND UTILITIES (POWER, TELECOMMUNICATIONS, CABLE TELEVISION)
UGE - UNDERGROUND ELECTRIC LINE
UGT - UNDERGROUND TELECOMMUNICATIONS
UP - UTILITY POLE
INV. - INVERT
RIM - STRUCTURE RIM
N -247,351.744 - NORTHING
E - 1,199,437.985 - EASTING
ELEV. - ELEVATION
56 - CONTOUR LINE - 2' INTERVAL
HDPE - HIGH DENSITY POLYETHYLENE
RIP RAP - STONE RIP RAP OUTLET PROTECTION
W 6"DI - WATER MAIN, MATERIAL AND PIPE SIZE
DI - DUCTILE IRON
T - ELECTRICAL TRANSFORMER
POLE MOUNTED LUMINAIRE W/ 2'ø CONC. BASE
WSO - WATER SHUT-OFF (CURB STOP)
HYD - FIRE HYDRANT
WV - WATER GATE VALVE

SMH - SEWER MANHOLE AND ID
DMH - DRAIN MANHOLE AND ID
CB - CATCH BASIN AND ID
SIGN ON POST
SGC - SLOPED GRANITE CURB
CCB - CAPE COD BERM
EOP - EDGE OF PAVEMENT
PVC - POLYVINYL CHLORIDE
S.F. - SQUARE FEET
Ac. - ACRE
(TYP.) - TYPICAL
± - MORE OR LESS
S.C.R.D. - STRAFFORD COUNTY REGISTRY OF DEEDS
OS - OUTLET STRUCTURE
I.R. - IRON ROD
BOLLARD
UD - UNDER DRAIN
FD - FOUNDATION DRAIN
RD - ROOF DRAIN
D 12"HDPE - DRAINAGE PIPE SIZE & TYPE
HC PARKING

EXISTING CONDITIONS PLAN OF LAND
PREPARED FOR
RECON REALTY, LLC
TAX MAP G, LOT No. 3A-100
80 INDUSTRIAL PARK DRIVE
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DOVER PLANNING FILE No. P 22-___

DRAWN BY: RJM	FILE: \2227\Dwgs\22-2227 EC
SCALE: 1" = 50'	DATE: APRIL 22, 2022

50 25 0 25 50 100 150 200

STATE OF NEW HAMPSHIRE No. 661 KEVIN M. McENEANEY LICENSED LAND SURVEYOR SIGNATURE

McEneaney Survey Associates of NEW ENGLAND
P.O. Box 681 - 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742-0911
SURVEYING - PLANNING - CONSULTING

GENERAL NOTES:

1. OWNER OF RECORD:

   C/3A-100 — RECON REALTY, LLC
   80 INDUSTRIAL PARK DRIVE
   DOVER, NEW HAMPSHIRE 03820
   S.C.R.D. VOL. 4713, PAGE 625

2. C/3A-100 — DENOTES TAX MAP AND PARCEL NUMBER.

3. ZONING DISTRICT IS COMMERICAL MANUFACTURING (CM)

DIMENSIONAL REGULATIONS:	REQUIRED	PROPOSED
MINIMUM LOT SIZE	= 20,000 S.F.	352,425 S.F.
MAXIMUM LOT COVERAGE	= 50 PERCENT	11.3%
MINIMUM FRONTAGE	= 100 FEET	±892'
BUILDING REQUIREMENTS:		
FRONT SETBACK	= 35 FEET MIN.	45.72' (EX)
SIDE SETBACK	= 10 FEET	32.51' (EX)
REAR SETBACK	= 10 FEET	52.62'
MAXIMUM BUILDING HEIGHT	= 50 FEET	27.5'

   * PER AGREEMENT BETWEEN THE INDUSTRIAL PARK AUTHORITY AND DOVER DEVELOPMENT CORPORATION RECORDED AT S.C.R.D. VOL. 697, PAGE 325 AND AMENDED IN VOL. 759, PAGE 339 THE FOLLOWING RESTRICTIVE COVENANTS ARE IN PLACE:

BUILDING SETBACKS:	REQUIRED
FRONT TO A RIGHT OF WAY	= 50 FEET
SIDE	= 30 FEET
REAR	
RATIO OF LAND TO BUILDING	= AT LEAST 5 TO 1

   * RESTRICTIONS ON THIS LOT WERE RELEASED JUNE 28, 2019.
4. PARCEL AREA: 352,425 S.F. / 8.09 Ac.
5. THE SUBJECT PARCEL IS LOCATED WITHIN AREAS DETERMINED TO BE OUTSIDE THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN AS SHOWN ON FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 330145; PANELS 0310 & 0320; SUFFIX E; MAP NUMBERS 33017C0310E & 33017C0320E; EFFECTIVE DATE SEPTEMBER 30, 2015.
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9. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES, INC. DURING APRIL AND MAY 2019 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.

DEMOLITION NOTES:

1. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
2. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL NOTIFY "DIG SAFE" PRIOR TO ANY DEMOLITION/ CONSTRUCTION ACTIVITIES. (811).
4. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, UTILITIES AND PAVEMENT ON THE SITE TO THE LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN.
5. IT IS THE CONTRACTORS RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
6. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS NOT ALREADY OBTAINED BY THE OWNER AND ARRANGE AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
8. THE LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATION IS NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
9. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES, AND CODES.
10. 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.

PERMIT SUMMARY:

1. THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY:

   ALTERATION OF TERRAIN: PENDING

2. 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.

   CONDITIONAL USE PERMIT: P22-XX PENDING

SITE NOTES:

1. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES, INC. DURING APRIL AND MAY 2019 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.
2. THE INTENT OF THIS PLAN IS TO SHOW SITE IMPROVEMENTS ASSOCIATED WITH THE CONSTRUCTION OF A COMMERCIAL BUILDING, SURFACE PARKING, DRIVE AISLES, DRAINAGE IMPROVEMENTS, AND UTILITIES.
3. EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 153-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.
4. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13.
5. ALL ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.
6. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.
7. STRIPE PARKING AREAS AS SHOWN INCLUDING HANDICAP SYMBOLS AND PAINTED ISLANDS. ALL MARKINGS SHALL BE CONSTRUCTED USING WHITE TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M-248-TYPE N.
8. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS, AND THE AMERICAN WITH DISABILITIES ACT, LATEST EDITIONS.
9. PAINTED ISLANDS SHALL BE 4 INCHES WIDE DIAGONAL LINES 3 FEET ON CENTER.
10. ON-SITE SNOW STORAGE SHALL OCCUR ALONG THE EDGES OF PROPOSED PAVEMENT.
11. ALL LAYOUT SHALL BE PERFORMED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR UNDER CONTRACT WITH THE CONTRACTOR.
12. SEE DETAILS FOR SIGN LEGENDS.
13. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE CONSTRUCTION PROCEDURES AND SEQUENCE TO ENSURE THE SAFETY OF THE FACILITIES AND THEIR COMPONENTS DURING DEMOLITION AND CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE OWNERS REPRESENTATIVE. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIE-DOWNS. SUCH MATERIALS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AT THE COMPLETION OF THE PROJECT.
14. METHODS OF DEMOLITION, CONSTRUCTION AND ERECTION ARE THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE SPECIFIED. IT IS THE CONTRACTORS' RESPONSIBILITY TO PROVIDE AND MAINTAIN ENVIRONMENTAL CONTROLS AS REQUIRED BY FEDERAL, STATE AND MUNICIPAL REGULATIONS AND PERMITS. ENVIRONMENTAL CONTROLS SHALL INCLUDE BUT SHALL NOT BE LIMITED TO DUST CONTROL AND SILT BARRIERS.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO STRUCTURES OR UTILITIES OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION PHASE CAUSED BY HIMSELF, HIS EMPLOYEES, HIS SUBCONTRACTORS OR EMPLOYEES OF SAME. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY FACILITIES FOR THE PROTECTION OF THE WORK, WORKERS AND PUBLIC SAFETY.
16. BUILDING ADDRESSES TO BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.
17. THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS NH RSA 155-A:5. THE PROPOSED STRUCTURE WILL ALSO BE DESIGNED IN ACCORDANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS.
18. THE SITE SHALL BE MAINTAINED TO PROVIDE ACCESSIBILITY IN ALL WEATHER CONDITIONS.
19. COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM WITH DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.
20. THE SUBJECT PARCEL(S) IS SERVED BY MUNICIPAL WATER AND SEWER.
21. 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 OCCURRING.
22. 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.
23. A SECURITY SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 45, ARTICLE I, SECTION 45-2 OF THE CODE OF THE CITY OF DOVER.
24. SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY-FRIDAY 7 AM-6 PM, SATURDAY AND SUNDAY WORK HOURS 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.
25. 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.
26. 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.
27. A LETTER OF CREDIT FOR THE COST OF REVEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURRING.
28. ANY RETAINING WALL TALLER THAN FOUR FEET (4') REQUIRES ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
29. ANY FENCE TALLER THAN SEVEN FEET (7') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
30. APPLICANT SHALL COMPLETE LAND USE DEVELOPMENT TRACKING FORM, MOST RECENTLY REVISED VERSION, UTILIZING THE ONLINE POLLUTION TRACKING AND ACCOUNTING PILOT PROJECT (PTAPP) PORTAL.
    HTTPS://WWW.UNH.EDU/UNHSC/PTAPP
31. THE OWNER OF RECORD SHALL RECORD AT THE REGISTRY OF DEEDS DOCUMENTATION SUFFICIENT TO PROVIDE NOTICE TO ALL PERSONS/ENTITIES 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.

GRADING NOTES:

1. ALL ROAD (INCLUDING PARKING LOT AND DRAINAGE) WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR CONSTRUCTION OF THE CITY OF DOVER, N.H. AND "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION", LATEST EDITION. THE MORE STRINGENT SPECIFICATION SHALL APPLY.
2. CONTRACTOR SHALL RETAIN A GEOTECHNICAL ENGINEERING CONSULTANT APPROVED BY THE OWNER, TO CONDUCT COMPACTION TESTING AND FILL GRADATION MONITORING PER THE ABOVE REFERENCED "STANDARD SPECIFICATIONS".
3. SEE EROSION CONTROL NOTES & DETAIL SHEET FOR TEMPORARY AND PERMANENT EROSION CONTROL MEASURES.
4. ALL DRAINAGE PIPES SHALL BE HDPE OR APPROVED EQUAL UNLESS OTHERWISE NOTED.
5. ALL DISTURBED AREAS NOT OTHERWISE CALLED FOR SURFACE TREATMENT SHALL RECEIVE 6" OF HIGH QUALITY LOAM AND SHALL BE SEEDED WITH GRASS.
6. ALL SITEWORK CONSTRUCTION SHALL BE ADVANCED USING "BEST MANAGEMENT PRACTICES" SANCTIONED BY THE USDA SCS AND NHDES.
7. TEMPORARY CONSTRUCTION ENTRANCE SHALL BE INSTALLED, UTILIZED AND MAINTAINED UNTIL BASE MATERIALS ARE CONSTRUCTED.
8. CONTRACTOR SHALL PROVIDE A FINISH GRADED SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE AND UNDER RAISED STRUCTURES.
9. DENSITY REQUIREMENTS:

LOCATION	MINIMUM DENSITY
BELOW PAVED OR CONCRETE AREAS	95%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREA	90%

   *ALL PERCENTAGES SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH AASHTO STANDARD 180, METHOD C. FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH AASHTO STANDARD T-191, T-204, OR T-238 AND T-239.

10. SEE GENERAL EROSION CONTROL NOTES ON DETAIL SHEET.
11. PROVIDE INLET PROTECTION BARRIERS AROUND ALL EXISTING AND PROPOSED STORM DRAINAGE INLETS WITHIN THE WORK LIMITS AND AS SHOWN ON PLAN. MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED AND UPSTREAM AREAS HAVE BEEN STABILIZED.
12. INSPECT SILT BARRIERS AFTER EACH RAIN STORM OF 1/4 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE STRUCTURE HEIGHT.
13. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED FOR THIS PROJECT. THE SWPPP MUST INCLUDE THE APPROPRIATE BEST MANAGEMENT PRACTICES (BMP'S) TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM THE SITE. PARTIES RESPONSIBLE FOR DEVELOPING THE SWPPP SHOULD REFER TO THE EPA NPDES CONSTRUCTION GENERAL PERMITS NOTICE OF INTENT FOR A COMPLETE OUTLINE OR REQUIRED ELEMENTS. THESE PLANS AND THE STORMWATER MANAGEMENT SYSTEM INSPECTION & MAINTENANCE PLAN PREPARED FOR THIS PROJECT MAY BE UTILIZED IN FULFILLING THE REQUIREMENTS.
14. 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.
15. ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS.
16. 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.
17. LIMIT TREE CLEARING TO ONLY THE EXTENT NECESSARY FOR CONSTRUCTION.
18. PLACARDS SHALL BE INSTALLED ALONG THE EDGE OF WETLAND PRIOR TO CONSTRUCTION.

UTILITY NOTES:

1. THE PROJECT SITE IS SERVED BY CITY WATER AND SEWER.
2. THE BEST AVAILABLE INFORMATION WAS USED TO DETERMINE THE LOCATION AND SIZE OF EXISTING UTILITIES. THE LOCATION IS NOT GUARANTEED BY THE OWNER OR THE ENGINEER. THE EXACT SIZE AND LOCATION OF UTILITIES SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR PRIOR TO COMMENCING WORK. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO ANTICIPATE CONFLICTS AND REPAIR EXISTING UTILITIES AS NECESSARY TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
3. ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AS SHOWN. THE CONTRACTOR SHALL VERIFY THEIR EXACT LOCATIONS WITH THE RESPECTIVE UTILITY OWNERS PRIOR TO WORK BEING PERFORMED. CALL DIGSAFE AT 1-888-388-7233 OR "811".
4. ALL PROPOSED UTILITY SERVICES SHALL BE UNDERGROUND WITHIN THE SITE.
5. UNDERGROUND ELECTRIC, TELEPHONE, AND CABLE TV CONDUITS SHALL BE INSTALLED IN ACCORDANCE WITH/PER EVERSOURCE, VERIZON, COMCAST, AND UNITIL STANDARDS.
6. PROPOSED INSTALLATION OF UNDERGROUND CONDUITS FOR TELEPHONE, ELECTRIC AND GAS SERVICE SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY.
7. SEE ELECTRICAL DRAWINGS AND DETAILS FOR OUTDOOR LIGHTING CONDUIT LOCATIONS.
8. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.
9. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
10. SEWAGE LOADING (PER ENV. - Wq 1008.03 TABLE 1008-1)
    OFFICE SPACE/UNSPECIFIED =
    2,986 S.F. X 5 GALS./DAY/100 S.F = 150 GPD
    PLUS
    FACTORIES/WAREHOUSES =
    10 GPD/EMPLOYEE (6) = 60 GPD
    TOTAL = 210 GPD
11. THE PROPOSED STRUCTURES SHALL BE SERVED BY A SPRINKLER SYSTEM AS REQUIRED UNDER CHAPTER 81-30 OF THE CODE OF THE CITY OF DOVER AND THE ADOPTED STATE OF NH BUILDING AND FIRE CODES.
12. 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 AND APPROVED BY INSPECTION SERVICES PRIOR TO CONNECTION OF THE BACKFLOW DEVICE.
13. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13. ACCESS TO THE FDC SHALL MAINTAIN A CLEAR AND UNOBSTRUCTED PATH AT ALL TIMES.
14. ALL ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND.
15. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.
16. APPROVED BACKFLOW PREVENTORS SHALL BE INSTALLED ON BOTH FIRE AND DOMESTIC WATER LINES.
17. ALL UNUSED WATER SERVICES SHALL BE REMOVED BACK TO THE CORPORATION AT THE MAIN.

LEGEND

S.F.	SQUARE FEET	OHW	OVERHEAD WIRES
Ac.	ACRE	E	EXISTING ELECTRIC
±	MORE OR LESS	W	EXISTING WATER LINE
(TYP.)	TYPICAL	S	EXISTING SEWER LINE
S.C.R.D.	STRAFFORD REGISTRY OF DEEDS	D	EXISTING DRAINAGE LINE
NHHD	NEW HAMPSHIRE HIGHWAY DEPT.	G	EXISTING GAS LINE
TBR	TO BE REMOVED		PROPOSED SIGN
ELEV.	ELEVATION	74	PROPOSED FINISH GRADE
INV.	INVERT	x 74.00	PROPOSED SPOT GRADE
R.O.W.	RIGHT-OF-WAY		PAVEMENT WITH CURB
	EXISTING UTILITY POLE		SILT BARRIER
	EXISTING SIGN	PG	PROPOSED GAS
	EXISTING WATER SHUT-OFF	PW	PROPOSED WATER
	EXISTING WATER VALVE		PROPOSED FENCE
	EXISTING GAS VALVE	PE	PROPOSED ELECTRIC
	EXISTING HYDRANT	PD	PROPOSED DRAIN LINE
	EXISTING LIGHT/SIGNAL POLE	RD	PROPOSED ROOF DRAIN
S	EXISTING SEWER MANHOLE	PUD	PROPOSED UNDERDRAIN LINE
D	EXISTING DRAINAGE MANHOLE		PROPOSED CATCHBASIN
	EXISTING CATCHBASIN		INLET PROTECTION
5'R	PAVEMENT RADIUS		HANDICAP PARKING SYMBOL
SGC	SLOPE GRANITE CURB		PROPOSED CONCRETE
VGC	VERTICAL GRANITE CURB		PROPOSED SIDEWALK
x 74.00	EXISTING SPOT GRADE		
—94—	EXISTING GRADE		
BSC	BITUMINOUS SLOPED CURB		

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PLANNING FILE NO.: P22_

NO.	REVISION	APP'D	DATE

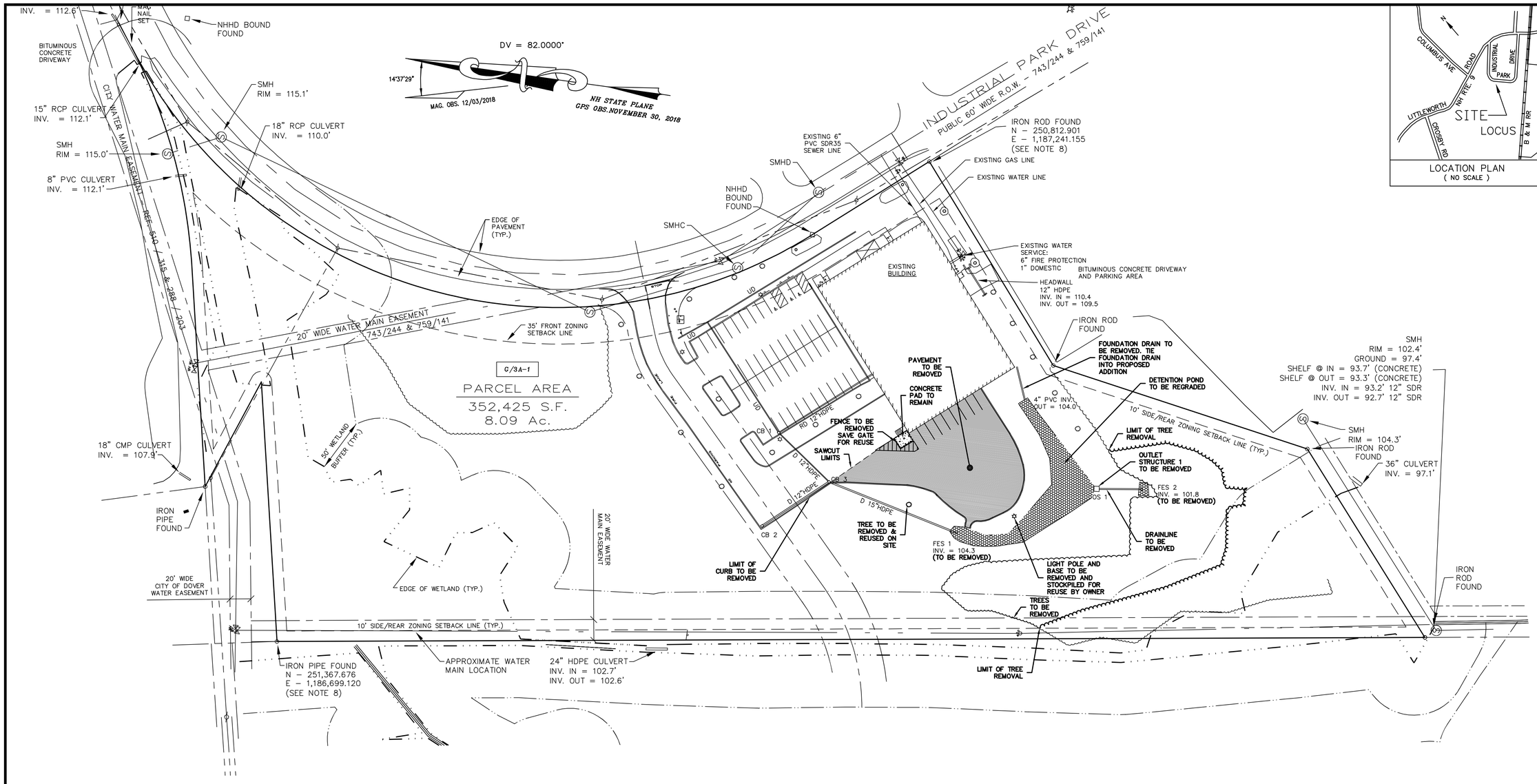
DATE: 8-15-22
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JPG
APPROVED BY:S.H
PROJECT NO:19003
FILE: SITE-ADDITION

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NOTE SHEET

BUILDING ADDITION
WHITE BIRCH ARMORY
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820



LOCATION PLAN
(NO SCALE)

SANITARY SEWER
STRUCTURE SCHEDULE

SMH C
RIM = 114.6
INV. IN 8" PVC = 108.1 SMH B
INV. OUT 8" PVC = 108.0 SMH D

SMH D
RIM = 115.0
INV. IN 8" PVC = 107.5 SMH C
INV. OUT 8" PVC = 107.4 (ROADWAY SOUTH)

DRAINAGE STRUCTURE
SCHEDULE

CB 1
RIM = 110.35
INV. IN 12" PVC = 106.3 BUILDING
INV. OUT 12" HDPE = 106.2 CB 3
SUMP = 103.35

CB 2
RIM = 109.51
INV. OUT = 105.7 CB3
SUMP = 102.8

CB 3
RIM = 108.50
INV. IN = 105.0 CB 2
INV. IN = 105.2 CB 1
INV. OUT = 104.9 FES 1
SUMP = 101.6

OS 1 (TO BE REMOVED)
INV. IN = 103.4 POND
INV. IN = 104.7 POND
INV. IN = 105.6 POND
INV. OUT = 102.8 FES

ATTENTION:

HIGH PRESSURE GAS MAIN EXISTS WITHIN THE RIGHT OF WAY OF INDUSTRIAL PARK ROAD; PRIOR TO ANY EARTH MOVING ACTIVITY CONTACT DIGSAFE AT 1-888-344-7233 TO VERIFY LOCATION.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

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DATE: 8-15-22
SCALE: 1"=50'
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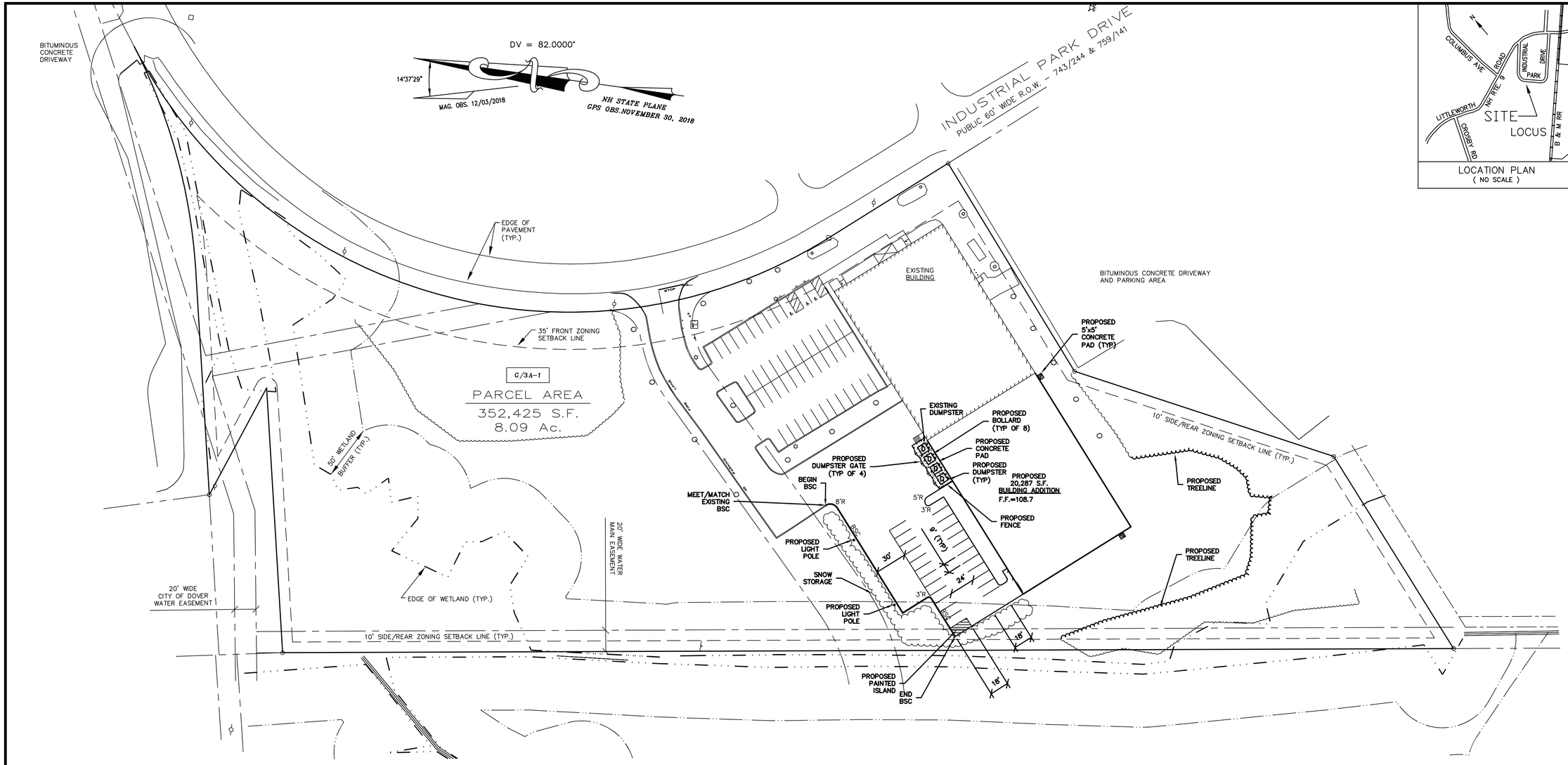
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DEMOLITION PLAN

BUILDING ADDITION
WHITE BIRCH ARMORY
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

5



LOCATION PLAN
(NO SCALE)

EXISTING PARKING CALCULATIONS:

	REQUIREMENT	AREA	MAX ALLOWED	PROVIDED
RETAIL	1 SP/ 275 S.F.	15,400 S.F.	56	46
OFFICE:	1 SP/300 S.F.	4,100 S.F.	14	14
TOTAL PARKING:			70	60

PROPOSED PARKING CALCULATIONS:

	REQUIREMENT	AREA	MAX ALLOWED	PROPOSED
INDUSTRIAL/WAREHOUSE	1 SP/800 S.F.	20,287 S.F.	25	14
RETAIL	1 SP/275 S.F.	15,400 S.F.	56	46
OFFICE:	1 SP/300 S.F.	7,086 S.F.	24	14
TOTAL PARKING:			105	74

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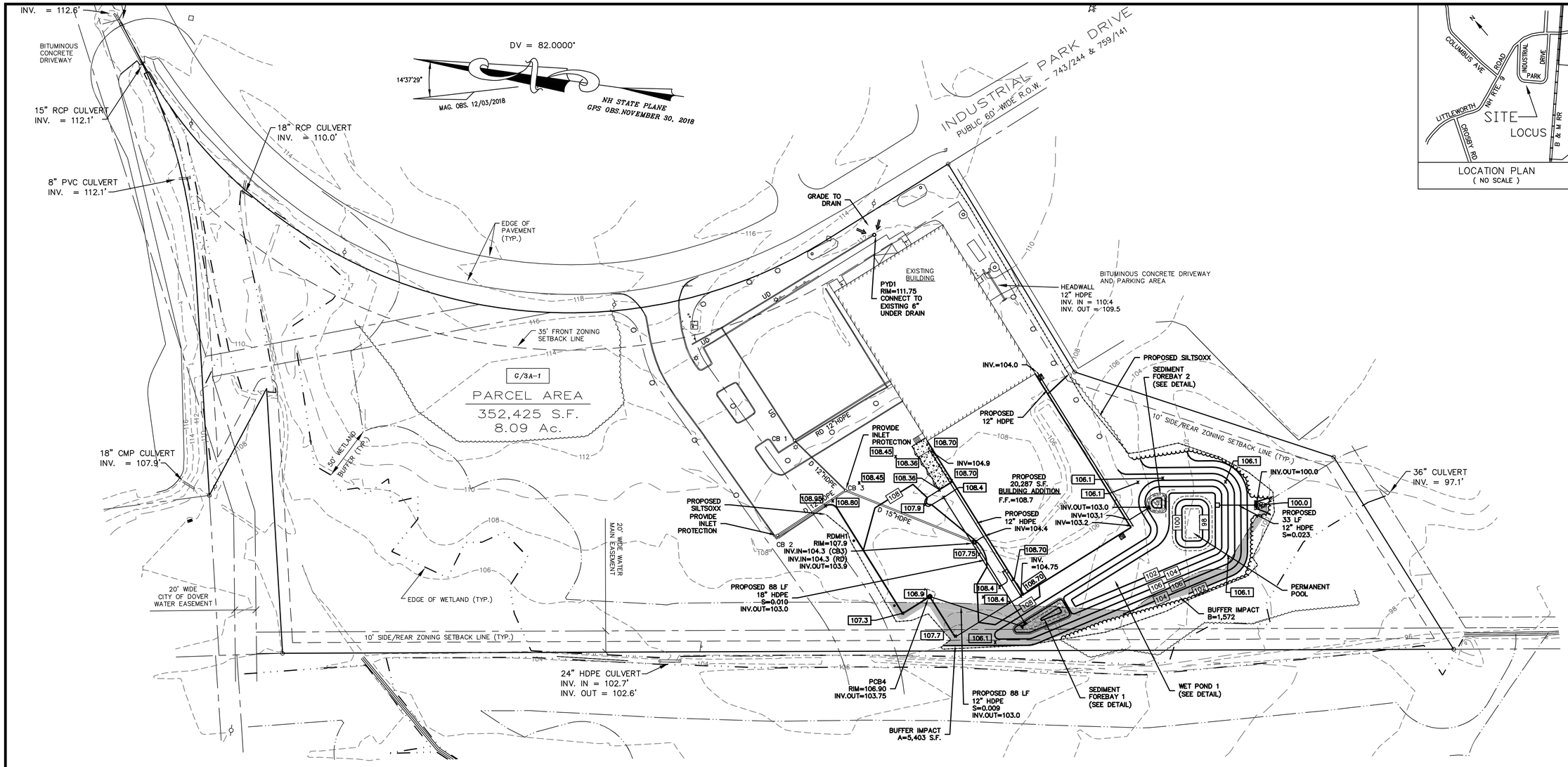
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RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

BUILDING ADDITION
WHITE BIRCH ARMORY
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

SITE PLAN

6



LOCATION PLAN
(NO SCALE)

DRAINAGE STRUCTURE SCHEDULE

CB 1
RIM = 110.35
INV. IN 12" PVC = 106.3 BUILDING
INV. OUT 12" HDPE = 106.2 CB 3
SUMP = 103.35

CB 2
RIM = 109.51
INV. OUT = 105.7 CB3
SUMP = 102.8

CB 3
RIM = 108.50
INV. IN = 105.0 CB 2
INV. IN = 105.2 CB 1
INV. OUT = 104.9 FES 1
SUMP = 101.6

OS 1 (TO BE REMOVED)
INV. IN = 103.4 POND
INV. IN = 104.7 POND
INV. IN = 105.6 POND
INV. OUT = 102.8 FES

ATTENTION:

⚠ HIGH PRESSURE GAS MAIN EXISTS WITHIN THE RIGHT OF WAY OF INDUSTRIAL PARK ROAD; PRIOR TO ANY EARTH MOVING ACTIVITY CONTACT DIGSAFE AT 1-888-344-7233 TO VERIFY LOCATION.

GRAPHIC SCALE

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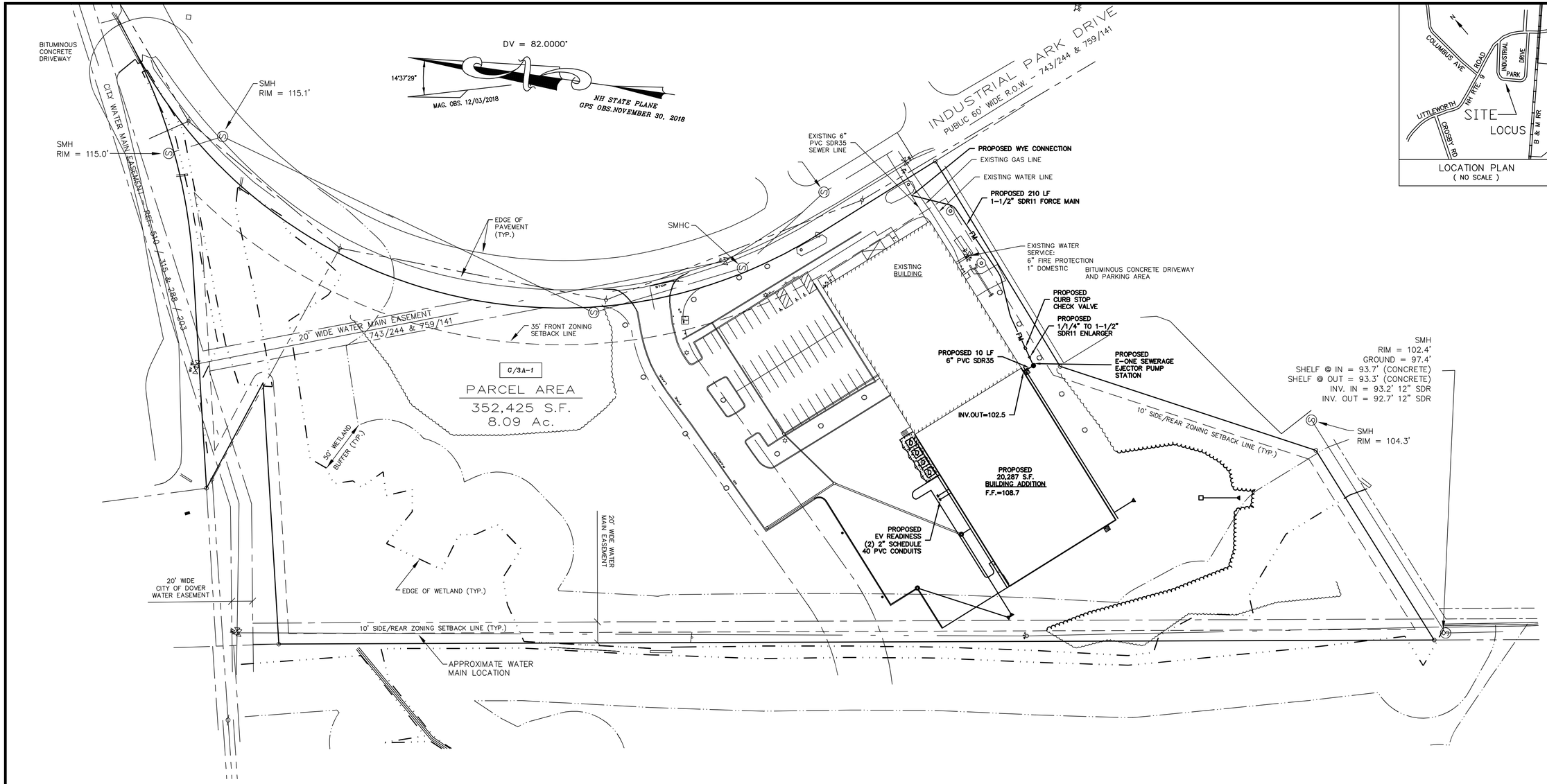
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CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
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GRADING, DRAINAGE & EROSION CONTROL PLAN

BUILDING ADDITION
WHITE BIRCH ARMORY
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820



SANITARY SEWER
STRUCTURE SCHEDULE

SMH C
RIM = 114.6
INV. IN 8" PVC = 108.1 SMH B
INV. OUT 8" PVC = 108.0 SMH D

SMH D
RIM = 115.0
INV. IN 8" PVC = 107.5 SMH C
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ATTENTION:

HIGH PRESSURE GAS MAIN EXISTS WITHIN THE RIGHT OF WAY OF INDUSTRIAL PARK ROAD; PRIOR TO ANY EARTH MOVING ACTIVITY CONTACT DIGSAFE AT 1-888-344-7233 TO VERIFY LOCATION.

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CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
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UTILITY PLAN

RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

BUILDING ADDITION
WHITE BIRCH ARMORY
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

8

DESCRIPTION

1. THE PURPOSE OF THIS PLAN IS TO SHOW SITE IMPROVEMENTS ASSOCIATED WITH THE CONSTRUCTION OF A 20,287 SF ADDITION. THE SITE IMPROVEMENTS INCLUDE LIGHTING, SIGNAGE, UTILITIES, ACCESS, PARKING, GRADING, AND STORMWATER MITIGATION.

PROJECT NAME AND LOCATION

WHITE BIRCH ARMORY — LATITUDE N43° 11' 10"
80 INDUSTRIAL PARK DRIVE — LONGITUDE W70° 54' 24"
DOVER, NH

DISTURBED AREA

±65,000 S.F.

NOTES:

1. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY TIME BEFORE DISTURBED AREAS ARE STABILIZED.
2. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.

SEQUENCE OF MAJOR ACTIVITIES

1. CONTRACTOR SHALL PREPARE THE SWPPP, FILE FOR AND OBTAIN THE NOI A MINIMUM OF 2 WEEKS PRIOR TO COMMENCEMENT OF SITE WORK.
2. PLACE TEMPORARY EROSION AND SEDIMENT CONTROL BMP'S PRIOR TO EARTH MOVING ACTIVITIES.
3. ALL EROSION CONTROL AND PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO COMMENCING EARTH MOVING OPERATIONS.
4. SELECTIVE DEMOLITION.
5. REGRADE SITE TO SUBGRADE.
6. TEMPORARY WATER DIVERSION (SWALES, BASINS) MUST BE USED AS NECCESSARY UNTIL AREAS ARE STABILIZED.
7. SWALES AND PONDS (AS APPLICABLE) SHALL BE CONSTRUCTED EARLY ON IN THE CONSTRUCTION SEQUENCE AND BEFORE ROUGH GRADING OF THE SITE AND ALL DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
8. INSTALL DRAINAGE STRUCTURES AND CONTROLS.
9. INSTALL FOUNDATION FOOTINGS AND WALLS.
10. INSTALL UTILITIES.
11. PLACE GRAVELS AND FINE GRADE.
12. STABILIZE ROADWAYS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
13. ALL CUT AND FILL SLOPES SHALL BE LOAMED AND SEEDED (AS APPLICABLE) WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.
14. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EVERY 1/2" OF RAINFALL.
15. IN ALL CASES THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION AND IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
16. WHEN ALL SITE WORK IS COMPLETE AND ALL DISTURBED AREAS ARE STABILIZED REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND FILE THE EPA – N.O.T.

DEFINITIONS

AN AREA SHALL BE CONSIDERED STABLE OF ONE OF THE FOLLOWING HAS OCCURRED.

1. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED
2. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED
3. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP-RAP HAS BEEN INSTALLED; OR
4. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED

INSTALLATION, MAINTENANCE, AND INSPECTION PROCEDURES OF EROSION AND SEDIMENT CONTROLS

A. SILT BARRIER

1. INSTALLATION
   a. USE SILT BARRIER AS PERIMETER CONTROLS, PARTICULARLY AT THE LOWER OR DOWN SLOPE EDGE OF A DISTURBED AREA.
   b. LEAVE SPACE FOR MAINTENANCE BETWEEN TOE AND SLOPE OF SILT BARRIER.
   c. TRENCH IN THE SILT BARRIER ON THE UPHILL SIDE (6 INCHES DEEP BY 6 INCHES WIDE).
   d. INSTALL STAKES ON THE DOWNHILL SIDE OF THE SILT BARRIER.
   e. CURVE THE END OF THE SILT BARRIER UP-GRADIENT TO HELP IT CONTAIN RUNOFF.
2. SEQUENCE OF INSTALLATION
   a. SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM.
3. MAINTENANCE
   a. SILT BARRIERS SHOULD BE INSPECTED AND MAINTAINED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
   b. SILT BARRIERS HAVE A USEFUL LIFE OF ONE SEASON, ON LONGER CONSTRUCTION PROJECTS, SILT BARRIERS SHOULD BE REPLACED PERIODICALLY TO MAINTAIN EFFECTIVENESS.
   c. REMOVE SEDIMENT WHEN IT REACHES ONE-THIRD (1/3) THE HEIGHT OF THE SILT BARRIER.
   d. REPLACE THE SILT BARRIERS WHERE THEY ARE TORN, WORN, OR OTHERWISED DAMAGED AND MONITOR PERFORMANCE TO ENSURE EFFECTIVE PERFORMANCE.
   e. RETRENCH OR REPLACE ANY SILT BARRIER THAT IS NOT PROPERLY ANCHORED TO THE GROUND.
   f. IF THERE IS EVIDENCE OF END FLOW ON PROPERLY INSTALLED BARRIERS, EXTEND BARRIERS UPHILL OR CONSIDER REPLACING THEM WITH OTHER MEASURES, SUCH AS TEMPORARY DIVERSIONS AND SEDIMENT TRAPS.
   g. SILT BARRIERS SHOULD BE REPAIRED IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SILT BARRIERS SHOULD BE REPLACED WITH A TEMPORARY CHECK DAM.

B. MULCHING

1. TIMING
   a. APPLY MULCH PRIOR TO ANY STORM EVENT. IT WILL BE NECESSARY TO CLOSELY MONITOR WEATHER PREDICTIONS TO HAVE ADEQUATE WARNING OF SIGNIFICANT STORMS.
   b. IN OTHER AREAS, THE TIME PERIOD CAN RANGE FROM 14 TO 30 DAYS OF INACTIVITY ON A AREA. THE LENGTH OF TIME VARYING WITH SITE CONDITIONS. PROFESSIONAL JUDGEMENT SHALL BE USED TO EVALUATE THE INTERACTION OF SITE CONDITIONS (SOIL ERODIBILITY, SEASON OF YEAR, EXTENT OF DISTURBANCE, PROXIMITY TO SENSITIVE RESOURCES, ETC.) AND THE POTENTIAL IMPACT OF EROSION ON ADJACENT AREAS TO CHOOSE AN APPROPRIATE TIME RESTRICTION.
   c. WITHIN 100 FEET OF RIVERS, STREAMS, WETLANDS, AND IN LAKE AND POND WATERSHEDS, THE TIME PERIOD OF WHICH MULCHING SHOULD TAKE OCCUR SHOULD BE NO GREATER THAN SEVEN (7) DAYS. THIS SEVEN DAY LIMIT SHOULD BE REDUCED FURTHER DURING WET WEATHER PERIODS.
2. APPLICATION RATE
   a. MULCH SHALL BE APPLIED AT A RATE OF BETWEEN 1.5 TO 2 TONS PER ACRE, OR 70 TO 90 POUNDS PER 1000 SQUARE FEET.
   b. GUIDELINES FOR WINTER MULCH APPLICATION. WHEN MULCH IS APPLIED TO PROVIDE PROTECTION OVER WINTER (PAST THE GROWING SEASON) IT SHALL BE AT A RATE OF 150-200 POUNDS OF HAY OR STRAW PER ACRE WITH ABOUT 4 INCHES IN DEPTH. A TACKIFIER MAY BE ADDED TO THE MULCH.
3. MAINTENANCE
   a. ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS. CHECK FOR SIGNS OF EROSION OR DISPLACEMENT OF THE MULCH. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED.
   b. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE AND SHOULD BE REPAIRED AS NECCESSARY.
   c. INSPECTIONS SHOULD TAKE PLACE UNTIL THE SITE IS ESTABLISHED.
   d. EROSION CONTROL MIX MULCH USED FOR TEMPORARY STABILIZATION SHOULD BE LEFT IN PLACE. VEGETATION ADDS STABILITY AND SHOULD BE PROMOTED.

C. TEMPORARY SEEDING

1. SEEDBED PREPARATION
   a. STONES AND TRASH SHOULD BE REMOVED SO AS NOT TO INTERFERE WITH THE SEEDING AREA.
   b. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED.
   c. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS.
      i) APPLY FERTILIZER AT A RATE OF 600 POUNDS PER ACRE OR 13.8 POUNDS PER 1,000 SQUARE FEET OF LOW PHOSPHATE FERTILIZER OR EQUIVALENT.
      ii) APPLY LIMESTONE AT A RATE OF 3 TONS PER ACRE OR 138 POUNDS PER 1,000 SQUARE FEET.
2. SEEDING
   a. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SUMMARY INCLUDING SEED AND FERTILIZER) WITH A SEEDING DEPTH FROM A QUARTER (1/4) TO A HALF (1/2) INCH.
   b. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
   c. TEMPORARY SEEDING BETWEEN MAY 15TH AND AUGUST 15TH SHOULD BE COVERED WITH HAY OR STRAW MULCH, ACCORDING TO THE "TEMPORARY AND PERMANENT MULCHING" PRACTICE.
   d. VEGETATED GROWTH COVERING 85% OF THE DISTURBED AREA SHOULD BE ACHIEVED PRIOR TO OCTOBER 15TH.
3. MAINTENANCE
   a. TEMPORARY SEEDING SHALL BE INSPECTED PERIODICALLY. AT A MINIMUM, 85% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES USED IN THE INTERIM (MULCH, FILTER FABRICS, CHECK DAMS, ETC.).

D. PERMANENT SEEDING

1. BEDDING – STONES LARGER THAN 2 INCHES, TRASH, ROOTS, AND OTHER DEBRIS INTERFERRING WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA SHOULD BE REMOVED. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF 4" TO PREPARE A SEEDBED AND MIX FERTILIZER INTO THE SOIL.
2. FERTILIZER
   a. LIME AND FERTILIZER SHOULD BE WORKED INTO THE SOIL TO A DEPTH OF 4 INCHES USING A DISC, SPRING TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT PRIOR TO OR AT THE SAME TIME OF SEEDING.
   b. FERTILIZER SHOULD BE RESTRICTED TO A LOW PHOSPHATE, SLOW RELEASE NITORGEN FERTILIZER WHEN APPLIED TO AREAS BETWEEN 25 FEET AND 250 FEET FROM A SURFACE WATER BODY. NO FERTILIZER EXCEPT LIMESTONE SHOULD BE APPLIED WITHIN 25 FEET OF THE SURFACE WATER.
   c. 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 @ 138 LBS. PER 1,000 S.F.
      LOW PHOSPHATE (N-P205-K20) FERTILIZER @ 13.8 LBS. PER 1,000 S.F.
3. SEED MIXTURE (RECOMMENDED)
   RATE:

TYPE	LBS. PER ACRE	LBS. PER 1,000 S.F.
TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
BIRDSFOOT TREFOIL	8	0.20
TOTAL	48	1.10

4. SEEDING
   a. SPRING SEEDING USUALLY GIVES THE BEST RESULTS FOR ALL SEED MIXES OR WITH LEGUMES. PERMANENT SEEDING SHOULD BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST.
   b. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER TYPE SEEDER OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER) WITH A SEEDING DEPTH FROM A QUARTER (1/4) TO A HALF (1/2) INCH.
   c. VEGETATED GROWTH COVERING AT LEAST 85% OF THE DISTURBED SHOULD BE ACHIEVED PRIOR TO OCTOBER 15TH. IF THIS CONDITION IS NOT ACHIEVED, IMPLEMENT TEMPORARY STABILIZATION MEASURES FOR OVERWINTER PROTECTION.
5. HYDROSEEDING
   a. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. THE USE OF STRAW MULCH ON CRITICAL AREAS IS PREFERRED SINCE IT GRANTS BETTER SLOPE PROTECTION BY USING ADHESIVE MATERIALS.
   b. SLOPES MUST BE NO STEEPER THAN 2 TO 1 (2 FEET HORIZONTALLY TO 1 FOOT VERTICALLY).
   c. SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.
6. MAINTENANCE
   a. PERMANENT SEEDED AREAS SHOULD BE INSPECTED AT LEAST MONTHLY DURING THE COURSE OF CONSTRUCTION. INSPECTIONS, MAINTENANCE, AND CORRECTIVE ACTIONS SHOULD CONTINUE UNTIL THE OWNER ASSUMES PERMANENT OPERATION OF THE SITE.
   b. SEEDED AREAS SHOULD BE MOWED AS REQUIRED TO MAINTAIN A HEALTHY STAND OF VEGETATION, WITH MOWING HEIGHT AND FREQUENCY DEPENDENT ON TYPE OF GRASS COVER.
   c. BASED ON INSPECTION, AREAS SHOULD BE RESEEDED TO ACHIEVE FULL STABALIZATION OF EXPOSED SOILS.
   d. IF EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHOULD BE MADE AND AREAS RESEEDED. WITH OTHER TEMPORARY MEASURES USED TO PROVIDE EROSION PROTECTION DURING THE PERIOD OF VEGETATION ESTABLISHMENT.
   e. AT A MINIMUM, 85% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION.

E. STORM DRAIN INLET PROTECTION

1. SPECIFICATIONS
   a. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE BARRIER SHOULD BE LESS THAN ONE ACRE.
   b. ANY RESULTANT PONDING OF STORMWATER MUST NOT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT AREAS OR STRUCTURES.
2. INSTALLATION
   a. INSTALL INLET PROTECTION AS SOON AS STORM DRAIN INLETS ARE INSTALLED AND BEFORE LAND-DISTURBANCE ACTIVITIES BEGIN IN AREAS WITH EXISTING STORM DRAIN SYSTEMS.
   b. PROTECT ALL INLETS THAT COULD RECEIVE STORMWATER FROM YOUR CONSTRUCTION PROJECT.
   c. USE IN CONJUNCTION WITH OTHER EROSION PREVENTION AND SEDIMENT CONTROL BMPS.
   d. DESIGN YOUR INLET PROTECTION TO HANDLE THE VOLUME OF WATER FROM THE AREA BEING DRAINED. ENSURE THAT THE DESIGN IS SIZED APPROPRIATELY.
3. MAINTENANCE
   a. INSPECT INLETS BARRIERS FREQUENTLY, BEFORE AND AFTER EACH RAINFALL EVENT AND REPAIR WHEN NECESSARY.
   b. SEDIMENT SHOULD BE REMOVED AND THE STORM DRAIN SEDIMENT BARRIER RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE BARRIER.
   c. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
   d. SWEEP STREETS, SIDEWALKS, AND OTHER PAVED AREAS REGULARLY.
   e. ALL CATCH BASINS AND STORM DRAIN INLETS MUST BE CLEANED AT THE END OF CONSTRUCTION AND AFTER THE SITE HAS BEEN FULLY STABILIZED

TIMING OF CONTROLS/MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES THE SILT BARRIERS SHALL BE INSTALLED PRIOR TO COMMENCING ANY CLEARING OR GRADING OF THE SITE. STRUCTURAL CONTROLS SHALL BE INSTALLED CONCURRENTLY WITH THE APPLICABLE ACTIVITY. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN TWENTY ONE (21) DAYS WILL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN FOURTEEN (14) DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, SILT FENCES AND ANY EARTH/DIKES WILL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED. ALL AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISH GRADE.

WASTE DISPOSAL

a. WASTE MATERIALS
   ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN A DUMPSTER. NO CONSTRUCTION WASTE MATERIALS WILL BE BURIED ON SITE. ALL PERSONEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
b. HAZARDOUS WASTE
   ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
c. SANITARY WASTE
   ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

MAINTENANCE OF STORMWATER MANAGEMENT FACILITIES

THE PROJECT PROPONENT IS RESPONSIBLE FOR THE MAINTENANCE OF ALL STORMWATER FACILITIES DURING CONSTRUCTION AND THE PORPERTY OWNER IS RESPONSIBLE AFTER CONSTRUCTION IS COMPLETE.

CATCH BASINS & STORMWATER TREATMENT STRUCTURES

1. CATCH BASINS & STORMWATER TREATMENT STRUCTURES SHOULD BE INSPECTED ON A MONTHLY BASIS AND/OR AFTER A MAJOR RAINFALL EVENT TO ASSURE THAT DEBRIS OR SEDIMENTS DO NOT REDUCE THE EFFECTIVENESS OF THE SYSTEM.

SPILL PREVENTION

A. MATERIAL MANAGEMENT PRACTICES
   THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL SANITARY EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:
   GOOD HOUSEKEEPING:
   THE FOLLOWING GOOD HOUSEKEEPING PRACTICES THAT WILL BE FOLLOWED ON SITE DURING
   1. THE CONSTRUCTION PROJECT:
      a. AN EFFORT WILL BE MADE TO STORE ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB.
      b. ALL MATERIALS STORED ON SITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
      c. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
      d. THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.
      e. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
      f. WHENEVER POSSIBLE ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
   2. HAZARDOUS PRODUCTS:
      a. THE FOLLOWING PRACTICES WILL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
      b. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
      c. ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION.
      d. SURPLUS PRODUCT THAT MUST BE DISPOSED OF WILL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.

B. PRODUCT SPECIFICATION PRACTICES
   THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON SITE:
   1. PETROLEUM PRODUCTS:
      a. ALL ON SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENACE TO REDUCE LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
   2. FERTILIZERS:
      a. FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER. STORAGE WILL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
   3. PAINTS:
      a. ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE DISPOSED OF PROPERLY ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
   4. CONCRETE TRUCKS:
      a. CONCRETE TRUCKS WILL DISCHARGE AND WASH OUT SURPLUS CONCRETE OR DRUM WASH WATER IN A CONTAINED AREA ON SITE.

C. SPILL CONTROL PRACTICES
   IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
   a. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
   b. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
   c. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
   d. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
   e. SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OF LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.
   f. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM RECURRING AND HOW TO CLEANUP THE SPILL IF IT OCCURS. A DESCRIPTION OF THE SPILL, ITS CAUSE, AND THE CLEANUP MEASURES WILL BE INCLUDED.
   g. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.

THE PROJECT PROPONENT IS REQUIRED TO MANAGE CONSTRUCTION TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO CONTROLLING INVASIVE SPECIES AND CONTROLLING FUGITIVE DUST IN ACCORDANCE WITH ENV-A 1002.

AGR 3800 PROHIBITED INVASIVE PLANT SPECIES RULES

THE RULE, AGR 3800, STATES: "NO PERSON SHALL COLLECT, TRANSPORT, IMPORT, EXPORT, MOVE, BUY SELL, DISTRIBUTE, PROPAGATE OR TRANSPLANT ANY LIVING AND VIABLE PORTION OF ANY PLANT SPECIES, WHICH INCLUDED ALL OF THEIR CULTIVARS AND VARIETIES, LISTED IN TABLE 3800.1, NEW HAMPSHIRE PROHIBITED INVASIVE SPECIES LIST". A COMPLETE COPY OF THE RULES CAN BE ACCESSED ON THE INTERNET AT HTTP://AGRICULTURE.NH.GOV/TOPICS/PLANTS_INSECTS.HTM.

ENV-A 1002 FUGITIVE DUST: PRECAUTIONS TO PREVENT, ABATE, AND CONTROL FUGITIVE DUST.

a. ANY PERSON ENGAGED IN ANY ACTIVITY WITHIN THE STATE EMITS FUGITIVE DUST, OTHER THAT THOSE LISTED IN ENV-A 1002.02 (b), SHALL TAKE PRECAUTIONS THROUGHOUT THE DURATION OF THE ACTIVITY IN ORDER TO PREVENT, ABATE, AND CONTROL THE EMISSION OF FUGITIVE DUST.
b. PRECAUTIONS REQUIRED BY (a) ABOVE, SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
   i) THE USE OF WATER OR HYDROPHILIC MATERIAL ON OPERATIONS OR SURFACES, OR BOTH;
   ii) THE APPLICATION OF ASPHALT, WATER, OR HYDROPHILIC MATERIAL, OR TARPS OR OTHER SUCH COVERS TO MATERIAL STOCKPILES;
   iii) THE USE OF HOODS, FANS, FABRIC FILTERS, OR OTHER DEVICES TO ENCLOSE AND VENT AREAS WHERE MATERIALS PRONE TO PRODUCING FUGITIVE DUST ARE HANDLED;
   iv) THE USE OF CONTAINMENT METHODS FOR SANDBLASTING OR SIMILAR OPERATIONS; AND
   v) THE USE OF VACUUMS OR OTHER SUCTION DEVICES TO COLLECT AIRBORNE PARTICULATE MATTER.

WINTER CONSTRUCTION NOTES

1. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
3. AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3-INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 403.3.

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P22_

NO.	REVISION	APP'D	DATE

DATE: 8-15-22
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JPG
APPROVED BY: S.H
PROJECT NO: 19003
FILE: SITE-ADDITION

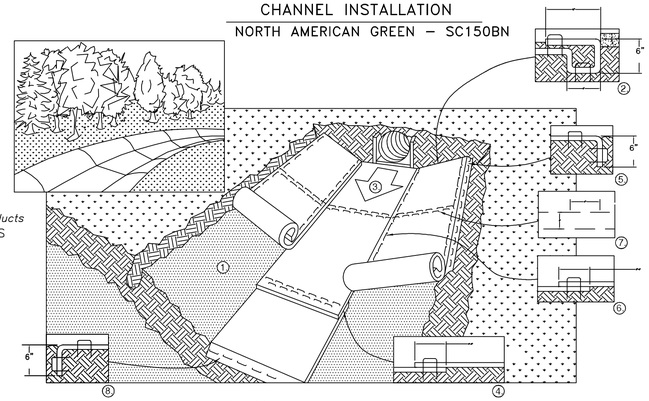
CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

BUILDING ADDITION
WHITE BIRCH ARMORY
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

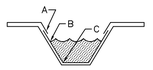
EROSION CONTROL NOTES

CHANNEL INSTALLATION
NORTH AMERICAN GREEN – SC150BN



NORTH AMERICAN GREEN
EROSION CONTROL *Products Guaranteed* SOLUTIONS

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP's IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" ACROSS THE WIDTH OF THE RECP's.
3. ROLL CENTER RECP's IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE RECP's END OVER END (SHINGLE STYLE) WITH A 4" – 6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE RECP's.
5. FULL LENGTH EDGE OF RECP's AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP's MUST BE OVERLAPPED APPROXIMATELY 2" – 5" (DEPENDING ON RECP's TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECP's MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. NOTE: * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.

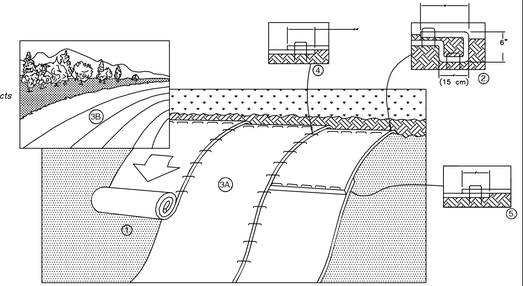


CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.

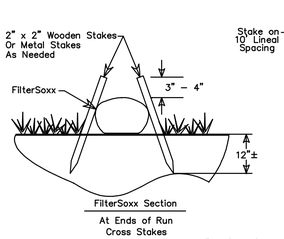
SLOPE INSTALLATION
NORTH AMERICAN GREEN – SC150BN

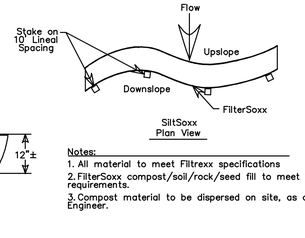


NORTH AMERICAN GREEN
EROSION CONTROL *Products Guaranteed* SOLUTIONS

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM® , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" – 5" (5 CM – 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH.
NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

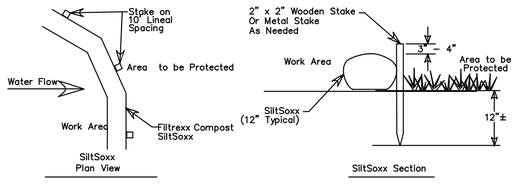
NOTE: THE USE OF WELDED PLASTIC OR BIODEGRADABLE PLASTIC NETTING OR THREAD IN EROSION CONTROL MATTING IS PROHIBITED. THE USE OF WILDLIFE FRIENDLY ORGANIC MATERIALS IS RECOMMENDED.





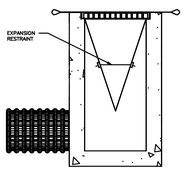
Notes:
1. All material to meet Filtrexx specifications
2. FilterSoxx compost/soil/rock/seed fill to meet application requirements.
3. Compost material to be dispersed on site, as determined by Engineer.

FilterSoxx Staking Details



Notes:
1. All material to meet Filtrexx specifications
2. SiltSoxx compost/soil/rock/seed fill to meet application requirements.
3. SiltSoxx depicted is for minimum slopes. Greater slopes may require larger socks per the Engineer.
4. Compost material to be dispersed on site, as determined by Engineer.

SiltSoxx Details
NOT TO SCALE



INSTALLATION DETAIL

SILTSACK®
SPECIFICATIONS

NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS AS SUPPLIED BY AM HARRIS OF PORTSMOUTH OR APPROVED EQUAL

REGULAR FLOW SILTSACK®
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

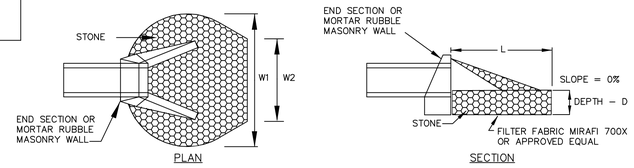
HI-FLOW SILTSACK®
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

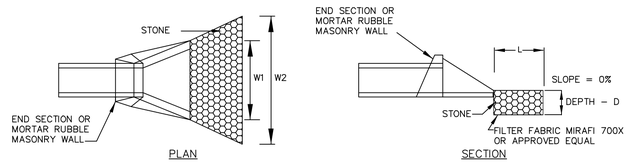
OIL-ABSORBANT SILTSACK®

(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)
DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK® CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK®, WITH A WOVEN PILLOW INSERT.

DETAIL OF INLET SEDIMENT CONTROL DEVICE
NOT TO SCALE



STONE APRON OUTLET PROTECTION DETAIL
OUTLET TO DEFINED CHANNEL



STONE APRON OUTLET PROTECTION DETAIL
OUTLET TO FLAT AREA, NON DEFINED CHANNEL

MAINTENANCE

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

STONE GRADATION

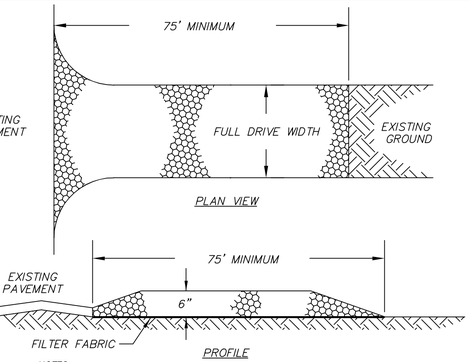
% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE
100	1.5 TO 2.0 D50
85	1.3 TO 1.8 D50
50	1.0 TO 1.5 D50
15	0.3 TO 0.5 D50

CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIPRAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIPRAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIPRAP. 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 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.

OUTLET FROM	W1(ft)	W2(ft)	L(ft)	D (ft)	D50(IN)	CHANNEL TYPE
WP1	9	3	18	1	6	DEFINED

RIP RAP OUTLET PROTECTION
NOT TO SCALE



NOTES:

1. *SEE EROSION CONTROL NOTES BELOW FOR MATERIAL, INSTALLATION AND MAINTENANCE REQUIREMENTS.*
2. *TO BE INSTALLED AT EACH POINT OF EGRESS FROM THE WORK AREA.*

STABILIZED CONSTRUCTION ENTRANCE

1. SPECIFICATIONS
   A. AGGREGATE SIZE: USE THREE (3) INCHES STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
   B. AGGREGATE THICKNESS: NOT LESS THAN SIX (6) INCHES.
   C. WIDTH TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS.
   D. LENGTH: AS REQUIRED, BUT NOT LESS THAN SEVENTY-FIVE (75) FEET. PIPING OF SURFACE WATER UNDER ENTRANCE SHALL BE PROVIDED AS REQUIRED.
   E. GEOTEXTILE: TO BE PLACED OVER THE ENTIRE AREA TO BE COVERED WITH AGGREGATE.
   F. CRITERIA FOR GEOTEXTILE: THE FABRICS SHALL BE TREVIA SPUNBOND 1135, MIRAFI 600X OR EQUAL.
2. MAINTENANCE
   THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

SEEKING REPORTS OF RARE TURTLES

The NH Fish & Game Department is collecting observations of four turtle species:



Blanding's turtle (state endangered)
- Large, dark/black domed shell with lighter speckles
- Distinct yellow throat/chin
- Aquatic but often moves on land



Wood turtle (special concern)
- Sculpted, pyramidal brownish shell
- Orange around neck and limbs
- River/stream turtle spending many months on land



Eastern box turtle (state endangered)
- Small terrestrial turtle with highly domed shell
- Irregular yellow or orange markings over brown/black base



Spotted turtle (state threatened)
- Small, mostly aquatic with black or dark brown with yellow spots.
- Fairly flat shell compared to Blanding's turtle

Report sightings to RAARP@wildlife.nh.gov or 603-271-2461 *Please report promptly, noting specific location and date – Photographs strongly encouraged*

ALL OUTSIDE CONSTRUCTION PERSONNEL SHALL RECEIVE TRAINING IN THE IDENTIFICATION OF RARE TURTLE SPECIES AND MADE AWARE OF THEIR PROTECTED STATUS.

THE USE OF WELDED PLASTIC OR 'BIODEGRADABLE PLASTIC' NETTING OR THREAD IN EROSION CONTROL MATTING IS PROHIBITED

THE USE OF EROSION CONTROL BERM, WHITE FILTREXX DEGRADABLE WOVEN SILT SOCK, OR 'WILDLIFE FRIENDLY' WOVEN ORGANIC MATERIAL (E.G. COCO OR JUTE MATTING SUCH AS NORTH AMERICAN GREEN SC150BN OR EQUIVALENT) ARE ACCEPTABLE FOR USE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P22_

NO.	REVISION	APP'D	DATE

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

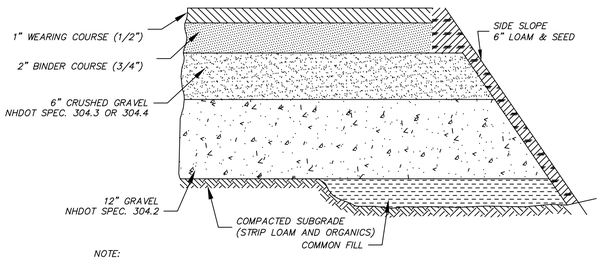
DATE: 8-15-22
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JPG
APPROVED BY:SJH
PROJECT NO:19003
FILE: SITE-ADDITION

EROSION CONTROL DETAILS

RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

BUILDING ADDITION
WHITE BIRCH ARMORY
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

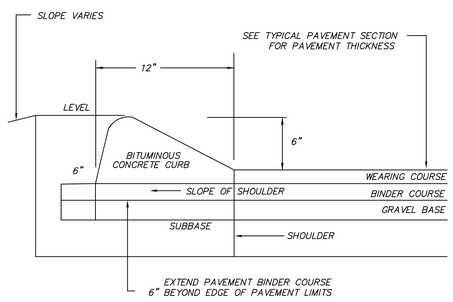
10



NOTE:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
3. GEOTEXTILE FABRIC MAYBE REQUIRED UNDER THE ROADWAY AND /OR THE PARKING AREAS AS REQUIRED BY THE ENGINEER BASED UPON SITE CONDITIONS.

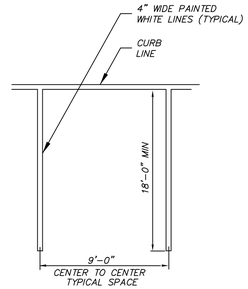
TYPICAL PAVEMENT SECTION

NOT TO SCALE



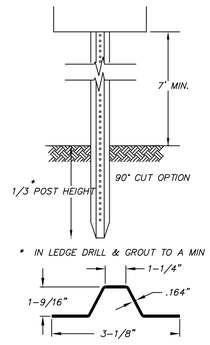
BITUMINOUS SLOPED CURB

NOT TO SCALE



STANDARD PARKING STALL

NOT TO SCALE

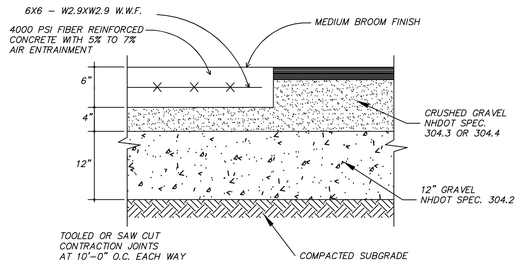


NOTE:
1. ALL SIGNS TO BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

LENGTH: AS REQUIRED
WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)
HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070 - 1080)
FINISH: SHALL BE PAINTED WITH TWO COATS OF AN APPROVED MEDIUM GREEN
BAKED ON OR AIR DRIED, PAINT OF WEATHER RESISTANT QUALITY.
ALL FABRICATION SHALL BE COMPLETE BEFORE PAINTING.

SIGN LEGEND & SIGN POST

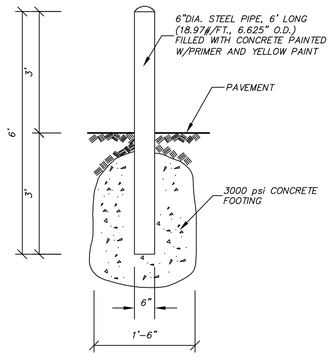
NOT TO SCALE



NOTE: PITCH CONCRETE PAD GRADING TO CENTER

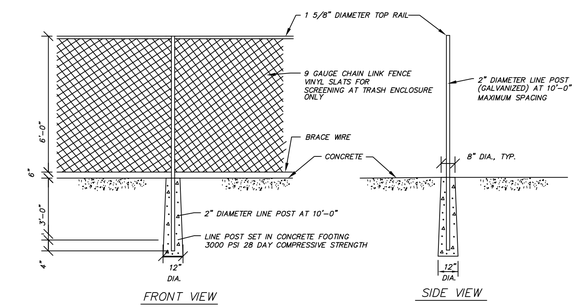
DUMPSTER PAD DETAIL

NOT TO SCALE



BOLLARD DETAIL

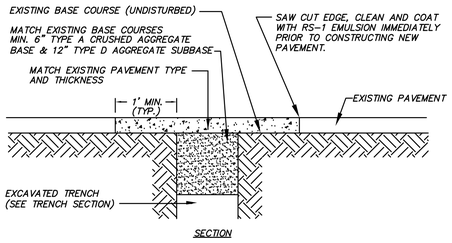
NOT TO SCALE



NOTES:
1. DUMPSTER CHAINLINK FENCE SHALL HAVE GREEN VINYL PRIVACY SLATS.

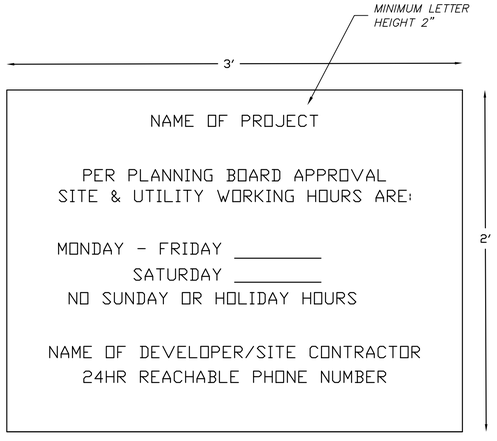
CHAINLINK FENCE DETAIL & DUMPSTER ENCLOSURE

NOT TO SCALE



ROADWAY TRENCH PATCH DETAIL

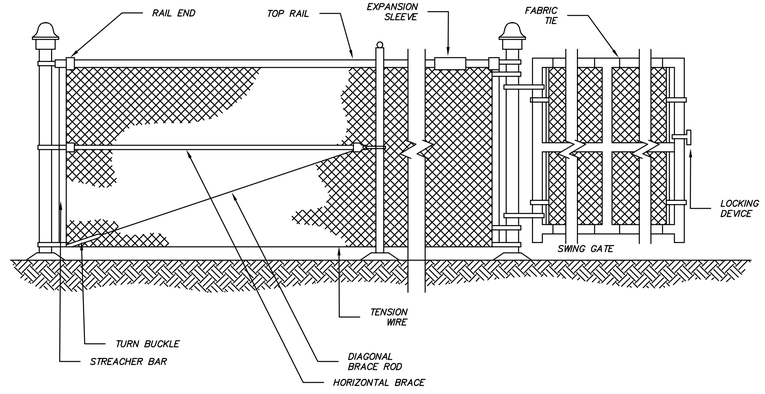
NOT TO SCALE



NOTES:
1. SIGN SHALL HAVE BLACK LETTERS ON A WHITE BACKGROUND
2. SIGN SHALL BE WEATHER RESISTANT AND SECURED TO THE GROUND

CITY OF DOVER CONSTRUCTION SIGN D-2

NOT TO SCALE



CHAINLINK FENCE WITH GATE

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P22-

NO.	REVISION	APP'D	DATE

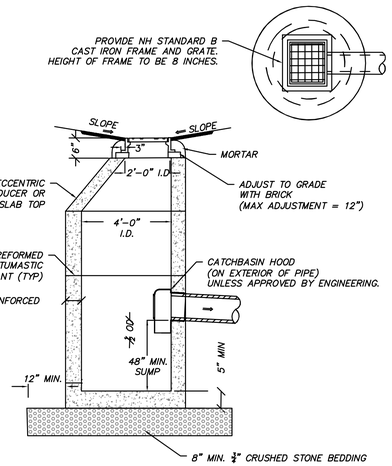
DATE: 8-15-22
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JPG
APPROVED BY:JH
PROJECT NO:19003
FILE: SITE-ADDITION

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
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DETAIL SHEET

RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
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BUILDING ADDITION
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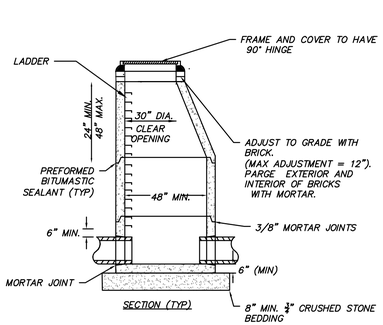


NOTES:

1. ENTIRE STRUCTURE SHALL BE H-20 LOAD RATED. PROVIDE MANUFACTURER REINFORCEMENT DETAILS TO THE CITY ENGINEER UPON REQUEST.

CITY OF DOVER D-19
CATCHBASIN DETAIL

NOT TO SCALE

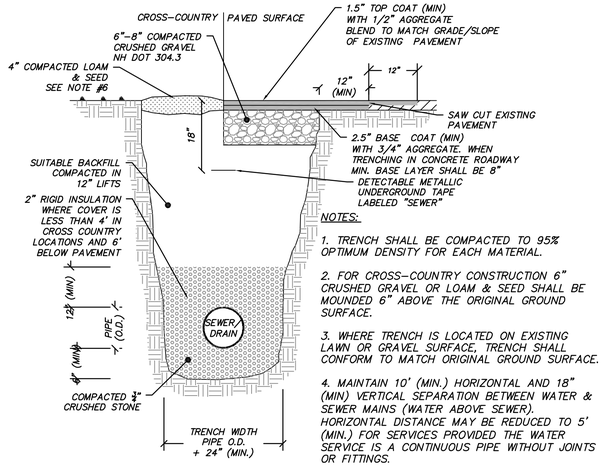


NOTES:

1. CORINGS TO BE SEPARATED BY 6" (MINIMUM) OF MONOLITHIC SECTION

CITY OF DOVER D-20
DRAIN MANHOLE DETAIL

NOT TO SCALE



NOTES:

1. TRENCH SHALL BE COMPACTED TO 95% OPTIMUM DENSITY FOR EACH MATERIAL.
2. FOR CROSS-COUNTRY CONSTRUCTION 6" CRUSHED GRAVEL OR LOAM & SEED SHALL BE MOUNDED 6" ABOVE THE ORIGINAL GROUND SURFACE.
3. WHERE TRENCH IS LOCATED ON EXISTING LAWN OR GRAVEL SURFACE, TRENCH SHALL CONFORM TO MATCH ORIGINAL GROUND SURFACE.
4. MAINTAIN 10' (MIN.) HORIZONTAL AND 18" (MIN) VERTICAL SEPARATION BETWEEN WATER & SEWER MAINS (WATER ABOVE SEWER). HORIZONTAL DISTANCE MAY BE REDUCED TO 5' (MIN.) FOR SERVICES PROVIDED THE WATER SERVICE IS A CONTINUOUS PIPE WITHOUT JOINTS OR FITTINGS.
5. BACKFILL MATERIAL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE; DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, MUCK, PEAT AND ROCKS OVER 6" IN LARGEST DIMENSION
6. LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.

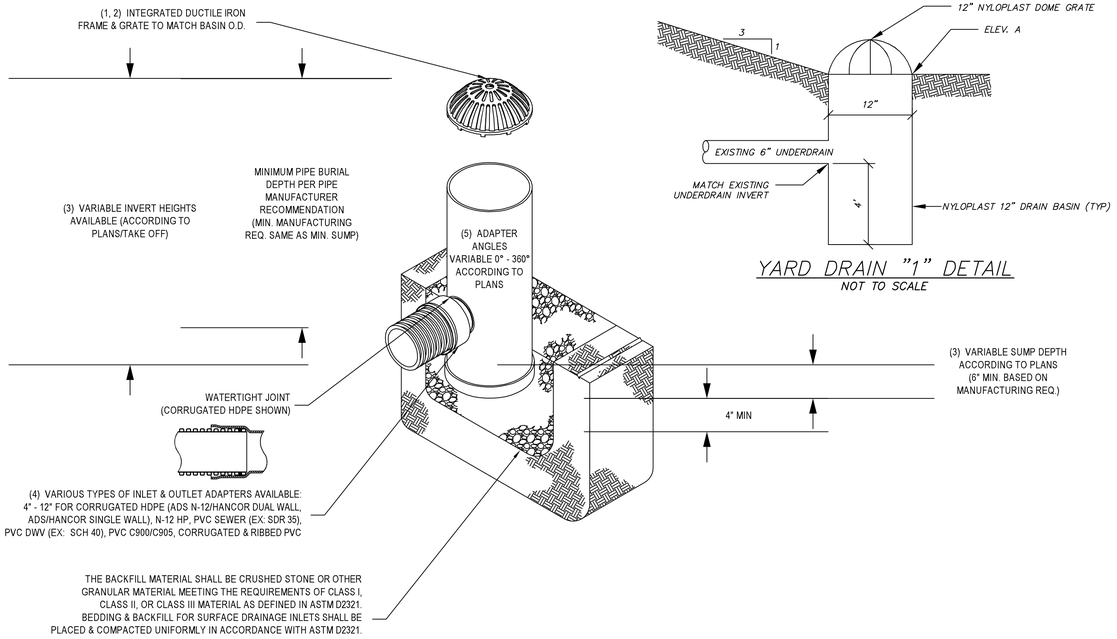
CITY OF DOVER D-3
SEWER TRENCH DETAIL

NOT TO SCALE

SPECIFICATIONS

1. ALL CONSTRUCTION SHALL CONFORM WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT), "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION"; HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS".
2. STORM DRAINS SHALL BE ADS N12 OR APPROVED EQUAL, AND SHALL BE JOINTED WITH NEOPRENE "O" RINGS.
3. CATCH BASINS AND MANHOLES SHALL BE PRE-CAST REINFORCED CONCRETE DESIGNED BY AN ENGINEER REGISTERED IN NEW HAMPSHIRE, AND ABLE TO WITHSTAND LOADINGS OF 8 TONS (H20 LOADING).
4. MANHOLES SHALL HAVE CAST IRON FRAMES AND COVERS WITH 30" INSIDE DIAMETER OPENINGS. A 3-INCH (MINIMUM) LETTER "D" FOR DRAIN SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
5. CATCH BASINS AND MANHOLES SHALL BE ADJUSTED TO GRADE WITH COURSES OF BRICK. MAXIMUM ADJUSTMENT TO GRADE SHALL BE 12 INCHES. FRAMES SHALL BE SET ON A FULL BED OF MORTAR, TRUE TO GRADE AND CONCENTRIC WITH THE MASONRY. ALL VOIDS BETWEEN THE TOP OF THE STRUCTURE AND THE BOTTOM FLANGE OF THE FRAME SHALL BE COMPLETELY FILLED TO MAKE A WATERTIGHT FIT. A RING OF MORTAR AT LEAST ONE INCH THICK AND PITCHED TO SHED WATER AWAY FROM THE FRAME, SHALL BE PLACED OVER AND AROUND THE OUTSIDE OF THE BOTTOM FLANGE. THE MORTAR SHALL EXTEND TO THE OUTER EDGE OF THE MASONRY ALL AROUND ITS CIRCUMFERENCE AND SHALL BE FINISHED SMOOTH. NO VISIBLE LEAKAGE WILL BE PERMITTED.
6. INVERT CHANNELS OF SEWER MANHOLES SHALL BE FORMED SMOOTHLY TO THE LARGEST PIPE RADIUS. CHANGES IN GRADE SHALL BE FORMED SMOOTHLY AND EVENLY. THE FLOOR OF THE STRUCTURE OUTSIDE THE CHANNELS SHALL BE SLOPED TOWARDS THE CHANNELS AT APPROXIMATELY 1/2 INCH PER FOOT. THE FLOOR AT THE CHANNEL SHALL MATCH THE CROWN OF THE LARGEST PIPE.
7. TRENCH CONSTRUCTION WILL CONFORM WITH SECTION 603.3.1 OF THE STANDARD SPECIFICATIONS (1974).
8. WOOD SHEETING OR A SUITABLE TRENCH BOX SHALL BE USED TO SUPPORT THE TRENCH AS NECESSARY. IF WOOD SHEETING IS USED, IT SHALL BE DRIVEN AT A DISTANCE OF 1 FOOT FROM THE OUTSIDE DIAMETER OF THE PIPE TO A DEPTH 6 INCHES BELOW THE INVERT OF THE PIPE. WOOD SHEETING SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE, BUT NOT GREATER THAN 3 FEET BELOW THE FINISHED GRADE.
9. BEDDING SHALL CONFORM WITH SECTION 603.3.2 OF THE STANDARD SPECIFICATIONS (1974).
10. BACKFILL MATERIAL WILL CONFORM WITH SECTION 603.3.5 OF THE STANDARD SPECIFICATIONS (1974) AND, IN ADDITION, SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, FROZEN MATERIAL, ALL ROCKS OVER 6 INCHES IN LARGEST DIMENSION, OR ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. BACKFILL SHALL NOT BE PLACED ON FROZEN OR PREVIOUSLY FROZEN MATERIAL.
11. ALL BACKFILL AND BEDDING COMPACTION SHALL MEET THE REQUIREMENTS OF AASHO T 99 METHOD C. DENSITY SHALL BE 95 PERCENT. COMPACTION SHALL BE 6 INCH LIFTS FOR BEDDING AND BACKFILL TO A PLANE 1 FOOT ABOVE THE PIPE AND IN 12 INCH LIFTS THEREAFTER BY AN APPROVED MECHANICAL COMPACTOR.
12. SHOULD FROZEN MATERIAL BE ENCOUNTERED, IT SHALL NOT BE PLACED IN THE BACKFILL NOR SHALL BACKFILL BE PLACED UPON FROZEN MATERIAL. PREVIOUSLY FROZEN MATERIAL SHALL BE REMOVED AS REQUIRED BEFORE NEW BACKFILL IS PLACED.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO FRAMES AND GRATES DURING AND FROM THE TIME OF REMOVAL FROM THE EXISTING STRUCTURE TO AND DURING THE TIME OF RESETTING, AND SHALL REPLACE IN KIND ANY DAMAGED FRAMES OR GRATES AT NO ADDITIONAL COMPENSATION.
14. ALL TRENCHES WILL BE COVERED AND DEBRIS, INCLUDING ANY REJECTED MATERIALS, SHALL BE REMOVED DAILY. STRICT SAFETY PRECAUTIONS SHALL BE MAINTAINED AT ALL TIMES.
15. LOCATION OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE.
    A) THE CONTRACTOR SHALL, 48 HOURS PRIOR TO CONSTRUCTION, NOTIFY THE UTILITY COMPANIES AND HAVE ALL UTILITIES IN THE VICINITY OF THE CONSTRUCTION MARKED IN THE FIELD.
    B) AFTER THE UTILITIES HAVE BEEN LOCATED AND PRIOR TO CONSTRUCTION, THE CONTRACTOR WITH THE ENGINEER, SHALL LAYOUT THE PROPOSED DRAINAGE SYSTEM IN THE FIELD AND RECTIFY ANY UTILITY CONFLICTS WHICH MAY BE FOUND.
    C) ANY CONFLICTS WITH UTILITIES FOUND DURING CONSTRUCTION BY THE CONTRACTOR SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE UTILITY COMPANY AND PROPERLY RECTIFIED.
    D) THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF REPAIR FOR ANY UTILITIES DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY TO REPAIR ANY DAMAGES, HOWEVER, THE CONTRACTOR MAY MAKE APPROPRIATE REPAIRS WITH THE UTILITY COMPANY'S PERMISSION.
16. COMPLETE SHOP DRAWINGS FOR PIPE, MANHOLES, CATCH BASINS, FRAMES, GRATES AND COVERS SHALL BE SUBMITTED IN TRIPLICATE FOR APPROVAL BY THE ENGINEER PRIOR TO THE START OF CONSTRUCTION. EACH SHOP DRAWING SHALL BE CHECKED AND INITIALIZED BY THE CONTRACTOR TO INDICATE APPROVAL BEFORE IT IS SUBMITTED TO THE ENGINEER.
17. SHOP DRAWINGS FOR FLAT CONCRETE COVERS SHALL BE STAMPED PRIOR TO SUBMISSION FOR APPROVAL BY A NEW HAMPSHIRE REGISTERED PROFESSIONAL ENGINEER.
18. BRICK MASONRY FOR SETTING FRAMES AND BRICK AND MORTAR PLUGS SHALL CONFORM TO THE STANDARD SPECIFICATION SECTION 604.2.4.

NYLOPLAST 12" DRAIN BASIN: 2812AG



YARD DRAIN "1" DETAIL

NOT TO SCALE

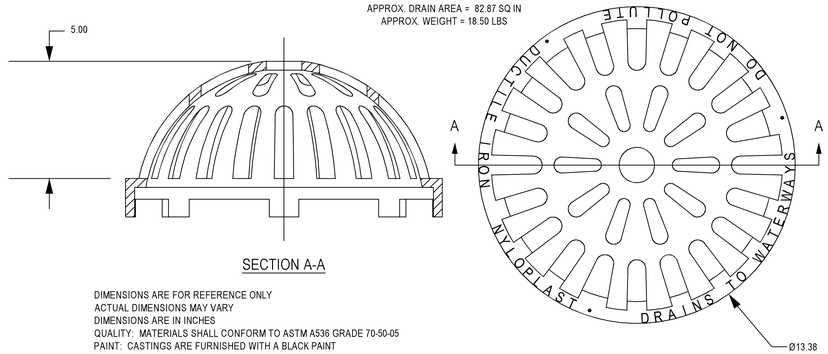
1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

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DRAWN BY EBC	MATERIAL	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 03-29-06			
REVISED BY NMH	PROJECT NO./NAME	TITLE	12 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL
DATE 03-11-16			
DWG SIZE A	SCALE NTS SHEET 1 OF 1	DWG NO. 7001-110-189	REV E

1299CGD

APPROX. DRAIN AREA = 82.87 SQ.IN
APPROX. WEIGHT = 18.50 LBS



DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST

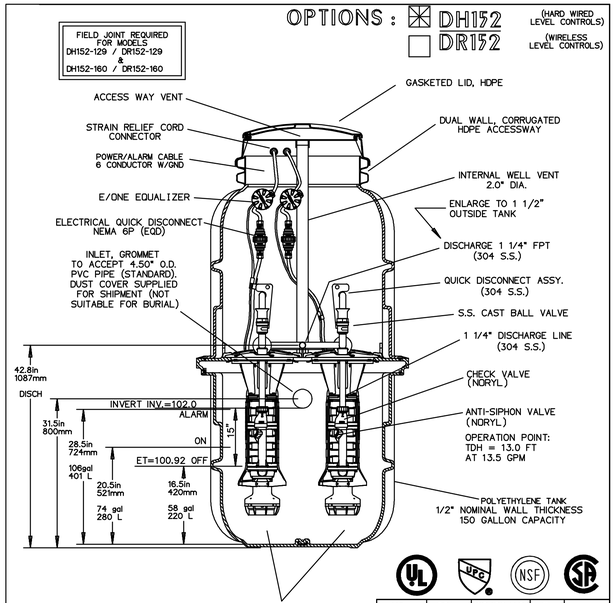
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DRAWN BY EBC	MATERIAL DUCTILE IRON	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 3-6-06			
REVISED BY EBC	PROJECT NO./NAME	TITLE	12 IN DOME GRATE
DATE 3-10-11			
DWG SIZE A	SCALE NTS SHEET 1 OF 1	DWG NO. 7001-110-206	REV D

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P22_

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443



KC	PD	09/30/19	F	
DR BY	CHK'D	DATE	ISSUE	SCALE

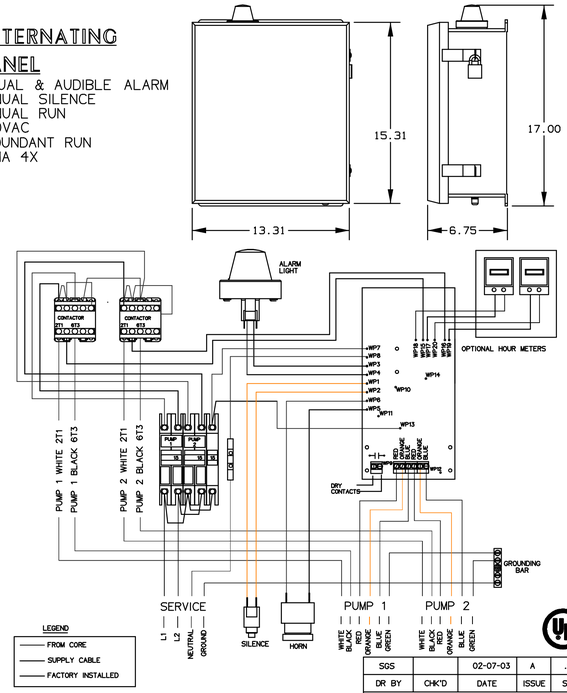
SEWER SYSTEMS

MODEL DH152 / DR152
DETAIL SHEET

NA0052P02

ALTERNATING PANEL

VISUAL & AUDIBLE ALARM
MANUAL SILENCE
MANUAL RUN
240VAC
REDUNDANT RUN
NEMA 4X

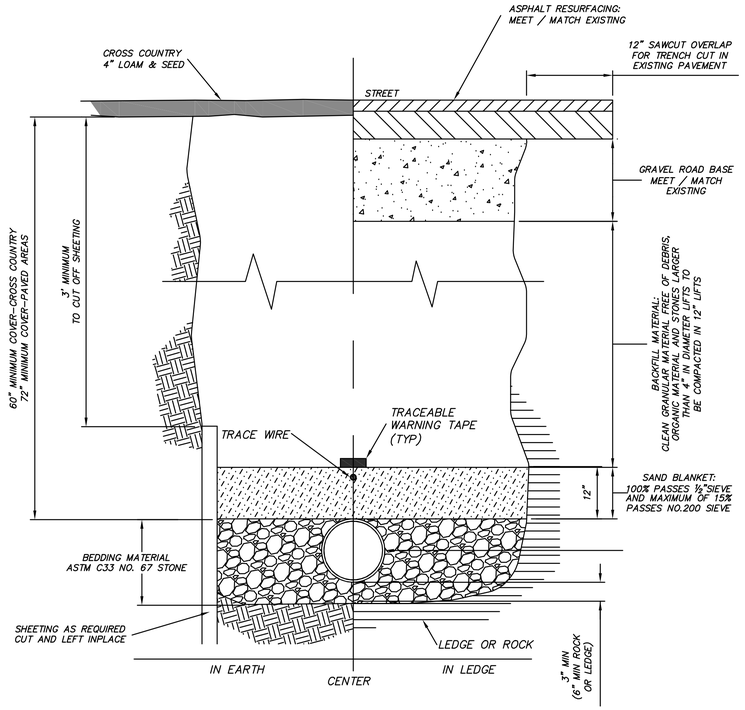


SGS		02-07-03	A	.156
DR BY	CHK'D	DATE	ISSUE	SCALE

SEWER SYSTEMS

DUPLEX
SPLIT TIME ALTERNATING PANEL

LM000270

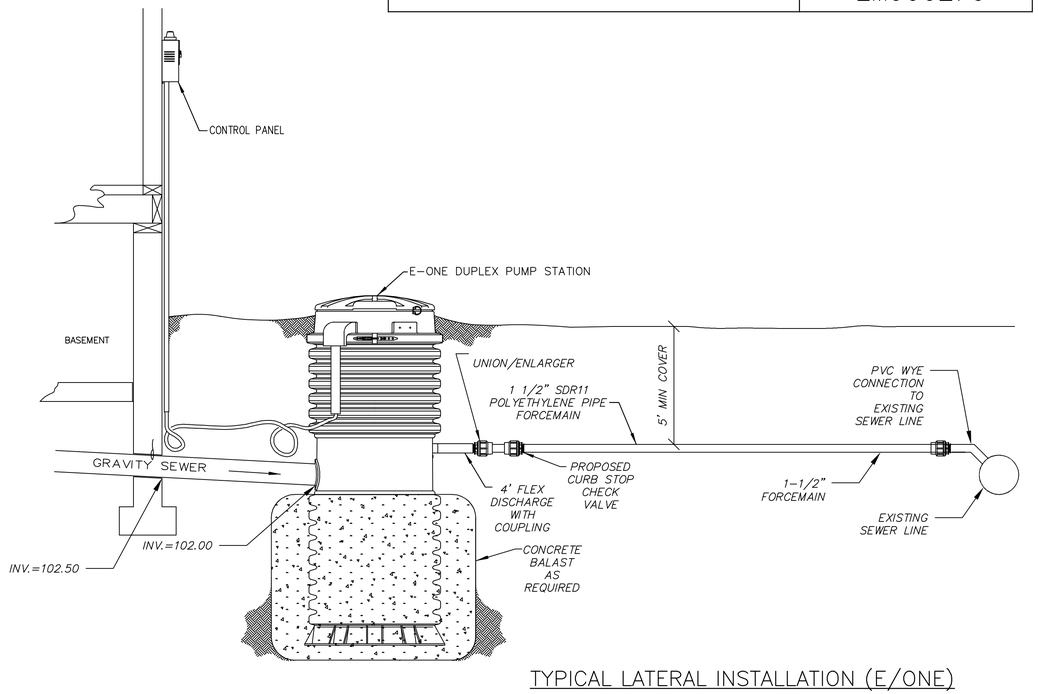


SEWER FORCEMAIN TRENCH

NOT TO SCALE

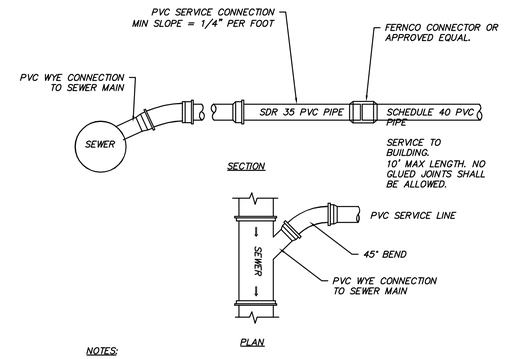
BURIED NON-METALLIC UTILITIES SHALL RECEIVE A TRACER WIRE.

1. *THE TRACER WIRE SHALL BE INSTALLED ON TOP OF THE BURIED UTILITY CROWN.*
2. *THE TRACER WIRE SHALL BE POSITIVELY ATTACHED TO THE NON-METALLIC BURIED UTILITIES BY PLASTIC WIRE TIES OF SIMILAR TYPE OF ATTACHMENT EVERY 6 FEET FOR STRAIGHT RUN OF UTILITY AND AT ALL CHANGES OF DIRECTION. TAPE SHALL BE POLYKEN "930-35," PROTECTO-WRAP "310", OR EQUAL.*
3. *THE ENDS OF THE TRACER WIRE SHALL BE EXPOSED ABOVE THE FINISHED GRADE.*
4. *INSTALL APPROVED CAST IRON VALVE BOXES AT ALL LOCATIONS WHERE THE ENDS OF THE TRACER WIRE ARE EXPOSED ABOVE THE FINISHED GRADE. THE BOXES SHALL NOT BE MORE THAN 200 FEET APART AND SHALL CONTAIN A 24" COIL OF WIRE FROM EACH END OF THE TRACER WIRE.*
5. *TRACER WIRE SHALL BE CONTINUOUS BETWEEN BOXES AND SHALL BE TESTED FOR CONTINUITY IN THE PRESENCE OF THE INSPECTOR.*
6. *TRACER WIRE SHALL BE NO. 10 AWG, COPPER WIRE WITH TW INSULATION (BLUE IN COLOR FOR USE WITH POTABLE WATER, GREEN FOR USE WITH SEWER). CONNECTORS SHALL BE DRY-CON TYPE CONNECTORS FOR SPECIFIED WIRE GAGE AND SUITABLE FOR USE WITH BURIED TRACER WIRE.*
7. *TRACER WIRE SHALL BE EXPOSED ABOVE FINISHED GRADE IN THE CAST IRON BOXES AT THE TRANSITION WHERE THE NON-METALLIC BURIED UTILITY CONNECTS TO THE EXISTING METALLIC UTILITY.*
8. *EXTEND WIRE INTO VALVE BOXES AND TERMINATE WITH A WIRE CONNECTOR. TERMINATE WIRE FROM LINES EXTENDING FROM MAINS TO FIRE RISERS OR BUILDING SERVICES 12" (300MM) ABOVE GRADE AND CAP WITH A WIRE CONNECTOR.*



TYPICAL LATERAL INSTALLATION (E/ONE)

NOT TO SCALE



NOTES:

1. *TRENCHING AND BEDDING REQUIREMENTS PER CITY SEWER TRENCH DETAIL (D-3).*
2. *SERVICE LATERAL DIAMETER VARIES PER APPLICATION. REVIEW SIZE WITH CITY ENGINEER PRIOR TO INSTALLATION.*
3. *SDR 35 SHALL NOT EXTEND INTO THE BUILDING*

CITY OF DOVER D-17
SEWER SERVICE DETAIL

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P22_

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE

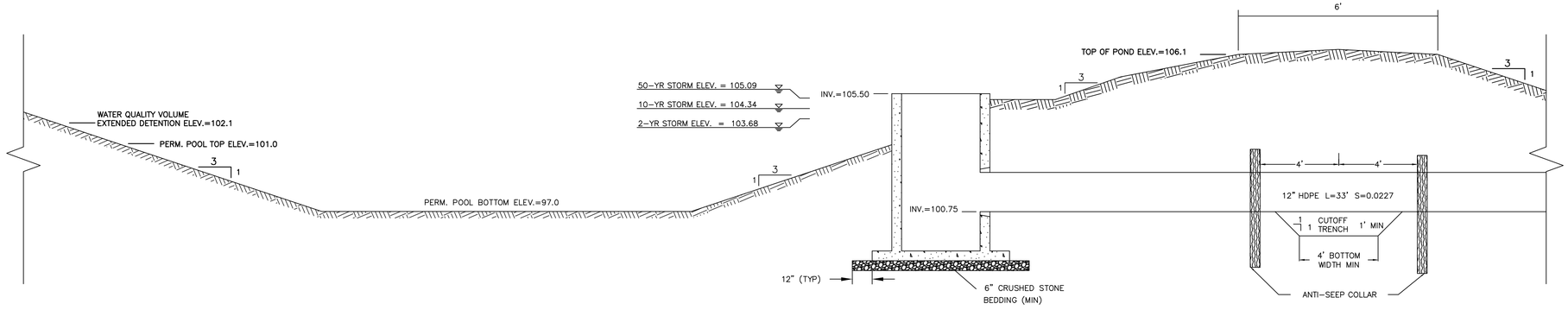
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DRAWN BY: SRD
DESIGN BY: JPG
APPROVED BY:S.H
PROJECT NO:19003
FILE: SITE-ADDITION

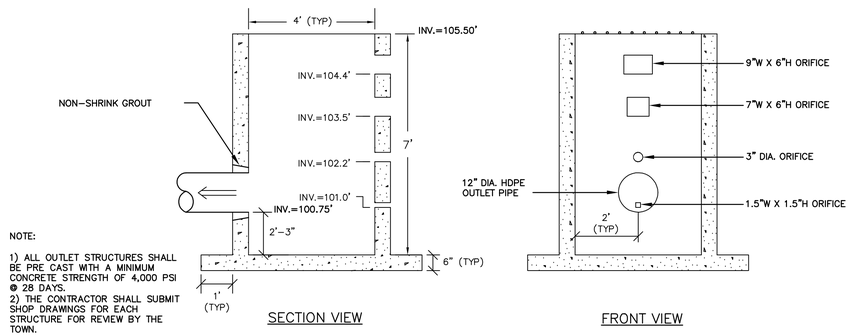
DETAIL SHEET

BUILDING ADDITION
WHITE BIRCH ARMORY
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

13





NOTE:

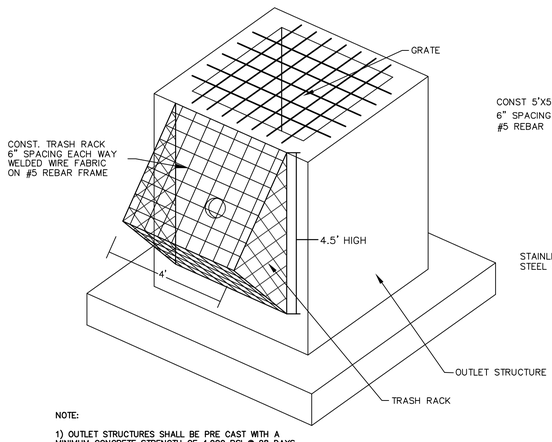
1) ALL OUTLET STRUCTURES SHALL BE PRE CAST WITH A MINIMUM CONCRETE STRENGTH OF 4,000 PSI @ 28 DAYS.
2) THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EACH STRUCTURE FOR REVIEW BY THE TOWN.

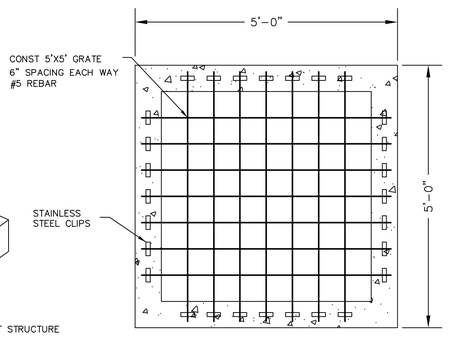
SECTION VIEW

FRONT VIEW

OUTLET STRUCTURE WET POND 1 (OS1) DETAIL

NOT TO SCALE





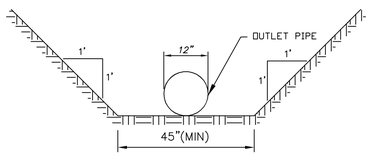
GRATE

NOTE:

1) OUTLET STRUCTURES SHALL BE PRE CAST WITH A MINIMUM CONCRETE STRENGTH OF 4,000 PSI @ 28 DAYS.
2) THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EACH STRUCTURE FOR REVIEW BY THE TOWN.

TYPICAL INLET TRASH RACKS

NOT TO SCALE



OUTLET PIPE TRENCH DETAIL

NOT TO SCALE

WET POND 1 (WP1)

NOT TO SCALE

DETENTION POND CONSTRUCTION NOTES

DETENTION AREA EARTH EMBANKMENT:
1 SEE GRADING PLAN FOR BERM WIDTHS.
2 SIDE SLOPES – THREE HORIZONTAL TO ONE VERTICAL (3:1) OR UNLESS OTHERWISE NOTED.
3 FILL MATERIALS SHALL BE FREE OF DETRIMENTAL AMOUNTS OF SOD, ROOTS, FROZEN SOIL, STONES MORE THAN 6 INCHES IN DIAMETER (EXCEPT FOR ROCK FILLS), AND OTHER OBJECTIONABLE MATERIAL.
4 FILL MATERIALS SHALL BE A MIXTURE OF STONES (NOT EXCEEDING 6" IN DIAMETER) AND A FINE SANDY SILT MATERIAL.
5 THE SOIL USED FOR THE SEDIMENT FOREBAY BERM SHALL HAVE A MINIMUM PERCOLATION RATE OF 10 MINUTES AN INCH.
6 SELECTED BACKFILL MATERIAL SHALL BE PLACED AROUND STRUCTURES, PIPE CONDUITS, AND ANTISEEP COLLARS AT ABOUT THE SAME RATE ON ALL SIDES TO PREVENT DAMAGE FROM UNEQUAL LOADING.

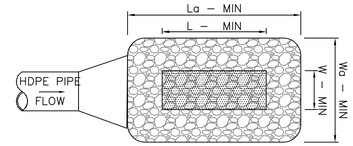
DETENTION AREA BERM BASE PREPARATION:
1 THE BASE AREA SHALL BE CLEARED OF TREES, LOGS, STUMPS, ROOTS, BRUSH, BOULDERS, SOD, AND RUBBISH. IF NEEDED TO ESTABLISH VEGETATION, THE TOPSOIL AND SOD SHALL BE STOCKPILED AND SPREAD ON THE COMPLETED BERM. THE BASE AREA SHALL BE THOROUGHLY SCARIFIED BEFORE PLACEMENT OF MATERIAL.
2 REMOVE ALL SOFT ORGANIC MATTER, PEAT, DEBRIS AND FOREIGN MATERIAL TO A DEPTH AS NEEDED (1' MIN) TO REACH AN UNYIELDING BASE OF VIRGIN SOIL.

EXECUTION:
1 FILL MATERIALS SHALL BE PLACED IN HORIZONTAL 12" (MAX.) LIFTS TO FULL WIDTHS AS SHOWN ON THE DESIGN PLAN.
2 FILL MATERIALS SHALL BE FRESHLY PLACED PRIOR TO COMPACTION.
3 ALL FILLS SHALL BE COMPACTED BY MECHANICAL VIBRATORY COMPACTION TO 95% PROCTOR DENSITY.
4 FILL SHALL BE CONSTRUCTED IN CONTINUOUS HORIZONTAL LAYERS EXCEPT WHERE OPENINGS OR SECTIONALIZED FILLS ARE REQUIRED. IN THOSE CASES, THE SLOPE OF THE BONDING SURFACES BETWEEN THE EMBANKMENT IN PLACE AND THE EMBANKMENT TO BE PLACED SHALL NOT BE STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL. PLACE THE MORE IMPERVIOUS SOIL (HIGHER PERCENTAGE PASSING THE #200 SIEVE) IN THE UPSTREAM TWO-THIRDS (2/3) OF THE BERM. THE MORE GRANULAR SOIL MATERIAL SHOULD BE PLACED IN THE REMAINING DOWNSTREAM ONE-THIRD PORTION OF THE BERM.
5 INSTALL ANTI-SEEP COLLARS CONCURRENTLY WITH FILL MATERIAL PLACEMENT.
6 INSTALL CUT-OFF TRENCH CONCURRENTLY WITH FILL MATERIAL PLACEMENT. THE CUT OFF TRENCH SHALL BE LOCATED AT OR SLIGHTLY UPSTREAM OF THE CENTER LINE OF THE BERM. IT SHALL EXTEND UP THE ABUTMENTS AS REQUIRED AND BE DEEP ENOUGH TO EXTEND INTO A RELATIVELY IMPERVIOUS LAYER.
7 THE CUTOFF TRENCH SHALL HAVE A BOTTOM WIDTH ADEQUATE TO ACCOMMODATE THE EQUIPMENT USED FOR EXCAVATION, BACKFILL AND COMPACTION OPERATIONS. CUTOFF TRENCH TO BE EXCAVATED AND BACKFILLED PRIOR TO PLACING PIPE.
8 CUTOFF TRENCH SIDE SLOPES SHALL NOT BE STEEPER THAN ONE HORIZONTAL TO ONE VERTICAL.

MOISTURE CONTROL
THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE ADEQUATE FOR OBTAINING THE REQUIRED COMPACTION. MATERIAL THAT IS TOO WET SHALL BE DRIED TO MEET THIS REQUIREMENT, AND MATERIAL THAT IS TOO DRY SHALL HAVE WATER ADDED AND MIXED UNTIL THE REQUIREMENT IS MET.

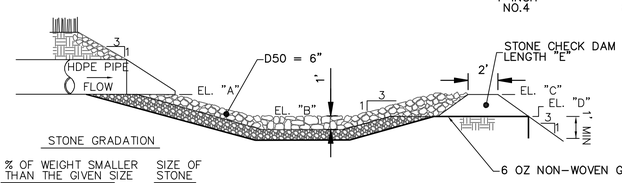
COMPACTION
FILL ADJACENT TO STRUCTURES, PIPE CONDUITS, AND ANTI-SEEP COLLARS SHALL BE COMPACTED TO A DENSITY EQUIVALENT TO THAT OF THE SURROUNDING FILL BY MEANS OF HAND TAMPING OR MANUALLY DIRECTED POWER TAMPER OR PLATE VIBRATORS.

MAINTENANCE:
MAINTENANCE IS NECESSARY TO ENSURE THAT THE DETENTION BASINS WILL CONTINUE TO FUNCTION AS ORIGINALLY DESIGNED. THE "HOMEOWNERS ASSOCIATION" IS RESPONSIBLE FOR MAINTAINING THE STRUCTURES AND THE BASIN AREA.
1 EMBANKMENT – THE EMBANKMENT SHOULD BE INSPECTED ANNUALLY TO DETERMINE IF RODENT BURROWS, WET AREAS, OR EROSION OF THE FILL IS TAKING PLACE. IF SUCH ISSUES ARE NOTED THEY SHALL BE RECTIFIED AS SOON AS PRACTICAL.
2 VEGETATION – THE VEGETATED AREAS OF THE BERM SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH. LIME AND FERTILIZER SHOULD BE APPLIED AS NECESSARY AS DETERMINED BY SOIL TESTS. TREES SHOULD BE KEPT OFF THE BERM AREA.
3 INLETS AND OUTLETS – SHOULD BE INSPECTED ANNUALLY AND AFTER EVERY MAJOR STORM. ACCUMULATED DEBRIS AND SEDIMENT SHOULD BE REMOVED.
4 SEDIMENT – SEDIMENT SHOULD BE CONTINUALLY CHECKED IN THE BASIN. WHEN SEDIMENT ACCUMULATIONS REACH THE STRUCTURE INLET ELEVATION 89.5' THEN THE SEDIMENT SHOULD BE REMOVED AND PROPERLY DISPOSED OF.



STONE CHECK DAM GRADATION

SIEVE DESIGNATION	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVE
12–INCH	100%
6–INCH	84%–100%
3–INCH	68%–83%
1–INCH	42%–55%
NO.4	8%–12%



STONE GRADATION

% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE
100	1.5 TO 2.0 D50
85	1.3 TO 1.8 D50
50	1.0 TO 1.5 D50
15	0.3 TO 0.5 D50

DIMENSIONS AND ELEVATIONS

	L	La	W	Wa	EL. "A"	EL. "B"	EL. "C"	EL. "D"	LENGTH "E"
SEDIMENT FOREBAY 1	5'	17'	5'	17'	103.0'	102.0'	104.0'	102.0'	10' MIN
SEDIMENT FOREBAY 2	3'	15'	2'	14'	103.0'	101.0'	103.0'	101.0'	10' MIN

SEDIMENT FOREBAY / PLUNGE POOL DETAIL

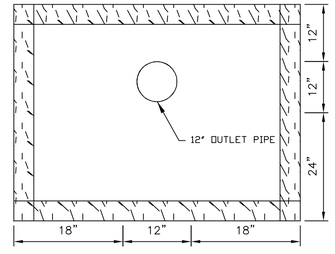
(NOT TO SCALE)

MAINTENANCE

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

CONSTRUCTION SPECIFICATIONS

1. FORBAY AREAS AND EXTENTS OF RIPRAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR RIPRAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. STONE FOR THE SEDIMENT FOREBAY 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. SEDIMENT FOREBAY SHALL BE CONSTRUCTED ON A 6" THICK (MIN) CRUSHED GRAVEL BASE.



ANTI-SEEP COLLAR DETAIL

NOT TO SCALE

NOTES:
1. ANTI-SEEP COLLARS SHALL BE WATERPROOF AND HAVE A WATERPROOF CONNECTION TO THE PIPE.
2. ANTI-SEEP COLLARS TO BE AGRI DRAIN OR APPROVED EQUAL.

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P22_

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE

DATE: 8-15-22
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JPG
APPROVED BY:SJH
PROJECT NO:19003
FILE: SITE-ADDITION

DETAIL SHEET

RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

BUILDING ADDITION
WHITE BIRCH ARMORY
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

14

BITUMINOUS CONCRETE DRIVEWAY

DV = 82.0000'

14°37'29"

MAG. OBS. 12/03/2018

NH STATE PLANE GPS OBS. NOVEMBER 30, 2018

INDUSTRIAL PARK DRIVE
PUBLIC 60' WIDE R.O.W. - 743/244 & 759/141

EDGE OF PAVEMENT (TYP.)

35' FRONT ZONING SETBACK LINE

C/3A-1

PARCEL AREA
352,425 S.F.
8.09 Ac.

50' WETLAND BUFFER (TYP.)

EXISTING BUILDING

BITUMINOUS CONCRETE DRIVEWAY AND PARKING AREA

10' SIDE/REAR ZONING SETBACK LINE (TYP.)

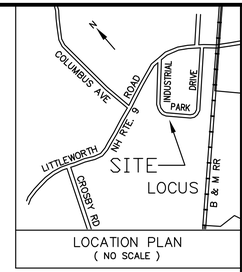
PROPOSED
20,287 S.F.
BUILDING ADDITION
F.F.=108.7

20' WIDE CITY OF DOVER WATER EASEMENT

EDGE OF WETLAND (TYP.)

20' WIDE WATER MAIN EASEMENT

10' SIDE/REAR ZONING SETBACK LINE (TYP.)



LOCATION PLAN
(NO SCALE)

Luminaire Schedule					
Symbol	Qty	Label	Arrangement	Description	Tag
	1	P4	Single	GLEON-SA2C-740-U-T4FT / SSS4A20SFN1 (20' AFG)	NEW PROPOSED ASSEMBLY
	1	S4	Single	GLEON-AF-02-LED-E1-T4FT / SSS4A20SFN1 (20' AFG)	EXISTING RELOCATED ASSEMBLY
	1	S5-2	Back-Back	GLEON-AF-02-LED-E1-5WQ / SSS4A20SFN1 (20' AFG)	EXISTING FIXTURE
	2	W	Single	GWC-SA1C-740-U-T4FT-HSS / WALL MTD 16' AFG	NEW PROPOSED FIXTURE
	2	W3	Single	GWC-SA1C-740-U-SL3 / WALL MTD 16' AFG	NEW PROPOSED FIXTURE
	1	W4	Single	GWC-AF-01-LED-E1-SL4 / WALL MTD 16' AFG	EXISTING FIXTURE

StatArea_1
NEW PARKING AREA
Illuminance (Fc)
Average = 1.79
Maximum = 5.4
Minimum = 0.5
Avg/Min Ratio = 3.58
Max/Min Ratio = 10.80

ATTENTION:

HIGH PRESSURE GAS MAIN EXISTS WITHIN THE RIGHT OF WAY OF INDUSTRIAL PARK ROAD; PRIOR TO ANY EARTH MOVING ACTIVITY CONTACT DIGSAFE AT 1-888-344-7233 TO VERIFY LOCATION.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

NO.	REVISION	APP'D	DATE

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

DATE: 8-15-22
SCALE: 1"=50'
DRAWN BY: SRD
DESIGN BY: JPG
APPROVED BY:SJH
PROJECT NO:19003
FILE: SITE-ADDITION

LIGHTING PLAN

RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

BUILDING ADDITION
WHITE BIRCH ARMORY
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

15

Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

GLEON Galleon

Area / Site Luminaire

Typical Applications

Outdoor • Parking Lots • Walkways • Roadways • Building Areas

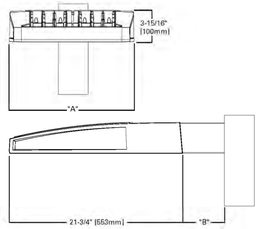
Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Optical Distributions page 4
- Product Specifications page 4
- Energy and Performance Data page 4
- Control Options page 9

Quick Facts

- Lumen packages range from 4,200 - 80,800 (34W - 640W)
- Efficacy up to 156 lumens per watt

Dimensional Details



Product Certifications

Product Features

Connected Systems

- WaveLinx
- Enlighted

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Extended Arm Length [1]	"B" Quick Mount Arm Length	"B" Quick Mount Extended Arm Length
1-4	15-1/2"	7"	10"	10-5/8"	16-9/16"
5-6	21-5/8"	7"	10"	10-5/8"	16-9/16"
7-8	27-5/8"	7"	13"	10-5/8"	--
9-10	33-3/4"	7"	16"	--	--

NOTES:
For arm selection requirements and additional line art, see Mounting Details section.

Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

GWC Galleon Wall

Wall Mount Luminaire

Typical Applications

Exterior Wall • Walkway

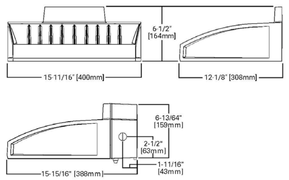
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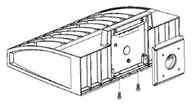
- Ordering Information page 2
- Product Specifications page 2
- Optical Configurations page 3
- Energy and Performance Data page 4
- Control Options page 6

Quick Facts

- Choice of thirteen high-efficiency, patented AccuLED Optics™
- Downward and inverted wall mounting configurations
- Eight lumen packages from 3,215 up to 17,056
- Efficacies up to 154 lumens per watt

Dimensional Details





Product Certifications

Connected Systems

- WaveLinx
- Enlighted

Steel Poles

Catalog #		Type	
Project			
Comments		Date	
Prepared by			



SSS SQUARE
STRAIGHT STEEL

FEATURES
- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

DESIGN CONSIDERATIONS

Wind induced vibrations resulting from steady, unidirectional winds and other aerodynamic forces, as well as vibration and coefficient of height factors for non-grounded mounted installations (e.g., installations on bridges or buildings) are not included in this document. The information contained herein is for general guidance only and is not a replacement for professional judgement. Consult with a professional, and local and federal standards, before ordering to ensure product is appropriate for the intended purpose and installation location. Also, please review Eaton's Light Pole White Paper for risk factors and design considerations. Learn more.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Eaton or visit www.eaton.com/lighting for available options, accessories and ordering information.

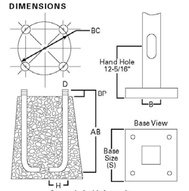
ORDERING INFORMATION

SAMPLE NUMBER: SSA5A20SFM1XG

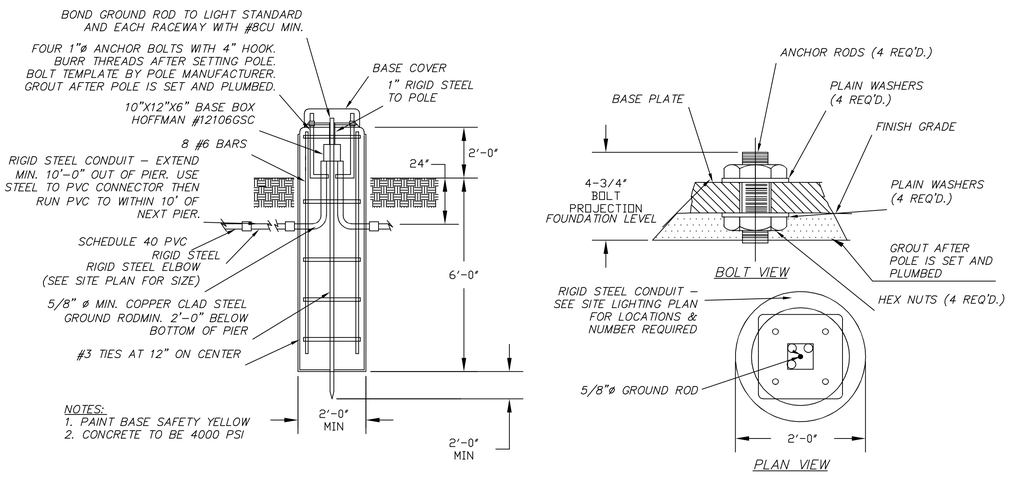
Product Family	Shaft Size (Inches)[1]	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS=Square Straight Steel	**4**=4" **5**=5" **6**=6"	**A**=0.120" **M**=0.188" **X**=0.250"	**10**=10' **15**=15' **20**=20' **25**=25' **30**=30' **35**=35' **39**=39'	**S**=Square Steel Base	**F**=Dark Bronze **G**=Galvanized Steel **J**=Summit White **K**=Carbon Bronze **L**=Dark Platinum **R**=Hartford Green **S**=Silver **T**=Graphite Metallic **V**=Grey **W**=White **X**=Custom Color **Y**=Black	**2**=2-3/8" O.D. Tenon (4" Long) **3**=3-1/2" O.D. Tenon (6" Long) **4**=4" O.D. Tenon (6" Long) **9**=3" O.D. Tenon (4" Long) **6**=2-3/8" O.D. Tenon (6" Long) **7**=4" O.D. Tenon (10" Long) **A**=Type A Drilling **C**=Type C Drilling **E**=Type E Drilling **F**=Type F Drilling **G**=Type G Drilling **J**=Type J Drilling **K**=Type K Drilling **M**=Type M Drilling **N**=Type N Drilling **R**=Type R Drilling **S**=Standard Upsweep Arm **Z**=Type Z Drilling	**1**=Single **2**=2 at 180° **3**=Triple[3] **4**=4 at 90° **5**=2 at 90° **X**=None	**X**=None **2**=2' **3**=2.5' **4**=4' **6**=6' **8**=8'	**A**=1/2" Tapped Hub[2] **B**=3/4" Tapped Hub[2] **C**=Convenience Outlet[4] **E**=GFCI Convenience Outlet[4] **G**=Ground Lug **H**=Additional Hand Hole[5] **V**=Vibration Dampener

NOTES: 1. All shaft sizes nominal. **2.** Square poles are 3 at 90°, round poles are 3 at 120°. **3.** Tapped Hub is located 5' below the pole top and on the same side of pole as hand hole, unless specified otherwise. **4.** Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. **5.** Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



See technical information.



LIGHT POLE BASE

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P22_

DATE: 8-15-22
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: JPG
APPROVED BY:SJH
PROJECT NO:19003
FILE: SITE-ADDITION

NO.	REVISION	APP'D	DATE

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

LIGHTING DETAILS

RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

BUILDING ADDITION
WHITE BIRCH ARMORY
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

BITUMINOUS CONCRETE DRIVEWAY

DV = 82.0000'

14°37'29"

MAG. OBS. 12/03/2018

NH STATE PLANE GPS OBS.NOVEMBER 30, 2018

INDUSTRIAL PARK DRIVE
PUBLIC 60' WIDE R.O.W. - 743/244 & 759/141

EDGE OF PAVEMENT (TYP.)

35' FRONT ZONING SETBACK LINE

C/3A-1

PARCEL AREA
352,425 S.F.
8.09 Ac.

50' WETLAND BUFFER (TYP.)

EXISTING BUILDING

BITUMINOUS CONCRETE DRIVEWAY AND PARKING AREA

PROPOSED 20,287 S.F. BUILDING ADDITION F.F.=108.7

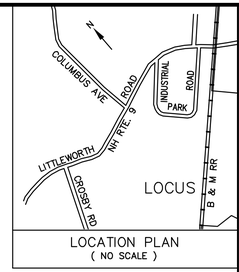
10' SIDE/REAR ZONING SETBACK LINE (TYP.)

20' WIDE CITY OF DOVER WATER EASEMENT

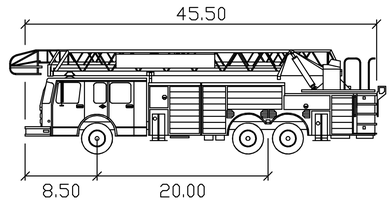
EDGE OF WETLAND (TYP.)

20' WIDE WATER MAIN EASEMENT

10' SIDE/REAR ZONING SETBACK LINE (TYP.)



LOCATION PLAN
(NO SCALE)



Dover ladder feet

Width	: 8.50
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 44.0

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

CIVILWORKS NEW ENGLAND
CIVIL & WATERFRONT ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE

DATE: 8-15-22
SCALE: 1"=50'
DRAWN BY: SRD
DESIGN BY: JPG
APPROVED BY:SJH
PROJECT NO:19003
FILE: SITE-ADDITION

DOVER LADDER TRUCK MOVEMENT PLAN

BUILDING ADDITION
WHITE BIRCH ARMORY
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

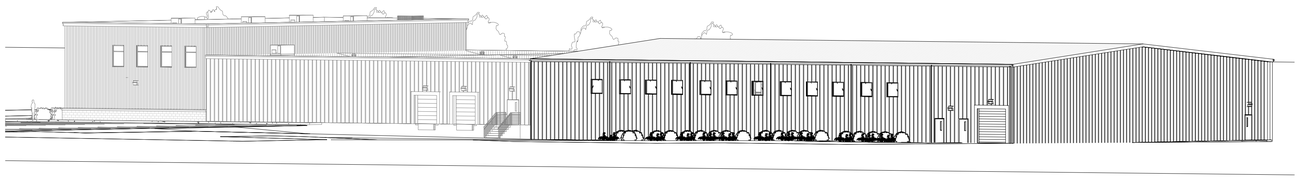
RECON REALTY, LLC
80 INDUSTRIAL PARK DRIVE
DOVER, NH 03820

17

White Birch Armory

80 Industrial Park Dr.
Dover, NH 03820

PLANNING BOARD SET
07/12/2022 (N.F.C.)

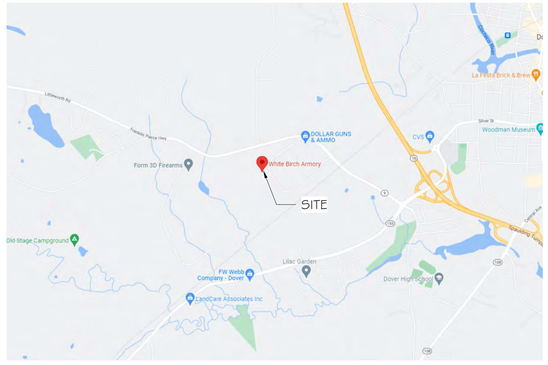


T | W DESIGNS
254 Drake Hill Rd. Strafford, NH
TW-Designs.com | 603.664.2181

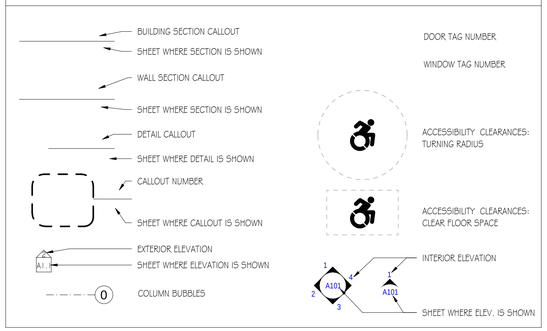
Revision Schedule

No.	Description	Date

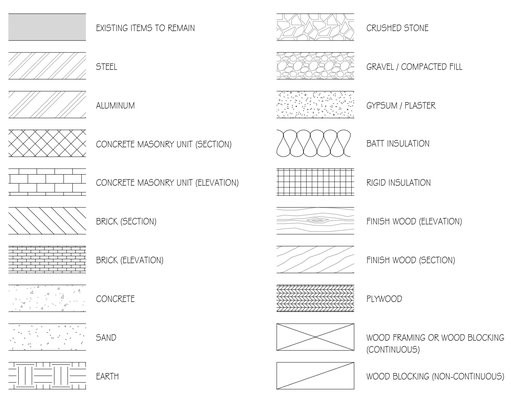
LOCUS MAP: (N.T.S.)



GRAPHIC SYMBOLS LEGEND



MATERIAL LEGEND



MASTER ABBREVIATION KEY:

AB	ANCHOR BOLT			LAM	LAMINATE	S	SOUTH
AC	AIR CONDITIONER	E	EAST	LAV	LAVATORY	S-TRAP	SEDIMENT TRAP
ACI	AMERICAN CONCRETE INSTITUTE	EJ	EXPANSION JOINT			SC	SOLID CORE
ACOUST	ACOUSTIC	EJC	EXPANSION JOINT COVER	MAS	MASONRY	SCED	SCHEDULE
AFF	ABOVE FINISH FLOOR	EL	ELEVATION	MAT	MATERIAL	SD	STORM DRAIN
ALT	ALTERNATE	ELEC	ELECTRICAL	MAX	MAXIMUM	SF	SQUARE FOOT
ALUM	ALUMINUM	ELEV	ELEVATOR	MECH	MECHANICAL	SH	SHOWER
ANCH	ANCHOR	EQ	EQUAL	MEM	MEMBRANE	SHT	SHEET
ANOD	ANODIZED	EQUIP	EQUIPMENT	MEP	MECHANICAL, ELECTRICAL, PLUMBING	SIM	SIMILAR
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS	ER	EMERGENCY ROOM	METTP	METAL TOILET PARTITION	SL	SLIDING
		EST	ESTIMATE	MFR	MANUFACTURER	SMR	SINGLE PLY MEMBRANE ROOF
BD	BOARD	EWC	ELECTRICAL WATER COOLER	MH	MANHOLE	SP/PT/FIN	SPECIAL PAINT FINISH
BIT	BITUMINOUS	EXH	EXHAUST	MIN	MINIMUM	SPEC	SPECIFICATION
BL	BUILDING LINE	EXIST	EXISTING	MISC	MISCELLANEOUS	SPKR	SPEAKER
BLDG	BUILDING	EXP	EXPANSION	MO	MASONRY OPENING	SQ	SQUARE
BLK	BLOCK	EXPD	EXPANDED	MTL	METAL	SS	STAINLESS STEEL
BLKG	BLOCKING	EXT	EXTERIOR	MULL	MULLION	STA	STATION
BM	BEAM					STD	STANDARD
BOC	BOTTOM OF CURB	F/F	FACE OF FOUNDATION WALL	N	NORTH	STL	STEEL
BOF	BOTTOM OF FOOTING ELEVATION	FA	FRESH AIR	NAT	NATURAL	STOR	STORAGE
		FAP	FIRE ALARM PANEL	NEC	NECESSARY	STRG	STRINGER
BOT	BOTTOM	FD	FLOOR DRAIN	NIC	NOT IN CONTRACT	STRUCT	STRUCTURAL
BRG	BEARING	FE	FIRE EXTINGUISHER	NOM	NOMINAL	SU	SITE UTILITY
BRK	BRICK	FEC	FIRE EXTINGUISHER CABINET	NRC	NOISE REDUCTION COEFFICIENT	SUSP	SUSPEND (SUSPENDED)
BSMT	BASEMENT	FIN	FINISH	NTS	NOT TO SCALE	SYMM	SYMMETRICAL
BTW	BETWEEN	FL	FLOW LINE			SYS	SYSTEM
BUR	BUILT-UP ROOF	FLR	FLOOR	OC	ON CENTER	T	TREAD
		FND	FOUNDATION	OD	OUTSIDE DIAMETER	TAG	TONGUE & GROOVED
CAB	CABINET	FOF	FACE OF FINISH	OF/C	OUTSIDE FACE OF CONCRETE	T/FRM	TOP OF FRAME
CB	CATCH BASIN	FOM	FACE OF MASONRY	OH	OVERHEAD	T/SLB	TOP OF SLAB
CER	CERAMIC	FOS	FACE OF STUD	OPG	OPENING	TB	TACKBOARD
CF	CUBIC FOOT	FR	FIRE RATED	OPP	OPPOSITE	TEL	TELEPHONE
CI	CAST IRON	FS	FULL SIZE	OR	OPERATING ROOM	TEMP	TEMPORARY
CJ	CONTROL JOINT	FT	FOOT			TERR	TERRAZZO
CL	CLOSET	FTG	FOOTING	PBD	PARTICLE BOARD	THK	THICK
CLCB	CURBLESS CATCH BASIN	FUR	FURRED (FURRING)	PCF	POUNDS PER CUBIC FOOT	THLD	THRESHOLD
CLG	CEILING	FVC	FIRE VALVE CABINET			TOC	TOP OF CURB
CM	CONTRACT MANAGER			PL	PROPERTY LINE	TOF	TOP OF FOUNDATION
CMU	CONCRETE MASONRY UNIT	GA	GAUGE	PLAM	PLASTIC LAMINATE	TOS	TOP OF SLAB
CO	CLEAN OUT	GALV	GALVANIZED	PLAS	PLASTER	TOW	TOP OF WALL ELEVATION
COL	COLUMN	GC	GENERAL CONTRACTOR	PLYWD	PLYWOOD	TR	TO REMAIN
COMP	COMPACTED (COMPOSITION)	GEN	GENERAL	PNL	PANEL	TYP	TYPICAL
		GL	GLASS	PSF	POUNDS PER SQUARE FOOT	UH	UNIT HEATER
CONC	CONCRETE	GLZ	GLAZING	PSI	POUNDS PER SQUARE INCH	UL	UNDERWRITERS LABORATORIES, INC.
CONST	CONSTRUCTION	GRD	GRADE	PT	PAINT	UOD	UNDERSIDE OF DECK
CONT	CONTINUOUS	GYP	GYPSUM	PTD	PAINTED	UON	UNLESS OTHERWISE NOTED
CONTR	CONTRACTOR			PTN	PARTITION	UR	URINAL
CORR	CORRUGATED	H/V	HEATING & VENTILATING	PVC	POLYVINYL CHLORIDE	UV	UNIT VENTILATOR
CP	CONTROL PANEL	HC	HANDICAP			VAR	VARIES OR VARIABLE
CSG	CASING	HDWD	HARDWOOD	QT	QUARRY TILE	VB	VINYL BASE
CSMT	CASEMENT	HGT	HEIGHT			VCT	VINYL COMPOSITION TILE
CT	CERAMIC TILE	HM	HOLLOW METAL	R	RADIUS	VERT	VERTICAL
CTR	CENTER	HP	HIGH POINT	R/A	RETURN AIR	VEST	VESTIBULE
CY	CUBIC YARD	HVAC	HEATING, VENTILATION, AIR CONDITIONING	RC	REINFORCED CONCRETE	VIF	VERIFY IN FIELD
		HWH	HOT WATER HEATER	RD	ROOF DRAIN	VNR	VENEER
DF	DRINKING FOUNTAIN			REF	REFERENCE	VOL	VOLUME
DIA	DIAMETER	ID	INSIDE DIAMETER	REFR	REFRIGERATOR		
DIAG	DIAGONAL	IN	INCH	REINF	REINFORCE	W	WEST
DIM	DIMENSION	INSUL	INSULATION	REQD	REQUIRED	W/	WITH
DL	DEAD LOAD	INT	INTERIOR	RGH	ROUGH	WC	WATER CLOSET
DN	DOWN	INV	INVERT	RL	RAIN LEADER	WD	WOOD
DR	DOOR			RM	ROOM	WDW	WINDOW
DS	DOWNSPOUT	JC	JANITORS CLOSET	RO	ROUGH OPENING	WGL	WIRE GLASS
DSIC	DRIVE SIDE OF CURB	JST	JOIST	ROW	RIGHT OF WAY	WP	WEATHERPROOF (WATERPROOFING)
DTL	DETAIL	JT	JOINT	RQMT	REQUIREMENT		
DWG	DRAWING					WWF	WELDED WIRE FABRIC

DRAWING SHEET INDEX:

Sheet	Sheet Name	Issued	Rev
PCS	*PROJECT COVER SHEET*	*N.F.C.*	
R-1	*3D RENDER*	*N.F.C.*	
A1.1	*FLOOR PLANS*	*N.F.C.*	
A3.1	*EXTERIOR ELEVATIONS*	*N.F.C.*	
A4.2	*SECTIONS*	*N.F.C.*	

GENERAL NOTES:

1. DO NOT SCALE DRAWING OR DIMENSIONS. FOR MISSING DIMENSIONS OR DIMENSIONS IN CONFLICT, CONTACT THE CONTRACTOR IMMEDIATELY BEFORE CONTINUING WITH WORK.
2. ANY DISCREPANCIES IN THESE PLANS WILL BE BROUGHT TO THE CONTRACTOR'S ATTENTION IN WRITING IMMEDIATELY
3. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DESIGN-BUILD PLANS AND SPECIFICATION FOR LOCATIONS OF ALL BLOCK OUTS, INSERTS, OPENINGS, CURBS, BASES, & PADS THAT ARE NOT DIMENSIONED OR SHOWN ON CONTRACTOR'S DWG'S. OR STRUCTURAL DWG'S.
4. STRUCTURAL STEEL, MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION PLANS AND SPECIFICATION SHALL BE PROVIDED AND ARE THE RESPONSIBILITY OF THERE RESPECTIVE SUBCONTRACTORS IF NOT CARRIED IN ARCHITECTURAL SERVICES
5. ALL CONSTRUCTION SHALL CONFORM TO AND BE IN ACCORDANCE WITH THE REGULATOR REQUIREMENTS MANDATED BY ALL FEDERAL, STATE AND LOCAL AUTHORITIES HAVING JURISDICTION IN ACCORDANCE TO THE STATE IN WHICH THE WORK IS PERFORMED (STATE BUILDING CODE, STATE LIFE SAFETY & FIRE CODE ETC.)
6. THE CONTRACTOR SHALL REVIEW ALL DOCUMENTS AND VERIFY ALL DIMENSIONS AND FIELD CONDITIONS, AND SHALL CONFIRM WORK IS BUILDABLE AS SHOWN. ANY CONFLICTS OR OMISSIONS, ETC. SHALL BE IMMEDIATELY REPORTED IN WRITING TO THE ARCHITECT FOR CLARIFICATION
7. DIMENSIONS ARE FROM EXTERIOR FACE OF FOUNDATION, VENEER, OR WALL STUD AND TO CENTER OF ALL INTERIOR STUD WALLS OR FACE OF INTERIOR MASONRY. UNLESS NOTED OTHERWISE.
8. CLEAR DIMENSIONS ARE FROM FACE TO FACE OF WALL FINISH. UNLESS NOTED OTHERWISE
9. REFER TO MECHANICAL DRAWINGS / SPEC. FOR ALL SIZES AND LOCATIONS OF MECHANICAL DUCT WORK.
10. UNLESS OBVIOUSLY SHOWN OTHERWISE, DOOR LOCATIONS NOT DESIGNATED BY WRITTEN DIMENSION SHALL BE CENTERED IN THE WALL OR SHALL BE LOCATED FOUR (4) INCHES FROM FINISH WALL TO EDGE OF DOOR JAMB. PER PLAN.
11. PROVIDE METAL CORNER BEAD AT ALL OUTSIDE CORNERS OF PLASTERED OR DRYWALL SURFACES, UNLESS NOTED OTHERWISE.
12. PENETRATIONS OF ALL FIRE RATED ASSEMBLIES SHALL BE PROTECTED BY LIKE RATED CONSTRUCTION DAMPERS, SEALANTS, COLLARS, ETC., TYPICAL.
13. CONTRACTOR SHALL FURNISH, LOCATE AND INSTALL ALL ACCESS PANELS AS REQUIRED AFTER INSTALLATION OF MECHANICAL DUCTS, PLUMBING AND ELECTRICAL WORK, FIRE RATED AS REQUIRED.
14. FURNISH AND INSTALL SOLID BLOCKING BEHIND ALL WALL HUNG MILLWORK ITEMS, RAILS, FIXTURES,GRAB BARS, ETC . WHERE INDICATED OR REQUIRED.
15. CONTRACTOR SHALL LAYOUT OR MARK, ALL EQUIPMENT, SYSTEMS AND MILLWORK ON THE FLOOR FOR ARCHITECT OR OWNER'S APPROVAL PRIOR TO BEGINNING CEILING / OVER HEAD WORK.
16. ALL SPRINKLER HEAD LOCATIONS, MAINS, BRANCHES AND RISER PIPE LOCATIONS MUST BE COORDINATED WITH THE DESIGN / BUILD CONTRACTOR PRIOR TO WORK.
17. FURNISH AND INSTALL FIRE EXTINGUISHERS IN TYPE, QUANTITY, AND LOCATION PER LOCAL FIRE DEPARTMENT. TYPICAL
18. CONTRACTOR SHALL VERIFY, COORDINATE LOCATION WITH THE ARCHITECT ANY SMOKE, CARBON MONOXIDE DETECTOR OR FIRE ALARM DEVICE AS REQUIRED BY THE LOCAL FIRE DEPARTMENT.
19. FURNISH & INSTALL FIRE DAMPERS WITH FUSIBLE LOUVER WHEREVER DUCT WORK PENETRATES ONE OR TWO HOUR CEILINGS OR WALLS. TYPICAL UNLESS NOTED OTHERWISE.
20. PROVIDE PLASTER AND GYPSUM WALL BOARD CONTROL JOINTS AT 30'-0" ON CENTER FROM FLOOR TO CEILING, OR AS NOTED ON THE CONSTRUCTION DOCUMENTS. VERIFY IN FEILD WITH ARCHITECT PRIOR TO WORK.

Architect of Record:
T | W Designs, LLC
254 Drake Hill Rd.
Strafford, NH 03884
603-664-2181

Civil Engineer:
XXX

Structural Engineer:
XXX

Electrical Engineer:
XXX

Mechanical Engineer:
XXX

Fire Protection Eng.:
XXX

General Contractor:
XXX

Project Info:
White Birch Armory
80 Industrial Park Dr.
Dover, NH 03820

22017
PROJECT COVER SHEET

SHEET NUMBER
PCS

TW DESIGNS LLC
254 DRAKE HILL RD. STRAFFORD, NH
P: 603.664.2181 | F: 603.664.9508



PLANNING BOARD SET
7/12/2022

T:\3.Projects\22023-WBA Addition\22023c_WBA Addition.rvt

No. Description Date

Revision Schedule

Project Info:

White Birch Armory

80 Industrial Park Dr.
Dover, NH 03820

Sheet Status:

Latest Release:
Issued For: PLANNING BOARD SET
Org. Issue Date: 2/2022 (N.F.C.)

JOB NO: 22017
DRAFTED: Author
CHECKED: Checker

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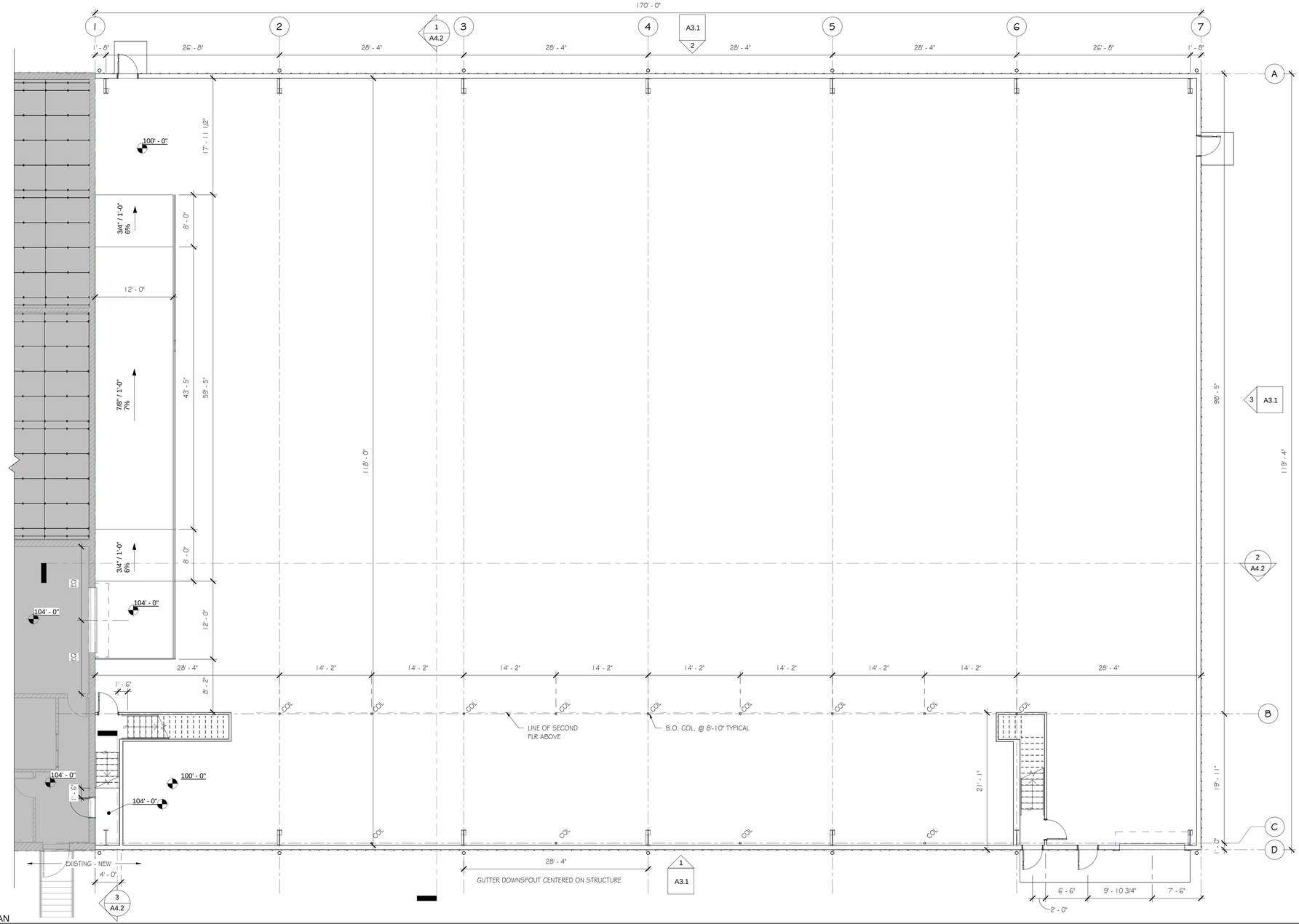
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3D RENDER

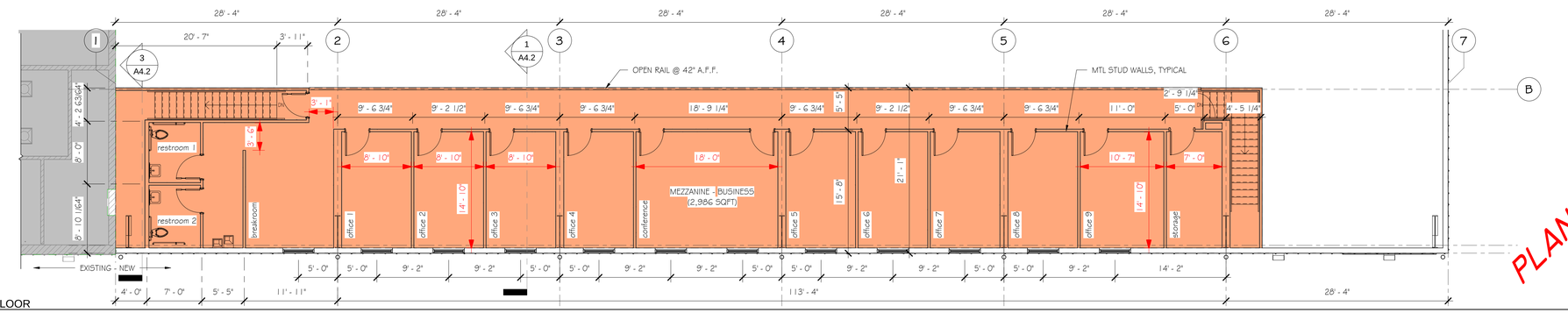
Sheet Number:

R-1

Printed on: 7/12/2022



1 FLOOR PLAN
1/8" = 1'-0"



2 SECOND FLOOR
1/8" = 1'-0"

T:\3 Projects\22023-WBA Addition\22023c_WBA Addition.rvt

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P: 603.664.2181 | F: 603.664.9508

SQ FOOTAGE
1ST FLOOR = 20,287 SQFT
2ND FLOOR = 2,986 SQFT

TOTAL SQFT = 23,273

No.	Description	Date

Revision Schedule

PLANNING BOARD SET
7/12/2022

True
PROJECT NORTH

Project Info:
White Birch Armory

80 Industrial Park Dr.
Dover, NH 03820

Sheet Status:
Latest Release:
Issued For: PLANNING BOARD SET2/2022 (N.F.C.)
Org. Issue Date:

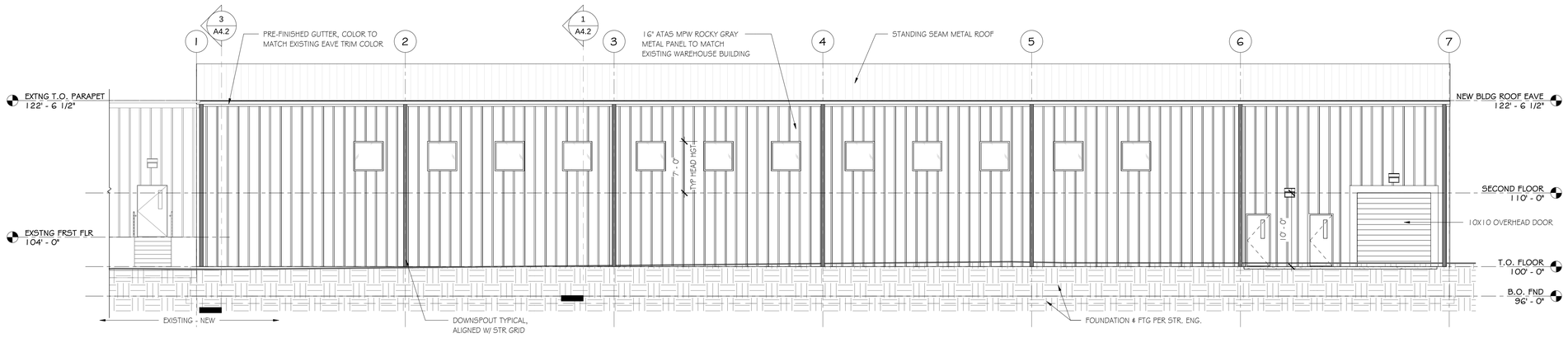
JOB NO: 22017
DRAFTED: SMP
CHECKED: JMT
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Sheet Title:
FLOOR PLANS

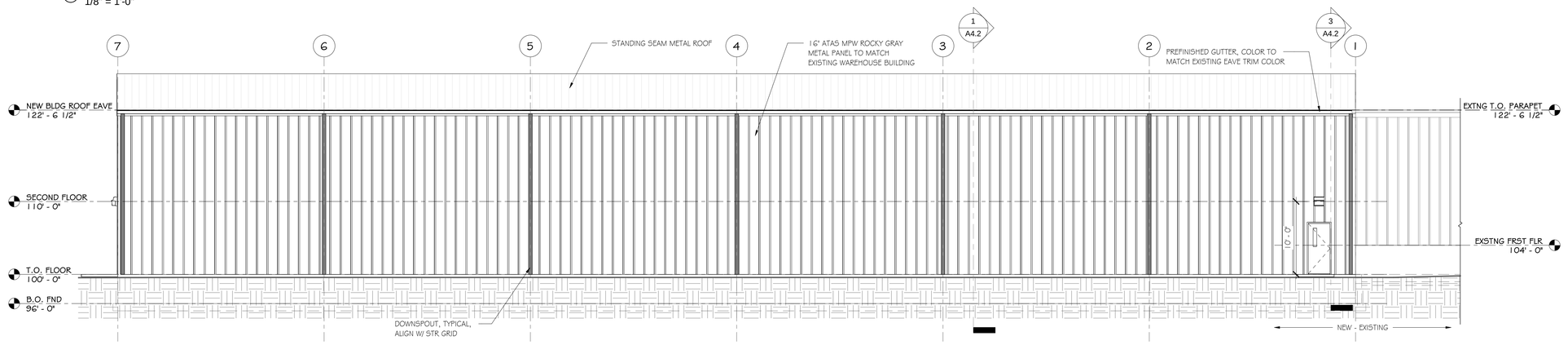
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A1.1

Printed on: 7/12/2022

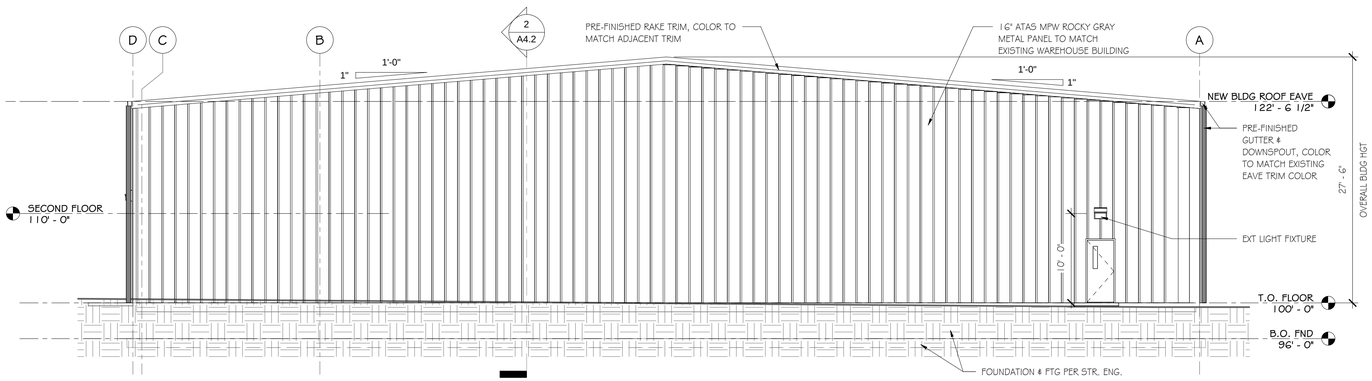
TW DESIGNS LLC
254 DRAKE HILL RD. STRAFFORD, NH
P: 603.664.2181 | F: 603.664.9508



1 FRONT ELEVATION
1/8" = 1'-0"



2 BACK ELEVATION
1/8" = 1'-0"



3 SIDE ELEVATION
1/8" = 1'-0"

T:\3.Projects\22023-WBA Addition\22023c_WBA Addition.rvt

No. Description Date

Revision Schedule

Project Info:

White Birch Armory

80 Industrial Park Dr.
Dover, NH 03820

Sheet Status:

Latest Release:
Issued For: PLANNING BOARD SET2/2022 (N.F.C.)
Org. Issue Date:

JOB NO. 22017
DRAFTED: SMP
CHECKED: JMT

SCALE: 1/8" = 1'-0"

Sheet Title:

EXTERIOR ELEVATIONS

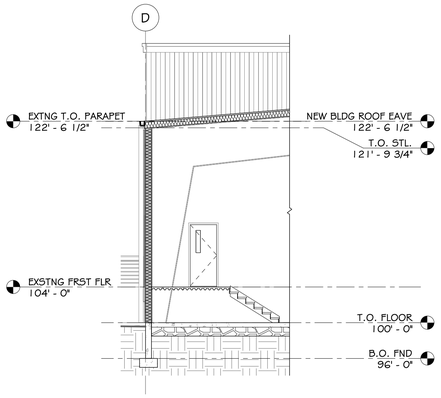
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A3.1

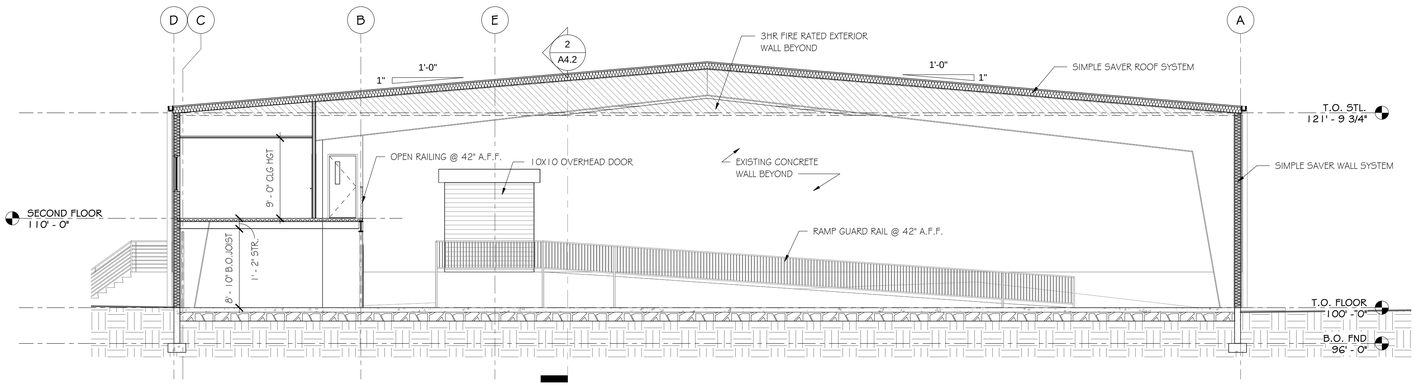
PLANNING BOARD SET
7/12/2022

Printed on: 7/12/2022

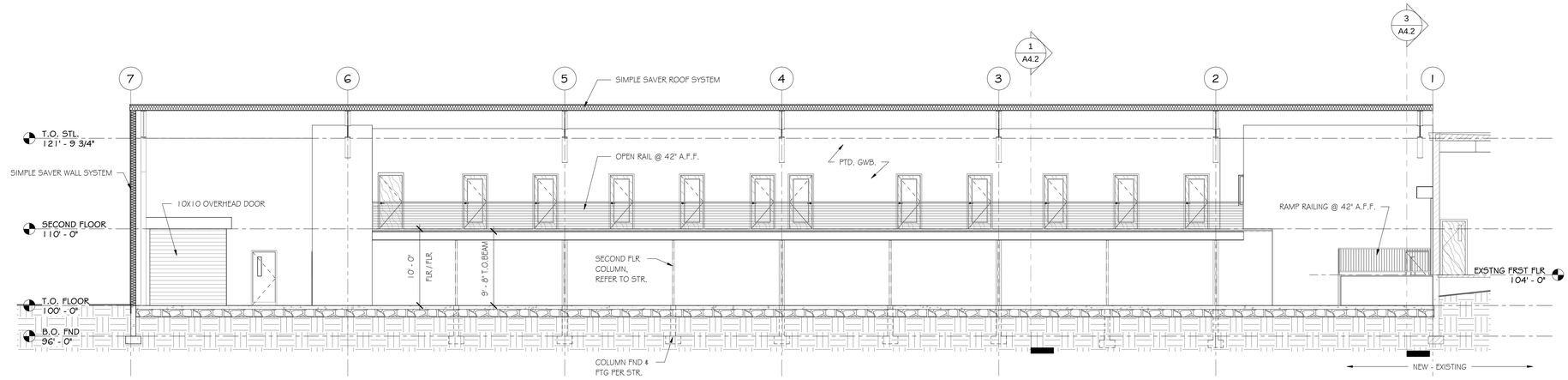
TW DESIGNS LLC
254 DRAKE HILL RD. STRAFFORD, NH
P: 603.664.2181 | F: 603.664.9508



3 SECTION 'A'
1/8" = 1'-0"



1 CROSS SECTION
1/8" = 1'-0"



2 LONGITUDINAL SECTION
1/8" = 1'-0"

PLANNING BOARD SET
7/12/2022

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No. Description Date

Revision Schedule

Project Info:

White Birch Armory

80 Industrial Park Dr.
Dover, NH 03820

Sheet Status:

Latest Release:
Issued For: PLANNING BOARD SET
Org. Issue Date: 2/2022 (N.F.C.)

JOB NO: 22017
DRAFTED: SMP
CHECKED: JMT

SCALE: 1/8" = 1'-0"

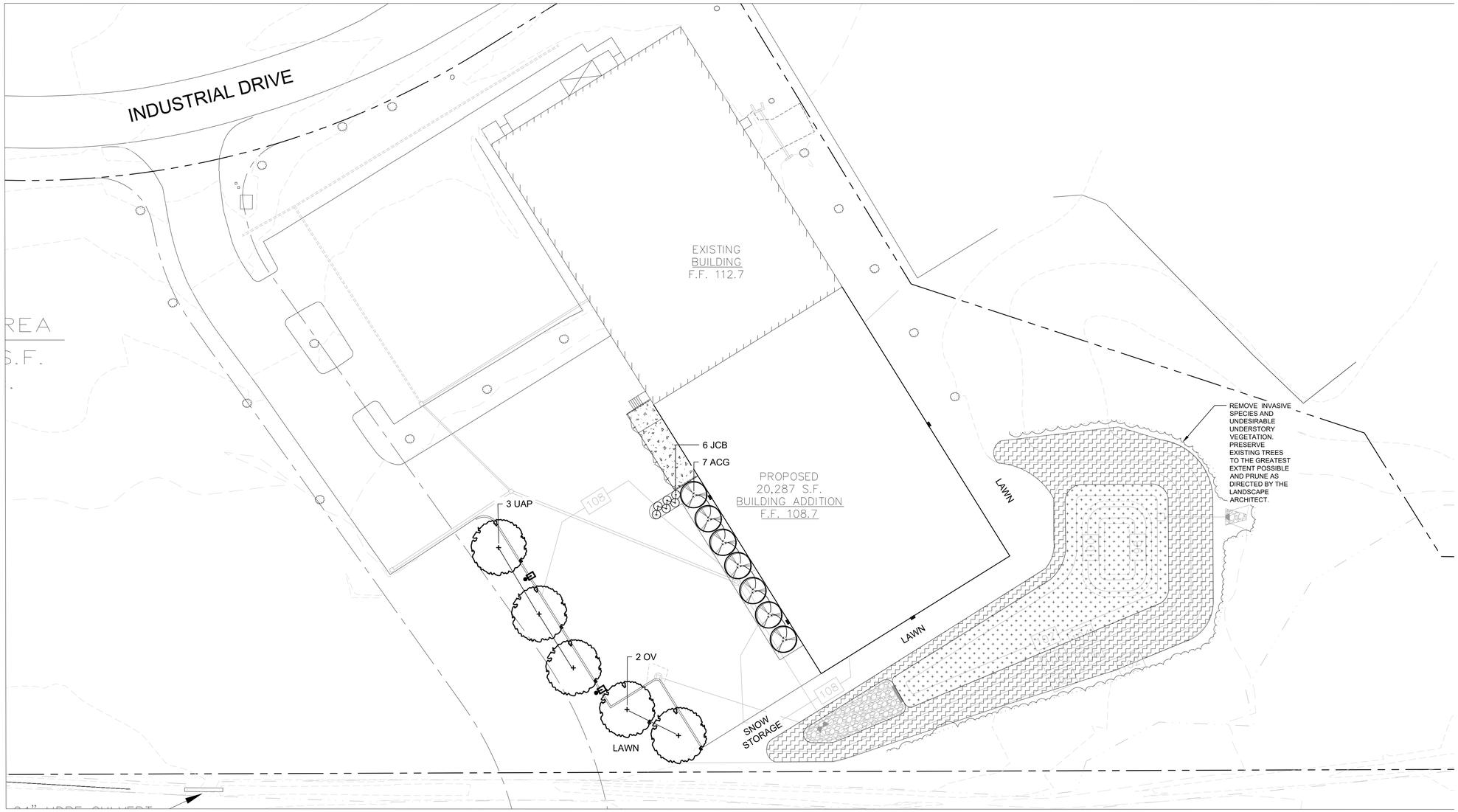
Sheet Title:

SECTIONS

Sheet Number:

A4.2

Printed on: 7/12/2022



GENERAL NOTES:

1. SEE CIVIL DRAWINGS FOR INFORMATION NOT DEPICTED ON THE LANDSCAPE DRAWINGS.
2. EXISTING VEGETATION SHALL BE PROTECTED DURING SITE CLEARING AND CONSTRUCTION THROUGH THE USE OF CONSTRUCTION FENCING OR OTHER ADEQUATE PROTECTIVE BARRIERS.
3. PLANT LOCATIONS SHOWN ON THE PLANTING PLAN ARE SUBJECT TO FIELD MODIFICATION TO ACCOMMODATE EXISTING CONDITIONS. FIELD ADJUSTMENTS SHALL BE COORDINATED WITH THE LANDSCAPE ARCHITECT.
4. WITHIN THE LIMIT OF WORK, ANY INVASIVE PLANT SPECIES ENCOUNTERED SHALL BE REMOVED FOLLOWING NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT BEST MANAGEMENT PRACTICES.
5. SEE SHEET L2.0 FOR LANDSCAPE DETAILS.
6. CONTACT DIGSAFE PRIOR TO BEGINNING WORK.

Legend

- DECIDUOUS SINGLE-STEMMED TREE PLANTING, SEE 1/L2.0
- DECIDUOUS MULTI-STEMMED TREE PLANTING, SEE 2/L2.0
- LAWN — LOAM AND LAWN SEED MIX, SEE 3/L2.0
- LOAM AND WET MEADOW / POND SEED MIX, SEE 4/L2.0
- LOAM AND DRY SITE EROSION / RESTORATION SEED MIX, SEE 5/L2.0

Plant Schedule

DECIDUOUS TREES

QTY.	ABRV.	SCIENTIFIC NAME	COMMON NAME	SIZE	APPROX. SIZE AT MATURITY	REMARKS
7	ACG	AMELANCHIER CANADENSIS 'GLENFORM'	RAINBOW PILLAR SERVICEBERRY	5'-6' HT	15' HT x 10' SPD	MULTI, B&B
2	OV	OSTRYA VIRGINIANA	AMERICAN HOPHORNBEAM	3"-3 1/2" CAL	25' HT x 30' SPD	B&B
3	UAP	ULMUS AMERICANA "PRINCETON"	PRINCETON AMERICAN ELM	3"-3 1/2" CAL	60' HT x 40' SPD	B&B
12						

SHRUBS

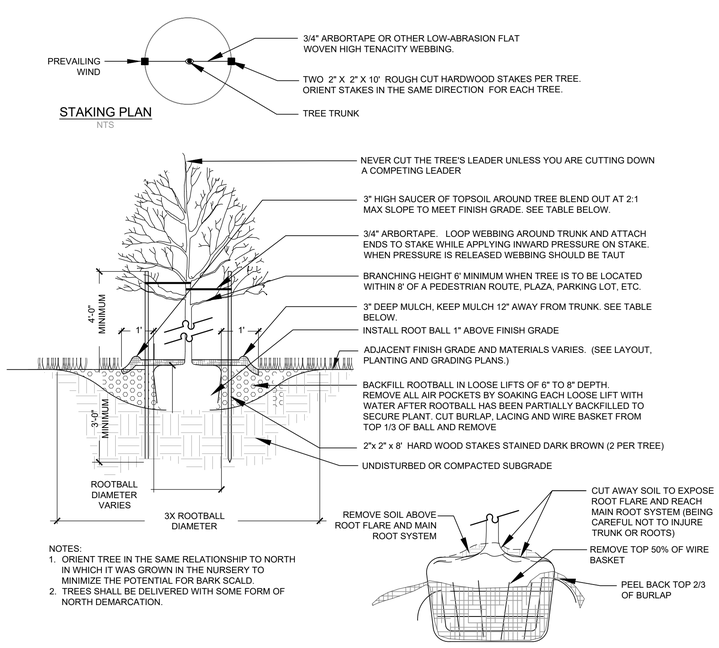
6	JCB	JUNIPERUS COMMUNIS 'BLUEBERRY DELIGHT'	BLUEBERRY DELIGHT JUNIPER	18"-24" HT	2' HT x 5' SPD	CONTAINER
6						

DRAWING SUBMITTED

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PLANTING NOTES:

1. PLEASE REVIEW AND BECOME FULLY ACQUAINTED WITH THESE NOTES, CONSTRUCTION DETAILS, AND THE PLANTING PLAN.
2. THE CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING AND NEW UTILITY LINE LOCATIONS PRIOR TO PLANTING, AND SHALL REPORT ANY CONFLICT TO THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
3. ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN SOCIETY OF NURSERY MEN, INC. LATEST EDITION.
4. THE CONTRACTOR SHALL STAKE THE LOCATION OF ALL THE PROPOSED PLANT MATERIAL FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING. NO PLANTS SHALL BE PLANTED BEFORE THE ACCEPTANCE OF ROUGH GRADING. THE BASE OF THE FLARE OF THE TREE TRUNK SHALL BE EXPOSED, IF NECESSARY, AND PLACED 2" ABOVE FINISH GRADE.
5. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES WILL BE PLANTS WITH EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER COLOR, LEAF COLOR, FRUIT COLOR, AND TIME OF BLOOM, AS APPROVED BY THE LANDSCAPE ARCHITECT.
6. EXISTING LOAM: STOCKPILING OF EXISTING LOAM IS SPECIFIED ELSEWHERE. REMOVE CLAY LUMPS, BRUSH, LITTER, ROOTS, STONES 1" AND LARGER, AND OTHER FOREIGN MATERIALS.
7. ADDITIONAL LOAM: IF STOCKPILED LOAM QUANTITY IS INSUFFICIENT, PROVIDE LOAM, WHICH IS A "FINE SANDY LOAM", OR A "SANDY LOAM" DETERMINED BY MECHANICAL ANALYSIS AND BASED ON THE "U.S.D.A. CLASSIFICATION SYSTEM." IT SHALL BE OF UNIFORM COMPOSITION, WITHOUT ADMIXTURE OF SUBSOIL. LOAM SHALL HAVE AN ACIDITY RANGE OF PH 5.8 TO PH 7.0 AND SHALL CONTAIN NOT LESS THAN 4% NOR MORE THAN 10% ORGANIC MATTER AS DETERMINED BY THE LOSS OF IGNITION OF OVEN-DRIED SAMPLES. PROVIDE LOAM WHICH IS FERTILE, FRIABLE, NATURAL LOAM FREE FROM SUBSOIL, CLAY LUMPS, BRUSH, LITTER, ROOTS, STONES 1" AND LARGER, AND ANY FOREIGN MATERIALS.
8. PINE MULCH: PROVIDE PARTIALLY DECOMPOSED MINIMUM SIX MONTH AGED FINELY SHREDDED PINE BARK MULCH WITH DARK BROWN COLOR AND FREE OF WEEDS, EXCESSIVE FINE PARTICLES, STRINGY MATERIAL, AND CHUNKS OF WOOD THICKER THAN ¼". PROVIDE BARK MULCH APPROVED BY THE LANDSCAPE ARCHITECT. APPLY TACKIFIED MULCH TO ALL SEEDED AREAS.
9. ALL PLANTS SHALL BE PLUM VERTICALLY AFTER SETTLING.
10. ALL PLANT MATERIAL SHALL BE MULCHED AFTER PLANTING.
11. LESS OTHERWISE INDICATED, DICTATED BY CONDITIONS AT THE SITE, AND DIRECTED BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE, BACKFILL SHALL CONSIST OF UNAMENDED SOIL EXCAVATED FROM THE PLANTING PIT. BACKFILL IN 3-4" LAYERS AND CONSOLIDATE EACH LAYER WITH WATER TO ELIMINATE VOIDS AND ARE POCKETS BEFORE PLACING SUBSEQUENT LAYERS. CONTINUE UNTIL BACKFILL HAS REACHED FINISHED GRADE. WATER THOROUGHLY WHEN EXCAVATION IS BACK FILLED AND CONTINUE WATERING UNTIL SATURATED. IF EXISTING UNAMENDED SOIL IS NOT ACCEPTED. PROVIDE PLANTING SOIL MIXTURE CONSISTING OF 7 PARTS LOAM AND 1 PART HUMUS. MIX QUANTITY OF FERTILIZER AND SOIL AMENDMENTS AS RECOMMENDED BY SOIL ANALYSIS AND APPROVED BY THE LANDSCAPE ARCHITECT.
12. WATERING: FLOOD ALL PLANTS WITH WATER TWICE WITHIN THE FIRST 24 HOURS AFTER PLANTING.
13. LOAMING: LOOSEN SUBGRADE AND EXISTING LOAM AREAS BY DISCING OR ROTOTILLING TO MINIMUM DEPTH OF 6". REMOVE STONES GREATER THAN 2" AND ALL RUBBISH AND DEBRIS. PLACE LOAM IN TWO EQUAL LIFTS MIXING FIRST APPLICATION INTO LOOSENED SUBGRADE THEN PLACE SECOND LIFT TO BRING LOAM AFTER SETTLING AND COMPACTING TO THE LINES AND GRADES SHOWN IN THE CONTRACT DOCUMENTS, 6" DEEP MINIMUM. DO NOT HANDLE LOAM OR SUBSOIL IF IT IS WET OR FROZEN.
14. AFTER LOAM HAS BEEN SPREAD, IT SHALL BE CAREFULLY PREPARED BY SCARIFYING AND HAND RAKING. ALL LARGE STIFF CLODS, LUMPS, BRUSH, ROOTS, STUMPS, LITTER AND FOREIGN MATTER, AND STONES OVER ONE INCH IN DIAMETER SHALL BE REMOVED FROM THE LOAM. LOAM SHALL ALSO BE FREE OF SMALLER STONES IN EXCESSIVE QUANTITIES AS DETERMINED BY THE LANDSCAPE ARCHITECT.
15. FINE GRADING: SET SUFFICIENT GRADE STAKES FOR CHECKING THE FINISHED GRADES. STAKES MUST BE SET AT THE BOTTOM AND TOP OF SLOPES. GRADES SHALL BE ESTABLISHED THAT ARE ACCURATE TO 1/10TH OF A FOOT EITHER WAY. CONNECT CONTOURS AND SPOT ELEVATIONS WITH AN EVEN SLOPE. ALL GRADING WILL INSURE DRAINAGE AWAY FROM STRUCTURES.
16. FINE GRADE LAWN AREAS TO SMOOTH, FREE DRAINING, EVEN SURFACES WITH FINE TEXTURE. ROLL, RAKE AND DRAW LAWN AREAS TO FLATTEN RIDGES AND FILL DEPRESSIONS, EXCEPT AT SELECT AREAS SHOW ON THE DRAWINGS. CONTROL MOISTURE CONTENT TO MAINTAIN OPTIMUM CONDITIONS, BUT DO NOT CREATE A MUDDY CONDITION.
17. ROLLING - TYPICAL: ROLL THE ENTIRE AREA WITH A HAND ROLLER WEIGHTING NOT MORE THAN 100 POUNDS. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT OF ROLLING SHALL BE FILLED WITH ADDITIONAL LOAM AND THE SURFACE SHALL BE REGARDED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE OR TO THE SHAPES AND CONFIGURATIONS AS SHOWN ON THE DETAILS.
18. THE SILT FENCE SHALL BE LIMIT OF SEEDING UNLESS OTHERWISE INDICATED ON THE DRAWINGS. ALL AREAS DISTURBED OUTSIDE THE LIMIT OF WORK SHALL BE SEEDED AS INDICATED ON THE DRAWINGS.
19. IN CASE OF DISCREPANCIES BETWEEN THE QUANTITIES SHOWN ON THE PLANT SCHEDULE AND THE QUANTITIES SHOWN ON THE PLANTING PLAN, THE QUANTITIES ON THE PLANTING PLAN SHALL BE PROVIDED BY THE CONTRACTOR.

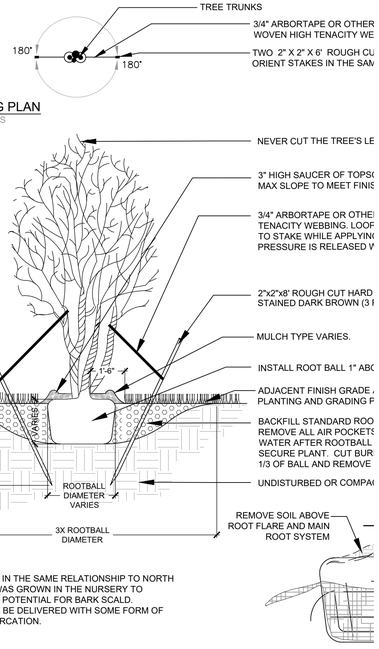


Deciduous Tree Planting

Not to Scale

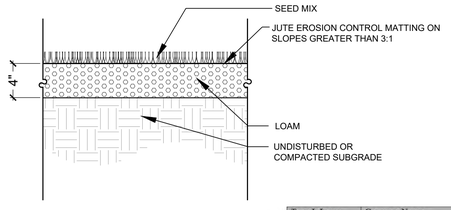
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Deciduous Multi-Stemmed Tree Pla

Not to Scale



Type I Lawn Percent by weight	Common Name	Scientific Name
40%	Celmfine, Rebel II or Tribute Tall Fescue	
15%	Palmer II Perennial Ryegrass	
10%	Jamestown Chewings Fescue	
10%	Reliant Hard Fescue	
10%	Bridsfoot Trefoil	*Arvents* variety
5%	Switchgrass	
5%	White Clover	
5%	Redtop	*Streaker* variety

Apply at a rate of 265/lbs/acre

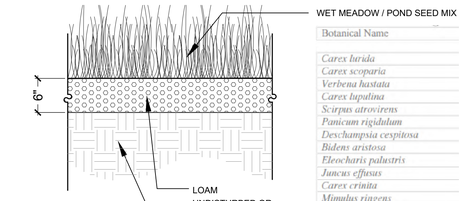
NOTE:
1. LOAM ALL DISTURBED AREAS.
2. PRIOR TO SEEDING THE LAWN SEED MIX PROPERLY PREPARE THE SEED BED.

Loam and Lawn Seed Mix

Not to Scale

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3 L2.0



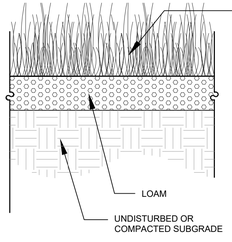
Botanical Name
Carex lurida
Carex scoparia
Verbena hastata
Carex lupulina
Scirpus atrovirens
Panicum rigidulum
Deschampsia cespitosa
Bidens aristosa
Eleocharis palustris
Juncus effusus
Carex crinita
Mimulus ringens
Aster puniceus
Eupatorium perfoliatum
Glyceria canadensis
Asclepias incarnata
Helenium autumnale
Penthorum sedoides

Apply at rate of 231bs/acre. New Engla Wetland Plants, Ma: www.newp

NOTE:
1. LOAM ALL DISTURBED AREAS.
2. PRIOR TO SEEDING THE WET MEADOW SEED MIX PROPERLY PREPARE THE SEED BED.
3. INSTALL JUTE MATTING ON POND SIDE SLOPES GREATER THAN 3:1.
4. FOLLOW MFG INSTRUCTIONS FOR SEEDING. AVAILABLE AT NEW ENGLAND WETLAND PLANTS, MA: WWW.NEWP.COM. APPROVED EQUAL MAY BE SUBSTITUTED.

Loam and Wet Meadow / Pond S

Not to Scale



New England Erosion Control/Restoration Mix for Dry Sites

Botanical Name	Common Name	Indicator
Elymus canadensis	Canada Wild Rye	FACU+
Festuca rubra	Red Fescue	FACU
Lolium multiflorum	Annual Ryegrass	
Lolium perenne	Perrenial Ryegrass	
Schizachyrium scoparium	Little Bluestem	FACU
Panicum virgatum	Switch Grass	FAC
Sorghastrum nutans	Indian Grass	UPL

Apply at rate of 231bs/acre. New England Wildflower Mix available at New England Wetland Plants, Ma: www.newp.com . Approved equal may be substituted.

NOTE:
1. LOAM ALL DISTURBED AREAS.
2. PRIOR TO SEEDING THE EROSION CONTROL SEED MIX, PROPERLY PREPARE THE SEED BED.
3. INSTALL JUTE MATTING ON SLOPES GREATER THAN 3:1.
4. FOLLOW MFG INSTRUCTIONS FOR SEEDING. AVAILABLE AT NEW ENGLAND WETLAND PLANTS, MA: WWW.NEWP.COM. APPROVED EQUAL MAY BE SUBSTITUTED.

Dry Site Erosion / Restoration Seed Mix

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