CITY OF DOVER

PLANNING TECHNICAL REVIEW COMMITTEE –AGENDA

Meeting Type: Regular Meeting
Meeting Location: Council Conference Room – City Hall, Dover NH
Meeting Date: **Thursday, May 27, 2021**
Meeting Time: **10:30 AM**

1. 10:30 AM – 11:00 AM: Site Review for The Storage Barn, LLC., Assessor's Map D, Lots 16 & 16G, zoned C & IT, located at 385 Sixth Street. (Proposal is to add a 12,000 s.f. self-storage building to the existing facility). (P21-34)

2. 11:00 AM – 11:30 AM: Site Review for Dover Point Village, LLC., (Owner: Sebring Holdings, LLC.) Assessor's Map K, Lot 26, located on Dover Point Road. (Proposal is to construct a 3600 s.f. professional/medical office building with associated parking). A related CUP application will also appear before the Planning Board. (P21-35)
3. 11:30 AM – 12:00 AM: Site Review for Macs Convenience Stores, LLC, Assessor's Map K, Lot 19C, zoned R-12, C & IT, located at Dover Point Road. (Proposal is to construct a 5,358 sq. ft. convenience store with (6) vehicle refueling and (1) electric recharging stations). A related CUP application will also appear before the Planning Board. (P21-15)

JONES & BEACH
ENGINEERS INC.
85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885
603.772.4746 - JonesandBeach.com

May 4, 2021

Dover Planning Board
Attn: Gina Cruikshank, Chairperson
288 Central Avenue
Dover, NH 03820

RE: Site Plan Application
385 & 387 Sixth Street, Dover, NH
Tax Map D, Lots 16 & 16G
JBE Project No. 13172

Dear Ms. Cruikshank,

Jones & Beach Engineers, Inc., on behalf of our client & owner, The Storage Barn, LLC, respectfully submit a Site Plan Application for the parcel referenced above. The intent of this proposal is to add a 12,000 S.F self-storage buildings to the existing facility. Project to be served by underground telephone, cable tv, electric. We are requesting to be heard at your next scheduled TRC meeting on May 27th.

The following documents are provided in support of this application:

1. Completed Site Plan Application.
2. Letter of Authorization.
3. Current Deed.
4. Fee Check.
5. Eight (8) Full Size Plans (folded).

Thank you very much for your consideration. If you have any questions, or need further assistance, please contact our office.

Very truly yours,
JONES & BEACH ENGINEERS, INC.

Bradford Jones
Vice President

cc: Mark Phillips, The Storage Barn, LLC (application & plans via email)

CHRISTOPHER G. PARKER, AICP
Assistant City Manager
Planning & Strategic Initiatives
c.parker@dover.nh.gov

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Dover, New Hampshire 03820-4169
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City of Dover, New Hampshire

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

INSTRUCTIONS TO APPLICANTS TO THE DOVER PLANNING BOARD

IMPORTANT: PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE FILLING OUT ATTACHED APPLICATION.
INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED FOR REVIEW.

Dear Applicant:

This will serve to briefly inform you regarding the process to have the Dover Planning Board (the Board) review a land use application. Please refer to the NH Statutes on Land Use and Regulation the Dover Code, and our Developer's Handbook for more specific information.

The Board primarily reviews 5 types of applications:

1. **Site Plans** - A site plan is a professionally rendered drawing which delineates the proposed development of a site. This plan is required for non-residential development, creation of multi-family residential structures, and for extensions of parking lots and alteration of an acre or more of land. These plans require meeting with the Technical Review Committee before Planning Board review.

2. **Subdivisions** - A subdivision is the division of the lot, tract, or parcel of land into two (2) or more lots, plats, sites or other divisions of land for the purpose, whether immediate or future, of sale, rent, lease or building development. It includes re-subdivision and, when appropriate to the context, relates to the process of subdividing or to the land or territory subdivided. Major subdivision plans (4+) require meeting with the Technical Review Committee before Planning Board review.

3. **Lot Line Adjustments** - A lot line adjustment alters the size of two (2) or more lots, but does not create a new buildable lot.

4. **Conditional Use Permits** - A conditional use permit is required for any alteration of wetlands, wetland buffers or work within the City's conservation district. Additionally, a conditional use permit could be issued as to offer relief in the Central Business District, for plans in the Residential Mixed Use Overlay District, or parking relief. Environmental Conditional Use Permits are acted on after Conservation Commission review.

5. **Excavation Permits** – NH RSA Chapter 155-E grants municipalities the authority to regulate earth excavations within their borders. This authority rests with the Planning Board.

The Board cannot and will not review applications that do not meet zoning requirements. **Please review the need to apply to the Zoning Board of Adjustment prior to applying to the Board.**

Professional agents will prepare your application; however, you may represent yourself or authorize, in writing, someone else to represent you before the Planning Board.

In most cases, 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, and a PDF, need to be provided, along with payment of plan review fees. These meetings occur on Thursday, and materials and payment must be submitted three (3) weeks prior to meeting. Meetings are scheduled, upon receipt of completed applications with the full checklist and payment.

The next step would be to provide, two weeks prior to Planning Board, the final plan sets (three (3) full size and twelve (12) half size (11x 17), folded, copies of the plan), and 15 copies, and a PDF, of all supporting materials, including response to TRC comments. Please print all materials on both sides of paper.

For projects not appearing before the Technical Review Committee, Plan Review Fees are due along with three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and 15 copies, plus a PDF, of plans and materials, 3 weeks prior to the Planning Board meeting. Please print all materials on both sides of paper.

Staff will generate an abutter list, and Abutter/Notice Fees will be invoiced. They are due 28 hours prior to Planning Board. If they are not paid, the application will not be heard.

Once an item is placed upon an agenda the following process is used:

- The Board will hold a public hearing on your application at a regularly scheduled meeting
    - Typically the second or fourth Tuesday of the Month.
- Public notice of the hearing will be posted at the City Clerk's office and the Planning Department office and printed in the newspaper.
- Certified letters will be mailed to you and to all abutters at least ten days before the date of the hearing.
- 28 hours prior to the meeting, abutter/notice fees must be paid
- At the meeting
    - Staff will introduce your project
    - You and all other parties will be invited to appear in person or by agent or counsel to present your application.
        - Your project will be pre-loaded onto a laptop for review by the Board and public
    - The Board may ask clarifying questions
    - The Board will vote to accept jurisdiction on the application
    - If accepted:
        - The Board will hold a public hearing
        - The Board may ask additional questions
        - The Board will deliberate on your application
            - Typically decisions are made the night of the presentation, but an application may be tabled
        - After deliberation, a decision will be made.
            - You will be sent a notice of the decision.

City of Dover, New Hampshire
SITE REVIEW APPLICATION

[Revision Date: June 4, 2019]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: The Storage Barn, LLC Telephone # 603-396-1635

Address of Applicant: 35 Hodgdon Farm Lane, Newington, NH 03801

E-Mail Address: greatbaynh@comcast.net

Name of Property Owner (*if different from applicant*): Same As Applicant Telephone #

Address of Property Owner:

PROPERTY INFORMATION

Address of Property: 385 & 387 Sixth Street, Dover, NH

Assessor's Map # D Lot(s) # 16 & 16G

Zoning District(s) I-4 Overlay District(s)

Size of Parcel: 1,179,605 sq. ft. 27.08 ac. Property Deed: Book 4209 Page: 0241

Existing Use of Property: Self-Storage Facility

SITE PLAN INFORMATION

Describe Proposed Use: To add 1 self-storage buildings to the existing facility

Area of Parcel to be Developed: 12,000 sq. ft.

If Multi-family Residential, Specify Number of Units & Buildings Proposed:

Number of Parking Spaces: Existing 57 Proposed 57

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

Number of Employees Total: 1 In Maximum Shift: 8 hours

Disposition of Parcel:

Building Footprint 12,000 sq. ft.

Total Building Area 12,000 sq. ft.

Paved Area 4,718 sq. ft.

Building Setbacks:

Front Yard N/A ft.

Rear Yard N/A ft.

Side Yard: Right N/A ft. Left N/A ft.

City Water? _X_ Yes ___ No How far is city water from the property? onsite

City Sewer? _X_ Yes ___ No How far is city sewer from the property? onsite

BUILDING INFORMATION

Type of Building to be Built: Add 1 additional self-storage buildings to the existing facility

Height of Building: _____ Finished Floor Elevation: 174.96

Number of Seats (where applicable) N/A

Estimated value of construction: _____ Refuse removal: Public/Private (circle one)

WAIVER REQUESTS

Site Review Regulations section(s) to be waived: _____

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

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) David Collier, Jones & Beach Engineers, Inc.

Address PO Box 219, Stratham, NH 03885 Telephone #: 603-772-4746

Professional License #: 892 E-mail address: dcollier@jonesandbeach.com

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Michael Kerivan, Jones & Beach Engineers, Inc.

Address PO Box 219, Stratham, NH 03885 Telephone #: 603-772-4746

Professional License #: 9846 E-mail address: mkerivan@jonesandbeach.com

ARCHITECT INFORMATION

Name of Architect and Company (Licensed in N.H.) _____

Address _____ Telephone #: _____

Professional License #: _____ E-mail address: _____

LANDSCAPE ARCHITECT INFORMATION

Name of Landscape Architect and Company (Licensed in N.H.) LM Land Design LLC

Address 11 South Road, Brentwood, NH 03833 Telephone #: 603-770-7728

Professional License #: _____ E-mail address: lmlanddesign@gmail.com

SOIL SCIENTIST INFORMATION

Name of Soil Scientist and Company (Licensed in N.H.) _____

Address _____ Telephone #: _____

Professional License #: _____ E-mail address: _____

CONSERVATION EASEMENT HOLDER

Name of Easement Holder: TDR Sending 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: 5/3/21

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

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

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

Signature of Property Owner: _____ Date: 5/3/21

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: 5/3/21

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: 5/3/21

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

PLANNING BOARD FEE SCHEDULE

(Revised September 17, 2020)

Below are the fees associated with plan review and are subject to a nonrefundable application fee to cover administrative expenses. Please complete the information below and provide payment with your application submittal. **Plan review fees shall be paid prior to technical review committee (TRC) being scheduled.** For plans not requiring TRC review, **fees are due 21 days prior** to the Planning Board meeting. Staff will coordinate abutter/notice fees, which will be invoiced and must be paid 28 hours before the Planning Board meeting for an application to be heard. Fees shall be paid by cash or check made payable to "City of Dover".

A. Plan Review Fees

1. Application fee for the following (SELECT ALL THAT APPLY):

- ☐ SUBDIVISION Application fee $200.00 + $150.00 x # _____ new lots created = $_____
- ☐ LOT LINE ADJUSTMENT Application fee $200.00 + $100.00 X # ___ of lots involved = $_____
- ☐ TRANSFER OF DEVELOPMENT RIGHTS Application fee $200.00 = $_____
- ☐ SITE REVIEW – RESIDENTIAL Application fee $200.00+ $100.00 x # __ per dwelling unit =$_____
- ☒ SITE REVIEW – NON-RESIDENTIAL Application fee $200.00 + (not to exceed $10,000)
  - New construction $.15 sq. ft. x # _____ sq. ft.= $_____
  - Additions (new floor space) $.10 per sq. ft. x # 12000 sq. ft.= 12000 $ 1200.00

MOTEL/HOTEL $35.00 x # ___ per lodging unit= $_____

CHANGE OF USE Application fee $200.00 + (not to exceed $5,000)

- Existing floor spaces $.10 per sq. ft. x # _____ sq. ft. = $_____

- ☐ CONDITIONAL USE PERMIT Application fee $200.00 x # _____ per Application = $_____
- ☐ GRAVEL PIT/ EXCAVATIONS
  - Application fee $50.00= $_____
  - Permit fee $75.00= $_____
- ☐ EXTENSIONS/AMENDMENTS/WAIVERS FOR AN APPROVED PLAN Application fee $200.00 = $_____
- ☐ REQUEST FOR REZONING Application fee $200.00 = $_____
- ☐ DRIVEWAY WAIVER Application fee $200.00 = $_____

SUB TOTAL= **$** 1,200.00

AND

2. TOTAL IMPERVIOUS PAVED AREA (for new development, roadways or additions to existing parking lots, (not to exceed $10,000)) Application fee $200.00 + $.07 sq. ft. x # 4718 = $ 530.26

TOTAL PLAN REVIEW FEE= **$** 1,730.26

B. Abutter Notification/Mailing Labels - this office will create and print the abutter list and provide labels in triplicate for each abutter. The applicant/owner will need to review the list and provide to this office the engineer, architect, licensed land surveyor (LLS), licensed landscape architect (LLA) and/or soil scientist whose professional seal appears on the plan with names and addresses for notices.

- ☒ Applicant & Owner, engineer, architect, LLS, LLA and/or soil scientist
  - Certified letters fee # 4 of x $8.00= $ 32.00
- ☐ Certified letters fee: # of abutters _____ X $8.00= $_____
- ☐ First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X $1.00= $_____
- ☒ Creating/Printing Abutter Labels in triplicate per sheet 1 x $10.00= $ 10.00

SUB TOTAL= **$** 42.00

C. Foster's newspaper public notice fee $100.00 x # 1 applications = $ 100.00

TOTAL NOTICE FEE= **$** 142.00

The above amount must be paid 28 hours prior to the Planning Board meeting, to be heard.

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: The Storage Barn, LLC File Number: _____

PROJECT TITLE: The Storage Barn Site Expansion Plan

PROPERTY LOCATION: 385 & 387 Sixth Street Tax Map: D Lot: 16 & 16G

	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)		
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: The Storage Barn, LLC 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).* To add 2 additional self-storage buildings to the existing facility.
2. Owners of Record are: Name The Storage Barn, LLC
   Street address 35 Hodgdon Farm Lane
   Municipality, State, Zip Code Newington, NH 03801

   _____
   Authorized Signature
3. The parcel(*s*) is (*are*) shown as Lot No. 16 & 16-G Map D of the City of Dover Tax Assessor's Maps.
4. The subject parcel(s) contains 27.08 acres or 1,179,605 sq. ft. area of land.
5. Title reference for the project parcel(*s*) is the Strafford County Registry of Deeds, Book No. 4209, Page No. 0241.
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:

Letter of Authorization

I, Mark Phillips, 35 Hogdon Farm Lane, Newington, NH 03801, owner of property located in Dover, NH, known as Tax Map D, Lots 16 and 16G, do hereby authorize Jones & Beach Engineers, Inc., PO Box 219, Stratham, NH, to act on my behalf concerning the previously-mentioned property. The parcel is located on 385 Sixth Street in Dover, NH.

I hereby appoint Jones & Beach Engineers, Inc., as my agent to act on my behalf in the review process, to include any required signatures.

Witness

Mark Phillips

1/6/2021
Date

Doc # 0004494 Apr 25, 2014 12:39 PM
Book 4209 Page 0241 Page 1 of 4
Register of Deeds, Strafford County

C/H
L-CHIP
STA076853

DEPARTMENT OF REVENUE ADMINISTRATION
REAL ESTATE TRANSFER TAX
****4 Thousand 6 Hundred 32 Dollars
DATE 04/25/2014 ST829695 $ ****4632.00
AMOUNT

WARRANTY DEED

KNOW ALL PERSONS BY THESE PRESENTS, that **BETHARLENE F. MILLER, TRUSTEE OF THE WEEDEN FAMILY REVOCABLE TRUST**, of 36 Juniper Drive, Davenport, Florida 33837, and **BEULAH M. ELDREDGE, TRUSTEE OF THE WEEDEN FAMILY REVOCABLE TRUST**, of 447 Sixth Street, Dover, Strafford County, New Hampshire 03820, for consideration paid, grants to **THE STORAGE BARN, LLC**, a New Hampshire Limited Liability Company, with an address of 35 Hodgdon Farm Lane, Newington, Rockingham County, State of New Hampshire, with **WARRANTY COVENANTS**, the following:

A certain tract or parcel of land, together with any buildings and improvements thereon, situate on the northerly side of Sixth Street in Dover, Strafford County, State of New Hampshire, and shown as Tax Map D, Lot 16 on plan entitled "Overview Parcel Plat, Tax Map D, Lot 16 & 16A, Plan No. P11-36" dated July 21, 2011, as revised, drawn by Jones & Beach Engineers, Inc., approved by the Dover Planning Board on October 11, 2011, and recorded at the Strafford County Registry of Deeds as Plan 102-67, more particularly bounded and described pursuant to said plan as follows:

Beginning at a point on the northerly side of Sixth Street, said point marking the westerly corner of Tax Map D, Lot 16-A as shown on the plan; thence turning and running N 48° 26' W along the northerly sideline of Sixth Street a distance of eighty-three and two tenths (83.2') feet, more or less, to a point; thence turning and running N 51° 08' W along the northerly sideline of Sixth Street a distance of four hundred fifty-nine and nine tenths (459.9') feet, more or less, to a point at land now or formerly of Edward M. & Valerie C. Sawyer; thence turning and running along land now or formerly of Sawyer and land now or formerly of Dube the following courses and distances: N 26° 59' E a distance of twenty-four and seven tenths (24.7') feet, more or less, to

a point; thence turning and running N 27° 32' E a distance of seventy-five and six tenths (75.6') feet, more or less, to a point; thence turning and running N 24° 05' E a distance of fifty-two and four tenths (52.4') feet, more or less, to a point; thence turning and running N 28° 57' E a distance of thirty and five tenths (30.5') feet, more or less, to a point; thence turning and running N 23° 45' E a distance of one hundred sixteen and four tenths (116.4') feet, more or less, to a point; thence turning and running N 31° 45' E a distance of forty and one tenth (40.1') feet, more or less, to a point; thence turning and running N 08° 50' E a distance of eleven and two tenths (11.2') feet, more or less, to a point; thence turning and running N 28° 05' E a distance of thirty-one and five tenths (31.5') feet, more or less, to a point; thence turning and running N 30° 00' E a distance of sixty and nine tenths (60.9') feet, more or less, to a point; thence turning and running N 25° 29' E a distance of twenty-four and four tenths (24.4') feet, more or less, to Tax Map D, Lot 15 as shown on the plan; thence turning and running along Tax Map D, Lot 15 the following courses and distances: S 41° 39' E a distance of four hundred thirty and seven tenths (430.7') feet, more or less, to a point; thence turning and running N 12° 30' W a distance of seventy-five and no hundredths (75.0') feet, more or less, to a point; thence turning and running N 02° 29' W a distance of one hundred forty-six and no tenths (146.0') feet, more or less, to a point; thence turning and running N 09° 19' E a distance of one hundred one and no tenths (101.0') feet, more or less, to a point; thence turning and running N 18° 47' E a distance of one hundred forty-three and no tenths (143.0') feet, more or less, to a point; thence turning and running N 27° 06' E a distance of two hundred sixty-one and no tenths (261.0') feet, more or less, to a point; thence turning and running N 15° 27' E a distance of two hundred fifty-three and no tenths (253.0') feet, more or less, to a point; thence turning and running N 34° 59' E a distance of one hundred one and no tenths (101.0') feet, more or less, to a point; thence turning and running N 57° 26' W a distance of two hundred sixteen and no tenths (216.0') feet, more or less, to a point and land now or formerly of Johannes Cramer; thence turning and running N 24° 16' E a distance of seven hundred ninety-seven and two tenths (797.2') feet, more or less, to a point; thence turning and running N 27° 34' E a distance of three hundred sixteen and two tenths (316.2') feet, more or less, to a point; thence turning and running N 25° 17' E a distance of three hundred twenty-five and seven tenths (325.7') feet, more or less, to a point and land now or formerly of DIDA; thence turning and running S 79° 02' E along land now or formerly of DIDA a distance of one hundred ninety-one and four tenths (191.4') feet, more or less, to a point at land now or formerly of John W. and Debra J. Weeden; thence turning and running along land now or formerly of Weeden the following courses and distances: S 14° 25' W a distance of four hundred seventy-nine and five tenths (479.5') feet, more or less, to a point; thence turning and running S 13° 27' W a distance of four hundred fifty-three and two tenths (453.2') feet, more or less, to a point; thence turning and running S 13° 35' W a distance of three hundred seventy-one and five tenths (371.5') feet, more or less, to a point; thence turning and running S 14° 43' W a distance of two hundred seventy-six and two tenths (276.2') feet, more or less, to a point; thence turning and running S 05° 01' W a distance of four hundred fifty-two and nine tenths (452.9') feet, more or less, to a point; thence turning and running S 07° 30' W a distance of sixty-nine and nine tenths (69.9') feet, more or less, to a point; thence turning and running S 06° 09' W a distance of two hundred eighty-five and seven tenths (285.7') feet, more or less, to a point and Tax Map D, Lot 16-A as shown on the plan; thence turning and running S 46° 05' 37" W along Tax Map D, Lot 16-A a distance of seven hundred fifteen and thirty-three hundredths (715.33') feet, more or less, to the point of beginning. Said parcel contains 1,180,068 square feet (27.1 acres), more or less.

Subject to right of way easement as shown on said plan and recorded at the Strafford County Registry of Deeds, Book 1106, Page 610.

Together with the benefit of the right of way easement as shown on said plan and recorded at the Strafford County Registry of Deeds, Book 1110, Page 17.

Subject to utility easement as shown on the above referenced plan.

Meaning and intending to convey a portion of the premises conveyed to the Weeden Family Revocable Trust by deed from Alfred W. Weeden, Nancy A. Hager, Ronald J. Weeden, Naomi Weeden, Albert S. Weeden, Daniel F. Weeden, Patricia J. Weeden-Hallahan, Karen Weeden, James E. Weeden, Sarajean J. Fisk, Jeffrey A. Weeden, Beulah M. Eldredge, and Betharlene F. Miller, recorded at the Strafford County Registry of Deeds at Book 3809, Page 572; and by deed of John W. Weeden, recorded at the Strafford County Registry of Deeds at Book 3837, Page 42.

The above described premises is land only.

Signed this 25 day of April, 2014.

WEEDEN FAMILY REVOCABLE TRUST

Caryn J V Ranson
Witness

By: Beulah M. Eldredge Trustee
Beulah M. Eldredge, Trustee

STATE OF NEW HAMPSHIRE
COUNTY OF Rockingham

April 25, 2014

Personally appeared the above-named Beulah M. Eldredge, Trustee of the Weeden Family Revocable Trust, and acknowledged the foregoing instrument to be her voluntary act and deed.

Before me,

CARYN J.V. RANSON
MY COMMISSION EXPIRES FEB. 12, 2019
NOTARY PUBLIC NEW HAMPSHIRE

Caryn J V Ranson
Notary Public/~~Justice of the Peace~~
My Commission Expires:

WEEDEN FAMILY REVOCABLE TRUST

Witness

By: Betharlene F. Miller
Betharlene F. Miller, Trustee

STATE OF FLORIDA
COUNTY OF Polk

April 21st, 2014

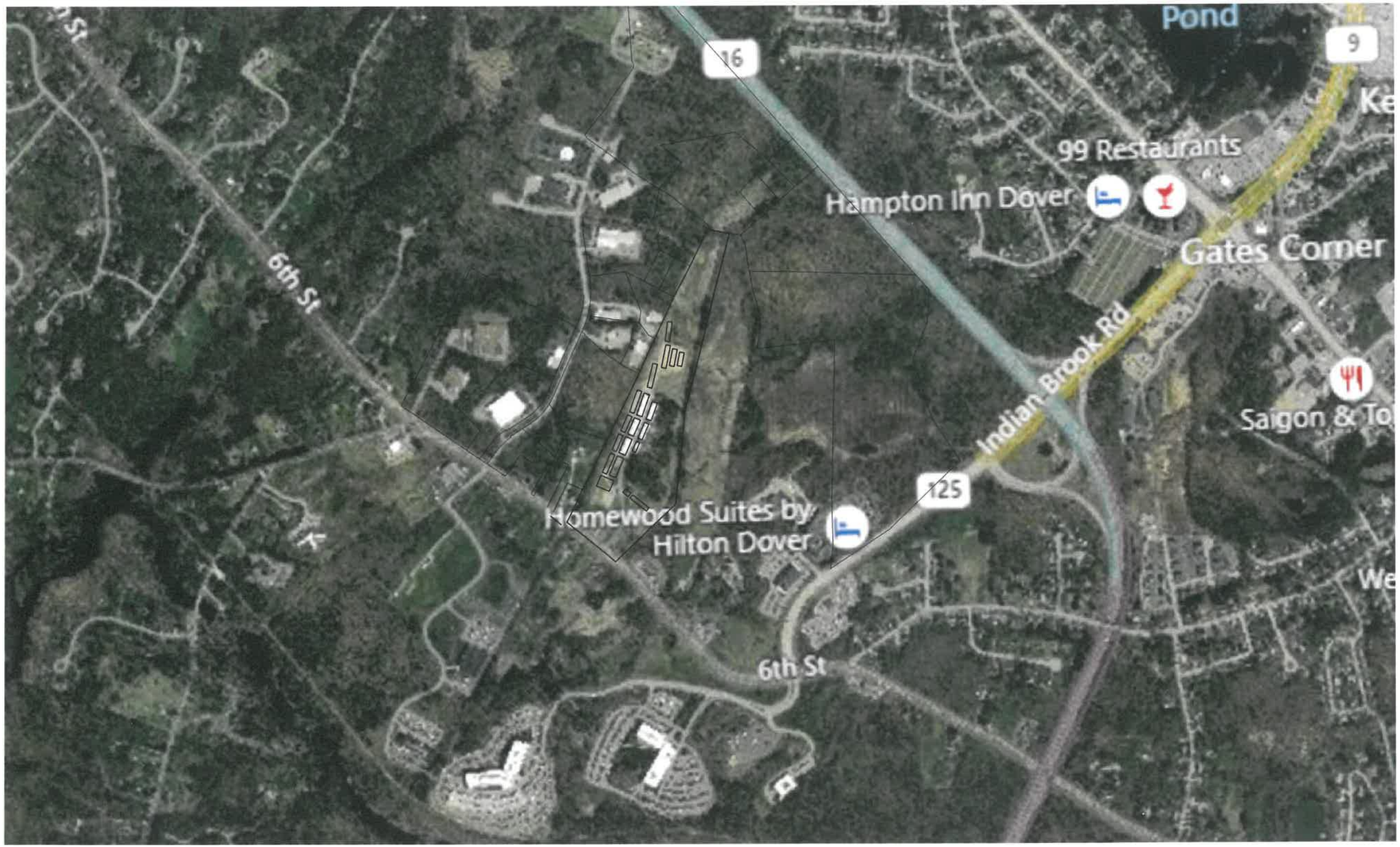
Personally appeared the above-named Betharlene F. Miller, Trustee of the Weeden Family Revocable Trust, and acknowledged the foregoing instrument to be her voluntary act and deed.

Before me,

STEPHANIE VIRUET
NOTARY PUBLIC
STATE OF FLORIDA
Comm# EE067113
Expires 2/23/2015

4/21/14
Notary Public/Justice of the Peace
My Commission Expires:
2/23/2015

N:\DEEDS\Weeden -Map D-Lot 16.wpd

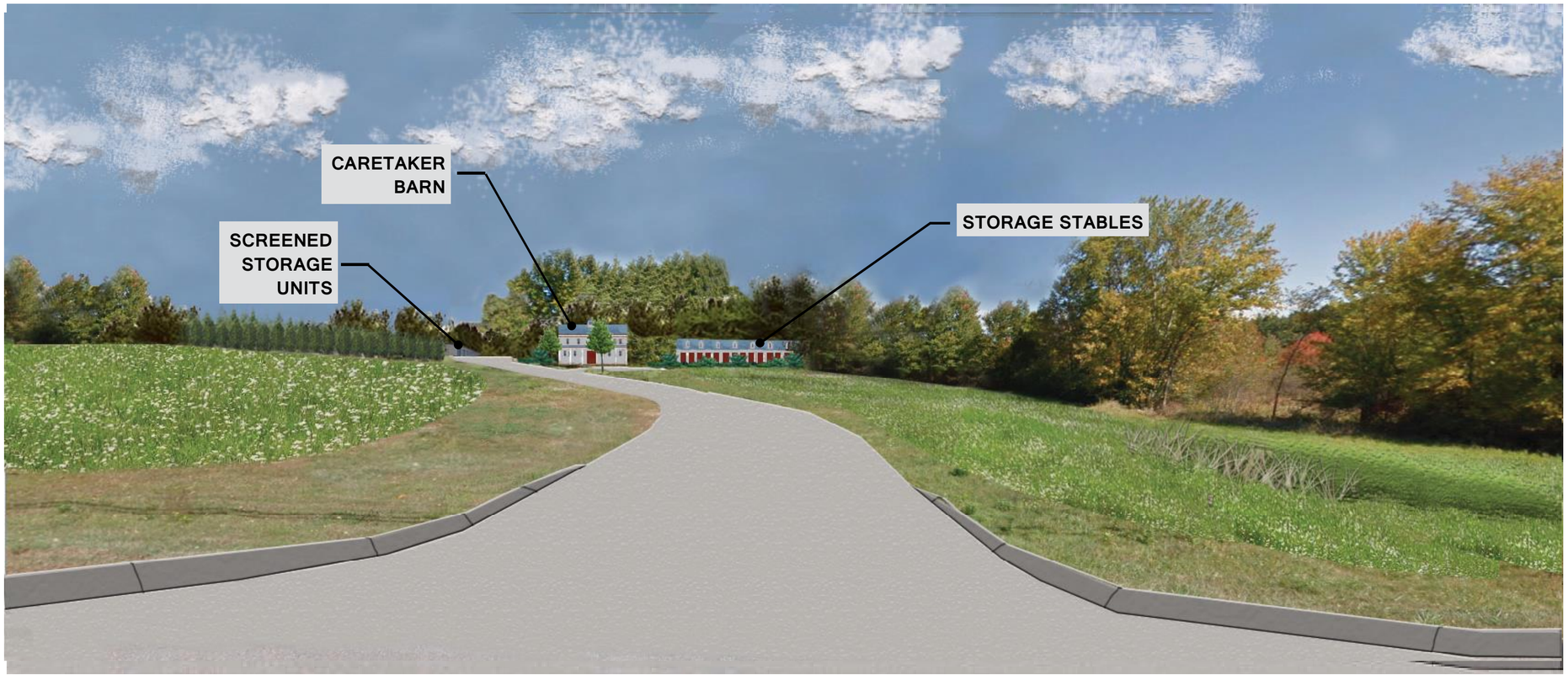


NEIGHBORHOOD PLAN

SCALE: 1"=400'
JBE PROJECT NO. 13172
MAY 3, 2021



BEFORE



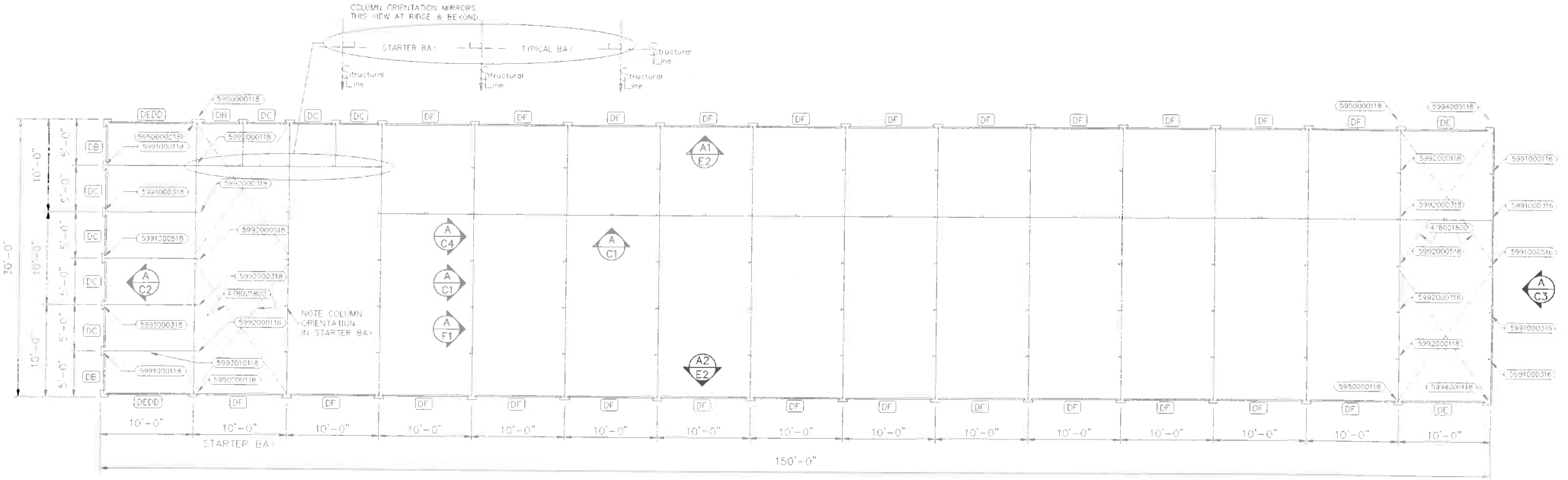
AFTER

Ironwood design group, LLC

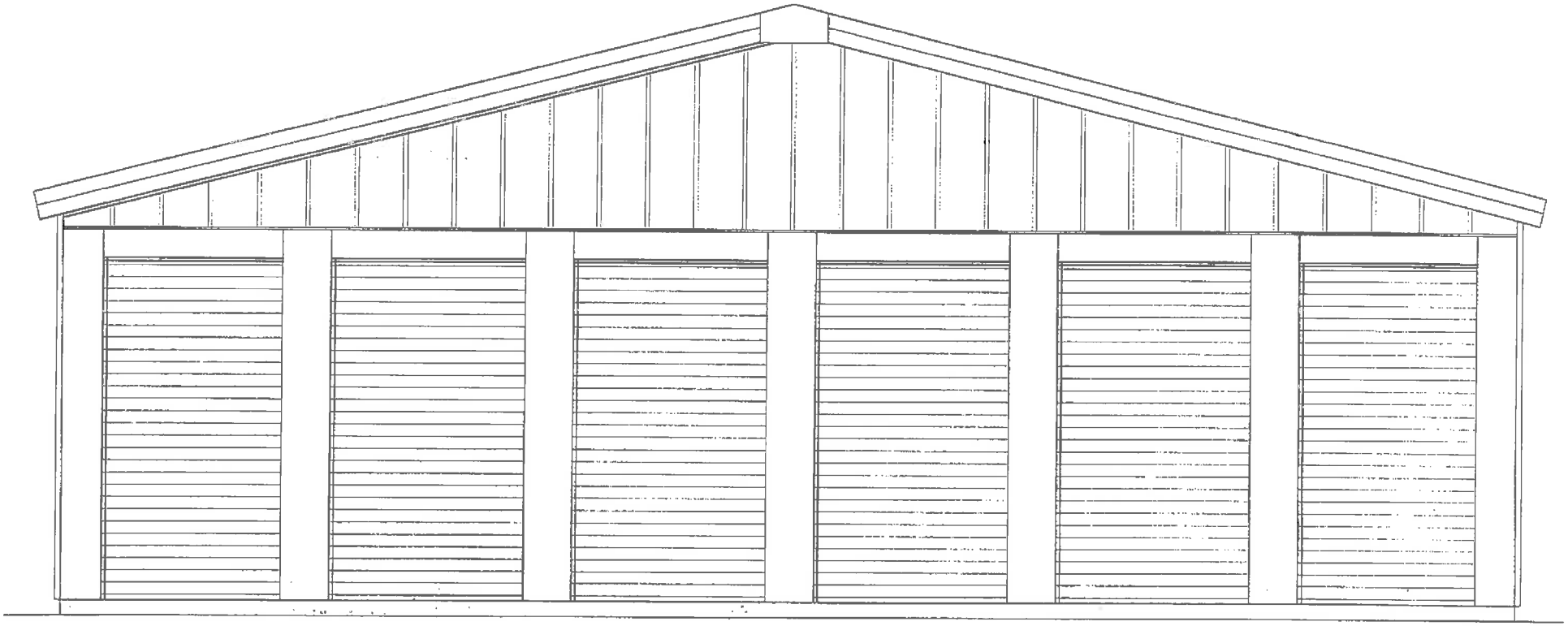
The Storage Barn, LLC. ~ Streetscape View

6th Street, Dover, New Hampshire

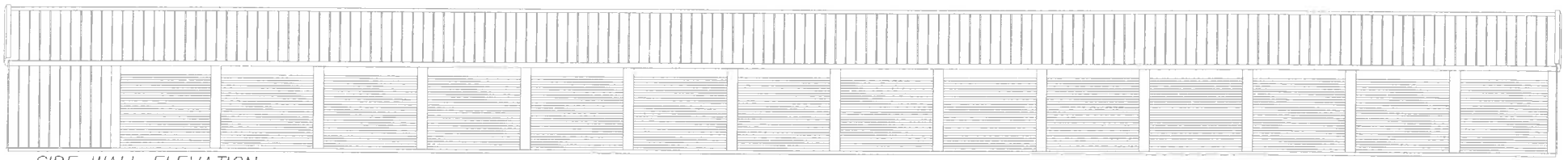
Date: October 17, 2014
Scale: Not to Scale



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



END WALL ELEVATION



SIDE WALL ELEVATION

JONES & BEACH ENGINEERS INC.
85 Portsmouth Avenue, PO Box 219, Stratham, NH 03885
603.772.4746 - JonesandBeach.com

The Storage Barn units located off of Sixth Street in Dover NH.





JONES & BEACH ENGINEERS, INC.

85 Portsmouth Avenue
Post Office Box 219
Stratham, NH 03885
Telephone: (603) 772-4746
Fax: (603) 772-0227

Post Office Box 484
Alton, NH 03809
Email: jbe@jonesandbeach.com
www.jonesandbeach.com

May 19, 2021

Dover Planning Board
Attn: Gina Cruikshank, Chair
288 Central Avenue
Dover, NH 03820

RE: Waiver Request Letter
The Storage Barn Site Plan
385 & 387 Sixth Street, Dover, NH
Tax Map D, Lots 16 & 16G
JBE Project No. 13172

Dear Board Members:

On behalf of our client, The Storage Barn, LLC, Jones & Beach Engineers, Inc., respectfully requests the following waiver from the City of Dover Land Use Regulations for the above-referenced parcel:

Section 149-13.A.(20) – Traffic Impact Assessment and Analysis. These facilities are typically low traffic generators, perhaps 7 vehicles per day per 100 storage units. We are planning on approximately 850 units for the entire site rather than the anticipate 1,100 to 1,200 units. This would equate to a maximum of 60 vehicles per day. This waiver was granted previously when the project started for the 1200 units. A waiver is respectfully requested.

If you have any questions or need any additional information, please feel free to contact our office. Thank you very much for your time.

Very truly yours,
JONES & BEACH ENGINEERS, INC.

Bradford Jones
Vice President

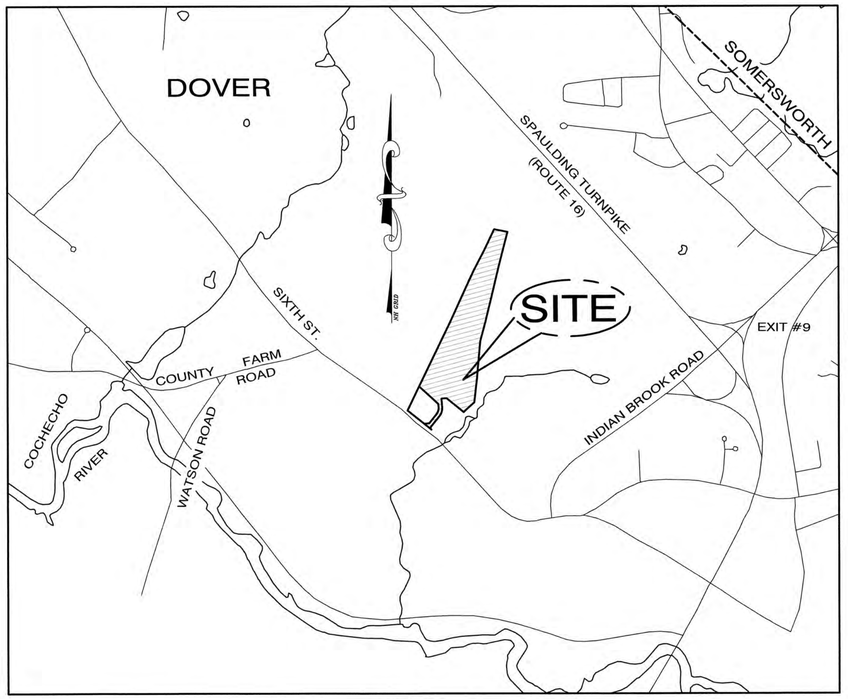
THE STORAGE BARN SITE EXPANSION PLAN

TAX MAP D, LOTS 16 AND 16G

385 & 387 SIXTH STREET, DOVER, NH

GENERAL LEGEND

EXISTING	PROPOSED	DESCRIPTION
		PROPERTY LINES
		SETBACK LINES
		CENTERLINE
		FRESHWATER WETLANDS LINE
		TIDAL WETLANDS LINE
		STREAM CHANNEL
		TREE LINE
		STONEWALL
		BARBED WIRE
		FENCE
		STOCKADE FENCE
		SOIL BOUNDARY
		AQUIFER PROTECTION LINE
		FLOOD PLAIN LINE
		ZONELINE
		EASEMENT
100 / 98	100 / 98	MAJOR CONTOUR / MINOR CONTOUR
VGC	VGC	EDGE OF PAVEMENT / VERTICAL GRANITE CURB
SGC	SGC	SLOPE GRANITE CURB
CCB	CCB	CAPE COD BERM
PCC	PCC	POURED CONCRETE CURB
X		SILT FENCE
D		DRAINAGE LINE
S	S	SEWER LINE / SEWER FORCE MAIN
FM	FM	
G	G	GAS LINE
W	W	WATER LINE
WS	WS	WATER SERVICE
OHE	OHE	OVERHEAD ELECTRIC
UGE	UGE	UNDERGROUND ELECTRIC
		GUARDRAIL
UD	UD	UNDERDRAIN
F	F	FIRE PROTECTION LINE
	W	THRUST BLOCK
		IRON PIPE/IRON ROD
		DRILL HOLE
		IRON ROD/DRILL HOLE
		STONE/GRANITE BOUND
100x0	100x0	SPOT GRADE
100.00	100.00	
100.00 TC	100.00 TC	PAVEMENT SPOT GRADE
99.50 BC	99.50 BC	CURB SPOT GRADE
		BENCHMARK (TBM)
		DOUBLE POST SIGN
		SINGLE POST SIGN
W	W	WELL
TP1		TEST PIT
		FAILED TEST PIT
M	M	MONITORING WELL
		PERC TEST
1		PHOTO LOCATION
		TREES AND BUSHES
		UTILITY POLE
		LIGHT POLES
		DRAIN MANHOLE
		SEWER MANHOLE
		HYDRANT
		WATER GATE
		WATER SHUT OFF
		REDUCER
		SINGLE GRATE CATCH BASIN
		DOUBLE GRATE CATCH BASIN
		TRANSFORMER
		CULVERT W/WINGWALLS
		CULVERT W/FLARED END SECTION
		CULVERT W/STRAIGHT HEADWALL
		STONE CHECK DAM
		DRAINAGE FLOW DIRECTION
		4K SEPTIC AREA
		WETLAND IMPACT
		VEGETATED FILTER STRIP
		RIPRAP
		OPEN WATER
		FRESHWATER WETLANDS
		TIDAL WETLANDS
		STABILIZED CONSTRUCTION ENTRANCE
		CONCRETE
		GRAVEL
		SNOW STORAGE
		RETAINING WALL



LOCUS MAP
SCALE 1" = 1000'

SHEET INDEX

CS	COVER SHEET
A1	LOT LINE ADJUSTMENT PLAN
OV1	OVERVIEW SITE PLAN
C1	EXISTING CONDITIONS PLAN
DEMO	DEMOLITION PLAN
C2	SITE PLAN
C3	GRADING AND DRAINAGE PLAN
L1	LIGHTING AND LANDSCAPE PLAN
D1-D2	DETAIL SHEET
E1	EROSION AND SEDIMENT CONTROL DETAILS

CIVIL ENGINEER / SURVEYOR
WETLAND SCIENTIST
JONES & BEACH ENGINEERS, INC.
85 PORTSMOUTH AVENUE
PO BOX 219
STRATHAM, NH 03885
(603) 772-4746
CONTACT: BRAD JONES
EMAIL: BJONES@JONESANDBEACH.COM

LANDSCAPE DESIGN
LM DESIGN, LLC
11 SOUTH ROAD
BRENTWOOD, NH 03833
(603) 770-7728
CONTACT: LISE McNAUGHTON

ELECTRIC
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
74 OLD DOVER ROAD
ROCHESTER, NH 03867
(603) 332-4227

TELEPHONE
FAIRPOINT COMMUNICATIONS
100 TRI CITY ROAD
SOMERSWORTH, NH 03878
ATTN:DAVE KESTNER
(603) 743-1114

LIGHTING DESIGNER:
CHARRON, INC.
PO BOX 4550
MANCHESTER, NH 03108
CONTACT: KEN SWEENEY
(603)662-8418

WATER AND SEWER
CITY OF DOVER COMMUNITY SERVICES
271 MAST ROAD
DOVER, NH 03820
(603) 516-6450

CABLE TV
COMCAST COMMUNICATION CORPORATION
334-B CALEF HIGHWAY
EPPING, NH 03042-2325
(603) 679-5695

NATURAL GAS
UNITIL
325 WEST ROAD
PORTSMOUTH, NH 08201
(603) 294-5144

OWNER'S SIGNATURE: MAP D LOT 16 & 16G

DATE:

THE STORAGE BARN, LLC
MARK G. PHILLIPS (MEMBER)

DOVER, NH

PROJECT PARCEL
CITY OF DOVER
TAX MAP D, LOT 16 & 16G

APPLICANT/OWNER
THE STORAGE BARN, LLC
35 HODGDON FARM LANE
NEWINGTON, NH 03801
BK 4209/PG 0241

TOTAL LOT AREA
1,179,605 SQ. FT.
27.08 ± ACRES

Design: MJK	Draft: LAZ	Date: 1/20/21	
Checked: BAJ	Scale: AS NOTED	Project No.: 13172	
Drawing Name: 13172-PLAN-NEW-STORAGE.dwg			

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.

STATE OF NEW HAMPSHIRE – MICHAEL J. KERIVAN No. 9848 LICENSED PROFESSIONAL ENGINEER – 4/1/21

REV.	DATE	REVISION	BY
2	4/29/21	REVISIONS PER CLIENT	LAZ
1	4/19/21	REVISIONS PER CLIENT	LAZ
0	4/1/21	ISSUED FOR REVIEW	LAZ

Designed and Produced in NH

Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-Mail: JBE@JONESANDBEACH.COM

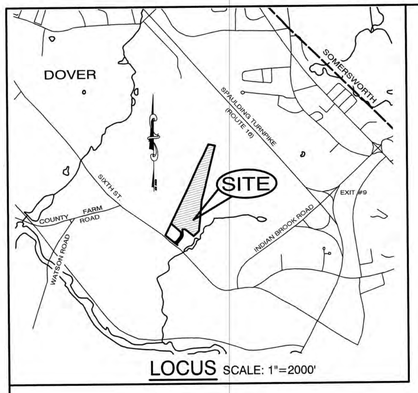
Plan Name: COVER SHEET

Project: THE STORAGE BARN, LLC
385 & 387 SIXTH STREET, DOVER, NH

Owner of Record: THE STORAGE BARN, LLC, 35 HODGDON FARM LANE, NEWINGTON, NH 03801

DRAWING No.
CS
SHEET 1 OF 10
JBE PROJECT NO. 13172

THE STORAGE BARN SITE PLAN, 385 & 387 SIXTH STREET, DOVER, NH
JBE # 13172
REVISION 4/1/21



LOCUS SCALE: 1"=2000'

TAX MAP E/LOT 27E
RUSSELL A. & JENNIFER K. NEWELL
308 SIXTH STREET
DOVER, NH 03820
BK 2448/PG 223

TAX MAP E/LOT 26B
SEAN M. LAROSE REV TRUST
390 SIXTH STREET
DOVER, NH 03820

MAP E LOT 24
LIBERTY MUTUAL INSURANCE
C/O JOANNE BRAGG
175 BERKELEY STREET, MS03L
BOSTON, MA 02116
BK 1364 PG 453

MAP D LOT 16C
EDWARD M. & VALERIE C. SAWYER
399 SIXTH STREET
DOVER, NH 03820
BK 3478 PG 150

TAX MAP D-1/LOT 16E
DENNIS D. DUBE, JR.
KIMBERLY J. DUBE
401 SIXTH STREET
DOVER, NH 03820
BK 3689/PG 830

TAX MAP D-1/LOT 13
CRAMER FABRICS INC.
ROBBERT & HENDRIK CRAMER
20 VENTURE DRIVE
DOVER, NH 03820

TAX MAP D-1/LOTS 14-3B
CARLTON REALTY REALTY, LLC
PO BOX 2034
DOVER, NH 03820

TAX MAP D-1/LOT 14-2
SARNIA PROPERTIES INC.
C/O CP MANAGEMENT
11 COURT STREET
SUITE 100
EXETER, NH 03833

TAX MAP D-1/LOT 14-3-2
CARLTON REALTY, LLC
PO BOX 2034
DOVER, NH 03821

MAP D-1 LOT 14
DOVER DUSINESS & IND DEV AUTHORITY
288 CENTRAL AVE.
DOVER, NH 03820

MAP D-1 LOT 7
DIDA
288 CENTRAL AVE.
DOVER, NH 03820
BK 1790 PG 581

TAX MAP D
LOT 16G
THE STORAGE BARN, LLC

EXISTING
169,028 SF
3.88 AC

PROPOSED
139,685 SF
3.21 AC

TAX MAP D
LOT 16
THE STORAGE BARN, LLC

EXISTING
1,144,604 SF
26.28 AC

PROPOSED
1,179,815 SF
27.08 AC

MAP D LOT 16F
HIRSEL PROPERTIES, LLC
314 ROUTE 108
MADBURY, NH 03823

MAP D-1 LOT 16B
JOHN W. & DEBRA J. WEEDEN
365 SIXTH STREET
DOVER, NH 03820
BK 2818 PG 983

TAX MAP D-1/LOT 16A
LDSJ HOLDINGS LLC
375 SIXTH STREET
DOVER, NH 03820
BK 3960/PG 969

SIXTH STREET

PROPERTY LINE TO BE VACATED

AREA TO BE CONSOLIDATED WITH LOT 16G
29,343 SF
0.67 AC

EXISTING 40' WIDE SEWER EASEMENT

PROPERTY LINE TO BE VACATED

EASEMENT LINE TO BE RELOCATED

EXISTING 10' WIDE UTILITY EASEMENT

EXISTING ACCESS EASEMENT

PROPOSED PROPERTY LINE

TDR SENDING CONSERVATION RESTRICTION
224,759 SF
5.16 AC

TDR SENDING CONSERVATION RESTRICTION

N25°41'41"E 896.04'
N24°16'59"E 797.15'
N27°34'20"E 316.16'
N25°17'24"E 325.11'
S78°07'17"E 19.44'
S14°25'24"W 479.52'
S13°27'19"W 453.23'
S13°35'33"W 371.46'
S14°13'32"W 276.16'
S05°01'12"W 452.87'
S07°30'36"W 69.90'
S06°09'48"W 265.62'
N25°41'41"E 19.76'
N28°05'08"E 31.45'
N25°29'13"E 24.44'
N08°50'34"E 11.20'
N31°45'07"E 40.14'
N30°00'01"E 60.89'
N28°57'56"E 30.49'
N24°05'44"E 52.40'
N23°45'37"E 116.42'
N27°33'10"E 25.58'
N26°59'36"E 24.69'
N59°16'30"W 25.82'
N04°43'23"W 18.39'
N04°43'23"W 248.69'
N04°43'23"W 81.97'
N04°43'23"W 332.47'
S51°05'58"E 256.35'
S59°16'30"E 70.01'
S30°43'30"W 100.00'
N59°16'30"W 359.88'
N38°51'02"E 167.56'
N38°51'02"E 187.56'
L=47.12
R=30.00'
R=125.00'
L=125.06'
R=175.00'
L=240.98'
S05°08'58"E 284.29'
S05°08'58"E 285.60'
N46°05'37"E 82.79'
715.33'
232.54'

1-1/4" IRON PIPE FOUND
1" IRON PIPE FOUND
IRON ROD FOUND
IRON PIPE FOUND
PK FOUND
FIELD STONE FOUND
DRILL HOLE SET
SPIKE SET
IR SET
IRON ROD SET
BOUND FOUND

NOTES:

1. THE INTENT OF THIS PLAN IS TO ADJUST THE LOT LINES OF LOT 16 AND LOT 16G IN ORDER TO EXPAND THE EXISTING SELF-STORAGE FACILITY PROJECT TO BE SERVED BY UNDERGROUND TELEPHONE, CABLE TV, ELECTRIC, GAS AND MUNICIPAL SEWER & WATER. COMPLETE ELEVEN (11) SHEET PLAN SET IS ON FILE AT THE PLANNING BOARD OFFICE.
2. ZONING DISTRICT: I-4
   LOT AREA MINIMUM = 5 ACRES
   LOT FRONTAGE MINIMUM = 400'
   MAX. BUILDING HEIGHT = 55'
3. ZONING BOARD OF ADJUSTMENT GRANTED A VARIANCE FROM SECTION 170-12.A OF THE ZONING ORDINANCE AND THE B-4 DISTRICT TABLE OF USE AND DIMENSIONAL REQUIREMENTS TO PERMIT A SELF STORAGE FACILITY USE WITH CONDITIONS; CASE Z 14-04, DATED FEBRUARY 20, 2014.
   A. THE SELF-STOARGE USE SHALL BE LOCATED NO CLOSER THAN 500 FT. FROM THE SIXTH STREET RIGHT-OF-WAY.
   B. NO FURTHER VARIANCES FROM THE CITY OF DOVER ZONING ORDINANCE FOR THE SUBJECT PROPERTIES SHALL BE PERMITTED.
   C. THE BUILDING IDENTIFIED ON THE PLANS SUBMITTED WITH THE APPLICATION AS "BARN" AND "STABLE" SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE ARCHITECTURAL RENDERINGS AND DESCRIPTIVE TEXT PROVIDED IN THE APPLICATION.
   D. ARBORVITAE SHALL BE INSTALLED TO PROVIDE SCREENING FOR THE PROPOSED SELF-STORAGE BUILDINGS LOCATED TO THE LEFT OF THE DRIVEWAY AS DEPICTED ON THE PLANS SUBMITTED.

PLAN REFERENCES:

1. "SUBDIVISION PLAT, TAX MAP D LOT 16 & 16-A, JD HOWARD DENTAL OFFICE, 375 SIXTH STREET, DOVER, NH WEEDEN FAMILY REVOCABLE TRUST", PREPARED BY JONES & BEACH ENGINEERS, INC., SCALE: 1"=40', DATED 7/26/11, AS LAST REVISED, THREE SHEETS RECORDED AS: OV1 - PLAN DRAWER 102 PLAN NUMBER 067, A1 - PLAN DRAWER 102 PLAN NUMBER 068, AND A2 - PLAN DRAWER 102 PLAN NUMBER 069.
2. "LOT LINE ADJUSTMENT PLAN, THE STORAGE BARN, LLC, 385 & 387 SIXTH STREET, DOVER, NH", PREPARED BY JONES & BEACH ENGINEERS, INC., SCALE: 1"=100', DATED 6/9/14, AS LAST REVISED AND TO BE RECORDED.
3. "SUBDIVISION PLAN, THE STORAGE BARN, LLC, 385 & 387 SIXTH STREET, DOVER, NH", PREPARED BY JONES & BEACH ENGINEERS, INC., SCALE: 1"=100', DATED 6/9/14, AS LAST REVISED AND TO BE RECORDED

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

OWNER'S SIGNATURE: MAP D LOT 16 & 16G
DATE:
THE STORAGE BARN, LLC
MARK G. PHILLIPS (MEMBER)

DOVER, NH

PLAN NO.

PROJECT PARCEL
CITY OF DOVER
TAX MAP D, LOT 16 & 16G

APPLICANT/OWNER
THE STORAGE BARN, LLC
35 HODGDON FARM LANE
NEWINGTON, NH 03801
BK 4209/PG 0241

TOTAL LOT AREA
1,179,605 SQ. FT.
27.08 ± ACRES

Design: MJK	Draft: LAZ	Date: 1/20/21
Checked: BAJ	Scale: 1"=30'	Project No.: 13172
Drawing Name: 13172-PLAN-NEW-STORAGE.dwg		

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.

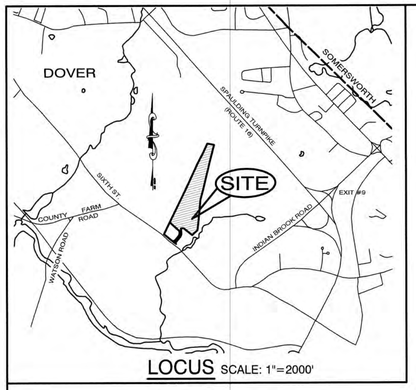
STATE OF NEW HAMPSHIRE MICHAEL J. KERIVAN No. 9646 LICENSED PROFESSIONAL ENGINEER 5/4/2021

REV.	DATE	REVISION	BY
2	4/29/21	REVISIONS PER CLIENT	LAZ
1	4/19/21	REVISIONS PER CLIENT	LAZ
0	4/1/21	ISSUED FOR REVIEW	LAZ

Designed and Produced in NH
Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-Mail: JBE@JONESANDBEACH.COM

Plan Name: LOT LINE ADJUSTMENT PLAN
Project: THE STORAGE BARN, LLC
385 & 387 SIXTH STREET, DOVER, NH
Owner of Record: THE STORAGE BARN, LLC, 35 HODGDON FARM LANE, NEWINGTON, NH 03801

DRAWING No.
A1
SHEET 2 OF 10
JBE PROJECT NO. 13172



LOCUS SCALE: 1"=2000'

TAX MAP D-1/LOT 14-2
SARNIA PROPERTIES INC.
C/O CP MANAGEMENT
11 COURT STREET
SUITE 100
EXETER, NH 03833

TAX MAP D-1/LOT 14-3-2
CARLTON REALTY, LLC
PO BOX 2034
DOVER, NH 03821

MAP D-1 LOT 14
DOVER DUSINESS & IND
DEV AUTHORITY
288 CENTRAL AVE.
DOVER, NH 03820

MAP D-1 LOT 7
DIDA
288 CENTRAL AVE.
DOVER, NH 03820
BK 1790 PG 581

TAX MAP D-1/LOTS 14-3B
CARLTON REALTY REALTY, LLC
PO BOX 2034
DOVER, NH 03820

TAX MAP D-1/LOT 13
CRAMER FABRICS INC.
ROBBERT & HENDRIK CRAMER
20 VENTURE DRIVE
DOVER, NH 03820

TAX MAP D-1/LOT 16E
DENNIS D. DUBE, JR.
KIMBERLY J. DUBE
401 SIXTH STREET
DOVER, NH 03820
BK 3689/PG 830

MAP D LOT 16C
EDWARD M. &
VALERIE C. SAWYER
399 SIXTH STREET
DOVER, NH 03820
BK 3478 PG 150

TAX MAP E/LOT 27E
RUSSELL A. &
JENNIFER K. NEWELL
398 SIXTH STREET
DOVER, NH 03820
BK 2448/PG 223

TAX MAP E/LOT 26B
SEAN M. LAROSE
REV TRUST
390 SIXTH STREET
DOVER, NH 03820

TAX MAP D
LOT 16G
BLACK DOG
REALTY, LLC

TAX MAP D
LOT 16
THE STORAGE
BARN, LLC

MAP E LOT 24
LIBERTY MUTUAL INSURANCE
C/O JOANNE BRAGG
175 BERKELEY STREET, MS03L
BOSTON, MA 02116
BK 1364 PG 453

MAP D LOT 16F
HIRSEL PROPERTIES, LLC
314 ROUTE 108
MADBURY, NH 03823

MAP D-1 LOT 16B
JOHN W. &
DEBRA J. WEEDEN
365 SIXTH STREET
DOVER, NH 03820
BK 2818 PG 983

TAX MAP D-1/LOT 16A
LDSJ HOLDINGS LLC
375 SIXTH STREET
DOVER, NH 03820
BK 3960/PG 969

I-4 ZONE

B-1 ZONE

PROPOSED PROPERTY LINE

PROPOSED RELOCATED ACCESS EASEMENT

10' WIDE UTILITY EASEMENT TO BENEFIT LOT 16

ACCESS EASEMENT

EXISTING 40' UTILITY EASEMENT

40' UTILITY EASEMENT

LIMIT OF 500 YEAR FLOOD ZONE

INDIAN BROOK

SIXTH STREET

PROPERTY LINE

TDR SENDING CONSERVATION RESTRICTION
224,759 SF
5.16 AC

EXIS. BLDG. 7,200 SF
EXIS. BLDG. 10,800 SF
EXIS. 2 STORY BLDG. 6,000 SF FOOTPRINT 12,000 STORAGE AREA
EXIS. BLDG. 9,000 SF
EXIS. 2 STORY BLDG. 6,000 SF FOOTPRINT 12,000 STORAGE AREA
EXIS. BLDG. 8,250 SF
EXIS. BLDG. 8,000 SF
EXIS. BLDG. 10,000 SF
EXIS. BLDG. 7,200 SF
EXIS. BLDG. 6,400 SF
EXIS. BLDG. 8,000 SF
EXIS. BLDG. 6,000 SF
EXIS. BLDG. 4,800 SF
EXIS. BLDG. 6,800 SF
EXIS. BLDG. 2,700 SF
EXIS. BLDG. 6,000 SF
PROP. BLDG. 12,000 SF
EXIS. BARN 2,400 SF
PROP. 1 1/2 STORY "STABLE" 6,720 SF STORAGE AREA

SITE PLAN NOTES:

1. THE INTENT OF THIS PLAN IS TO EXPAND THE EXISTING SELF-STORAGE FACILITY PROJECT TO BE SERVED BY UNDERGROUND TELEPHONE, CABLE TV, ELECTRIC, GAS AND MUNICIPAL SEWER & WATER. COMPLETE TEN (10) SHEET PLAN SET IS ON FILE AT THE PLANNING BOARD OFFICE.
2. ZONING DISTRICT: I-4
   LOT AREA MINIMUM = 5 ACRES
   LOT FRONTAGE MINIMUM = 400'
   MAX. BUILDING HEIGHT = 55'
   BUILDING LOT COVERAGE = 33%
3. ZONING BOARD OF ADJUSTMENT GRANTED A VARIANCE FROM SECTION 170-12.A OF THE ZONING ORDINANCE AND THE B-4 DISTRICT TABLE OF USE AND DIMENSIONAL REQUIREMENTS TO PERMIT A SELF STORAGE FACILITY USE WITH CONDITIONS; CASE Z 14-04, DATED FEBRUARY 20, 2014.
   A. THE SELF-STOARGE USE SHALL BE LOCATED NO CLOSER THAN 500 FT. FROM THE SIXTH STREET RIGHT-OF-WAY.
   B. NO FURTHER VARIANCES FROM THE CITY OF DOVER ZONING ORDINANCE FOR THE SUBJECT PROPERTIES SHALL BE PERMITTED.
   C. THE BUILDING IDENTIFIED ON THE PLANS SUBMITTED WITH THE APPLICATION AS "BARN" AND "STABLE" SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE ARCHITECTURAL RENDERINGS AND DESCRIPTIVE TEXT PROVIDED IN THE APPLICATION.
   D. ARBORVITAE SHALL BE INSTALLED TO PROVIDE SCREENING FOR THE PROPOSED SELF-STORAGE BUILDINGS LOCATED TO THE LEFT OF THE DRIVEWAY AS DEPICTED ON THE PLANS SUBMITTED.

PLAN REFERENCES:

1. "SUBDIVISION PLAT, TAX MAP D LOT 16 & 16-A, JD HOWARD DENTAL OFFICE, 375 SIXTH STREET, DOVER, NH WEEDEN FAMILY REVOCABLE TRUST", PREPARED BY JONES & BEACH ENGINEERS, INC., SCALE: 1"=40', DATED 7/26/11, AS LAST REVISED, THREE SHEETS RECORDED AS: OV1 - PLAN DRAWER 102 PLAN NUMBER 067, A1 - PLAN DRAWER 102 PLAN NUMBER 068, AND A2 - PLAN DRAWER 102 PLAN NUMBER 069.
2. "LOT LINE ADJUSTMENT PLAN, THE STORAGE BARN, LLC, 385 & 387 SIXTH STREET, DOVER, NH", PREPARED BY JONES & BEACH ENGINEERS, INC., SCALE: 1"=100', DATED 6/9/14, AS LAST REVISED AND TO BE RECORDED.
3. "SUBDIVISION PLAN, THE STORAGE BARN, LLC, 385 & 387 SIXTH STREET, DOVER, NH", PREPARED BY JONES & BEACH ENGINEERS, INC., SCALE: 1"=100', DATED 6/9/14, AS LAST REVISED AND TO BE RECORDED

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

OWNER'S SIGNATURE: MAP D LOT 16 & 16G

DATE:

THE STORAGE BARN, LLC
MARK G. PHILLIPS (MEMBER)

DOVER, NH

PLAN NO.

PROJECT PARCEL
CITY OF DOVER
TAX MAP D, LOT 16 & 16G

APPLICANT/OWNER
THE STORAGE BARN, LLC
35 HODGDON FARM LANE
NEWINGTON, NH 03801
BK 4209/PG 0241

TOTAL LOT AREA
1,179,605 SQ. FT.
27.08 ± ACRES

Design: MJK	Draft: LAZ	Date: 1/20/21
Checked: BAJ	Scale: 1"=30'	Project No.: 13172
Drawing Name: 13172-PLAN-NEW-STORAGE.dwg		

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STATE OF NEW HAMPSHIRE
MICHAEL J. KERIVAN
No. 9846
LICENSED PROFESSIONAL ENGINEER
5/4/21

REV.	DATE	REVISION	BY
2	4/29/21	REVISIONS PER CLIENT	LAZ
1	4/19/21	REVISIONS PER CLIENT	LAZ
0	4/1/21	ISSUED FOR REVIEW	LAZ

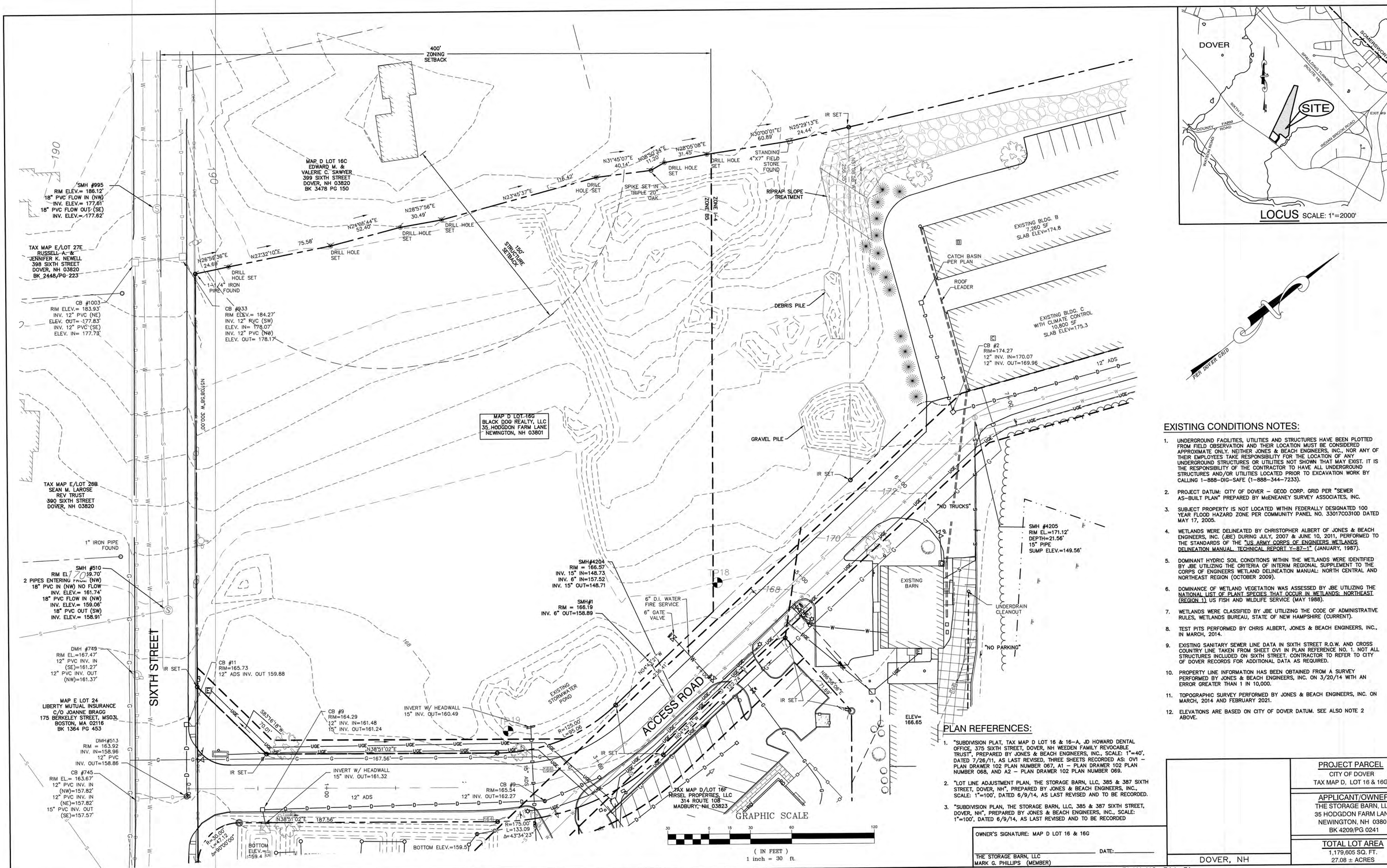
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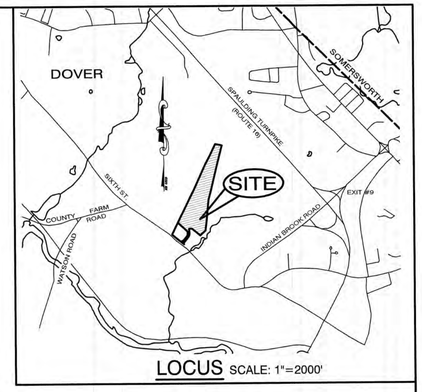
Plan Name: OVERVIEW SITE PLAN

Project: THE STORAGE BARN, LLC
385 & 387 SIXTH STREET, DOVER, NH

Owner of Record: THE STORAGE BARN, LLC, 35 HODGDON FARM LANE, NEWINGTON, NH 03801

DRAWING No.
OV1
SHEET 3 OF 10
JBE PROJECT NO. 13172





EXISTING CONDITIONS NOTES:

1. UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN PLOTTED FROM FIELD OBSERVATION AND THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. NEITHER JONES & BEACH ENGINEERS, INC., NOR ANY OF THEIR EMPLOYEES TAKE RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES OR UTILITIES NOT SHOWN THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND STRUCTURES AND/OR UTILITIES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 1-888-DIG-SAFE (1-888-344-7233).
2. PROJECT DATUM: CITY OF DOVER – GEOD CORP. GRID PER "SEWER AS-BUILT PLAN" PREPARED BY McENEANEY SURVEY ASSOCIATES, INC.
3. SUBJECT PROPERTY IS NOT LOCATED WITHIN FEDERALLY DESIGNATED 100 YEAR FLOOD HAZARD ZONE PER COMMUNITY PANEL NO. 33017C0310D DATED MAY 17, 2005.
4. WETLANDS WERE DELINEATED BY CHRISTOPHER ALBERT OF JONES & BEACH ENGINEERS, INC. (JBE) DURING JULY, 2007 & JUNE 10, 2011, PERFORMED TO THE STANDARDS OF THE "US ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1" (JANUARY, 1987).
5. DOMINANT HYDRIC SOIL CONDITIONS WITHIN THE WETLANDS WERE IDENTIFIED BY JBE UTILIZING THE CRITERIA OF INTERIM REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH CENTRAL AND NORTHEAST REGION (OCTOBER 2009).
6. DOMINANCE OF WETLAND VEGETATION WAS ASSESSED BY JBE UTILIZING THE NATIONAL LIST OF PLANT SPECIES THAT OCCUR IN WETLANDS: NORTHEAST (REGION 1) US FISH AND WILDLIFE SERVICE (MAY 1988).
7. WETLANDS WERE CLASSIFIED BY JBE UTILIZING THE CODE OF ADMINISTRATIVE RULES, WETLANDS BUREAU, STATE OF NEW HAMPSHIRE (CURRENT).
8. TEST PITS PERFORMED BY CHRIS ALBERT, JONES & BEACH ENGINEERS, INC., IN MARCH, 2014.
9. EXISTING SANITARY SEWER LINE DATA IN SIXTH STREET R.O.W. AND CROSS COUNTRY LINE TAKEN FROM SHEET OV1 IN PLAN REFERENCE NO. 1. NOT ALL STRUCTURES INCLUDED ON SIXTH STREET. CONTRACTOR TO REFER TO CITY OF DOVER RECORDS FOR ADDITIONAL DATA AS REQUIRED.
10. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY JONES & BEACH ENGINEERS, INC. ON 3/20/14 WITH AN ERROR GREATER THAN 1 IN 10,000.
11. TOPOGRAPHIC SURVEY PERFORMED BY JONES & BEACH ENGINEERS, INC. ON MARCH, 2014 AND FEBRUARY 2021.
12. ELEVATIONS ARE BASED ON CITY OF DOVER DATUM. SEE ALSO NOTE 2 ABOVE.

PLAN REFERENCES:

1. "SUBDIVISION PLAT, TAX MAP D LOT 16 & 16-A, JD HOWARD DENTAL OFFICE, 375 SIXTH STREET, DOVER, NH WEEDEN FAMILY REVOCABLE TRUST", PREPARED BY JONES & BEACH ENGINEERS, INC., SCALE: 1"=40', DATED 7/26/11, AS LAST REVISED, THREE SHEETS RECORDED AS: OV1 – PLAN DRAWER 102 PLAN NUMBER 067, A1 – PLAN DRAWER 102 PLAN NUMBER 068, AND A2 – PLAN DRAWER 102 PLAN NUMBER 069.
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3. "SUBDIVISION PLAN, THE STORAGE BARN, LLC, 385 & 387 SIXTH STREET, DOVER, NH", PREPARED BY JONES & BEACH ENGINEERS, INC., SCALE: 1"=100', DATED 6/9/14, AS LAST REVISED AND TO BE RECORDED

OWNER'S SIGNATURE: MAP D LOT 16 & 16G

_____ DATE:_____

THE STORAGE BARN, LLC
MARK G. PHILLIPS (MEMBER)

DOVER, NH

PROJECT PARCEL
CITY OF DOVER
TAX MAP D, LOT 16 & 16G

APPLICANT/OWNER
THE STORAGE BARN, LLC
35 HODGDON FARM LANE
NEWINGTON, NH 03801
BK 4209/PG 0241

TOTAL LOT AREA
1,179,605 SQ. FT.
27.08 ± ACRES

PLAN NO. P14-31

Design: MJK	Draft: LAZ
Checked: BAJ	Scale: 1"=30'
Date: 1/20/21	Project No.: 13172
Drawing Name: 13172-PLAN-NEW-STORAGE.dwg	

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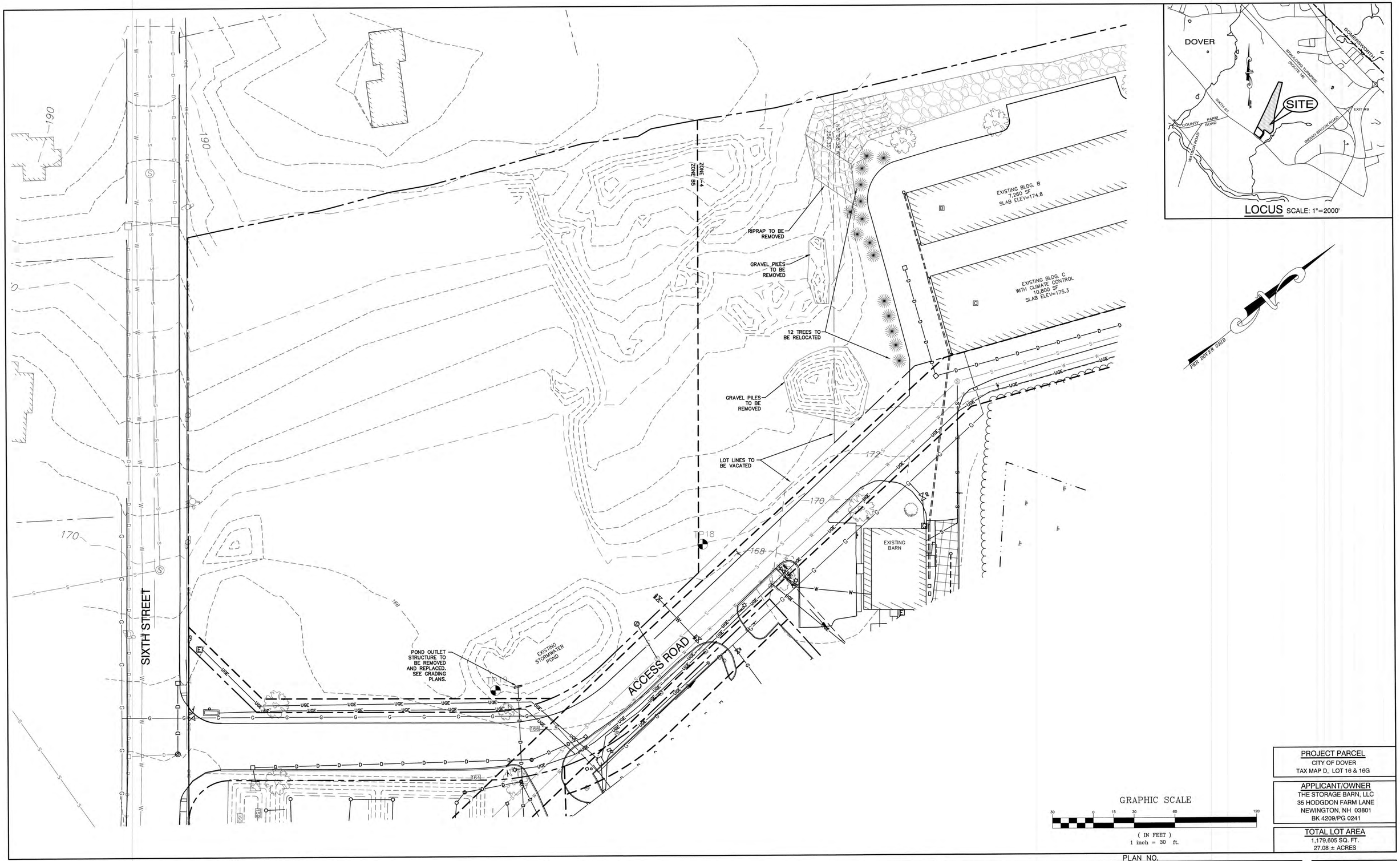
STATE OF NEW HAMPSHIRE – MICHAEL J. KERIVAN No. 9946 – LICENSED PROFESSIONAL ENGINEER – 5/4/22

REV.	DATE	REVISION	BY
2	4/29/21	REVISIONS PER CLIENT	LAZ
1	4/19/21	REVISIONS PER CLIENT	LAZ
0	4/1/21	ISSUED FOR REVIEW	LAZ

Designed and Produced in NH
J/B Jones & Beach Engineers, Inc.
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
Civil Engineering Services
603-772-4746
FAX: 603-772-0227
E-Mail: JBE@JONESANDBEACH.COM

Plan Name: EXISTING CONDITIONS PLAN
Project: THE STORAGE BARN, LLC
385 & 387 SIXTH STREET, DOVER, NH
Owner of Record: THE STORAGE BARN, LLC, 35 HODGDON FARM LANE, NEWINGTON, NH 03801

DRAWING No.
C1
SHEET 4 OF 10
JBE PROJECT NO. 13172



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

PROJECT PARCEL
CITY OF DOVER
TAX MAP D, LOT 16 & 16G

APPLICANT/OWNER
THE STORAGE BARN, LLC
35 HODGDON FARM LANE
NEWINGTON, NH 03801
BK 4209/PG 0241

TOTAL LOT AREA
1,179,605 SQ. FT.
27.08 ± ACRES

PLAN NO.

Design: MJK	Draft: LAZ	Date: 1/20/21
Checked: BAJ	Scale: 1"=30'	Project No.: 13172
Drawing Name: 13172-PLAN-NEW-STORAGE.dwg		

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STATE OF NEW HAMPSHIRE – MICHAEL J. KERVAN No. 9648 – LICENSED PROFESSIONAL ENGINEER – 5/4/2021

REV.	DATE	REVISION	BY
2	4/29/21	REVISIONS PER CLIENT	LAZ
1	4/19/21	REVISIONS PER CLIENT	LAZ
0	4/1/21	ISSUED FOR REVIEW	LAZ

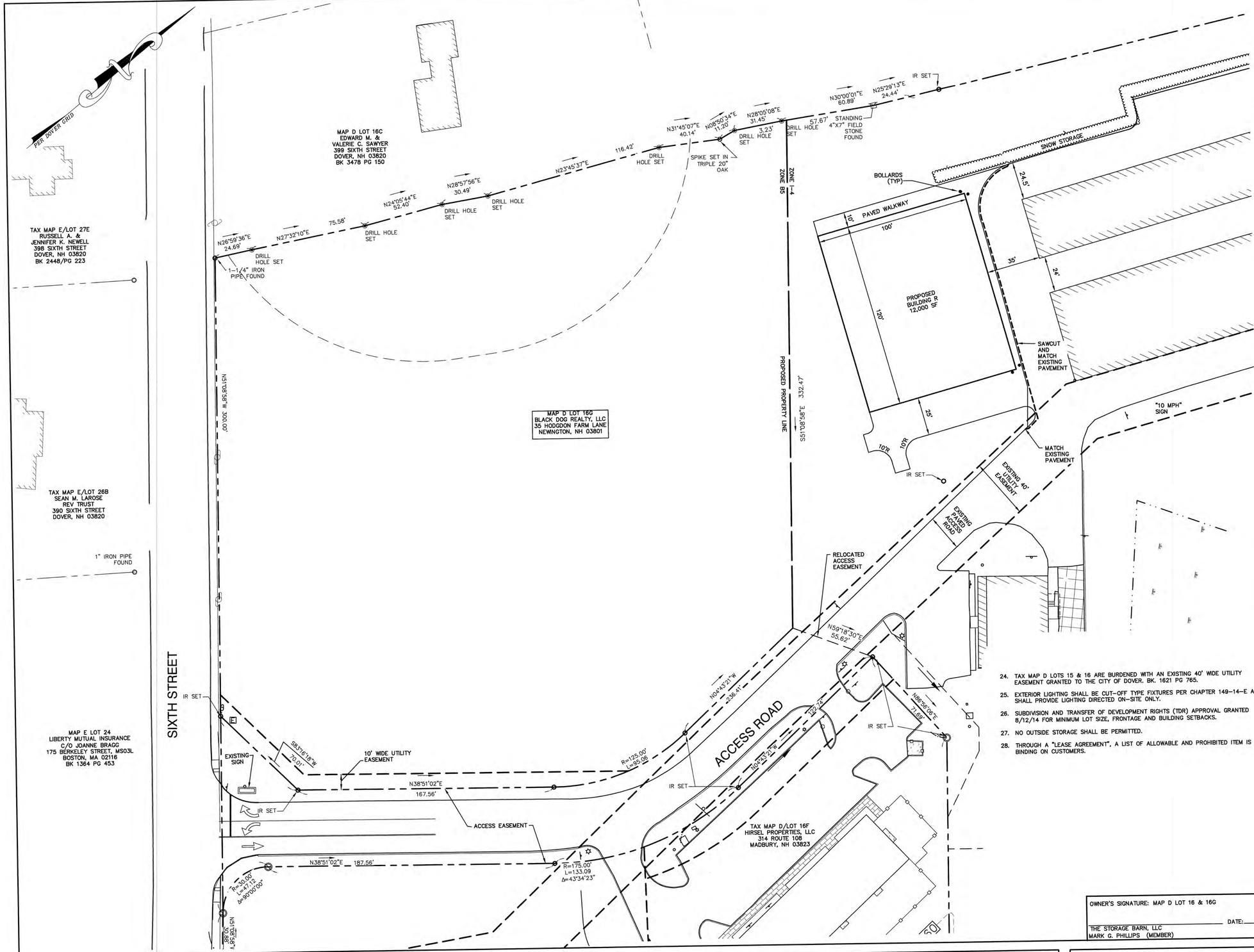
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J/B Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-Mail: JBE@JONESANDBEACH.COM

Plan Name: **DEMOLITION PLAN**

Project: THE STORAGE BARN, LLC
385 & 387 SIXTH STREET, DOVER, NH

Owner of Record: THE STORAGE BARN, LLC, 35 HODGDON FARM LANE, NEWINGTON, NH 03801

DRAWING No.
DEMO
SHEET 5 OF 10
JBE PROJECT NO. 13172



SITE NOTES:

1. THE INTENT OF THIS PLAN IS TO ADD TWO SELF STORAGE BUILDINGS TO THE EXISTING FACILITY. PROJECT TO BE SERVED BY UNDERGROUND TELEPHONE, CABLE TV, ELECTRIC, GAS AND MUNICIPAL SEWER & WATER. COMPLETE PLAN SET IS ON FILE AT THE PLANNING BOARD OFFICE.
2. ZONING DISTRICT: I–4 (OFFICE AND ASSEMBLY)
   LOT AREA MINIMUM = 2 ACRES
   LOT FRONTAGE MINIMUM = 200'
   MAX. BUILDING HEIGHT = 55'
   BUILDING LOT COVERAGE = 33%
   BUILDING SETBACKS:
   FRONT = 50'
   SIDE AND REAR = 50'
3. SUBDIVISION AND TRANSFER OF DEVELOPMENT RIGHTS (TDR) APPROVAL GRANTED 8/12/14 FOR MINIMUM LOT SIZE, FRONTAGE AND BUILDING SETBACKS.
4. ZONING BOARD OF ADJUSTMENT GRANTED A VARIANCE FROM SECTION 170–12.A OF THE ZONING ORDINANCE AND THE B–4 DISTRICT TABLE OF USE AND DIMENSIONAL REQUIREMENTS TO PERMIT A SELF STORAGE FACILITY USE WITH CONDITIONS; CASE Z 14–04, DATED FEBRUARY 20, 2014.
   A. THE SELF–STOARGE USE SHALL BE LOCATED NO CLOSER THAN 500 FT. FROM THE SIXTH STREET RIGHT–OF–WAY.
   B. NO FURTHER VARIANCES FROM THE CITY OF DOVER ZONING ORDINANCE FOR THE SUBJECT PROPERTIES SHALL BE PERMITTED.
   C. THE BUILDING IDENTIFIED ON THE PLANS SUBMITTED WITH THE APPLICATION AS "BARN" AND "STABLE" SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE ARCHITECTURAL RENDERINGS AND DESCRIPTIVE TEXT PROVIDED IN THE APPLICATION.
   D. ARBORVITAE SHALL BE INSTALLED TO PROVIDE SCREENING FOR THE PROPOSED SELF–STORAGE BUILDINGS LOCATED TO THE LEFT OF THE DRIVEWAY AS DEPICTED ON THE PLANS SUBMITTED.
5. WITH APPROVAL OF THIS PLAN BY THE DOVER PLANNING BOARD, THE FOLLOWING WAIVERS ARE GRANTED FROM "DOVER CODE, SITE REVIEW REGULATIONS, CHAPTER 149":
   A. SECTION 149–13.A.(20) – TRAFFIC IMPACT ASSESSMENT AND ANALYSIS
   B. SECTION 149–14.D.(5)(g) – PERVIOUS MATERIAL VEHICLE AREA
   C. SECTION 149–14.J.(2) – INTERCONNECTION OF ADJACENT PARCELS
6. NHDES ALTERATION OF TERRAIN PERMIT NO. AoT–0832 DATED 12/11/14. AMENDED ALTERATION OF TERRAIN PERMIT PENDING.
7. THIS PLAN SET HAS BEEN PREPARED BY JONES & BEACH ENGINEERS, INC., FOR MUNICIPAL AND STATE APPROVALS AND FOR CONSTRUCTION BASED ON DATA OBTAINED FROM ON–SITE FIELD SURVEY AND EXISTING MUNICIPAL RECORDS. THROUGHOUT THE CONSTRUCTION PROCESS, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY FIELD DISCREPANCY FROM DATA AS SHOWN ON THE DESIGN PLANS, INCLUDING ANY UNFORESEEN CONDITIONS, SUBSURFACE OR OTHERWISE, FOR EVALUATION AND RECOMMENDATIONS. ANY CONTRADICTION BETWEEN ITEMS ON THIS PLAN/PLAN SET, OR BETWEEN THE PLANS AND ON–SITE CONDITIONS, MUST BE RESOLVED BEFORE RELATED CONSTRUCTION HAS BEEN INITIATED. CONTRACTOR TO ALWAYS CONTACT DIG SAFE PRIOR TO DIGGING ONSITE OR OFFSITE TO ENSURE SAFETY AND OBEY THE LAW.
8. ALL CONSTRUCTION SHALL CONFORM TO CITY STANDARDS AND REGULATIONS, AND NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, WHICHEVER IS MORE STRINGENT.
9. SUBJECT PROPERTY IS NOT LOCATED WITHIN FEDERALLY DESIGNATED 100 YEAR FLOOD HAZARD ZONE PER COMMUNITY PANEL NO. 33017C0310D DATED MAY 17, 2005.
10. ALL CONSTRUCTION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (S.W.P.P.P.). THIS DOCUMENT IS TO BE KEPT ONSITE AT ALL TIMES AND UPDATED AS REQUIRED.
11. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER, ARCHITECT AND/OR OWNER, IN ORDER TO OBTAIN AND/OR PAY ALL THE NECESSARY LOCAL PERMITS, FEES AND BONDS.
12. ALL PROPOSED SIGNAGE SHALL CONFORM WITH THE CITY ZONING REGULATIONS.
13. ALL SIGNAGE AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND NHDOT STANDARDS AND SPECIFICATIONS (NON–REFLECTORIZED PAVEMENT MARKINGS).
14. ALL PARKING STALLS SHALL BE SEPARATED USING 4" WIDE SOLID STRIPES. STRIPING SHALL HAVE TWO COATS OF PAINT, ALKYD BASIN SYNTHETIC RESIN, FEDERAL SPECIFICATION TTP–115 TYPE 1, IN A COLOR OF WHITE.
15. ALL STOP BARS SHALL BE 18" IN WIDTH IN A COLOR OF WHITE; ALL TRAFFIC ARROWS SHALL BE PAINTED IN A COLOR OF WHITE.
16. ALL BUILDING DIMENSIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL AND STRUCTURAL PLANS PROVIDED BY THE OWNER. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND OWNER PRIOR TO THE START OF CONSTRUCTION. BUILDING DIMENSIONS AND AREAS ARE TO OUTSIDE OF WALL, UNLESS OTHERWISE NOTED.
17. SNOW TO BE STORED AT EDGE OF PAVEMENT AND IN AREAS SHOWN ON THE PLANS, OR TRUCKED OFFSITE TO AN APPROVED SNOW DUMPING LOCATION.
18. AS–BUILT PLANS OF THE SITE SHALL BE SUBMITTED ON A REPRODUCIBLE MYLAR MEDIUM AND IN A DIGITAL DXF FORMAT ON DISK TO THE CITY OF DOVER ENGINEERS OFFICE UPON COMPLETION OF PROJECT. AS–BUILT SHALL BE PREPARED AND CERTIFIED CORRECT BY A L.L.S. OR P.E.
19. A LETTER OF CREDIT FOR THE COST OF RE–VEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED PRIOR TO ANY EARTH–DISTURBING ACTIVITY OCCURS.
20. A PRECONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE CITY ENGINEERS SHALL OCCUR PRIOR TO ANY EARTH–DISTURBING ACTIVITY.
21. FINAL STREET ADDRESS WILL BE ASSIGNED AT TIME OF BUILDING PERMIT ISSUE.
22. CIVIL PLANS END FIVE (5') FEET FROM BUILDING. FOR ALL DETAIL AND CONNECTIONS TO BUILDING, REFER TO ARCHITECTURAL PLANS.
24. TAX MAP D LOTS 15 & 16 ARE BURDENED WITH AN EXISTING 40' WIDE UTILITY EASEMENT GRANTED TO THE CITY OF DOVER. BK. 1621 PG 765.
25. EXTERIOR LIGHTING SHALL BE CUT–OFF TYPE FIXTURES PER CHAPTER 149–14–E AND SHALL PROVIDE LIGHTING DIRECTED ON–SITE ONLY.
26. SUBDIVISION AND TRANSFER OF DEVELOPMENT RIGHTS (TDR) APPROVAL GRANTED 8/12/14 FOR MINIMUM LOT SIZE, FRONTAGE AND BUILDING SETBACKS.
27. NO OUTSIDE STORAGE SHALL BE PERMITTED.
28. THROUGH A "LEASE AGREEMENT", A LIST OF ALLOWABLE AND PROHIBITED ITEM IS BINDING ON CUSTOMERS.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

OWNER'S SIGNATURE: MAP D LOT 16 & 16G

DATE:

THE STORAGE BARN, LLC
MARK G. PHILLIPS (MEMBER)

DOVER, NH

PROJECT PARCEL
CITY OF DOVER
TAX MAP D, LOT 16 & 16G

APPLICANT/OWNER
THE STORAGE BARN, LLC
35 HODGDON FARM LANE
NEWINGTON, NH 03801
BK 4209/PG 0241

TOTAL LOT AREA
1,179,605 SQ. FT.
27.08 ± ACRES

Design: MJK	Draft: LAZ
Checked: BAJ	Scale: 1"=30'
Drawing Name: 13172-PLAN-NEW-STORAGE.dwg	Date: 1/20/21
	Project No.: 13172

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STATE OF NEW HAMPSHIRE — MICHAEL J. KERVAN No. 9648 — LICENSED PROFESSIONAL ENGINEER

REV.	DATE	REVISION	BY
2	4/29/21	REVISIONS PER CLIENT	LAZ
1	4/19/21	REVISIONS PER CLIENT	LAZ
0	4/1/21	ISSUED FOR REVIEW	LAZ

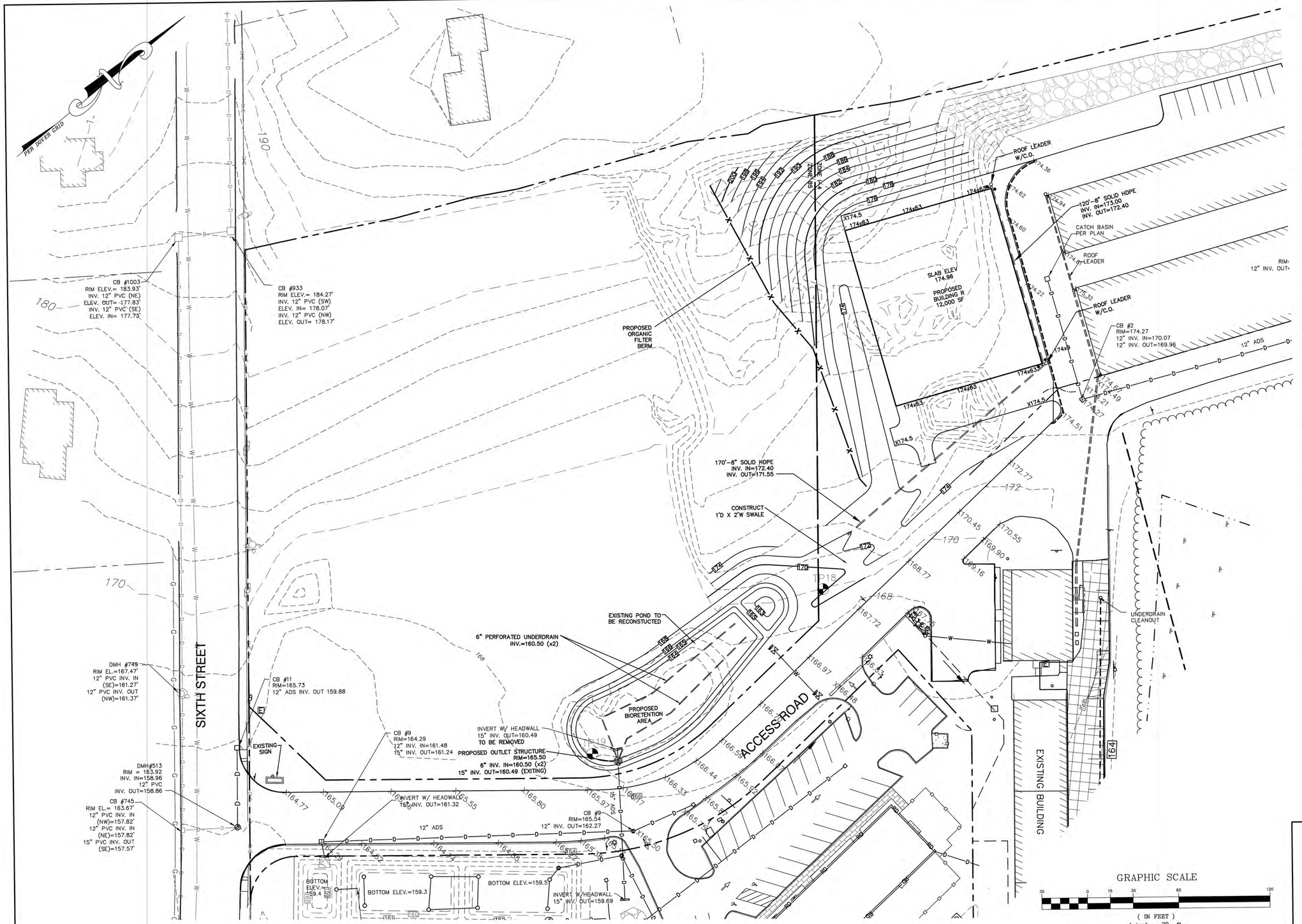
Designed and Produced in NH
Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-Mail: JBE@JONESANDBEACH.COM

Plan Name: SITE PLAN

Project: THE STORAGE BARN, LLC
385 & 387 SIXTH STREET, DOVER, NH

Owner of Record: THE STORAGE BARN, LLC, 35 HODGDON FARM LANE, NEWINGTON, NH 03801

DRAWING No.
C2
SHEET 6 OF 10
JBE PROJECT NO. 13172



GRADING AND DRAINAGE NOTES:

1. UNDERGROUND FACILITIES, UTILITIES AND STRUCTURES HAVE BEEN PLOTTED FROM FIELD OBSERVATION AND THEIR LOCATION MUST BE CONSIDERED APPROXIMATE ONLY. NEITHER JONES & BEACH ENGINEERS, INC., NOR ANY OF THEIR EMPLOYEES TAKE RESPONSIBILITY FOR THE LOCATION OF ANY UNDERGROUND STRUCTURES AND/OR UTILITIES NOT SHOWN THAT MAY EXIST. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UNDERGROUND STRUCTURES AND/OR UTILITIES LOCATED PRIOR TO EXCAVATION WORK BY CALLING 888-DIG-SAFE (888-344-7233).
2. PROJECT DATUM: CITY OF DOVER – GEOD CORP. GRID PER "SEWER AS-BUILT PLAN" PREPARED BY McENEANEY SURVEY ASSOCIATES, INC.
3. ALL BENCHMARKS AND TOPOGRAPHY SHOULD BE FIELD VERIFIED BY THE CONTRACTOR.
4. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. SEE CONSTRUCTION SEQUENCE ON SHEET E1.
5. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR IS REQUIRED TO HAVE THE PROJECT'S LAND SURVEYOR STAKE OR FLAG CLEARING LIMITS. A MINIMUM OF 48 HOURS NOTICE IS REQUIRED.
6. ALL SWALES AND DETENTION PONDS ARE TO BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
7. PROPOSED RIM ELEVATIONS OF DRAINAGE STRUCTURES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH WITH FINISH GRADES.
8. ALL SWALES AND ANY SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH NORTH AMERICAN GREEN S75 EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVED IN WRITING BY THE ENGINEER), UNLESS OTHERWISE SPECIFIED.
9. ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS. CATCH BASINS SHALL HAVE 3' DEEP SUMPS WITH GREASE HOODS, UNLESS OTHERWISE NOTED.
10. ALL DRAINAGE STRUCTURES SHALL BE PRECAST, UNLESS OTHERWISE SPECIFIED.
11. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC H20 LOADING AND SHALL BE INSTALLED ACCORDINGLY.
12. IN AREAS WHERE CONSTRUCTION IS PROPOSED ADJACENT TO ABUTTING PROPERTIES, THE CONTRACTOR SHALL INSTALL ORANGE CONSTRUCTION FENCING ALONG PROPERTY LINES IN ALL AREAS WHERE SILT FENCING IS NOT REQUIRED.
13. ALL DRAINAGE PIPE SHALL BE NON-PERFORATED ADS N-12 OR APPROVED EQUAL.
14. STONE INLET PROTECTION SHALL BE PLACED AT ALL CATCH BASINS. SEE DETAIL WITHIN THE DETAIL SHEETS.
15. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY ALL GOVERNING AUTHORITIES. THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE EPA SWPPP DURING CONSTRUCTION OPERATIONS.
16. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
17. ALL EXPOSED AREAS SHALL BE SEEDED AS SPECIFIED WITHIN 3 DAYS OF FINAL GRADING.
18. SHOULD CONSTRUCTION STOP FOR LONGER THAN 3 DAYS, THE SITE SHALL BE SEEDED AS SPECIFIED.
19. MAINTAIN EROSION CONTROL MEASURES AFTER EACH RAIN EVENT OF 0.5" OR GREATER IN A 24 HOUR PERIOD AND AT LEAST ONCE A WEEK.
20. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE, AS THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SEDIMENT FROM LEAVING THE SITE.
21. CONSTRUCTION VEHICLES SHALL UTILIZE THE STABILIZED CONSTRUCTION ENTRANCE TO THE EXTENT POSSIBLE THROUGHOUT CONSTRUCTION.
22. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
23. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
24. SEDIMENT SHALL BE REMOVED FROM ALL SEDIMENT BASINS BEFORE THEY ARE 25% FULL.
25. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH PROJECT SPECIFICATIONS.
26. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED, IF DEEMED NECESSARY BY ON-SITE INSPECTION BY ENGINEER AND/OR REGULATORY OFFICIALS.
27. SEE ALSO EROSION AND SEDIMENT CONTROL SPECIFICATIONS ON SHEET E1.
28. ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS.

PROJECT PARCEL	CITY OF DOVER TAX MAP D, LOT 16 & 16G
APPLICANT/OWNER	THE STORAGE BARN, LLC 35 HODGDON FARM LANE NEWINGTON, NH 03801 BK 4209/PG 0241
TOTAL LOT AREA	1,179,605 SQ. FT. 27.08 ± ACRES

DOVER, NH

Design: MJK	Draft: LAZ	Date: 1/20/21
Checked: BAJ	Scale: 1"=30'	Project No.: 13172
Drawing Name: 13172-PLAN-NEW-STORAGE.dwg		

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STATE OF NEW HAMPSHIRE – MICHAEL J. KERIVAN No. 9646 – LICENSED PROFESSIONAL ENGINEER – 5/4/2021

REV.	DATE	REVISION	BY
2	4/29/21	REVISIONS PER CLIENT	LAZ
1	4/19/21	REVISIONS PER CLIENT	LAZ
0	4/1/21	ISSUED FOR REVIEW	LAZ

Designed and Produced in NH
J/B Jones & Beach Engineers, Inc.
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
Civil Engineering Services
603-772-4746
FAX: 603-772-0227
E-Mail: JBE@JONESANDBEACH.COM

Plan Name:	GRADING AND DRAINAGE PLAN
Project:	THE STORAGE BARN, LLC 385 & 387 SIXTH STREET, DOVER, NH
Owner of Record:	THE STORAGE BARN, LLC, 35 HODGDON FARM LANE, NEWINGTON, NH 03801

DRAWING No.
C3
SHEET 7 OF 10
JBE PROJECT NO. 13172

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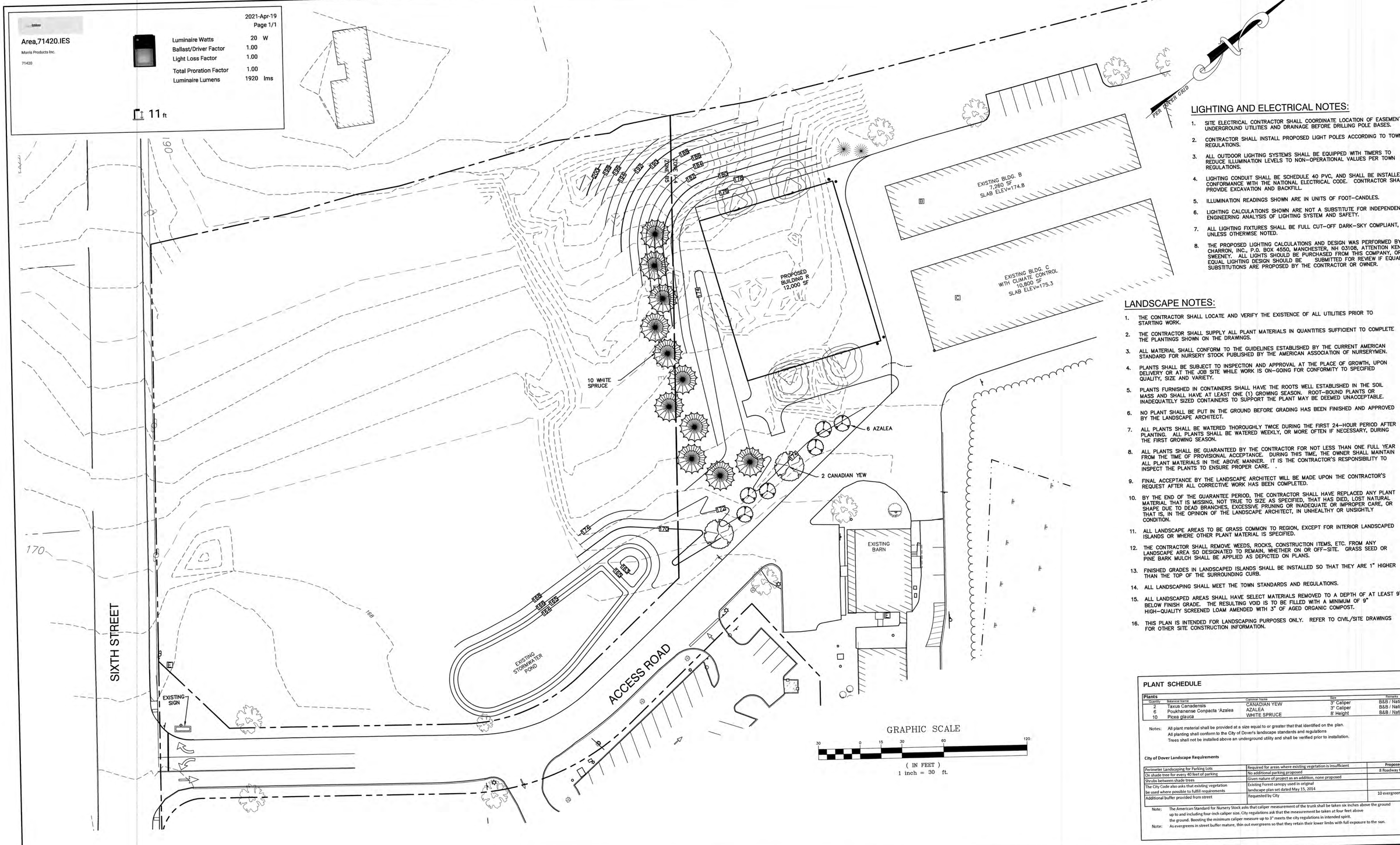
Morris Products Inc.

71420

2021-Apr-19
Page 1/1

Luminaire Watts	20 W
Ballast/Driver Factor	1.00
Light Loss Factor	1.00
Total Proration Factor	1.00
Luminaire Lumens	1920 lms

11 ft



LIGHTING AND ELECTRICAL NOTES:

1. SITE ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES AND DRAINAGE BEFORE DRILLING POLE BASES.
2. CONTRACTOR SHALL INSTALL PROPOSED LIGHT POLES ACCORDING TO TOWN REGULATIONS.
3. ALL OUTDOOR LIGHTING SYSTEMS SHALL BE EQUIPPED WITH TIMERS TO REDUCE ILLUMINATION LEVELS TO NON-OPERATIONAL VALUES PER TOWN REGULATIONS.
4. LIGHTING CONDUIT SHALL BE SCHEDULE 40 PVC, AND SHALL BE INSTALLED IN CONFORMANCE WITH THE NATIONAL ELECTRICAL CODE. CONTRACTOR SHALL PROVIDE EXCAVATION AND BACKFILL.
5. ILLUMINATION READINGS SHOWN ARE IN UNITS OF FOOT-CANDLES.
6. LIGHTING CALCULATIONS SHOWN ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM AND SAFETY.
7. ALL LIGHTING FIXTURES SHALL BE FULL CUT-OFF DARK-SKY COMPLIANT, UNLESS OTHERWISE NOTED.
8. THE PROPOSED LIGHTING CALCULATIONS AND DESIGN WAS PERFORMED BY CHARRON, INC., P.O. BOX 4550, MANCHESTER, NH 03108, ATTENTION KEN SWEENEY. ALL LIGHTS SHOULD BE PURCHASED FROM THIS COMPANY, OR AN EQUAL LIGHTING DESIGN SHOULD BE SUBMITTED FOR REVIEW IF EQUAL SUBSTITUTIONS ARE PROPOSED BY THE CONTRACTOR OR OWNER.

LANDSCAPE NOTES:

1. THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.
2. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTINGS SHOWN ON THE DRAWINGS.
3. ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
4. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, UPON DELIVERY OR AT THE JOB SITE WHILE WORK IS ON-GOING FOR CONFORMITY TO SPECIFIED QUALITY, SIZE AND VARIETY.
5. PLANTS FURNISHED IN CONTAINERS SHALL HAVE THE ROOTS WELL ESTABLISHED IN THE SOIL MASS AND SHALL HAVE AT LEAST ONE (1) GROWING SEASON. ROOT-BOUND PLANTS OR INADEQUATELY SIZED CONTAINERS TO SUPPORT THE PLANT MAY BE DEEMED UNACCEPTABLE.
6. NO PLANT SHALL BE PUT IN THE GROUND BEFORE GRADING HAS BEEN FINISHED AND APPROVED BY THE LANDSCAPE ARCHITECT.
7. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL BE WATERED WEEKLY, OR MORE OFTEN IF NECESSARY, DURING THE FIRST GROWING SEASON.
8. ALL PLANTS SHALL BE GUARANTEED BY THE CONTRACTOR FOR NOT LESS THAN ONE FULL YEAR FROM THE TIME OF PROVISIONAL ACCEPTANCE. DURING THIS TIME, THE OWNER SHALL MAINTAIN ALL PLANT MATERIALS IN THE ABOVE MANNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE PLANTS TO ENSURE PROPER CARE. .
9. FINAL ACCEPTANCE BY THE LANDSCAPE ARCHITECT WILL BE MADE UPON THE CONTRACTOR'S REQUEST AFTER ALL CORRECTIVE WORK HAS BEEN COMPLETED.
10. BY THE END OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL HAVE REPLACED ANY PLANT MATERIAL THAT IS MISSING, NOT TRUE TO SIZE AS SPECIFIED, THAT HAS DIED, LOST NATURAL SHAPE DUE TO DEAD BRANCHES, EXCESSIVE PRUNING OR INADEQUATE OR IMPROPER CARE, OR THAT IS, IN THE OPINION OF THE LANDSCAPE ARCHITECT, IN UNHEALTHY OR UNSIGHTLY CONDITION.
11. ALL LANDSCAPE AREAS TO BE GRASS COMMON TO REGION, EXCEPT FOR INTERIOR LANDSCAPED ISLANDS OR WHERE OTHER PLANT MATERIAL IS SPECIFIED.
12. THE CONTRACTOR SHALL REMOVE WEEDS, ROCKS, CONSTRUCTION ITEMS, ETC. FROM ANY LANDSCAPE AREA SO DESIGNATED TO REMAIN, WHETHER ON OR OFF-SITE. GRASS SEED OR PINE BARK MULCH SHALL BE APPLIED AS DEPICTED ON PLANS.
13. FINISHED GRADES IN LANDSCAPED ISLANDS SHALL BE INSTALLED SO THAT THEY ARE 1" HIGHER THAN THE TOP OF THE SURROUNDING CURB.
14. ALL LANDSCAPING SHALL MEET THE TOWN STANDARDS AND REGULATIONS.
15. ALL LANDSCAPED AREAS SHALL HAVE SELECT MATERIALS REMOVED TO A DEPTH OF AT LEAST 9" BELOW FINISH GRADE. THE RESULTING VOID IS TO BE FILLED WITH A MINIMUM OF 9" HIGH-QUALITY SCREENED LOAM AMENDED WITH 3" OF AGED ORGANIC COMPOST.
16. THIS PLAN IS INTENDED FOR LANDSCAPING PURPOSES ONLY. REFER TO CIVIL/SITE DRAWINGS FOR OTHER SITE CONSTRUCTION INFORMATION.

PLANT SCHEDULE

Plants

Quantity	Botanical Name	Common Name	Size	Remarks
2	Taxus Canadensis	CANADIAN YEW	3" Caliper	B&B / Native
6	Poukhanense Conpacta 'Azalea	AZALEA	3" Caliper	B&B / Native
10	Picea glauca	WHITE SPRUCE	8' Height	B&B / Native

Notes: All plant material shall be provided at a size equal to or greater that that identified on the plan.
All planting shall conform to the City of Dover's landscape standards and regulations
Trees shall not be installed above an underground utility and shall be verified prior to installation.

City of Dover Landscape Requirements

		Proposed
Perimeter Landscaping for Parking Lots	Required for areas where existing vegetation is insufficient	8 Roadway trees
On shade tree for every 40 feet of parking	No additional parking proposed	
Shrubs between shade trees	Given nature of project as an addition, none proposed	
The City Code also asks that existing vegetation be used where possible to fulfill requirements	Existing forest canopy used in original landscape plan set dated May 15, 2014	
Additional buffer provided from street	Requested by City	10 evergreen trees

Note: The American Standard for Nursery Stock asks that caliper measurement of the trunk shall be taken six inches above the ground up to and including four-inch caliper size. City regulations ask that the measurement be taken at four feet above the ground. Boosting the minimum caliper measure up to 3" meets the city regulations in intended spirit.

Note: As evergreens in street buffer mature, thin out evergreens so that they retain their lower limbs with full exposure to the sun.

Design: MJK	Draft: LAZ
Checked: BAJ	Scale: 1"=30'
Drawing Name: 13172-PLAN-NEW-STORAGE.dwg	

Date: 1/20/21
Project No.: 13172

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STATE OF NEW HAMPSHIRE
MICHAEL J. KERIVAN
No. 9646
LICENSED PROFESSIONAL ENGINEER
5/4/21

REV.	DATE	REVISION	BY
2	4/29/21	REVISIONS PER CLIENT	LAZ
1	4/19/21	REVISIONS PER CLIENT	LAZ
0	4/1/21	ISSUED FOR REVIEW	LAZ

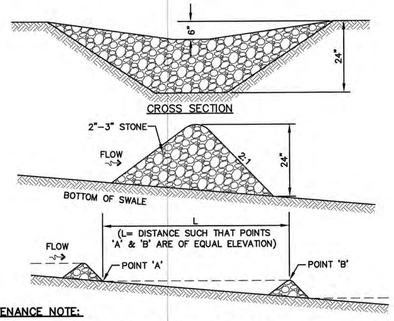
Designed and Produced in NH
J/B Jones & Beach Engineers, Inc.
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
Civil Engineering Services
603-772-4746
FAX: 603-772-0227
E-Mail: JBE@JONESANDBEACH.COM

Plan Name: LIGHTING AND LANDSCAPE PLAN

Project: THE STORAGE BARN, LLC
385 & 387 SIXTH STREET, DOVER, NH

Owner of Record: THE STORAGE BARN, LLC, 35 HODGDON FARM LANE, NEWINGTON, NH 03801

DRAWING No.
L1
SHEET 8 OF 10
JBE PROJECT NO. 13172

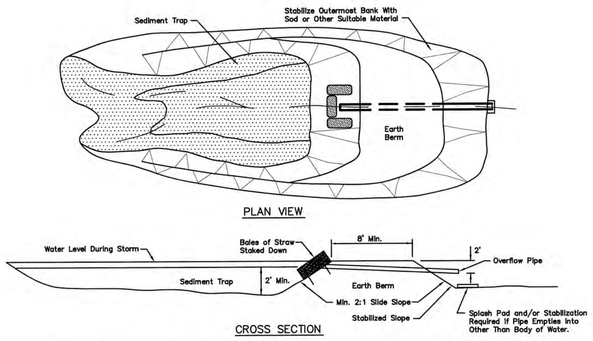


MAINTENANCE NOTE:

1. STONE CHECK DAMS SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE. WHEN THE STRUCTURES ARE REMOVED, THE DISTURBED PORTION SHOULD BE BROUGHT TO THE EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEEDED AND MULCHED. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE STRUCTURES. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF OF THE ORIGINAL HEIGHT OF THE STRUCTURE.

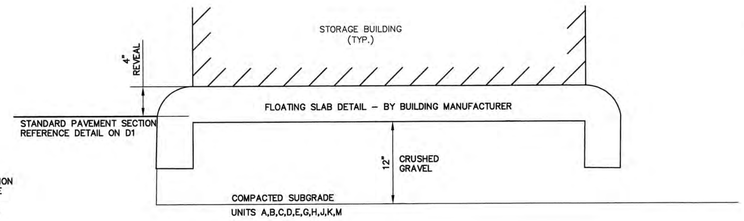
STONE CHECK DAM

NOT TO SCALE



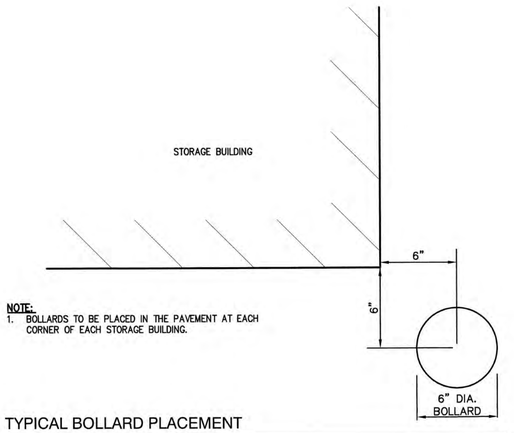
TEMPORARY SEDIMENT BASIN

NOT TO SCALE



STORAGE BUILDING SLAB AND SUBGRADE DETAIL-STANDARD PAVEMENT

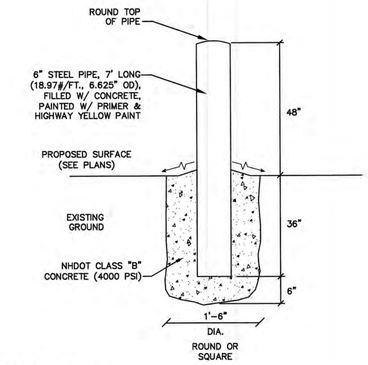
NOT TO SCALE



NOTE:
1. BOLLARDS TO BE PLACED IN THE PAVEMENT AT EACH CORNER OF EACH STORAGE BUILDING.

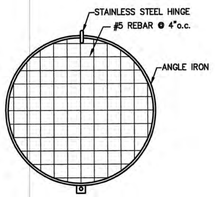
TYPICAL BOLLARD PLACEMENT

NOT TO SCALE

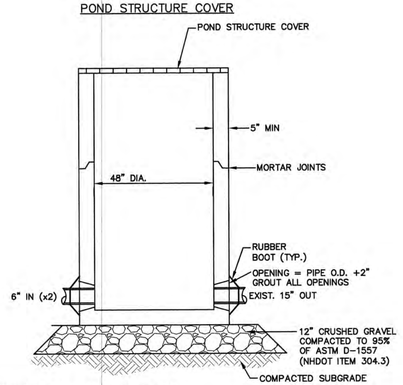


BOLLARD DETAIL

NOT TO SCALE

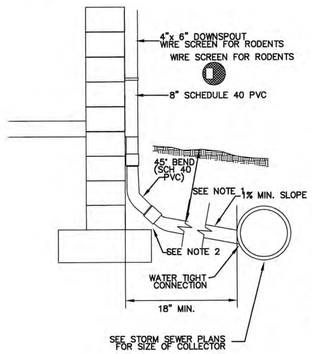


POND STRUCTURE COVER



CATCH BASIN OUTLET STRUCTURE

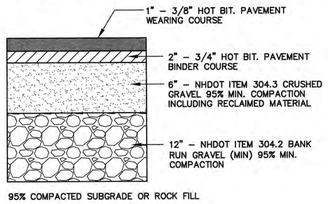
NOT TO SCALE



1. FOR ALL DEPTHS OF COVER LESS THAN TWO (2) FEET, PIPE MUST BE SCHEDULE 40 PVC. FOR DEPTHS OF COVER GREATER THAN TWO (2) FEET, FLEXIBLE PIPE MAY BE USED. REFER TO SPECIFICATIONS FOR ALLOWABLE PIPE TYPES.
2. A WATERTIGHT CONNECTION SHALL BE MAINTAINED WITH ANY TRANSITION FROM SCHEDULE 40 PVC PIPE TO ANY OTHER PIPE TYPE.
3. THE DOWNSPOUT COLLECTOR DRAIN SHALL BE INSTALLED BEFORE THE DOWNSPOUTS ARE INSTALLED ON THE BUILDING. SITEWORK CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK TO AND INCLUDING THE RODENT SCREEN. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONNECTION AT THE POINT OF THE RODENT SCREEN.

DOWNSPOUT COLLECTOR

NOT TO SCALE



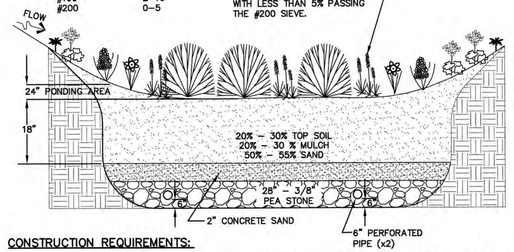
TYPICAL BITUMINOUS PAVEMENT

NOT TO SCALE

SAND SPECIFICATION	
SIEVE SIZE	% BY WEIGHT
3/8"	100
#4	95-100
#8	80-100
#16	50-85
#30	25-60
#50	10-30
#100	2-10
#200	0-5

TOPSOIL SPECIFICATION
LOAMY SAND TOPSOIL WITH MINIMAL CLAY CONTENT AND BETWEEN 15 TO 25% FINES PASSING THE #200 SIEVE.

MULCH SPECIFICATION
MODERATELY FINE, SHREDDED BARK OR WOOD FIBER MULCH WITH LESS THAN 5% PASSING THE #200 SIEVE.



CONSTRUCTION REQUIREMENTS:

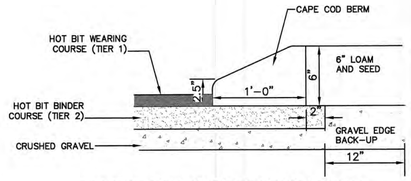
1. DO NOT PLACE BIORETENTION SYSTEMS INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
2. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUN-OFF, WATER FROM EXCAVATIONS) TO THE BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
3. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

MAINTENANCE REQUIREMENTS:

1. SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EVENT EXCEEDING 2.5 INCHES IN A 24 HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS WARRANTED BY SUCH INSPECTION.
2. PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
3. TRASH AND DEBRIS SHOULD BE REMOVED AT EACH INSPECTION.
4. AT LEAST ONCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF BIORETENTION SYSTEM DOES NOT DRAIN WITHIN 72 HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION OR INFILTRATION FUNCTION (AS APPLICABLE), INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
5. VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING PRUNING, REMOVAL AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES.

BIORETENTION SYSTEM

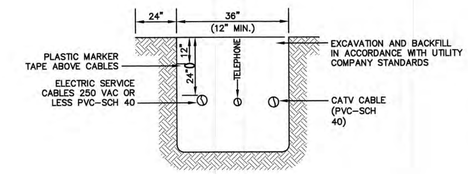
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THE CAPE COD BERM IS TO BE CONSTRUCTED OF A POLYFIBER CURB MIX CONTAINING 59.2% SAND, 27.6% 3/8" STONE, 9.2% 1/2" STONE, 0.3% FIBERS, AND 3.0% ASPHALT.

CAPE COD BERM

NOT TO SCALE



NOTE: ALL UTILITIES SHALL BE REVIEWED AND APPROVED BY APPROPRIATE UTILITY COMPANY.

UTILITY TRENCH

NOT TO SCALE

Design: MJK	Draft: LAZ	Date: 1/20/21
Checked: BAJ	Scale: AS NOTED	Project No.: 13172
Drawing Name: 13172-PLAN-NEW-STORAGE.dwg		

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.

STATE OF NEW HAMPSHIRE - MICHAEL J. KERIVAN No. 9848 LICENSED PROFESSIONAL ENGINEER - 6/4/2021

REV.	DATE	REVISION	BY
2	4/29/21	REVISIONS PER CLIENT	LAZ
1	4/19/21	REVISIONS PER CLIENT	LAZ
0	4/1/21	ISSUED FOR REVIEW	LAZ

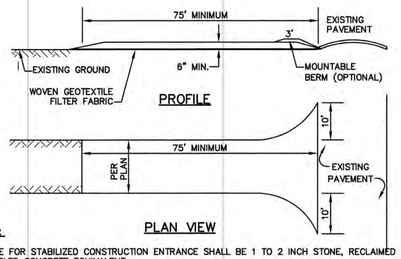
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Plan Name: DETAIL SHEET

Project: THE STORAGE BARN, LLC
385 & 387 SIXTH STREET, DOVER, NH

Owner of Record: THE STORAGE BARN, LLC, 35 HODGDON FARM LANE, NEWINGTON, NH 03801

DRAWING No.
D1
SHEET 9 OF 10
JBE PROJECT NO. 13172

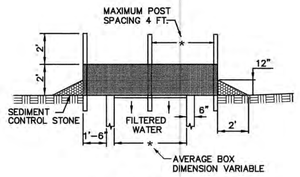


NOTES:

1. STONE FOR STABILIZED CONSTRUCTION ENTRANCE SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.
3. THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH OF THE ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS, OR 10 FEET, WHICHEVER IS GREATER.
5. GEOTEXTILE FILTER FABRIC SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER FABRIC IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENTIAL LOT.
6. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A STONE BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE REMOVED PROMPTLY.

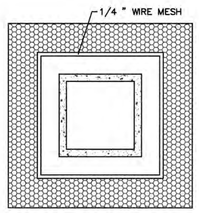
STABILIZED CONSTRUCTION ENTRANCE

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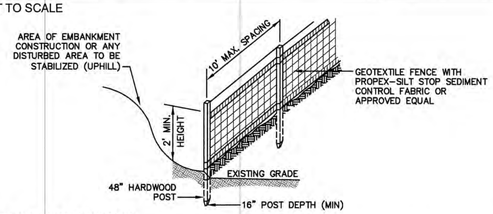
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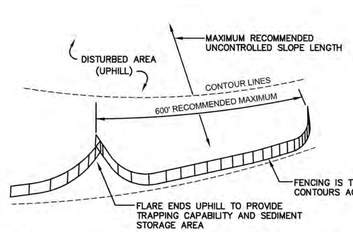
1. SEDIMENT CONTROL STONE SHALL BE 3/4" WASHED STONE.
2. WIRE MESH SHALL BE HARDWARE CLOTH 23 GAUGE MIN. AND SHALL HAVE 1/4 INCH MESH OPENINGS.
3. TOP OF WIRE MESH SHALL BE A MINIMUM OF ONE FOOT BELOW THE SHOULDER OR ANY DIVERSION POINT.
4. STEEL POST SHALL BE 5 FT. IN HEIGHT, BE INSTALLED 1.5 FT. DEEP MINIMUM, AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
5. WOOD POST SHALL BE 6 FT. IN HEIGHT, BE INSTALLED TO 1.5 FT. DEEP MINIMUM, AND BE 3 INCHES IN DIAMETER.
6. POST SPACING SHALL BE A MAXIMUM OF 4 FT.



INLET PROTECTION

NOT TO SCALE





CONSTRUCTION SPECIFICATIONS:

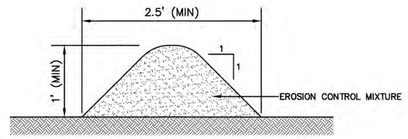
1. WOVEN FABRIC FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP, MID AND BOTTOM AND EMBEDDED IN THE GROUND A MINIMUM OF 8" AND THEN COVERED WITH SOIL.
2. THE FENCE POSTS SHALL BE A MINIMUM OF 48" LONG, SPACED A MAXIMUM 10' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED 6", FOLDED AND STAPLED TO PREVENT SEDIMENT FROM BY-PASSING.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED AND PROPERLY DISPOSED OF WHEN IT IS 6" DEEP OR VISIBLE 'BULGES' DEVELOP IN THE SILT FENCE.
5. PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.
6. SILT FENCE SHALL REMAIN IN PLACE FOR 24 MONTHS.
7. SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND REVEGETATED.

MAINTENANCE:

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

SILT FENCE

NOT TO SCALE



NOTES:

1. ORGANIC FILTER BERMS MAY BE UTILIZED IN LIEU OF SILT FENCE, UNLESS OTHERWISE SPECIFIED.
2. THE EROSION CONTROL MIX USED IN THE FILTER BERMS SHALL BE A WELL-GRADED MIXTURE OF PARTICLE SIZES, MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER, STUMP GRINDINGS, SHREDDED OR COMPOSTED BARK, OR ACCEPTABEL MANUFACTURED PRODUCTS, AND SHALL BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH, AND SHALL MEET THE FOLLOWING STANDARDS:
   a) THE ORGANIC CONTENT SHALL BE 80-100% OF DRY WEIGHT.
   b) PARTICLE SIZE BY WEIGHT SHALL BE 100% PASSING A 6" SCREEN, AND 70-85% PASSING A 0.75" SCREEN.
   c) THE ORGANIC PORTION SHALL BE FIBROUS AND ELONGATED.
   d) LARGE PORTIONS OF SILTS, CLAYS, OR FINE SANDS SHALL NOT BE INCLUDED IN THE MIXTURE.
   e) SOLUBLE SALTS CONTENT SHALL BE >4.0mmhos/cm.
   f) THE pH SHALL BE BETWEEN 5.0 AND 8.0.
3. ORGANIC FILTER BERMS SHALL BE INSTALLED ALONG A RELATIVELY LEVEL CONTOUR. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BERM.
4. ON SLOPES LESS THAN 5%, OR AT THE BOTTOM OF SLOPES STEEPER THAN 3:1, UP TO 20' LONG, THE BERM SHALL BE A MINIMUM OF 12" HIGH (AS MEASURED ON THE UPHILL SIDE), AND A MINIMUM OF 36" WIDE. ON LONGER OR STEEPER SLOPES, THE BERM SHALL BE WIDER TO ACCOMMODATE THE POTENTIAL ADDITIONAL RUNOFF.
5. FROZEN GROUND, OUTCROPS OF BEDROCK, AND VERY ROOTED FORESTED AREAS PRESENT THE MOST PRACTICAL AND EFFECTIVE LOCATIONS FOR ORGANIC FILTER BERMS. OTHER BMP'S SHOULD BE USED AT LOW POINTS OF CONCENTRATED RUNOFF, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS, AND AT THE BOTTOM OF STEEP PERIMETER SLOPES THAT HAVE A LARGE CONTRIBUTING AREA.
6. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF THE ORIGINAL HEIGHT OF THE STRUCTURE.
7. STRUCTURES MAY BE LEFT IN PLACE ONCE THE SITE IS STABILIZED.

ORGANIC FILTER BERM

NOT TO SCALE

SEEDING SPECIFICATIONS

1. GRADING AND SHAPING
   A. SLOPES SHALL NOT BE STEEPER THAN 2:1 WITHOUT APPROPRIATE EROSION CONTROL MEASURES AS SPECIFIED ON THE PLANS (3:1 SLOPES OR FLATTER ARE PREFERRED).
   B. WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
2. SEEDBED PREPARATION
   A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
   B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND FERTILIZER AND LIME MIXED INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
3. ESTABLISHING A STAND
   A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. TYPES AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:
      AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100 LBS. PER 1,000 SQ.FT.
      NITROGEN(N), 50 LBS. PER ACRE OR 1.1 LBS. PER 1,000 SQ.FT.
      PHOSPHATE(P2O5), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.
      POTASH(K2O), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.
      (NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. PER ACRE OF 5-10-10.)
   B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
   C. REFER TO THE 'SEEDING GUIDE' AND 'SEEDING RATES' TABLES ON THIS SHEET FOR APPROPRIATE SEED MIXTURES AND RATES OF SEEDING. ALL LEGUMES (CROWNVETCH, BIRDSFOOT, TREFOIL AND FLATPEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT PRIOR TO THEIR INTRODUCTION TO THE SITE.
   D. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20th OR FROM AUGUST 10th TO SEPTEMBER 1st.
4. MULCH
   A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
   B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90 LBS PER 1000 S.F.
5. MAINTENANCE TO ESTABLISH A STAND
   A. PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
   B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME FULLY ESTABLISHED.
   C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, ANNUAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

USE	SEEDING MIXTURE 1/	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED	POORLY DRAINED
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	
	B	POOR	GOOD	FAIR	
	C	POOR	GOOD	EXCELLENT	
	D	FAIR	EXCELLENT	EXCELLENT	
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD	
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
					FAIR
					GOOD
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A	GOOD	GOOD	GOOD	POOR
	B	GOOD	GOOD	FAIR	
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
					FAIR
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	E	FAIR	EXCELLENT	EXCELLENT	
	F	FAIR	EXCELLENT	EXCELLENT	FAIR
					POOR
					FAIR
GRAVEL PIT, SEE NH-PM-24 IN APPENDIX FOR RECOMMENDATION REGARDING RECLAMATION OF SAND AND GRAVEL PITS.					2/
1/ REFER TO SEEDING MIXTURES AND RATES IN TABLE BELOW.					2/
2/ POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.					

NOTE: TEMPORARY SEED MIX FOR STABILIZATION OF TURF SHALL BE WINTER RYE OR OATS AT A RATE OF 2.5 LBS. PER 1000 S.F. AND SHALL BE PLACED PRIOR TO OCTOBER 15th, IF PERMANENT SEEDING NOT YET COMPLETE.

SEEDING GUIDE

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.
A. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
RED TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREEPING RED FESCUE	10	0.25
CROWN VETCH	15	0.35
OR		
FLAT PEA	30	0.75
TOTAL	40 OR 55	0.95 OR 1.35
* C. TALL FESCUE	20	0.45
CREEPING RED FESCUE	20	0.45
BIRDS FOOT TREFOIL	8	0.20
TOTAL	48	1.10
D. TALL FESCUE	20	0.45
FLAT PEA	30	0.75
TOTAL	50	1.20
E. CREEPING RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.60

1/ FOR HEAVY USE ATHLETIC FIELDS CONSULT THE UNIVERSITY OF NEW HAMPSHIRE COOPERATIVE EXTENSION TURF SPECIALIST FOR CURRENT VARIETIES AND SEEDING RATES.

SEEDING RATES

TEMPORARY EROSION CONTROL NOTES

THE SMALLEST PRACTICAL AREA OF LAND SHALL BE EXPOSED AT ANY ONE TIME. AT NO TIME SHALL AN AREA IN EXCESS OF 5 ACRES BE EXPOSED AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.

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

ALL DISTURBED AREAS (INCLUDING POND AREAS BELOW THE PROPOSED WATERLINE) SHALL BE RETURNED TO PROPOSED GRADES AND ELEVATIONS. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 6" OF SCREENED ORGANIC LOAM AND SEEDED WITH SEED MIXTURE 'C' AT A RATE NOT LESS THAN 1.10 POUNDS OF SEED PER 1,000 S.F. OF AREA (48 LBS. / ACRE).

SILT FENCES AND OTHER BARRIERS SHALL BE INSPECTED EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 0.5" OR GREATER. ALL DAMAGED AREAS SHALL BE REPAIRED, AND SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.

AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.

AREAS MUST BE SEEDED AND MULCHED OR OTHERWISE PERMANENTLY STABILIZED WITHIN 3 DAYS OF FINAL GRADING, OR TEMPORARILY STABILIZED WITHIN 14 DAYS OF THE INITIAL DISTURBANCE OF SOIL. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.

ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING NORTH AMERICAN GREEN S75 EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVED IN WRITING BY THE ENGINEER) 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.

ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

AFTER NOVEMBER 15th, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3" OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.

AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED; OR
EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

FUGITIVE DUST CONTROL IS REQUIRED TO BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000, AND THE PROJECT IS TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.

PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR'S NAME, ADDRESS, AND PHONE NUMBER SHALL BE SUBMITTED TO DES VIA EMAIL (SEE BELOW).

PRIOR TO CONSTRUCTION, A PHASING PLAN THAT DELINEATES EACH PHASE OF THE PROJECT SHALL BE SUBMITTED. ALL TEMPORARY SEDIMENT BASINS THAT WILL BE NEEDED FOR DEWATERING WORK AREAS SHALL BE LOCATED AND IDENTIFIED ON THIS PLAN.

IN ORDER TO ENSURE THE STABILITY OF THE SITE AND EFFECTIVE IMPLEMENTATION OF THE SEDIMENT AND EROSION CONTROL MEASURES SPECIFIED IN THE PLANS FOR THE DURATION OF CONSTRUCTION, THE CONTRACTOR SHALL BE IN STRICT COMPLIANCE WITH THE FOLLOWING INSPECTION AND MAINTENANCE REQUIREMENTS IN ADDITION TO THOSE CALLED FOR IN THE SWPPP:

A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL OR A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE ("MONITOR") SHALL BE EMPLOYED TO INSPECT THE SITE FROM THE START OF ALTERATION OF TERRAIN ACTIVITIES UNTIL THE SITE IS IN FULL COMPLIANCE WITH THE SITE SPECIFIC PERMIT ("PERMIT").

DURING THIS PERIOD, THE MONITOR SHALL INSPECT THE SUBJECT SITE AT LEAST ONCE A WEEK, AND IF POSSIBLE, DURING ANY ½ INCH OR GREATER RAIN EVENT (I.E. ½ INCH OF PRECIPITATION OR MORE WITHIN A 24 HOUR PERIOD). IF UNABLE TO BE PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THIS EVENT.

THE MONITOR SHALL PROVIDE TECHNICAL ASSISTANCE AND RECOMMENDATIONS TO THE CONTRACTOR ON THE APPROPRIATE BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROLS REQUIRED TO MEET THE REQUIREMENTS OF RSA 485 A:17 AND ALL APPLICABLE DES PERMIT CONDITIONS.

WITHIN 24 HOURS OF EACH INSPECTION, THE MONITOR SHALL SUBMIT A REPORT TO DES VIA EMAIL (RIDGELY MAUCK AT: RIDGELY.MAUCK@DES.NH.GOV).

THE MONITOR SHALL MEET WITH DES TO DECIDE UPON A REPORT FORMAT. THE REPORT FORMAT SHALL BE REVIEWED AND APPROVED BY DES PRIOR TO THE START OF CONSTRUCTION.

CONSTRUCTION SEQUENCE

1. PRIOR TO THE START OF ANY ACTIVITY, IT IS THE RESPONSIBILITY OF THE SITE'S SITE DEVELOPER (OR OWNER) TO FILE A NOTICE OF INTENT (NOI) FORM WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) IN ORDER TO GAIN COVERAGE UNDER THE NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. A PRE-CONSTRUCTION MEETING IS TO BE HELD WITH ALL DEPARTMENT HEADS PRIOR TO THE START OF CONSTRUCTION.
2. WETLAND BOUNDARIES ARE TO BE CLEARLY MARKED PRIOR TO THE START OF CONSTRUCTION. AT LEAST A TEMPORARY CULVERT OR ROADBED TO BE IN PLACE PRIOR TO THE START OF CONSTRUCTION.
3. CUT AND REMOVE TREES IN CONSTRUCTION AREA AS REQUIRED OR DIRECTED.
4. INSTALL SILT FENCING, HAY BALES AND CONSTRUCTION ENTRANCES PRIOR TO THE START OF CONSTRUCTION. THESE ARE TO BE MAINTAINED UNTIL THE FINAL PAVEMENT SURFACING AND LANDSCAPING AREAS ARE ESTABLISHED.
5. CLEAR, CUT, GRUB AND DISPOSE OF DEBRIS IN APPROVED FACILITIES. THIS INCLUDES ANY REQUIRED DEMOLITION OF EXISTING STRUCTURES, UTILITIES, ETC.
6. CONSTRUCT AND/OR INSTALL TEMPORARY OR PERMANENT SEDIMENT AND/OR DETENTION BASIN(S) AS REQUIRED. THESE FACILITIES SHALL BE INSTALLED AND STABILIZED PRIOR TO DIRECTING RUN-OFF TO THEM.
7. STRIP LOAM AND PAVEMENT, OR RECLAIM EXISTING PAVEMENT WITHIN LIMITS OF WORK PER THE RECOMMENDATIONS OF THE PROJECT ENGINEER AND STOCKPILE EXCESS MATERIAL. STABILIZE STOCKPILE AS NECESSARY.
8. PERFORM PRELIMINARY SITE GRADING IN ACCORDANCE WITH THE PLANS.
9. PREPARE BUILDING PAD(S) TO ENABLE BUILDING CONSTRUCTION TO BEGIN.
10. INSTALL THE SEWER AND DRAINAGE SYSTEMS FIRST, THEN ANY OTHER UTILITIES IN ACCORDANCE WITH THE PLAN AND DETAILS. ANY CONFLICTS BETWEEN UTILITIES ARE TO BE RESOLVED WITH THE INVOLVEMENT AND APPROVAL OF THE ENGINEER.
11. INSTALL INLET PROTECTION AT ALL CATCH BASINS AS THEY ARE CONSTRUCTED IN ACCORDANCE WITH DETAILS.
12. ALL SWALES AND DRAINAGE STRUCTURES ARE TO BE CONSTRUCTED AND STABILIZED PRIOR TO HAVING RUN-OFF DIRECTED TO THEM.
13. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINAGE DITCHES, CHECK DAMS, SEDIMENT TRAPS, ETC., TO PREVENT EROSION ON THE SITE AND PREVENT ANY SILTATION OF ABUTTING WATERS AND/OR PROPERTY.
14. PERFORM FINAL FINE GRADING, INCLUDING PLACEMENT OF 'SELECT' SUBGRADE MATERIALS.
15. PAVE ALL PARKING LOTS AND ROADWAYS WITH INITIAL 'BASE COURSE'.
16. PERFORM ALL REMAINING SITE CONSTRUCTION (i.e. BUILDING, CURBING, UTILITY CONNECTIONS, ETC.).
17. LOAM AND SEED ALL DISTURBED AREAS AND INSTALL ANY REQUIRED SEDIMENT AND EROSION CONTROL FACILITIES (i.e. RIP RAP, EROSION CONTROL BLANKETS, ETC.).
18. FINISH PAVING ALL ROADWAYS AND PARKING AREAS WITH 'FINISH' COURSE.
19. ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
20. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
21. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
22. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDING AREAS HAVE BEEN 75%-85% ESTABLISHED AND SITE IMPROVEMENTS ARE COMPLETE. SMOOTH AND RE-VEGETATE ALL DISTURBED AREAS.
23. CLEAN SITE AND ALL DRAINAGE STRUCTURES, PIPES AND SUMPS OF ALL SILT AND DEBRIS.
24. INSTALL ALL PAINTED PAVEMENT MARKINGS AND SIGNAGE PER THE PLANS AND DETAILS.
25. ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY HALF-INCH OF RAINFALL.
26. UPON COMPLETION OF CONSTRUCTION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ANY RELEVANT PERMITTING AGENCIES THAT THE CONSTRUCTION HAS BEEN FINISHED IN A SATISFACTORY MANNER.

Design: MJK	Draft: LAZ
Date: 1/20/21	
Checked: BAJ	Scale: AS NOTED
Project No.: 13172	
Drawing Name: 13172-PLAN-NEW-STORAGE.dwg	

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.

STATE OF NEW HAMPSHIRE – MICHAEL J. KERIVAN No. 9946 – LICENSED PROFESSIONAL ENGINEER – 5/14/2021

REV.	DATE	REVISION	BY
2	4/29/21	REVISIONS PER CLIENT	LAZ
1	4/19/21	REVISIONS PER CLIENT	LAZ
0	4/1/21	ISSUED FOR REVIEW	LAZ

Designed and Produced in NH
Jones & Beach Engineers, Inc.
Civil Engineering Services
85 Portsmouth Ave.
PO Box 219
Stratham, NH 03885
603-772-4746
FAX: 603-772-0227
E-Mail: JBE@JONESANDBEACH.COM

Plan Name: EROSION AND SEDIMENT CONTROL DETAILS
Project: THE STORAGE BARN, LLC
385 & 387 SIXTH STREET, DOVER, NH
Owner of Record: THE STORAGE BARN, LLC, 35 HODGDON FARM LANE, NEWINGTON, NH 03801

DRAWING No.
E1
SHEET 10 OF 10
JBE PROJECT NO. 13172

City of Dover, New Hampshire
SITE REVIEW APPLICATION

[Revision Date: June 4, 2019]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: Dover Point Village, LLC Telephone # 603-742-2045

Address of Applicant: 10 Waterloo Circle Dover, NH 03820

E-Mail Address: N/A

Name of Property Owner (*if different from applicant*): Sebring Holdings, LLC Telephone # 603-749-2800

Address of Property Owner: 340 Central Avenue, Suite 202 Dover, NH 03820

PROPERTY INFORMATION

Address of Property: Dover Point Road

Assessor's Map # K Lot(s) # 26

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

Size of Parcel: 32,964 sq. ft. 0.76 ac. Property Deed: Book 4056 Page: 18

Existing Use of Property: Vacant - Residential

SITE PLAN INFORMATION

Describe Proposed Use: Medical/Office (Variance Granted - Z21-03)

Area of Parcel to be Developed: 23,712 sq. ft.

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

Number of Parking Spaces: Existing 0 Proposed 20

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

Number of Employees Total: 8 In Maximum Shift: 1

Disposition of Parcel:

Building Footprint 3600 sq. ft.

Total Building Area 3600 sq. ft.

Paved Area 7520 sq. ft.

Building Setbacks:

Front Yard 15 - 25 ft.

Rear Yard 30 ft.

Side Yard: Right 15 ft. Left 15 ft.

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

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

BUILDING INFORMATION

Type of Building to be Built: single story commercial building of wood contruction on slab foundation

Height of Building: 25' Finished Floor Elevation: 71.0

Number of Seats (where applicable) N/A

Estimated value of construction: $300,000 Refuse removal: Public/Private (circle one)

WAIVER REQUESTS

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 M. McEneaney, LLS
McEneaney Survey Associates

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

Professional License #: Kevin M. McEneaney
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 P.O. Box 1166 Dover, NH 03821 Telephone #: 603-749-0443

Professional License #: Stephen J. Haight, P.E.#7978 E-mail address: shaight@civilworksne.com

ARCHITECT INFORMATION

Name of Architect and Company (Licensed in N.H.) Tony Fallon - Tony Fallon Architecure

Address P.O. Box 404 Wolfeboro Falls, NH 03896 Telephone #: 603-269-3206

Professional License #: NH Licensed Architect #1849 E-mail address: tony@tonyfallon.com

LANDSCAPE ARCHITECT INFORMATION

Name of Landscape Architect and Company (Licensed in N.H.) Roberta N. Woodburn
Woodburn & Company Landscape Architecture, LLC

Address 103 Kent Place Newmarket, NH 03857 Telephone #: 603-659-5949

Professional License #: Roberta N. Woodburn, NH Licensed Architect #00002 E-mail address: robbi@woodburnandcompany.com

~~SOIL~~ WETLAND 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 #: Damon E. Burt, NH CWS#163 E-mail address: frenvironmental@gmail.com

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.

X Signature of Property Owner: _____ Date: 4/28/2021

Signature of Applicant (*if different from owner*): _____ Date: 5/5/2021

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

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

X Signature of Property Owner: _____ Date: 4/28/2021

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.

X Signature of Property Owner: _____ Date: 4/28/2021

Signature of Applicant (*if different from owner*): _____ Date: 5/5/2021

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.

X Signature of Property Owner: _____ Date: 4/28/2021

Signature of Applicant (*if different from owner*): _____ Date: 5/5/2021

PLANNING BOARD FEE SCHEDULE

(Revised September 17, 2020)

Below are the fees associated with plan review and are subject to a nonrefundable application fee to cover administrative expenses. Please complete the information below and provide payment with your application submittal. **Plan review fees shall be paid prior to technical review committee (TRC) being scheduled.** For plans not requiring TRC review, **fees are due 21 days prior** to the Planning Board meeting. Staff will coordinate abutter/notice fees, which will be invoiced and must be paid 28 hours before the Planning Board meeting for an application to be heard. Fees shall be paid by cash or check made payable to "City of Dover".

A. Plan Review Fees

1. Application fee for the following (SELECT ALL THAT APPLY):

- ☐ SUBDIVISION Application fee $200.00 + $150.00 x # _____ new lots created = $_____
- ☐ LOT LINE ADJUSTMENT Application fee $200.00 + $100.00 X # ___ of lots involved = $_____
- ☐ TRANSFER OF DEVELOPMENT RIGHTS Application fee $200.00 = $_____
- ☐ SITE REVIEW – RESIDENTIAL Application fee $200.00+ $100.00 x # __ per dwelling unit =$_____
- ☒ SITE REVIEW – NON-RESIDENTIAL Application fee $200.00 + (not to exceed $10,000)
  - New construction $.15 sq. ft. x # 3600 sq. ft.= $ 540.00
  - Additions (new floor space) $.10 per sq. ft. x # _____sq. ft.= $_____
- ☐ MOTEL/HOTEL $35.00 x # ___ per lodging unit= $_____
- ☐ CHANGE OF USE Application fee $200.00 + (not to exceed $5,000)
  - Existing floor spaces $.10 per sq. ft. x # _____ sq. ft. = $_____
- ☒ CONDITIONAL USE PERMIT Application fee $200.00 x # 1 per Application = $ 200.00
- ☐ GRAVEL PIT/ EXCAVATIONS
  - Application fee $50.00= $_____
  - Permit fee $75.00= $_____
- ☐ EXTENSIONS/AMENDMENTS/WAIVERS FOR AN APPROVED PLAN Application fee $200.00 = $_____
- ☐ REQUEST FOR REZONING Application fee $200.00 = $_____
- ☐ DRIVEWAY WAIVER Application fee $200.00 = $_____

SUB TOTAL= $ 740.00

AND

2. TOTAL IMPERVIOUS PAVED AREA (for new development, roadways or additions to existing parking lots, (not to exceed $10,000)) Application fee $200.00 + $.07 sq. ft. x # 7520 = **$** 726.40

TOTAL PLAN REVIEW FEE= $ 1466.40

B. Abutter Notification/Mailing Labels - this office will create and print the abutter list and provide labels in triplicate for each abutter. The applicant/owner will need to review the list and provide to this office the engineer, architect, licensed land surveyor (LLS), licensed landscape architect (LLA) and/or soil scientist whose professional seal appears on the plan with names and addresses for notices.

- ☐ Applicant & Owner, engineer, architect, LLS, LLA and/or soil scientist
  - Certified letters fee # _____ of x $8.00= $_____
- ☐ Certified letters fee: # of abutters _____ X $8.00= $_____
- ☐ First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X $1.00= $_____
- ☐ Creating/Printing Abutter Labels in triplicate per sheet _____ x $10.00= $_____

SUB TOTAL= $_____

C. Foster's newspaper public notice fee $100.00 x # _____ applications = $_____

TOTAL NOTICE FEE= $_____

The above amount must be paid 28 hours prior to the Planning Board meeting, to be heard.

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: Dover Point Village, LLC File Number: P21-

PROJECT TITLE: Middleton Chiropractic

PROPERTY LOCATION: 28 Dover Point Road Tax Map: K Lot: 26

	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)		
6. Waiver requests to the Site Plan Review Regulations, with written justification	N/A	
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:	x	
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	x	
Location of Conservation District areas	x	
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	X	
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	X	
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	N/A	
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	X	
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	N/A	
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	X	
Location of proposed drive-in facilities	N/A	
Provide additional exhibits/technical data determined appropriate by the Planning Board or its staff as required	X	

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: Dover Point Village, LLC Telephone # 603-742-2045

Address of Applicant: 10 Waterloo Circle Dover, NH 03820

E-Mail Address: N/A

Name of Property Owner (if different from applicant): Sebring Holdings, LLC Telephone # 603-749-2800

Address of Property Owner: 340 Central Avenue, Suite 202 Dover, NH 03820

PROPERTY INFORMATION

Assessor's Map # K Lot(s) # 26

Address of Property: Dover Point Road

Zoning District(s) R-12 Overlay District(s) NONE

Existing Use of Property: Vacant - Residential

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:

To allow construction activity related to drainage and grading impacting 901s.f. within a wetland buffer, and 896 s.f. within a wetland buffer along a stream.

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

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

Address P.O. Box 1166 Dover, NH 03821 Telephone #: 603-749-0443

Professional License #: Stephen J. Haight, P.E.#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.

X Signature of Property Owner: _____ Date: 4/28/2021

Signature of Applicant (if different from owner): _____ Date: 5/5/2021

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

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

X Signature of Property Owner: _____ Date: 4/28/2021

PROJECT NARRATIVE

for

MIDDLETON CHIROPRACTIC
28 Dover Point Road, Dover, NH
Tax Map K, Lots 26
May 2021

PROJECT OVERVIEW

The project applicant is proposing to construct a +/- 3600 SF professional/medical office building with associated parking located within the R-12 Zoning District which will share a driveway entrance on Dover Point Road with the abutting commercial project (see attached Variance Z21-03 Notice of Decision). The proposed site will include public water and sewer connections, underground electric service, natural gas service and associated drainage improvements. A small portion of the work is proposed within the 50' conservation district buffer but does not disturb any wetland, consisting of +/- 901 SF within a wetland buffer and +/- 896 SF within a stream buffer.

The project site consists of the following general improvements:

- Remove existing portion of asphalt currently present on site
- Construction of +/- 3600 SF professional/medical office building and associated parking
- Construction of on-site stormwater detention and treatment system, grading, and other drainage requirements
- On site utility construction
- Construction of (1) new entrance shared with abutting commercial project (See attached Variance Z21-03 Notice of Decision granted 2-19-21)
- Stabilize remaining areas with loam and seed

PROJECT LOCATION AND SITE CHARACTERISTICS

The project area consists of a parcel of land shown on Tax Map K as Lot 26 and is located within the R-12 Residential District, contains +/- .76 acres and is currently undeveloped. The project proposes to develop this existing lot with access from Dover Point.

DRIVEWAY AND PARKING LOT

A 35' wide driveway entrance is proposed for this project, located on Dover Point Road, to be shared with the abutting commercial property as well as parking associated with the construction of a proposed professional medical office, per a Variance Z21-03. Lighting for the proposed parking lot and driveway will be per the Lighting Plan.

For the proposed development, the City of Dover parking maximums allow for the following:

Required/Proposed:

- Medical: 1 space per employee (8) = 8 Surface Spaces
- Medical: 0.5 space per exam room (8) = 4 Surface Spaces
- Office: 1 space per 300 s.f. (2400 s.f.) = 8 Surface Spaces

    - Total proposed = **20 Surface Spaces (includes 1 Accessible Space)**

WETLAND SETBACK IMPACT TYPE

The project work requires a conditional use permit from the City of Dover. Approximately +/- 901 SF (and 896 SF within stream buffer) of non-tidal wetland buffer will be impacted. The total area of the 50' wetland buffer is 18,539 S.F. on the lot. 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 at 28 Dover Point Road, Dover, NH. The site contains approximately .76 acres and is bounded on the west by Dover Point Road, the east by commercial development, and the north by residential and mixed use properties. The watershed of the parcel includes the project site. On site soils are a mix of Windsor Loamy Fine Sand, Windsor Loamy Sand, Suffield Silt Loam, and Buxton Silt Loam. The Windsor series soils are HSG A with the Suffield and Buxton series soils classified as HSG C.

The proposed development of the site includes the demolition and removal of a pre-existing residential driveway and the construction of a professional medical office building with associated parking having site access from Dover Point Road which will be shared with the adjacent commercial development project. The project also includes the construction of utility upgrades, and drainage improvements including on-site stormwater detention and treatment system. The post development watershed is modeled utilizing the same point of analysis as the predevelopment watershed, allowing direct comparison of the peak runoff between the pre and post developed conditions (see drainage report). The analysis indicates that the proposed development of the site will have negligible impact on the watershed leading to Varney Brook.

UTILITIES

The proposed project will connect to City of Dover water and sewer as well as Unitil for natural gas, and Eversource for electricity. Natural Gas lines are located within the Dover Point Road right-of-way which is the anticipated location for this connection. The existing site is undeveloped and will require new services. City of Dover water lines are located within the Dover Point Road and Pointe Place. There is an existing service connection from the 8” line in Pointe Place that is anticipated to be used. A sewer easement and gravity sewer line runs through the property which is the intended point of connection for the project. Building connections made per the City’s Community Services Utility Division and Fire Department requirements and standards. Underground electric for the site is to be provided by the existing electric lines located along Dover Point Road.

CHRISTOPHER G. PARKER, AICP
Assistant City Manager
Planning & Strategic Initiatives
c.parker@dover.nh.gov

288 Central Avenue
Dover, New Hampshire 03820-4169
(603) 516-6008
Fax: (603) 516-6049
www.dover.nh.gov

City of Dover, New Hampshire

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

Zoning Board of Adjustment
NOTICE OF DECISION

February 19, 2021

Sebring Holdings, LLC
340 Central Avenue, Suite 202
Dover, NH 03820

Re: **Z21-03 – Dover Point Road (Tax Map K, Lot 26)**

Dear Sebring Holdings, LLC:

Please be advised that on February 18, 2021, the Zoning Board of Adjustment voted 5-0 to **GRANT** your request for a variance from **Section 170-12.B, 170-5 (D) and 170-11 (D)** of the Zoning Ordinance to construct and operate a professional/medical office within a residential district with a distance of 64.5 feet from a residential structure, where 150' is required and 77.8' from the front yard property line, where a 25' build to line is required. The Board imposed the following conditions:

1. The property shall be served by a single, shared driveway with Map K lot 19C.
2. The applicant shall relinquish any rights to the shared driveway over Map K lot 26-1
3. The Site Plan Submitted shall include an 8' tall fence and landscaped buffer between the proposed structure and Map K lot 26-1, and landscaping along the frontage of Dover Point road to shield the cars from the abutters across the street.

Please note that per Section 170-52.C.4(d) of the City of Dover Zoning Ordinance, if the variance is not acted upon within four (4) years of the date of approval, it shall be considered null and void.

If you have any questions, please do not hesitate to contact us at (603) 516-6008.

Sincerely,

Christopher G. Parker, AICP
Assistant City Manager, Director of Planning and Strategic Initiatives

EC: James Maxfield, Building Official
Michelle Dube, Inspections Secretary
Donna Langley, City Assessor

Fraggle Rock Environmental
Damon E. Burt, CWS, CPESC
38 Garland Road, Strafford NH 03884
603-969-5574
FRenvironmental@gmail.com

Wetland Report March 1, 2021
Circle K and Seabring Lots
Dover Point Road/Point Place
Dover NH

Fraggle Rock Environmental performed wetlands delineation on January 14, 2021. Wetland Flags A1 – A26; B1 –B32: Wetlands were delineated according to the following standards:

Wetland Delineation Standards

- Corps of Engineers Wetland Delineation Manual, Technical Report 4-87-1, (January, 1987)
- U.S. Army Corps of Engineers, Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0, U.S. Army Engineer Research and Development Center, 3909 Halls Ferry Road, Vicksburg, MS 39180-6199, January 2012, ERDC/EL TR-12-1
- Cowardin, Lewis M., Golet, Francis C. and LaRoe, Edward T, Classification of Wetlands and Deepwater Habitats of the United States, USFWS, Dept. of the Interior, Wash. D.C., 1979.
- Field Indicators of Hydric Soils in the United States A Guide for Identifying and Delineating Hydric Soils, Version 8.1, 2017 (Including corrections to version 8.0, 2016, on pages 21, 25, and 34)
- New England Hydric Soils Technical Committee. 2017 Version 4, Field Indicators for Identifying Hydric Soils in New England. New England Interstate Water Pollution Control Commission, Lowell, MA
- U.S. Army Corps of Engineers 2016. National Wetland Plant List/State List, Version 3.3

Sincerely,

Damon E. Burt

Damon E. Burt, CWS, CPESC
Fraggle Rock Environmental Services
NH Certified Wetland Scientist
Certified Professional in Erosion and Sediment Control

STATE OF NEW HAMPSHIRE
DAMON E. BURT
No. 163
CERTIFIED WETLAND SCIENTIST
3/2/2021

Stormwater Management System Inspection & Maintenance Plan

Prepared for

MIDDLETON CHIROPRACTIC
MAP K, LOT 26

Dover Point Road
Dover, New Hampshire
Strafford County

March, 2021

Owner of Record:

SEBRING HOLDINGS, LLC
340 Central Avenue, Suite 202
Dover, New Hampshire 03820

Prepared By:

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

Introduction

Civilworks NE, has prepared the following Stormwater Management System Inspection & Maintenance Plan for **Middleton Chiropractic/Sebring Holdings, 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

Sebring Holdings, LLC
340 Central Ave. Suite 202
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

David Middleton
90 Central Avenue
Dover, NH 03820

PHONE: 603.988.8672

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

Management Company

Sebring Holdings, LLC
340 Central Ave. Suite 202
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:

- Bioretention Basins
- Pipes/Culverts
- Outlet Structures
- Energy Dissipation Structures
- Pavement
- Catch Basins
- 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.

BIORETENTION BASINS:

- Inspection, by a **qualified professional**, of detention ponds at least twice annually, and following any rainfall event exceeding 2.5 inches in a 24 hour period, with maintenance or rehabilitation conducted as warranted by such inspection.
- Embankments and spillways should be inspected by a **qualified professional** for settlement, erosion, seepage, animal burrows, woody vegetation, and other conditions that could degrade the embankment and reduce its stability for impounding water. Immediate corrective action should be implemented if any such conditions are found.
- Inlet and outlet pipes, inlet and outlet structures, energy dissipation structures or practices, and other structural appurtenances should be inspected by a **qualified professional**, and corrective action implemented (e.g., maintenance, repairs, or replacement) as indicated by such inspection.
- The bottoms, interior and exterior side slopes, and crest of earthen detention basins should be mowed, and the vegetation maintained in healthy condition, as appropriate to the function of the facility and type of vegetation.
- Vegetated embankments that serve as "berms" or "dams" that impound water should be mowed at least once annually to prevent the establishment of woody vegetation.
- Trash and debris should be removed from the pond and any inlet or outlet structures whenever observed.
- Accumulated sediment should be removed when it significantly affects pond capacity.

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): As Applicable

- 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.

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.

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.

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.

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.

Inspection & Maintenance Table

System Component / BMP	Minimum Inspection Frequency	Minimum Inspection Requirements	Maintenance / Cleanout Threshold
Bio-Retention Basin • Embankments • Pond Sediment • Trash/Debris • Drawdown Time • Vegetation (Veg.)	Bi-Annually Periodically Periodically Periodically Annually Periodically	• Check for erosion, settlement, seepage, etc. • Check for sediment accumulation in pond • Check for trash (in pond and structures) • 72 hour drain time • Maintain 95% veg. (pond & slopes) • Maintain healthy stand of veg.	Repair immediately ≥ 2 in. sediment Remove all trash/debris Repair immediately Restore veg. in-kind Mow when ≥ 6 in
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 (RipRap)	Annually	• Check for displaced stones • Check for woody vegetation	Replace immediately Remove annually
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
Catch Basins	Annually	• Check for sediment accumulation • Check for floatable contaminants	≥ 1 ft. sediment depth Remove all floatables
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

DRAINAGE ANALYSIS

for

Professional / Medical Office
Map K - Lot 26
Dover Point Road
Dover, NH 03820

April 2021

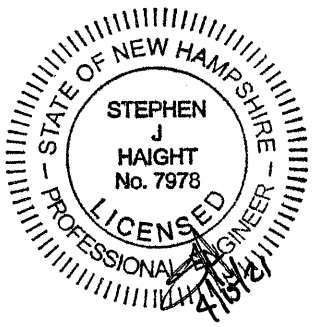
Prepared For:

Dover Point Village, LLC
10 Waterloo Circle
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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- Routing Diagram
- Area & Soil Listing
- Node Listing – 2-yr
- Node Listing – 10-yr
- Storm Summary – 10-yr
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- Node Listing – 50-yr

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1.0 INTRODUCTION

This is a hydrologic analysis of the subject parcel, Tax Map K – Lot 26. The parcel is located on Dover Point Road, Dover, NH. The site contains approximately 0.76 acres and is bounded on the north-west by a residential parcel, the south-west by Dover Point Road, the south-east by an undeveloped commercial lot, and with Varney Brook separating the site from residential and mixed use properties to the north east. The parcel had been developed however, the former structure was previously demolished while the deteriorated driveway remains. On site soils are a mix of Windsor Loamy Fine Sand, Windsor Loamy Sand, Suffield Silt Loam, and Buxton Silt Loam. The Windsor series soils are HSG A with the Suffield and Buxton series soils classified as HSG C.

The existing conditions within the property and its watershed have been analyzed using analysis points to compare the pre-development runoff to post-development. The subject parcel is located along Dover Point Road. The site predominantly slopes from south-west to northeast and into a wetland which includes Varney Brook. The site is broken down into 4 watersheds in order to model the pre-development condition. Watershed A, the largest, consists of the majority of the parcel and drains overland, directly into Varney Brook. Watershed's B, C, and D consists of the areas that drain offsite to the commercial lot, Dover Point Road, and the residential lot respectively.

The proposed development of the site includes the construction of a proposed 3,600 sf professional/medical office building, parking areas, utility connections, drainage improvements including a rain garden to act as a stormwater quality treatment structure, and associated landscaping enhancements.

The post development conditions include grading the site to support the development of the parcel. This grading results in stormwater runoff predominantly being directed to Varney Brook through watershed A with a small portion of the entrance drive being directed to the abutting parcel, Tax Map K, Lot 19C, through watershed B. In the post development condition runoff no longer flows to watershed C and D. Watershed A has been divided into 5 sub-catchments to accurately model the proposed development and the closed drainage system that directs runoff to the rain garden. Impacts to watershed B have been incorporated into the design of the abutting parcel, Tax Map K, Lot 19C, and include both water quality and rate of flow. Watershed B is not a direct comparison between Pre and Post conditions due to alternative points of analysis, however, the information has been included for reference.

The closed drainage system and associated roof drains capture runoff from the development and direct it to the raingarden for treatment prior to discharge and the analysis indicates that the proposed development of the site will have minimal impact on the watershed.

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: Windsor Loamy Fine Sand
Windsor Loamy Sand

Hydrologic Drainage Class C: Suffield Silt Loam
Buxton Silt Loam

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 3.16", 4.77", 6.03", and 7.21" rainfall depths respectively. The raingarden 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 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**
A	0.039	0.35	0.76	1.08	1.39
B	0.003	0.02	0.09	0.16	0.23
C	0.007	0.07	0.15	0.21	0.27
D	0.005	0.05	0.11	0.15	0.19

2.3 DEVELOPED CONDITIONS

The post development parcel was analyzed as 2 watersheds with Watershed A further broken into 5 sub-catchments. Watershed A has the same summing point as the pre development analysis while watershed B is not a direct comparison as the watersheds have separate summing points. Runoff from watershed B has been incorporated into the development of the abutting parcel, Tax Map K, Lot 19C. Watersheds C and D have been incorporated into Watershed A through grading improvements of the proposed site.

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**
A	0.089	0.45	0.75	0.99	1.22
B	0.006	0.09	0.12	0.14	0.16
C	-	-	-	-	-
D	-	-	-	-	-

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**
A	0.039/**0.089**	0.35/**0.45**	0.76/**0.75**	1.08/**0.99**	1.39/**1.22**
B	0.003/**0.006**	0.02/**0.09**	0.09/**0.12**	0.16/**0.14**	0.23/**0.16**
C	0.007/ -	0.07/ -	0.15/ -	0.21/ -	0.27/ -
D	0.005/ -	0.05/ -	0.11/ -	0.15/ -	0.19/ -

APPENDIX A

HYDROLOGIC CALCULATIONS

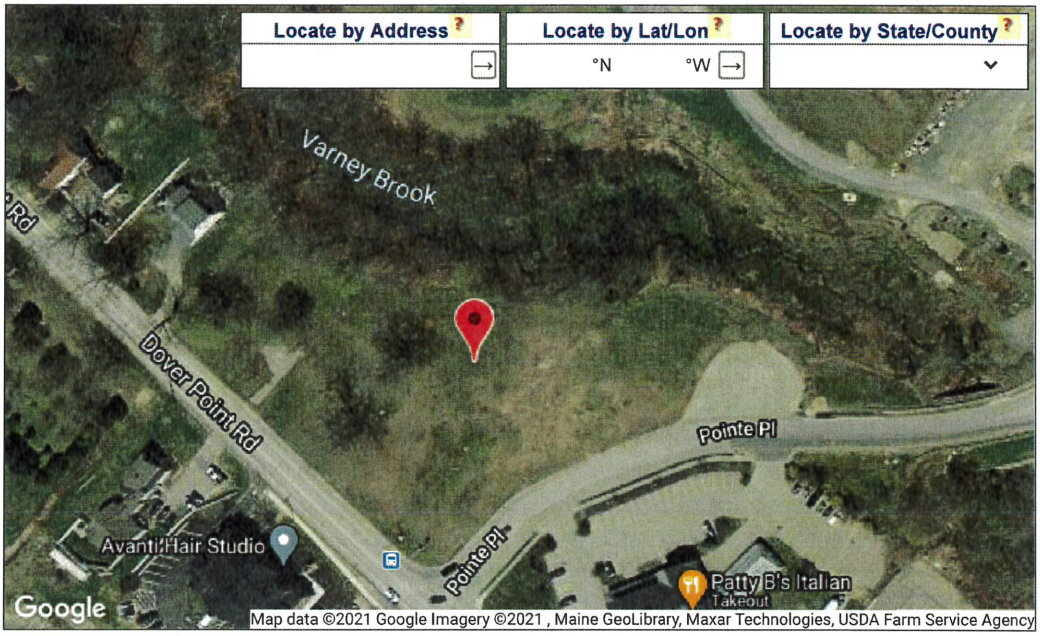
About this Project **Data & Products** **Daily Monitoring** **Documentation**

Select Product

- Extreme Precipitation Tables - HTML
- Extreme Precipitation Tables - Text/CSV
- Partial Duration Series - by Point
- Partial Duration Series - by Station
- Distribution Curves - Graphical
- Distribution Curves - Text/TBL
- Intensity Frequency Duration Graphs
- Precipitation Frequency Duration Graphs
- GIS Data Files
- Regional/State Maps

Select Location Double-click the map to place a marker, or enter address or latitude/longitude.

Locate by Address	Locate by Lat/Lon	Locate by State/County
	°N °W	



Select Options

Smoothing	Delivery
Yes	Popup

Submit

Version 1.12 Copyright 2010-2021.
This project is a joint collaboration between:

Northeast Regional Climate Center (NRCC) Cornell University

Natural Resources Conservation Service (NRCS) USDA NRCS

Contact: precip@cornell.edu

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	70.862 degrees West
Latitude	43.174 degrees North
Elevation	0 feet
Date/Time	Wed, 20 Jan 2021 20:07:46 -0500

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	1.55	2.00	2.61	2.87	**1yr**	2.31	2.76	3.16	3.88	4.46	**1yr**
2yr	0.32	0.49	0.61	0.81	1.02	1.29	**2yr**	0.88	1.17	1.50	1.92	2.45	3.16	3.51	**2yr**	2.79	3.37	3.87	4.60	5.24	**2yr**
5yr	0.37	0.57	0.72	0.96	1.23	1.58	**5yr**	1.06	1.45	1.85	2.39	3.08	3.99	4.50	**5yr**	3.53	4.32	4.94	5.82	6.58	**5yr**
10yr	0.40	0.63	0.80	1.09	1.42	1.85	**10yr**	1.23	1.70	2.18	2.83	3.67	4.77	5.43	**10yr**	4.22	5.22	5.96	6.95	7.82	**10yr**
25yr	0.46	0.74	0.94	1.30	1.72	2.27	**25yr**	1.49	2.10	2.70	3.54	4.62	6.03	6.96	**25yr**	5.34	6.70	7.62	8.80	9.83	**25yr**
50yr	0.52	0.83	1.06	1.49	2.00	2.67	**50yr**	1.73	2.46	3.19	4.20	5.51	7.21	8.41	**50yr**	6.38	8.09	9.19	10.52	11.70	**50yr**
100yr	0.58	0.94	1.21	1.71	2.32	3.13	**100yr**	2.01	2.90	3.75	4.97	6.56	8.62	10.17	**100yr**	7.63	9.78	11.08	12.58	13.92	**100yr**
200yr	0.64	1.05	1.36	1.96	2.70	3.68	**200yr**	2.33	3.41	4.44	5.91	7.82	10.32	12.29	**200yr**	9.13	11.82	13.36	15.05	16.58	**200yr**
500yr	0.76	1.24	1.62	2.36	3.31	4.55	**500yr**	2.85	4.23	5.51	7.40	9.86	13.08	15.80	**500yr**	11.58	15.20	17.12	19.09	20.89	**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	0.89	**1yr**	0.64	0.87	0.92	1.27	1.60	2.16	2.46	**1yr**	1.91	2.37	2.86	3.31	3.99	**1yr**
2yr	0.31	0.49	0.60	0.81	1.00	1.18	**2yr**	0.86	1.16	1.36	1.83	2.36	3.04	3.40	**2yr**	2.69	3.27	3.75	4.47	5.04	**2yr**
5yr	0.35	0.54	0.67	0.91	1.16	1.40	**5yr**	1.00	1.37	1.61	2.15	2.77	3.72	4.13	**5yr**	3.29	3.97	4.62	5.42	6.12	**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	4.28	4.79	**10yr**	3.79	4.60	5.33	6.26	7.04	**10yr**
25yr	0.43	0.66	0.82	1.18	1.55	1.90	**25yr**	1.33	1.86	2.11	2.83	3.64	4.87	5.80	**25yr**	4.31	5.58	6.49	7.58	8.46	**25yr**
50yr	0.48	0.73	0.91	1.30	1.75	2.18	**50yr**	1.51	2.13	2.35	3.18	4.08	5.54	6.69	**50yr**	4.90	6.43	7.53	8.75	9.71	**50yr**
100yr	0.53	0.81	1.01	1.46	2.00	2.49	**100yr**	1.73	2.44	2.63	3.56	4.55	6.29	7.71	**100yr**	5.57	7.41	8.74	10.11	11.14	**100yr**
200yr	0.59	0.89	1.13	1.63	2.27	2.85	**200yr**	1.96	2.79	2.93	3.98	5.06	7.13	8.89	**200yr**	6.31	8.55	10.14	11.69	12.81	**200yr**
500yr	0.69	1.02	1.31	1.91	2.72	3.42	**500yr**	2.34	3.35	3.40	4.60	5.86	8.40	10.72	**500yr**	7.43	10.30	12.33	14.18	15.35	**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	1.06	1.24	1.74	2.22	2.90	3.09	**1yr**	2.57	2.97	3.46	4.25	4.85	**1yr**
2yr	0.33	0.51	0.63	0.85	1.05	1.25	**2yr**	0.90	1.22	1.48	1.96	2.51	3.31	3.63	**2yr**	2.93	3.49	4.01	4.76	5.48	**2yr**
5yr	0.39	0.61	0.75	1.03	1.31	1.59	**5yr**	1.13	1.55	1.86	2.51	3.21	4.25	4.86	**5yr**	3.77	4.68	5.28	6.24	7.01	**5yr**
10yr	0.46	0.70	0.87	1.22	1.57	1.93	**10yr**	1.36	1.88	2.24	3.06	3.88	5.23	6.07	**10yr**	4.63	5.84	6.67	7.67	8.56	**10yr**
25yr	0.56	0.85	1.05	1.50	1.98	2.49	**25yr**	1.71	2.43	2.89	3.99	4.99	7.21	8.16	**25yr**	6.38	7.85	8.92	10.10	11.16	**25yr**
50yr	0.64	0.98	1.22	1.75	2.36	3.01	**50yr**	2.04	2.94	3.51	4.87	6.07	8.93	10.23	**50yr**	7.90	9.83	11.15	12.42	13.65	**50yr**
100yr	0.75	1.13	1.42	2.05	2.82	3.64	**100yr**	2.43	3.56	4.26	5.96	7.40	11.06	12.82	**100yr**	9.79	12.32	13.91	15.31	16.70	**100yr**
200yr	0.87	1.31	1.66	2.41	3.36	4.42	**200yr**	2.90	4.32	5.18	7.30	9.00	13.74	16.08	**200yr**	12.16	15.46	17.39	18.85	20.47	**200yr**
500yr	1.07	1.59	2.04	2.97	4.22	5.68	**500yr**	3.65	5.56	6.70	9.57	11.69	18.32	21.71	**500yr**	16.22	20.87	23.37	24.85	26.79	**500yr**

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Northeast Regional Climate Center

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Strafford County, New Hampshire
Survey Area Data: Version 20, May 29, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Sep 9, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report
Map—Hydrologic Soil Group (1677 - Circle K)



Table—Hydrologic Soil Group (1677 - Circle K)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BzB	Buxton silt loam, 3 to 8 percent slopes	C/D	12.3	14.5%
CfB	Charlton fine sandy loam, 3 to 8 percent slopes	B	2.0	2.4%
CfC	Charlton fine sandy loam, 8 to 15 percent slopes	B	1.4	1.7%
EaB	Elmwood fine sandy loam, 3 to 8 percent slopes	B	5.2	6.1%
HcB	Hollis-Charlton fine sandy loams, 3 to 8 percent slopes	D	0.6	0.7%
Ma	Made land		9.8	11.6%
ScB	Scantic silt loam, 3 to 8 percent slopes	C/D	0.1	0.2%
SfC	Suffield silt loam, 8 to 15 percent slopes	C	14.8	17.5%
SwA	Swanton fine sandy loam, 0 to 3 percent slopes	C/D	1.5	1.8%
W	Water		1.7	2.0%
WdA	Windsor loamy sand, 0 to 3 percent slopes	A	22.0	26.0%
WdB	Windsor loamy sand, 3 to 8 percent slopes	A	3.9	4.5%
WdE	Windsor loamy sand, 15 to 60 percent slopes	A	4.8	5.7%
WfB	Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes	A	4.5	5.3%
Totals for Area of Interest			**84.8**	**100.0%**

Rating Options—Hydrologic Soil Group (1677 - Circle K)

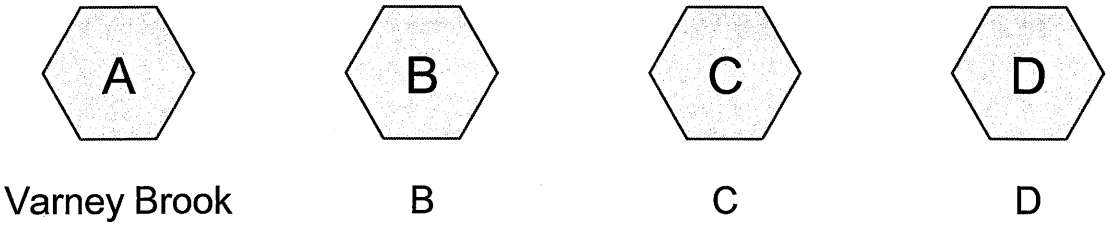
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

A-1

EXISTING WATERSHEDS



Subcat Reach Pond Link

Routing Diagram for 19018 - Pre
Prepared by Civilworks NE
HydroCAD® 10.10-5a s/n 03240 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.100	39	Pasture/grassland/range, Good, HSG A (A, B, C)
0.629	74	Pasture/grassland/range, Good, HSG C (A, B, C, D)
0.004	98	Paved parking, HSG A (B, C)
0.024	98	Paved parking, HSG C (B, C)
0.757	**70**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.104	HSG A	A, B, C
0.000	HSG B	
0.653	HSG C	A, B, C, D
0.000	HSG D	
0.000	Other	
0.757		**TOTAL AREA**

A – 1

NODE LISTING – 2-YR

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
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 A: Varney Brook Runoff Area=22,286 sf 0.00% Impervious Runoff Depth=0.90"
Flow Length=305' Tc=12.2 min CN=72 Runoff=0.35 cfs 0.039 af

Subcatchment B: B Runoff Area=4,524 sf 22.17% Impervious Runoff Depth=0.36"
Flow Length=46' Slope=0.0430 '/' Tc=5.7 min CN=59 Runoff=0.02 cfs 0.003 af

Subcatchment C: C Runoff Area=3,795 sf 5.61% Impervious Runoff Depth=0.96"
Flow Length=60' Slope=0.0210 '/' Tc=9.4 min CN=73 Runoff=0.07 cfs 0.007 af

Subcatchment D: D Runoff Area=2,359 sf 0.00% Impervious Runoff Depth=1.01"
Flow Length=78' Slope=0.0640 '/' Tc=7.4 min CN=74 Runoff=0.05 cfs 0.005 af

Total Runoff Area = 0.757 ac Runoff Volume = 0.053 af Average Runoff Depth = 0.84"
96.31% Pervious = 0.729 ac 3.69% Impervious = 0.028 ac

A – 1

NODE LISTING – 10-YR

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
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 A: Varney Brook Runoff Area=22,286 sf 0.00% Impervious Runoff Depth=2.02"
Flow Length=305' Tc=12.2 min CN=72 Runoff=0.76 cfs 0.086 af

Subcatchment B: B Runoff Area=4,524 sf 22.17% Impervious Runoff Depth=1.11"
Flow Length=46' Slope=0.0430 '/' Tc=5.7 min CN=59 Runoff=0.09 cfs 0.010 af

Subcatchment C: C Runoff Area=3,795 sf 5.61% Impervious Runoff Depth=2.10"
Flow Length=60' Slope=0.0210 '/' Tc=9.4 min CN=73 Runoff=0.15 cfs 0.015 af

Subcatchment D: D Runoff Area=2,359 sf 0.00% Impervious Runoff Depth=2.18"
Flow Length=78' Slope=0.0640 '/' Tc=7.4 min CN=74 Runoff=0.11 cfs 0.010 af

Total Runoff Area = 0.757 ac Runoff Volume = 0.121 af Average Runoff Depth = 1.92"
96.31% Pervious = 0.729 ac 3.69% Impervious = 0.028 ac

A – 1

STORM SUMMARY – 10-YR

Summary for Subcatchment A: Varney Brook

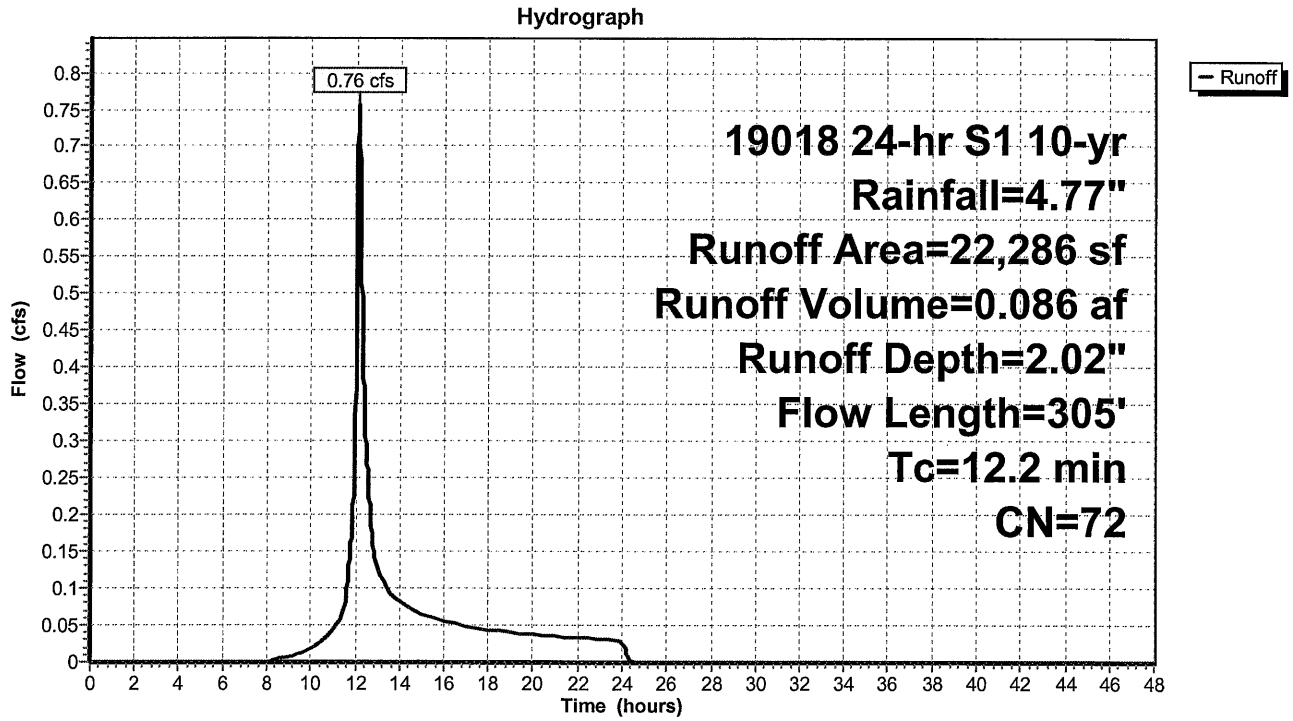
Runoff = 0.76 cfs @ 12.12 hrs, Volume= 0.086 af, Depth= 2.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
19018 24-hr S1 10-yr Rainfall=4.77"

Area (sf)	CN	Description
1,412	39	Pasture/grassland/range, Good, HSG A
20,874	74	Pasture/grassland/range, Good, HSG C
22,286	72	Weighted Average
22,286		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	100	0.0550	0.17		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.16"
0.5	87	0.1880	3.04		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.1	118	0.0050	0.94	3.14	**Parabolic Channel, Varney Brook** W=5.00' D=1.00' Area=3.3 sf Perim=5.5' n= 0.080 Earth, long dense weeds
12.2	305	Total			

Subcatchment A: Varney Brook



Summary for Subcatchment B: B

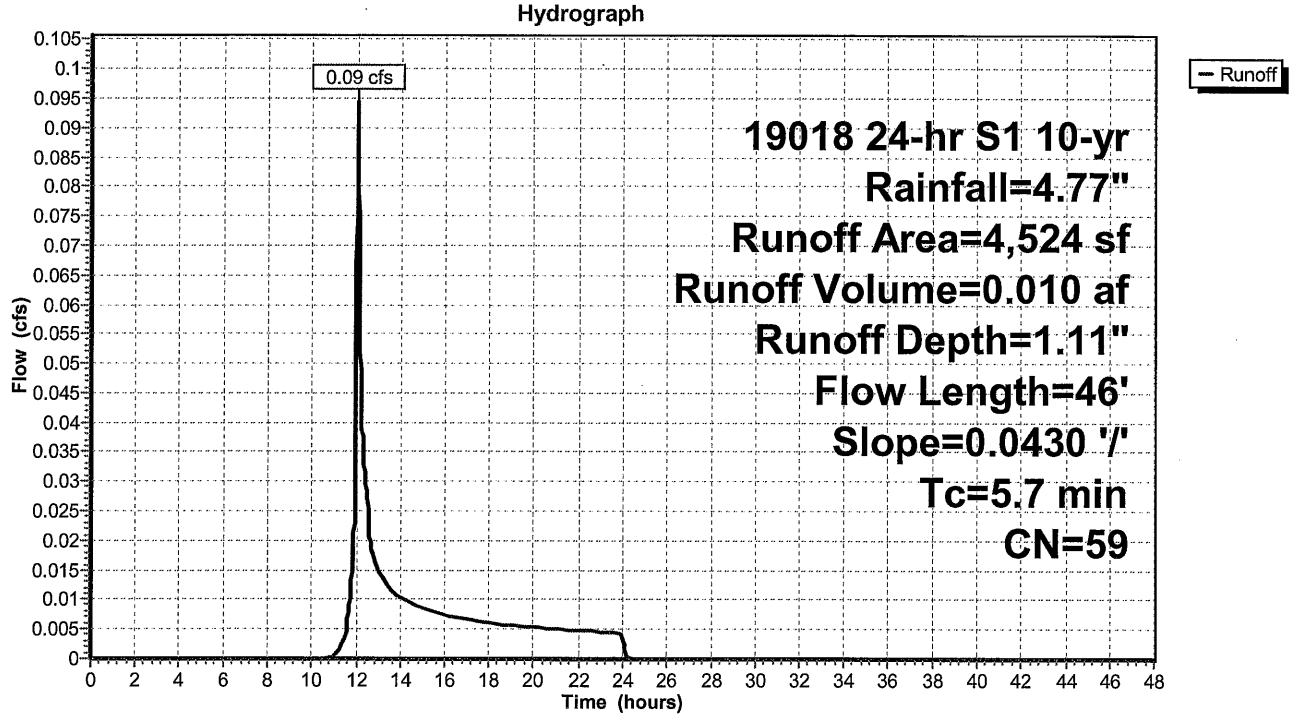
Runoff = 0.09 cfs @ 12.04 hrs, Volume= 0.010 af, Depth= 1.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
19018 24-hr S1 10-yr Rainfall=4.77"

Area (sf)	CN	Description
2,654	39	Pasture/grassland/range, Good, HSG A
117	98	Paved parking, HSG A
867	74	Pasture/grassland/range, Good, HSG C
886	98	Paved parking, HSG C
4,524	59	Weighted Average
3,521		77.83% Pervious Area
1,003		22.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.7	46	0.0430	0.13		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.16"

Subcatchment B: B



Summary for Subcatchment C: C

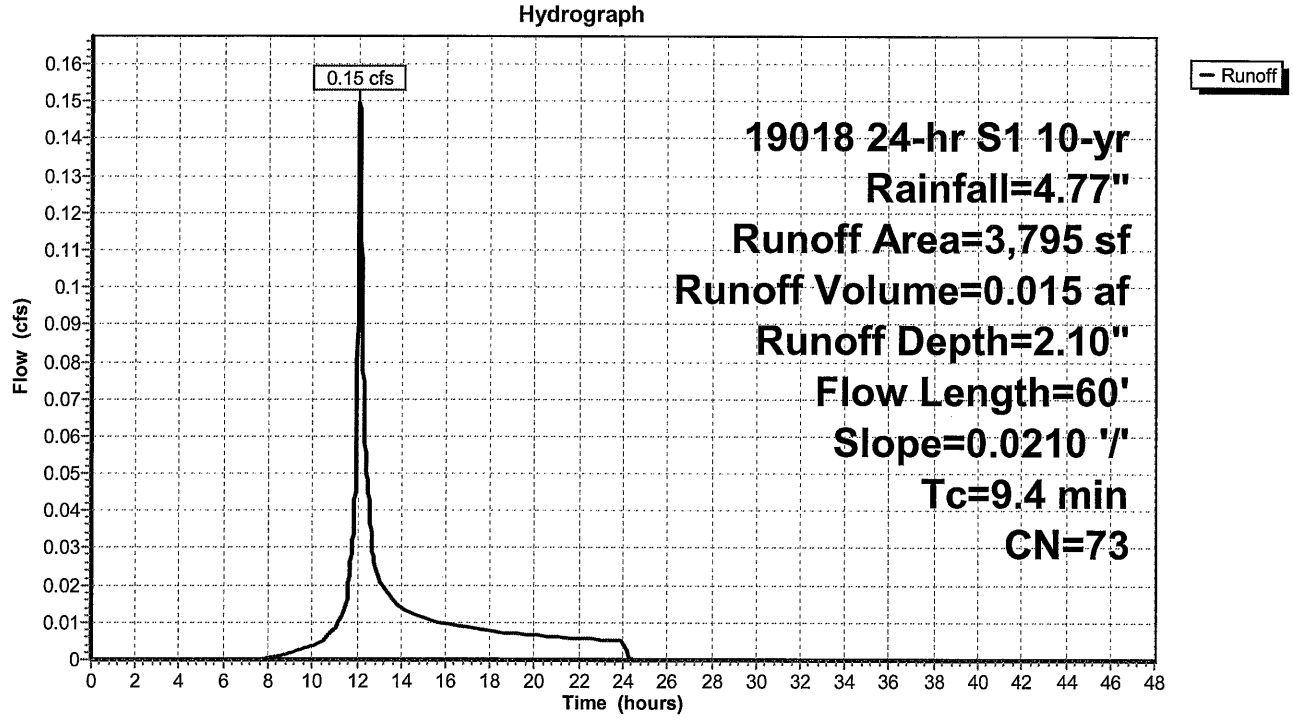
Runoff = 0.15 cfs @ 12.08 hrs, Volume= 0.015 af, Depth= 2.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
19018 24-hr S1 10-yr Rainfall=4.77"

Area (sf)	CN	Description
286	39	Pasture/grassland/range, Good, HSG A
66	98	Paved parking, HSG A
3,296	74	Pasture/grassland/range, Good, HSG C
147	98	Paved parking, HSG C
3,795	73	Weighted Average
3,582		94.39% Pervious Area
213		5.61% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	60	0.0210	0.11		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.16"

Subcatchment C: C



Summary for Subcatchment D: D

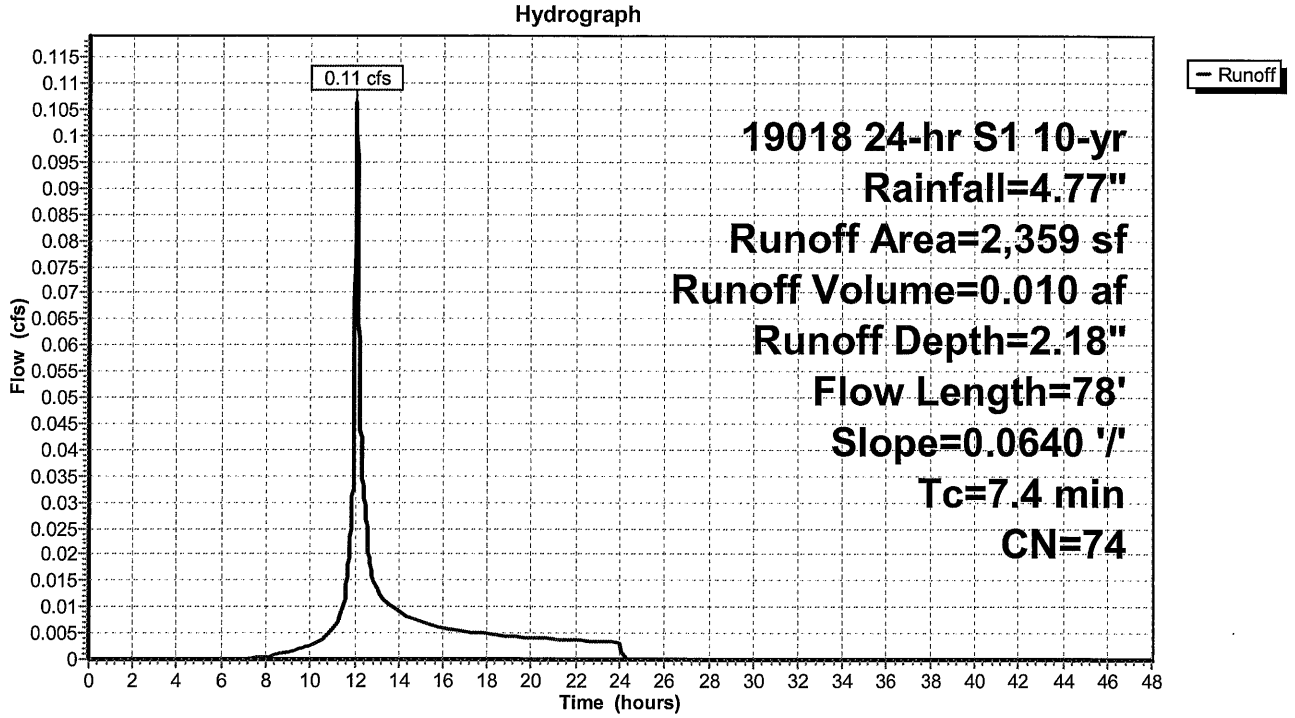
Runoff = 0.11 cfs @ 12.06 hrs, Volume= 0.010 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
19018 24-hr S1 10-yr Rainfall=4.77"

Area (sf)	CN	Description
2,359	74	Pasture/grassland/range, Good, HSG C
2,359		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	78	0.0640	0.18		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.16"

Subcatchment D: D



A – 1

NODE LISTING – 25-YR

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
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 A: Varney Brook Runoff Area=22,286 sf 0.00% Impervious Runoff Depth=3.02"
Flow Length=305' Tc=12.2 min CN=72 Runoff=1.08 cfs 0.129 af

Subcatchment B: B Runoff Area=4,524 sf 22.17% Impervious Runoff Depth=1.86"
Flow Length=46' Slope=0.0430 '/' Tc=5.7 min CN=59 Runoff=0.16 cfs 0.016 af

Subcatchment C: C Runoff Area=3,795 sf 5.61% Impervious Runoff Depth=3.11"
Flow Length=60' Slope=0.0210 '/' Tc=9.4 min CN=73 Runoff=0.21 cfs 0.023 af

Subcatchment D: D Runoff Area=2,359 sf 0.00% Impervious Runoff Depth=3.21"
Flow Length=78' Slope=0.0640 '/' Tc=7.4 min CN=74 Runoff=0.15 cfs 0.014 af

Total Runoff Area = 0.757 ac Runoff Volume = 0.182 af Average Runoff Depth = 2.88"
96.31% Pervious = 0.729 ac 3.69% Impervious = 0.028 ac

A – 1

NODE LISTING – 50-YR

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
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 A: Varney Brook Runoff Area=22,286 sf 0.00% Impervious Runoff Depth=4.01"
Flow Length=305' Tc=12.2 min CN=72 Runoff=1.39 cfs 0.171 af

Subcatchment B: B Runoff Area=4,524 sf 22.17% Impervious Runoff Depth=2.65"
Flow Length=46' Slope=0.0430 '/' Tc=5.7 min CN=59 Runoff=0.23 cfs 0.023 af

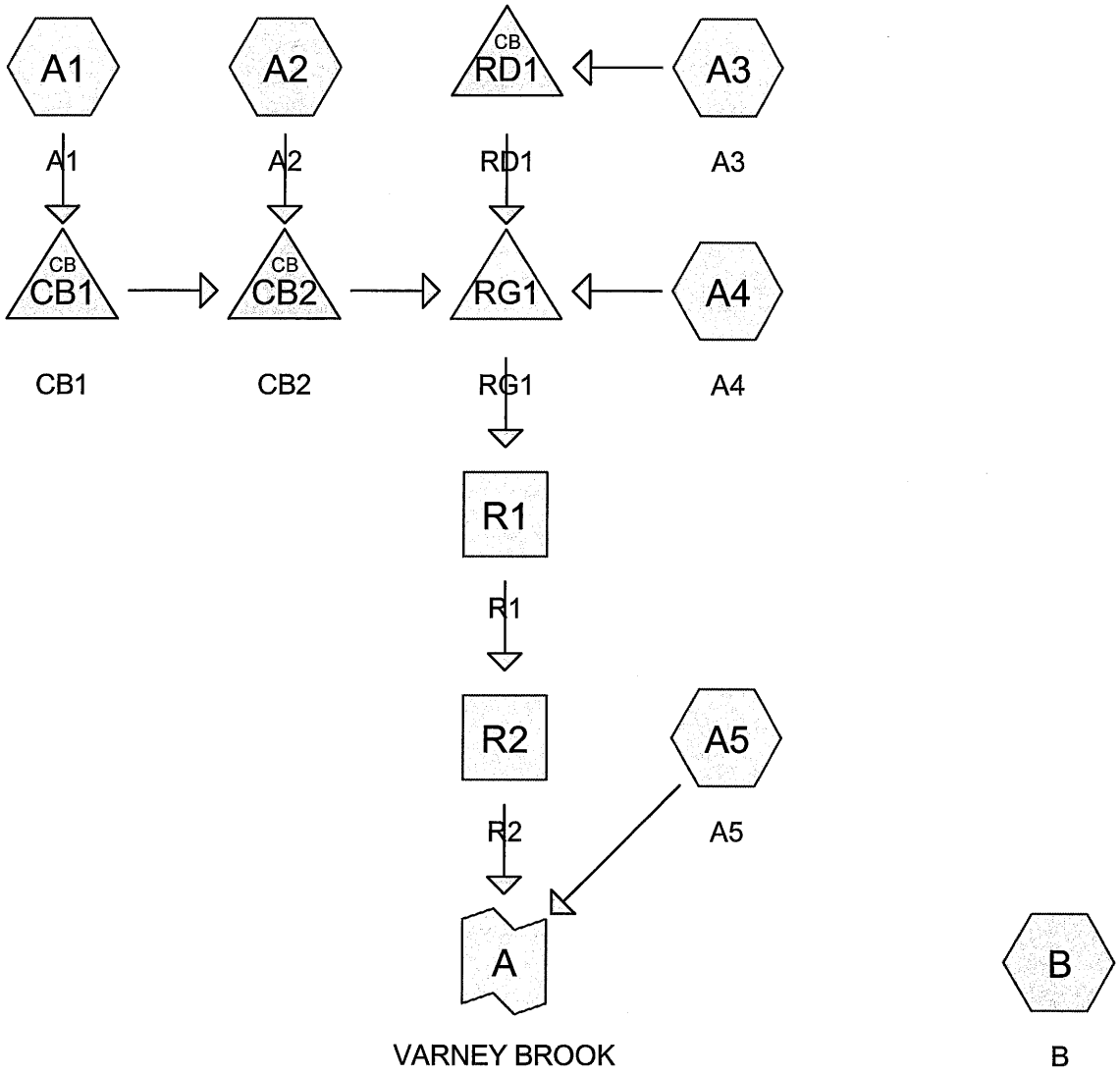
Subcatchment C: C Runoff Area=3,795 sf 5.61% Impervious Runoff Depth=4.12"
Flow Length=60' Slope=0.0210 '/' Tc=9.4 min CN=73 Runoff=0.27 cfs 0.030 af

Subcatchment D: D Runoff Area=2,359 sf 0.00% Impervious Runoff Depth=4.23"
Flow Length=78' Slope=0.0640 '/' Tc=7.4 min CN=74 Runoff=0.19 cfs 0.019 af

Total Runoff Area = 0.757 ac Runoff Volume = 0.243 af Average Runoff Depth = 3.85"
96.31% Pervious = 0.729 ac 3.69% Impervious = 0.028 ac

A-2

DEVELOPED WATERSHEDS



Subcat Reach Pond Link

Routing Diagram for 19018 - Post
Prepared by Civilworks NE
HydroCAD® 10.10-5a s/n 03240 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.059	39	>75% Grass cover, Good, HSG A (A4, A5, B)
0.243	74	>75% Grass cover, Good, HSG C (A1, A2, A4, A5, B)
0.197	74	Pasture/grassland/range, Good, HSG C (A5)
0.027	98	Paved parking, HSG A (A2, A4, B)
0.147	98	Paved parking, HSG C (A1, A2, B)
0.017	98	Roofs, HSG A (A3)
0.065	98	Roofs, HSG C (A3)
0.757	**79**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.104	HSG A	A2, A3, A4, A5, B
0.000	HSG B	
0.653	HSG C	A1, A2, A3, A4, A5, B
0.000	HSG D	
0.000	Other	
0.757		**TOTAL AREA**

A – 2

NODE LISTING – 2-YR

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
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 A1: A1 Runoff Area=4,641 sf 85.28% Impervious Runoff Depth=2.51"
Flow Length=79' Tc=2.4 min CN=94 Runoff=0.34 cfs 0.022 af

Subcatchment A2: A2 Runoff Area=2,928 sf 83.98% Impervious Runoff Depth=2.51"
Flow Length=73' Tc=2.3 min CN=94 Runoff=0.21 cfs 0.014 af

Subcatchment A3: A3 Runoff Area=3,603 sf 100.00% Impervious Runoff Depth=2.93"
Tc=2.0 min CN=98 Runoff=0.29 cfs 0.020 af

Subcatchment A4: A4 Runoff Area=5,031 sf 3.64% Impervious Runoff Depth=0.30"
Flow Length=80' Slope=0.0200 '/' Tc=12.0 min CN=57 Runoff=0.01 cfs 0.003 af

Subcatchment A5: A5 Runoff Area=15,593 sf 0.00% Impervious Runoff Depth=1.01"
Flow Length=347' Tc=14.1 min CN=74 Runoff=0.27 cfs 0.030 af

Subcatchment B: B Runoff Area=1,167 sf 84.92% Impervious Runoff Depth=2.51"
Flow Length=58' Tc=1.7 min CN=94 Runoff=0.09 cfs 0.006 af

Reach R1: R1 Avg. Flow Depth=0.06' Max Vel=2.70 fps Inflow=0.19 cfs 0.059 af
n=0.040 L=36.0' S=0.3917 '/' Capacity=18.31 cfs Outflow=0.19 cfs 0.059 af

Reach R2: R2 Avg. Flow Depth=0.26' Max Vel=0.43 fps Inflow=0.19 cfs 0.059 af
n=0.080 L=26.0' S=0.0058 '/' Capacity=3.37 cfs Outflow=0.19 cfs 0.059 af

Pond CB1: CB1 Peak Elev=66.31' Inflow=0.34 cfs 0.022 af
12.0" Round Culvert n=0.012 L=102.0' S=0.0064 '/' Outflow=0.34 cfs 0.022 af

Pond CB2: CB2 Peak Elev=65.62' Inflow=0.55 cfs 0.036 af
12.0" Round Culvert n=0.012 L=78.0' S=0.0096 '/' Outflow=0.55 cfs 0.036 af

Pond RD1: RD1 Peak Elev=66.16' Inflow=0.29 cfs 0.020 af
6.0" Round Culvert n=0.012 L=150.0' S=0.0050 '/' Outflow=0.29 cfs 0.020 af

Pond RG1: RG1 Peak Elev=63.61' Storage=502 cf Inflow=0.84 cfs 0.059 af
Outflow=0.19 cfs 0.059 af

Link A: VARNEY BROOK Inflow=0.45 cfs 0.089 af
Primary=0.45 cfs 0.089 af

Total Runoff Area = 0.757 ac Runoff Volume = 0.095 af Average Runoff Depth = 1.51"
66.04% Pervious = 0.500 ac 33.96% Impervious = 0.257 ac

A – 2

NODE LISTING – 10-YR

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
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 A1: A1 Runoff Area=4,641 sf 85.28% Impervious Runoff Depth=4.08"
Flow Length=79' Tc=2.4 min CN=94 Runoff=0.46 cfs 0.036 af

Subcatchment A2: A2 Runoff Area=2,928 sf 83.98% Impervious Runoff Depth=4.08"
Flow Length=73' Tc=2.3 min CN=94 Runoff=0.29 cfs 0.023 af

Subcatchment A3: A3 Runoff Area=3,603 sf 100.00% Impervious Runoff Depth=4.53"
Tc=2.0 min CN=98 Runoff=0.37 cfs 0.031 af

Subcatchment A4: A4 Runoff Area=5,031 sf 3.64% Impervious Runoff Depth=0.98"
Flow Length=80' Slope=0.0200 '/' Tc=12.0 min CN=57 Runoff=0.07 cfs 0.009 af

Subcatchment A5: A5 Runoff Area=15,593 sf 0.00% Impervious Runoff Depth=2.18"
Flow Length=347' Tc=14.1 min CN=74 Runoff=0.54 cfs 0.065 af

Subcatchment B: B Runoff Area=1,167 sf 84.92% Impervious Runoff Depth=4.08"
Flow Length=58' Tc=1.7 min CN=94 Runoff=0.12 cfs 0.009 af

Reach R1: R1 Avg. Flow Depth=0.06' Max Vel=2.86 fps Inflow=0.22 cfs 0.100 af
n=0.040 L=36.0' S=0.3917 '/' Capacity=18.31 cfs Outflow=0.22 cfs 0.100 af

Reach R2: R2 Avg. Flow Depth=0.28' Max Vel=0.45 fps Inflow=0.22 cfs 0.100 af
n=0.080 L=26.0' S=0.0058 '/' Capacity=3.37 cfs Outflow=0.22 cfs 0.100 af

Pond CB1: CB1 Peak Elev=66.37' Inflow=0.46 cfs 0.036 af
12.0" Round Culvert n=0.012 L=102.0' S=0.0064 '/' Outflow=0.46 cfs 0.036 af

Pond CB2: CB2 Peak Elev=65.69' Inflow=0.75 cfs 0.059 af
12.0" Round Culvert n=0.012 L=78.0' S=0.0096 '/' Outflow=0.75 cfs 0.059 af

Pond RD1: RD1 Peak Elev=66.25' Inflow=0.37 cfs 0.031 af
6.0" Round Culvert n=0.012 L=150.0' S=0.0050 '/' Outflow=0.37 cfs 0.031 af

Pond RG1: RG1 Peak Elev=63.99' Storage=843 cf Inflow=1.14 cfs 0.100 af
Outflow=0.22 cfs 0.100 af

Link A: VARNEY BROOK Inflow=0.75 cfs 0.165 af
Primary=0.75 cfs 0.165 af

Total Runoff Area = 0.757 ac Runoff Volume = 0.174 af Average Runoff Depth = 2.76"
66.04% Pervious = 0.500 ac 33.96% Impervious = 0.257 ac

A – 2

STORM SUMMARY – 10-YR

Summary for Subcatchment A1: A1

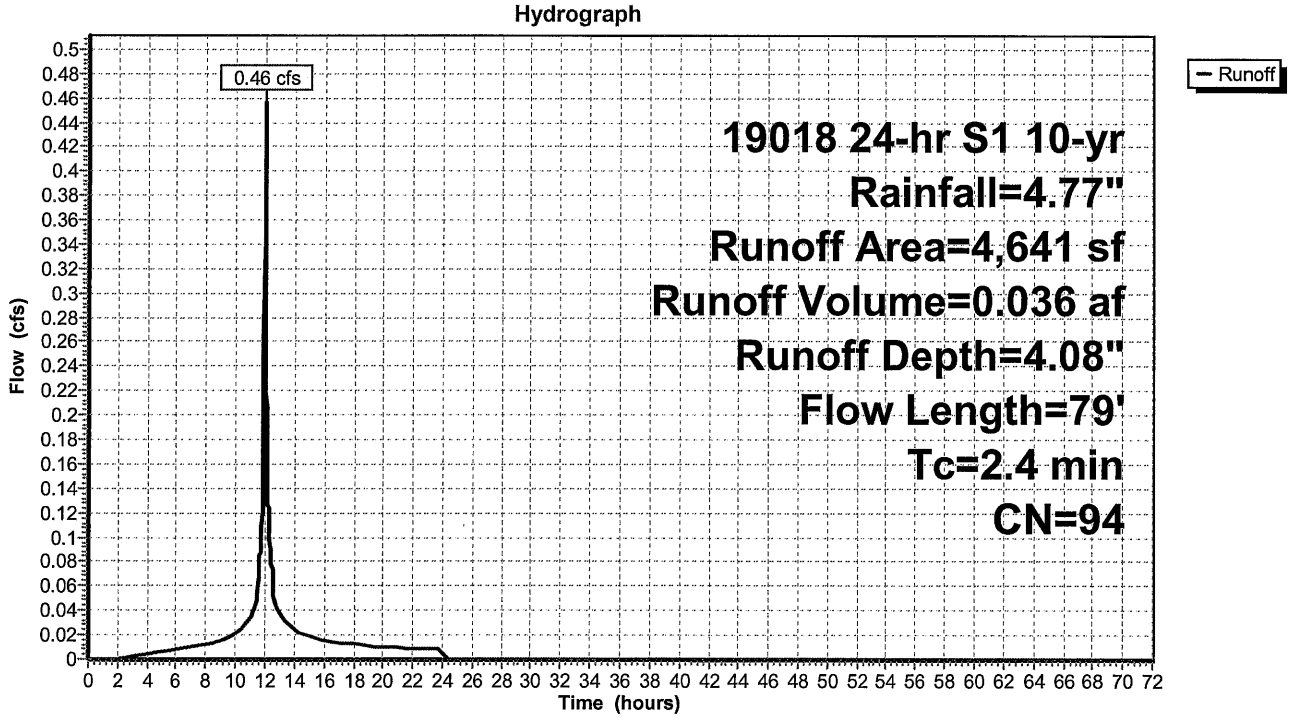
Runoff = 0.46 cfs @ 12.00 hrs, Volume= 0.036 af, Depth= 4.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
19018 24-hr S1 10-yr Rainfall=4.77"

Area (sf)	CN	Description
683	74	>75% Grass cover, Good, HSG C
3,958	98	Paved parking, HSG C
4,641	94	Weighted Average
683		14.72% Pervious Area
3,958		85.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	11	0.0350	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.16"
0.4	68	0.0210	2.94		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.4	79	Total			

Subcatchment A1: A1



Summary for Subcatchment A2: A2

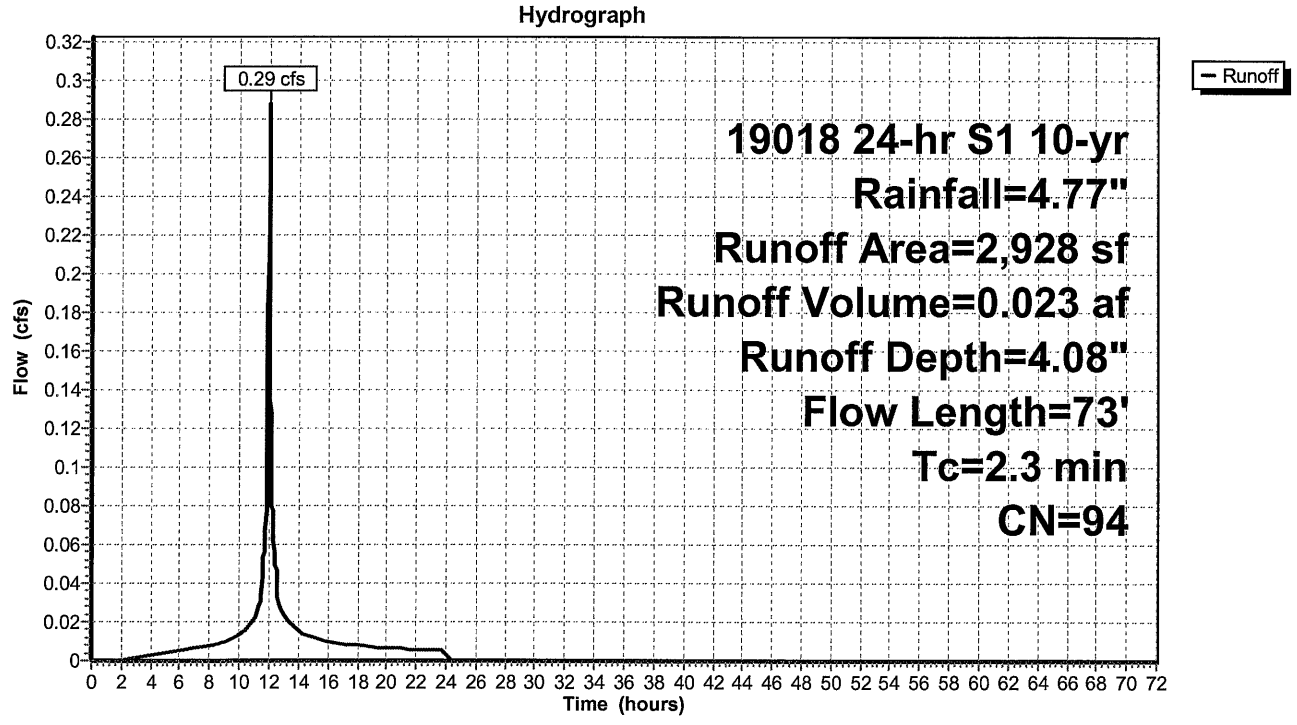
Runoff = 0.29 cfs @ 12.00 hrs, Volume= 0.023 af, Depth= 4.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
19018 24-hr S1 10-yr Rainfall=4.77"

Area (sf)	CN	Description
393	98	Paved parking, HSG A
469	74	>75% Grass cover, Good, HSG C
2,066	98	Paved parking, HSG C
2,928	94	Weighted Average
469		16.02% Pervious Area
2,459		83.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	11	0.0350	0.09		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.16"
0.3	62	0.0410	4.11		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.3	73	Total			

Subcatchment A2: A2



Summary for Subcatchment A3: A3

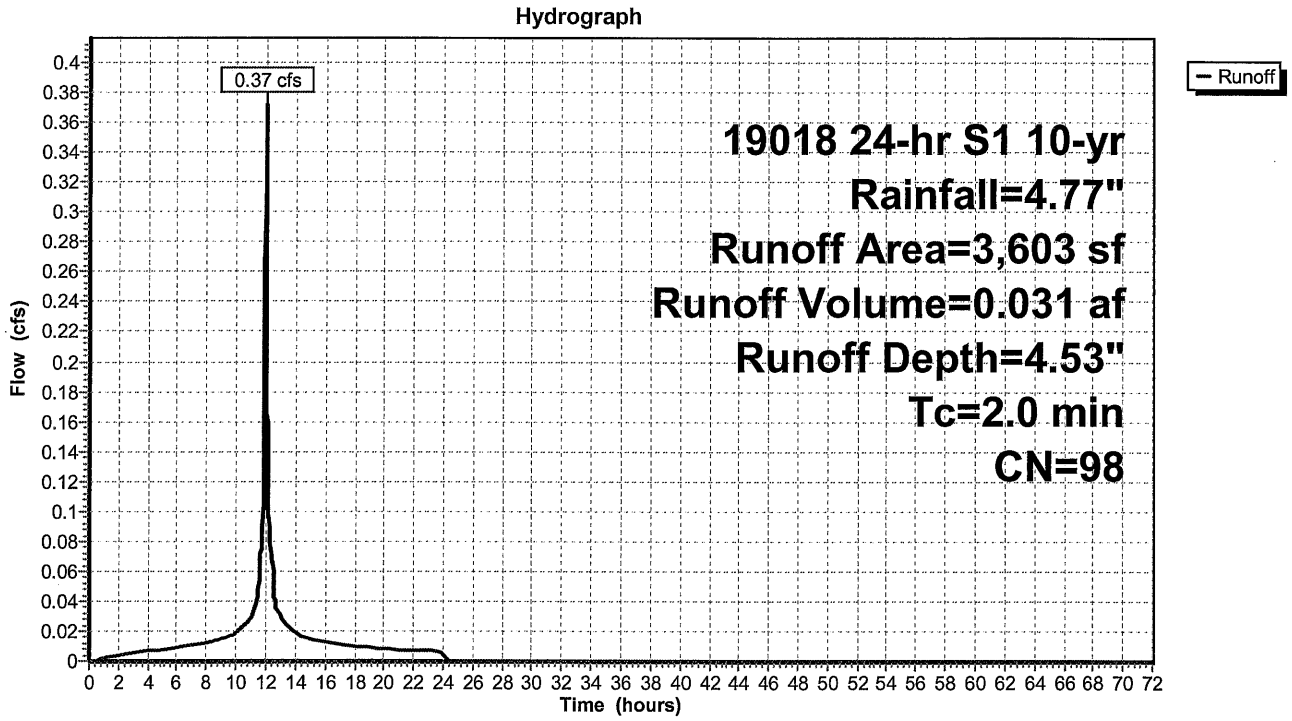
Runoff = 0.37 cfs @ 12.00 hrs, Volume= 0.031 af, Depth= 4.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
19018 24-hr S1 10-yr Rainfall=4.77"

Area (sf)	CN	Description
756	98	Roofs, HSG A
2,847	98	Roofs, HSG C
3,603	98	Weighted Average
3,603		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0					**Direct Entry, Roof Runoff**

Subcatchment A3: A3



Summary for Subcatchment A4: A4

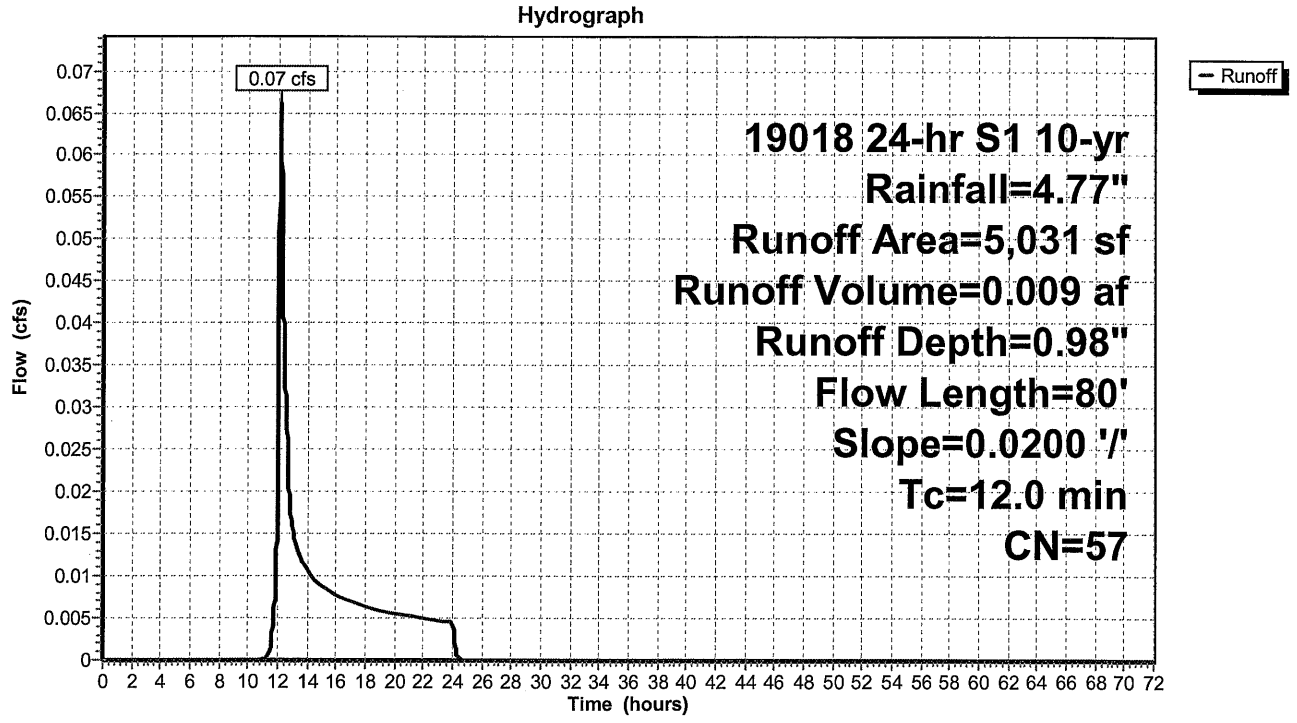
Runoff = 0.07 cfs @ 12.13 hrs, Volume= 0.009 af, Depth= 0.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
19018 24-hr S1 10-yr Rainfall=4.77"

Area (sf)	CN	Description
2,536	39	>75% Grass cover, Good, HSG A
183	98	Paved parking, HSG A
2,312	74	>75% Grass cover, Good, HSG C
5,031	57	Weighted Average
4,848		96.36% Pervious Area
183		3.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	80	0.0200	0.11		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.16"

Subcatchment A4: A4



Summary for Subcatchment A5: A5

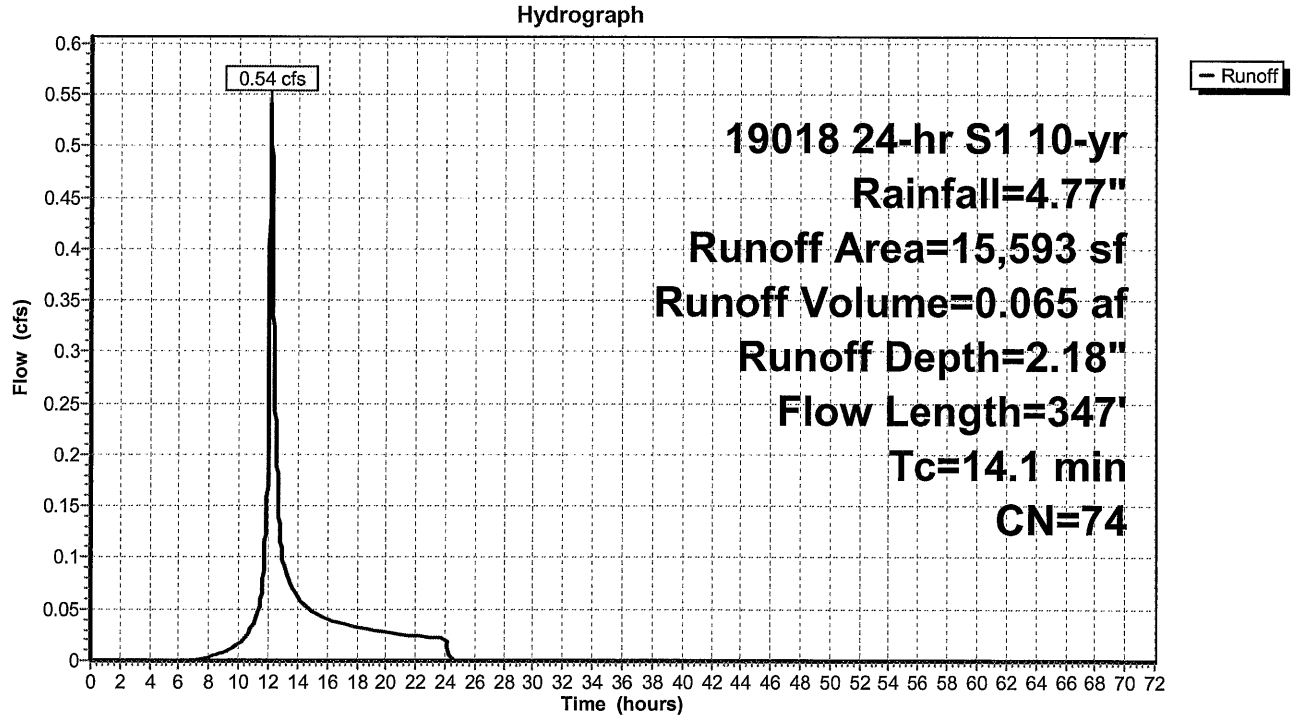
Runoff = 0.54 cfs @ 12.14 hrs, Volume= 0.065 af, Depth= 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
19018 24-hr S1 10-yr Rainfall=4.77"

Area (sf)	CN	Description
33	39	>75% Grass cover, Good, HSG A
8,582	74	Pasture/grassland/range, Good, HSG C
6,978	74	>75% Grass cover, Good, HSG C
15,593	74	Weighted Average
15,593		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.1	100	0.0380	0.15		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.16"
0.6	113	0.1950	3.09		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
2.4	134	0.0050	0.94	3.14	**Parabolic Channel, Varney Brook** W=5.00' D=1.00' Area=3.3 sf Perim=5.5' n= 0.080 Earth, long dense weeds
14.1	347	Total			

Subcatchment A5: A5



Summary for Subcatchment B: B

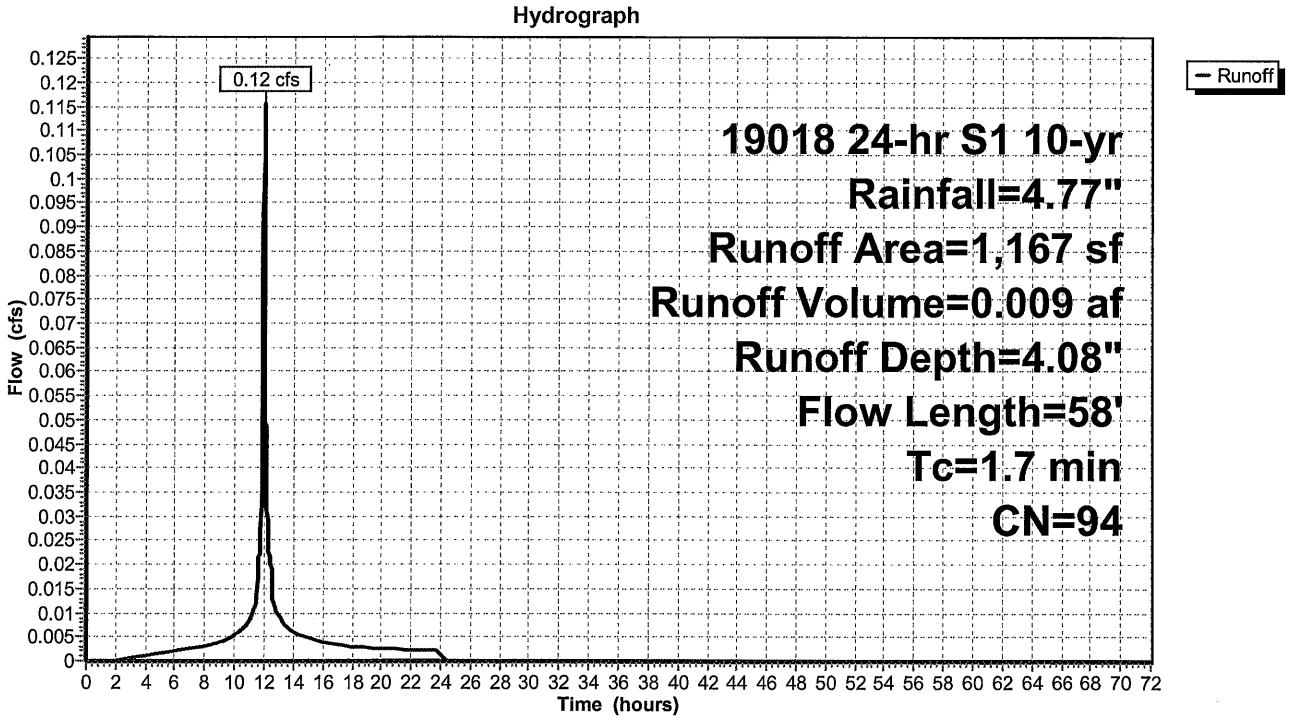
Runoff = 0.12 cfs @ 12.00 hrs, Volume= 0.009 af, Depth= 4.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
19018 24-hr S1 10-yr Rainfall=4.77"

Area (sf)	CN	Description
19	39	>75% Grass cover, Good, HSG A
615	98	Paved parking, HSG A
157	74	>75% Grass cover, Good, HSG C
376	98	Paved parking, HSG C
1,167	94	Weighted Average
176		15.08% Pervious Area
991		84.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	6	0.0200	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 3.16"
0.2	52	0.0400	4.06		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.7	58	Total			

Subcatchment B: B



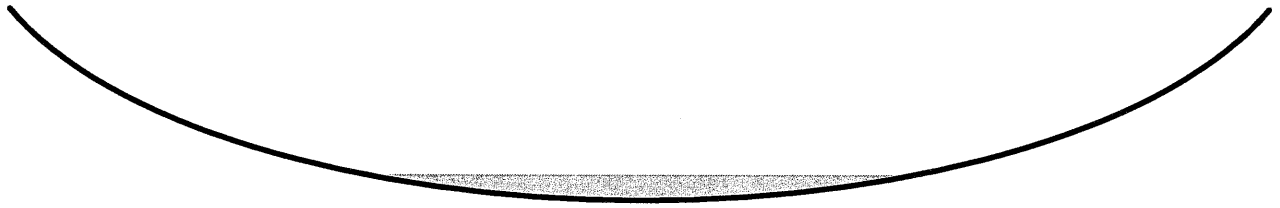
Summary for Reach R1: R1

Inflow Area = 0.372 ac, 62.97% Impervious, Inflow Depth = 3.22" for 10-yr event
Inflow = 0.22 cfs @ 12.44 hrs, Volume= 0.100 af
Outflow = 0.22 cfs @ 12.45 hrs, Volume= 0.100 af, Atten= 0%, Lag= 0.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.86 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.24 fps, Avg. Travel Time= 0.5 min

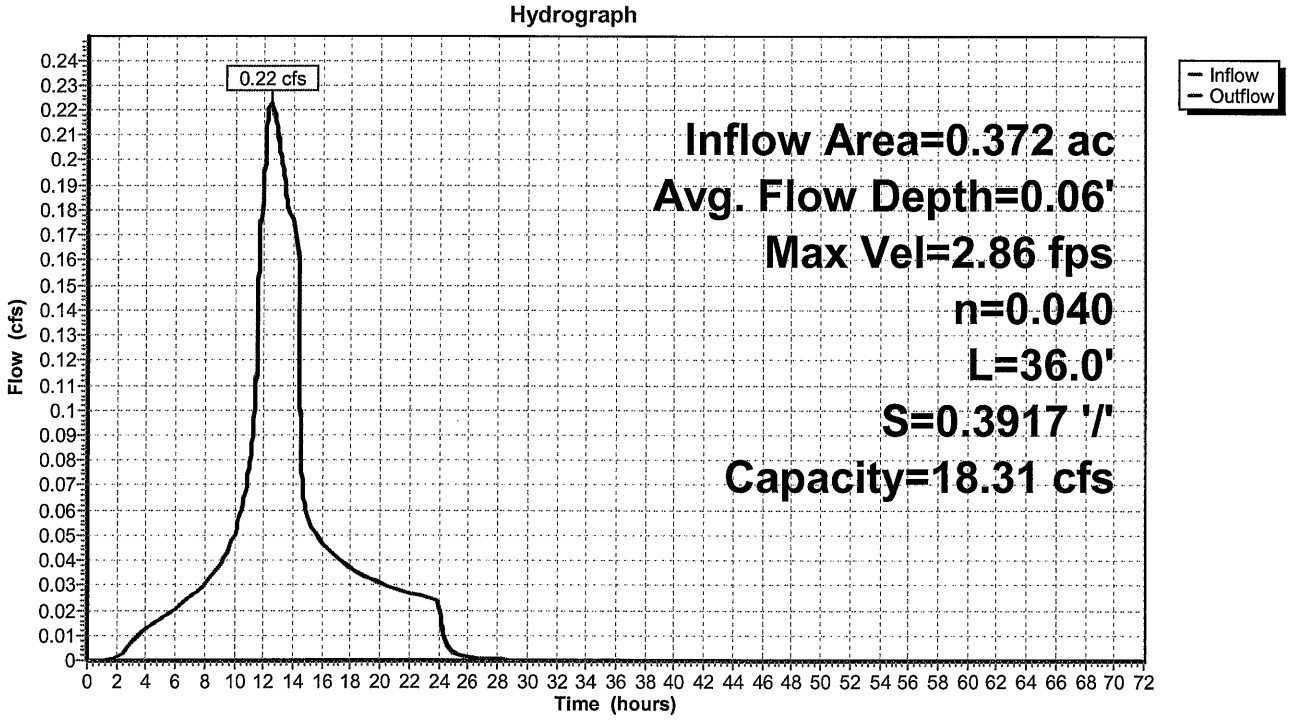
Peak Storage= 3 cf @ 12.45 hrs
Average Depth at Peak Storage= 0.06' , Surface Width= 1.80'
Bank-Full Depth= 0.50' Flow Area= 1.7 sf, Capacity= 18.31 cfs

5.00' x 0.50' deep Parabolic Channel, n= 0.040 Earth, dense weeds
Length= 36.0' Slope= 0.3917 '/'
Inlet Invert= 60.00', Outlet Invert= 45.90'



‡

Reach R1: R1



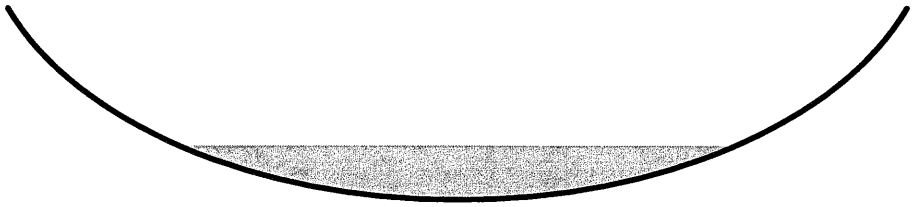
Summary for Reach R2: R2

Inflow Area = 0.372 ac, 62.97% Impervious, Inflow Depth = 3.22" for 10-yr event
Inflow = 0.22 cfs @ 12.45 hrs, Volume= 0.100 af
Outflow = 0.22 cfs @ 12.46 hrs, Volume= 0.100 af, Atten= 0%, Lag= 0.8 min

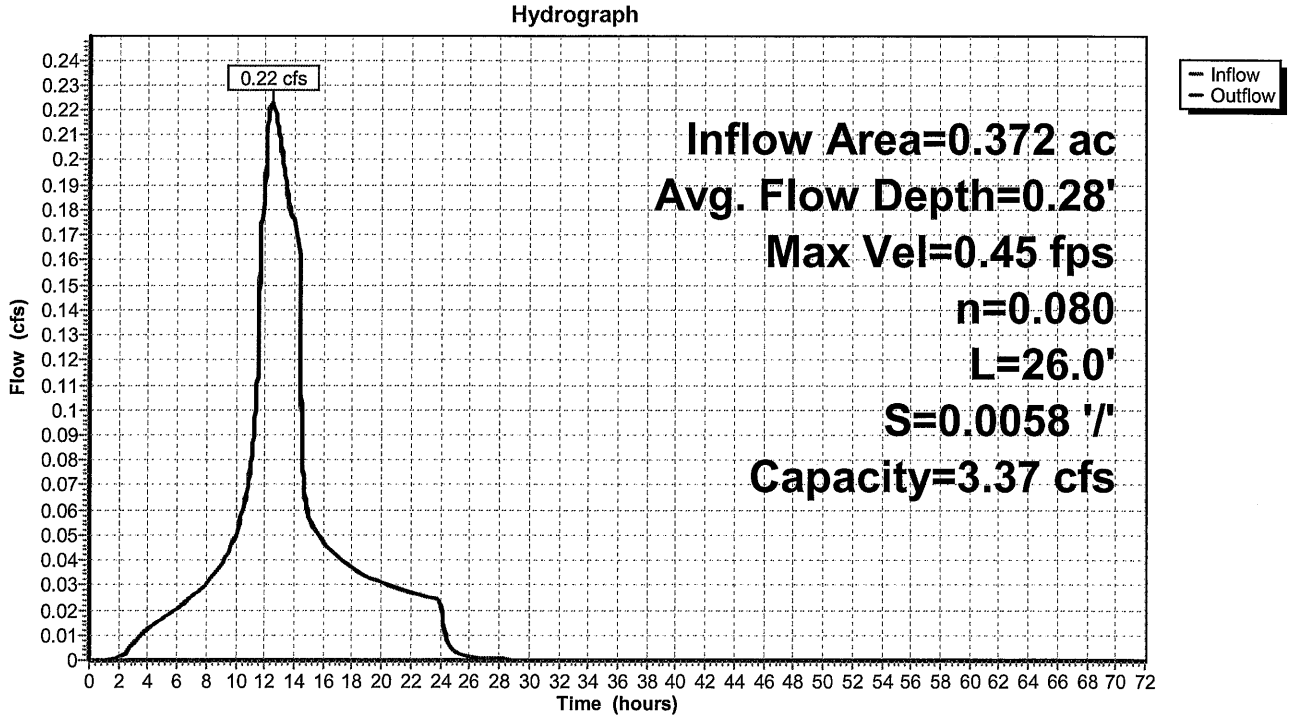
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.45 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 0.12 fps, Avg. Travel Time= 3.6 min

Peak Storage= 13 cf @ 12.46 hrs
Average Depth at Peak Storage= 0.28' , Surface Width= 2.64'
Bank-Full Depth= 1.00' Flow Area= 3.3 sf, Capacity= 3.37 cfs

5.00' x 1.00' deep Parabolic Channel, n= 0.080 Earth, long dense weeds
Length= 26.0' Slope= 0.0058 '/'
Inlet Invert= 45.90', Outlet Invert= 45.75'



Reach R2: R2



Summary for Pond CB1: CB1

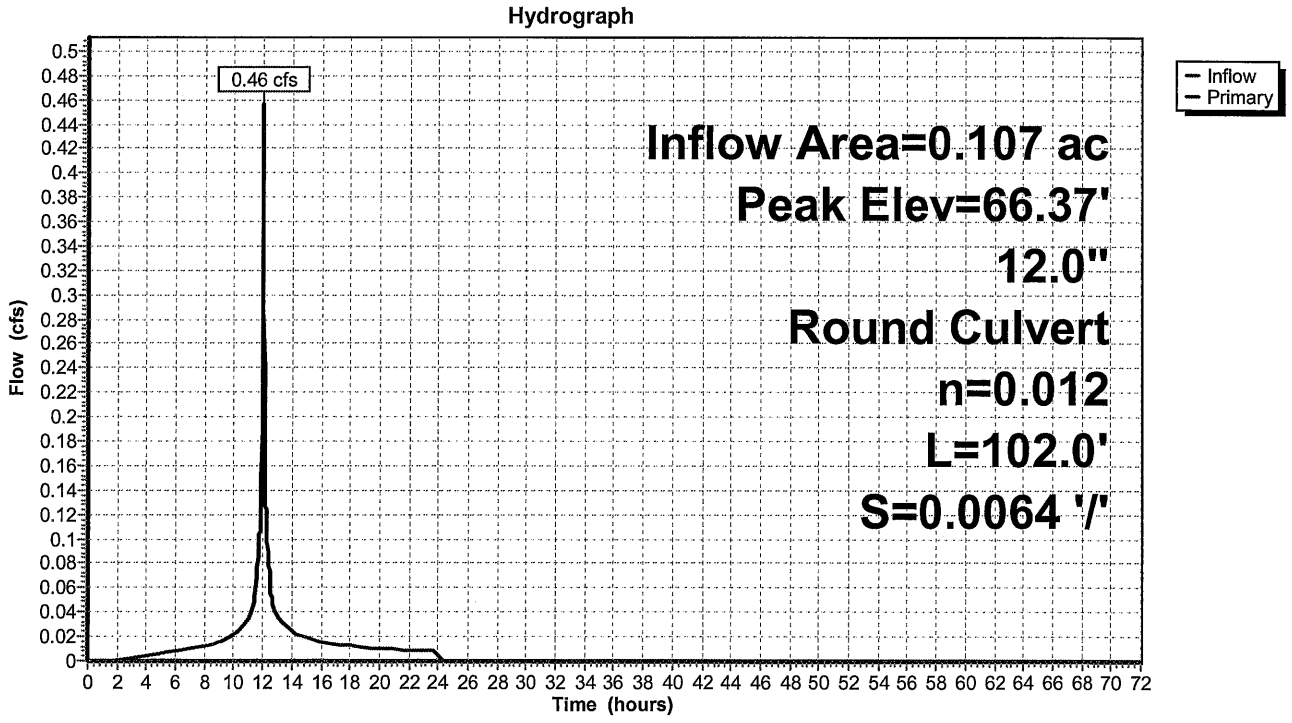
Inflow Area = 0.107 ac, 85.28% Impervious, Inflow Depth = 4.08" for 10-yr event
Inflow = 0.46 cfs @ 12.00 hrs, Volume= 0.036 af
Outflow = 0.46 cfs @ 12.00 hrs, Volume= 0.036 af, Atten= 0%, Lag= 0.0 min
Primary = 0.46 cfs @ 12.00 hrs, Volume= 0.036 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 66.37' @ 12.00 hrs
Flood Elev= 69.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	66.00'	**12.0" Round Culvert** L= 102.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 66.00' / 65.35' S= 0.0064 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.46 cfs @ 12.00 hrs HW=66.37' TW=65.69' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 0.46 cfs @ 2.60 fps)

Pond CB1: CB1



Summary for Pond CB2: CB2

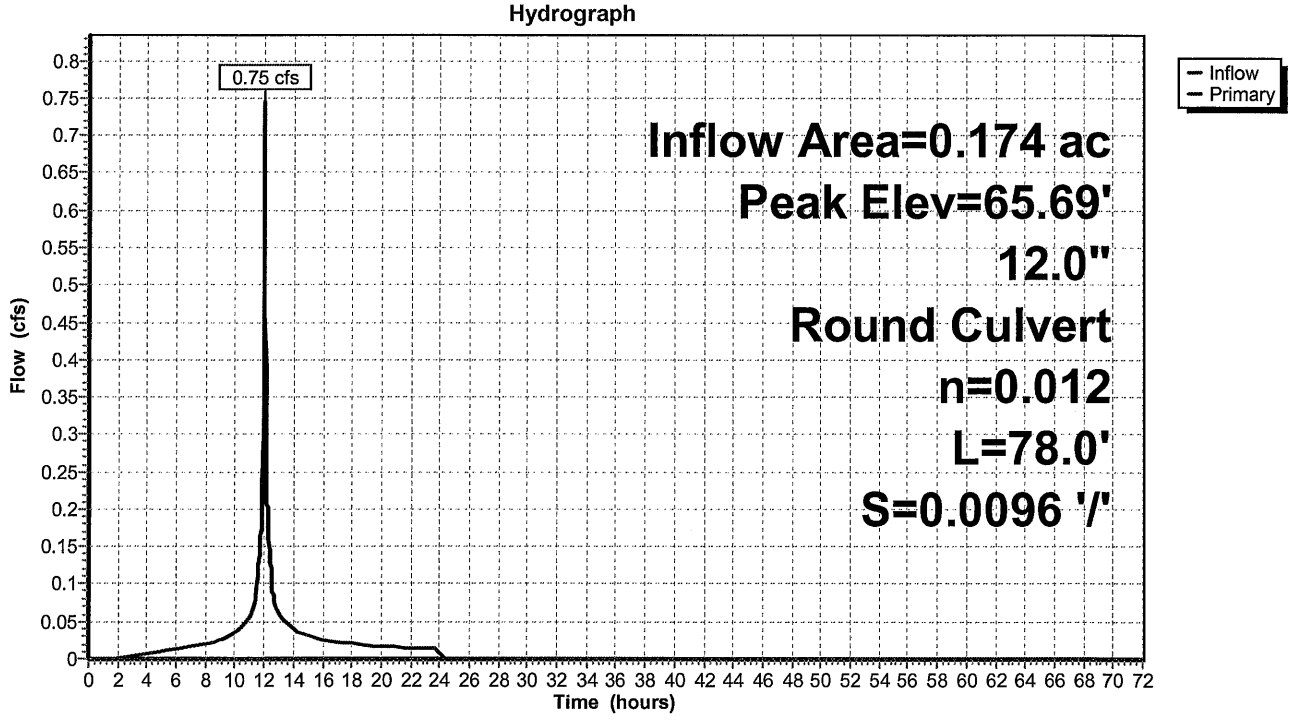
Inflow Area = 0.174 ac, 84.78% Impervious, Inflow Depth = 4.08" for 10-yr event
Inflow = 0.75 cfs @ 12.00 hrs, Volume= 0.059 af
Outflow = 0.75 cfs @ 12.00 hrs, Volume= 0.059 af, Atten= 0%, Lag= 0.0 min
Primary = 0.75 cfs @ 12.00 hrs, Volume= 0.059 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 65.69' @ 12.00 hrs
Flood Elev= 68.49'

Device	Routing	Invert	Outlet Devices
#1	Primary	65.25'	**12.0" Round Culvert** L= 78.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 65.25' / 64.50' S= 0.0096 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf

Primary OutFlow Max=0.74 cfs @ 12.00 hrs HW=65.69' TW=63.63' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.74 cfs @ 2.25 fps)

Pond CB2: CB2



Summary for Pond RD1: RD1

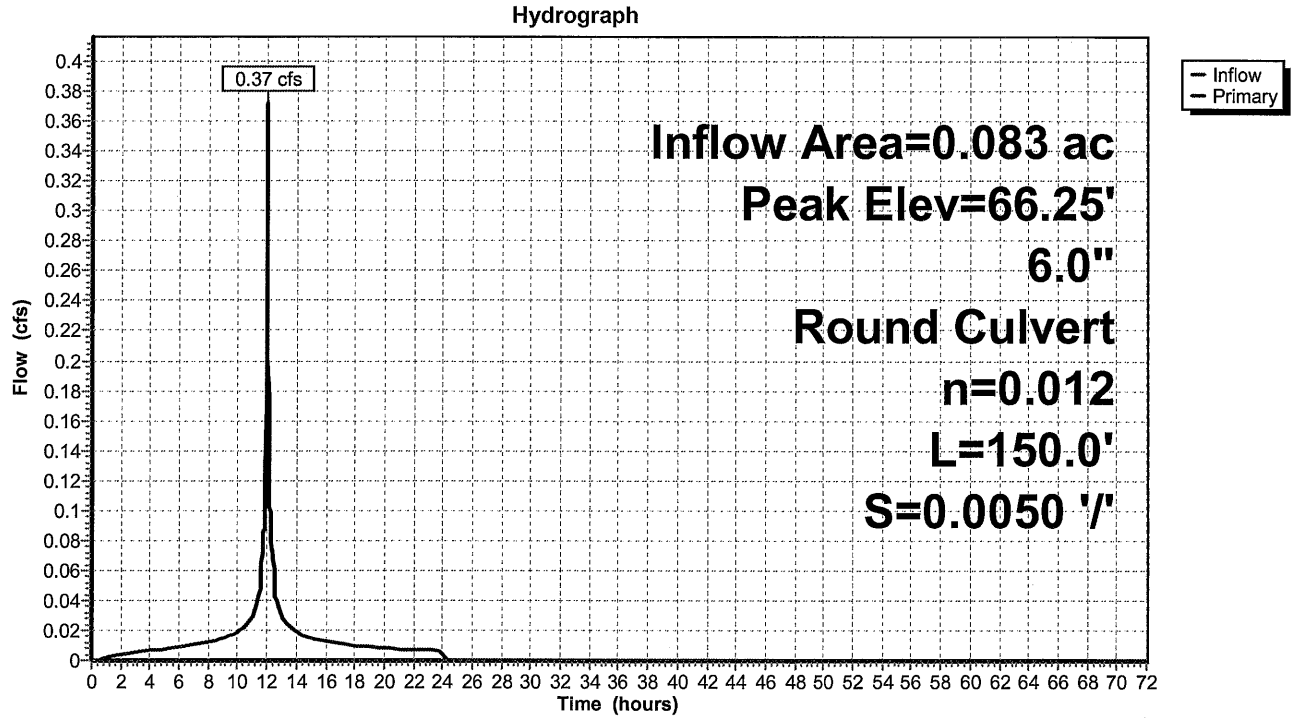
Inflow Area = 0.083 ac,100.00% Impervious, Inflow Depth = 4.53" for 10-yr event
Inflow = 0.37 cfs @ 12.00 hrs, Volume= 0.031 af
Outflow = 0.37 cfs @ 12.00 hrs, Volume= 0.031 af, Atten= 0%, Lag= 0.0 min
Primary = 0.37 cfs @ 12.00 hrs, Volume= 0.031 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 66.25' @ 12.00 hrs
Flood Elev= 69.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	65.75'	**6.0" Round Culvert** L= 150.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 65.75' / 65.00' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=0.37 cfs @ 12.00 hrs HW=66.25' TW=63.64' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 0.37 cfs @ 1.90 fps)

Pond RD1: RD1



Summary for Pond RG1: RG1

Inflow Area = 0.372 ac, 62.97% Impervious, Inflow Depth = 3.22" for 10-yr event
Inflow = 1.14 cfs @ 12.00 hrs, Volume= 0.100 af
Outflow = 0.22 cfs @ 12.44 hrs, Volume= 0.100 af, Atten= 81%, Lag= 26.7 min
Primary = 0.22 cfs @ 12.44 hrs, Volume= 0.100 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Starting Elev= 61.00' Surf.Area= 761 sf Storage= 67 cf
Peak Elev= 63.99' @ 12.44 hrs Surf.Area= 962 sf Storage= 843 cf (777 cf above start)
Flood Elev= 65.20' Surf.Area= 2,110 sf Storage= 2,691 cf (2,624 cf above start)

Plug-Flow detention time= 53.1 min calculated for 0.098 af (98% of inflow)
Center-of-Mass det. time= 33.8 min (820.6 - 786.8)

Volume	Invert	Avail.Storage	Storage Description
#1	64.00'	307 cf	**Sediment Forebay (Irregular)** Listed below (Recalc) -Impervious
#2	60.75'	2,494 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)
		2,801 cf	Total Available Storage

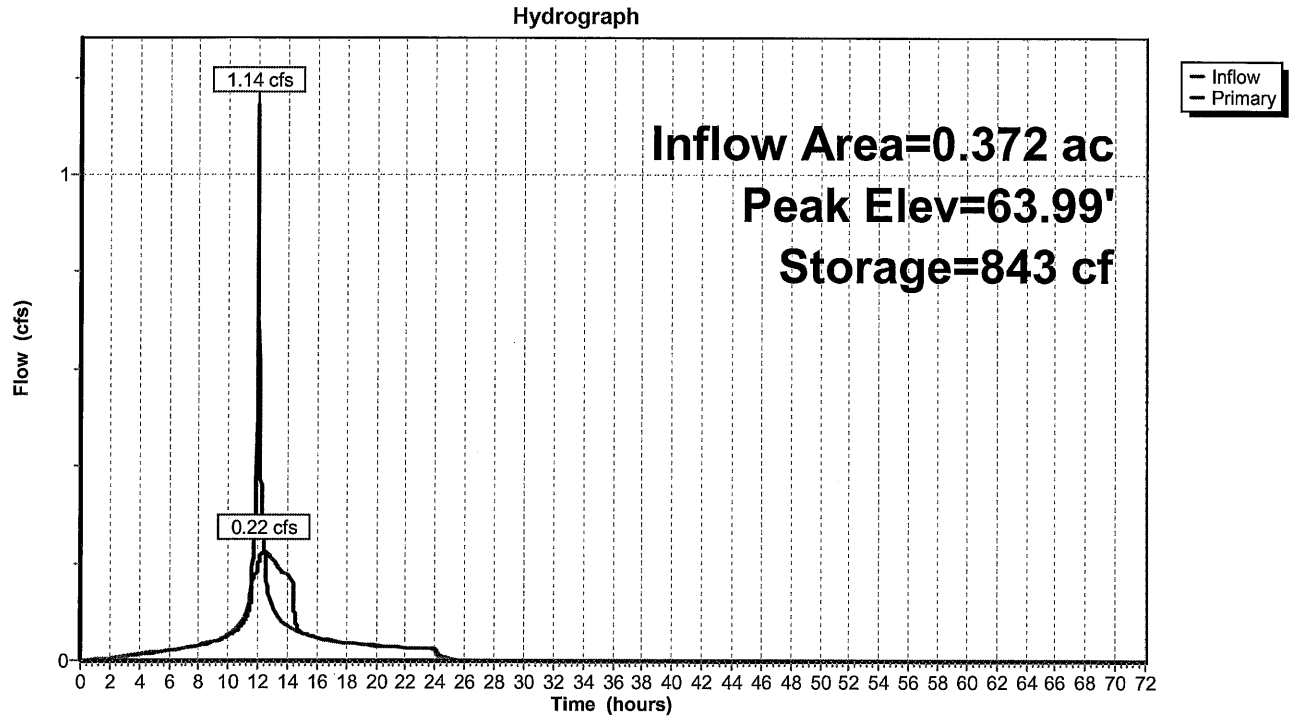
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
64.00	151	105.0	0	0	151
65.00	496	124.3	307	307	521

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
60.75	761	128.9	0.0	0	0	761
61.75	761	128.9	35.0	266	266	890
62.00	761	128.9	20.0	38	304	922
63.50	761	128.9	10.0	114	419	1,115
64.00	965	140.1	100.0	430	849	1,364
64.50	1,183	149.5	100.0	536	1,385	1,593
65.00	1,414	159.0	100.0	648	2,034	1,839
65.25	2,306	187.1	100.0	460	2,494	2,614

Device	Routing	Invert	Outlet Devices
#1	Primary	60.50'	**12.0" Round Culvert** L= 18.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 60.50' / 60.00' S= 0.0278 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	61.00'	**6.0" Round Culvert** L= 60.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.00' / 61.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#3	Device 2	60.75'	**10.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#4	Device 1	64.50'	**3.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Device 1	64.75'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.22 cfs @ 12.44 hrs HW=63.99' TW=60.06' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.22 cfs of 6.54 cfs potential flow)
  ├─**2=Culvert** (Passes 0.22 cfs of 1.02 cfs potential flow)
  │ └─**3=Exfiltration** (Exfiltration Controls 0.22 cfs)
  ├─**4=Orifice/Grate** (Controls 0.00 cfs)
  └─**5=Orifice/Grate** (Controls 0.00 cfs)

Pond RG1: RG1

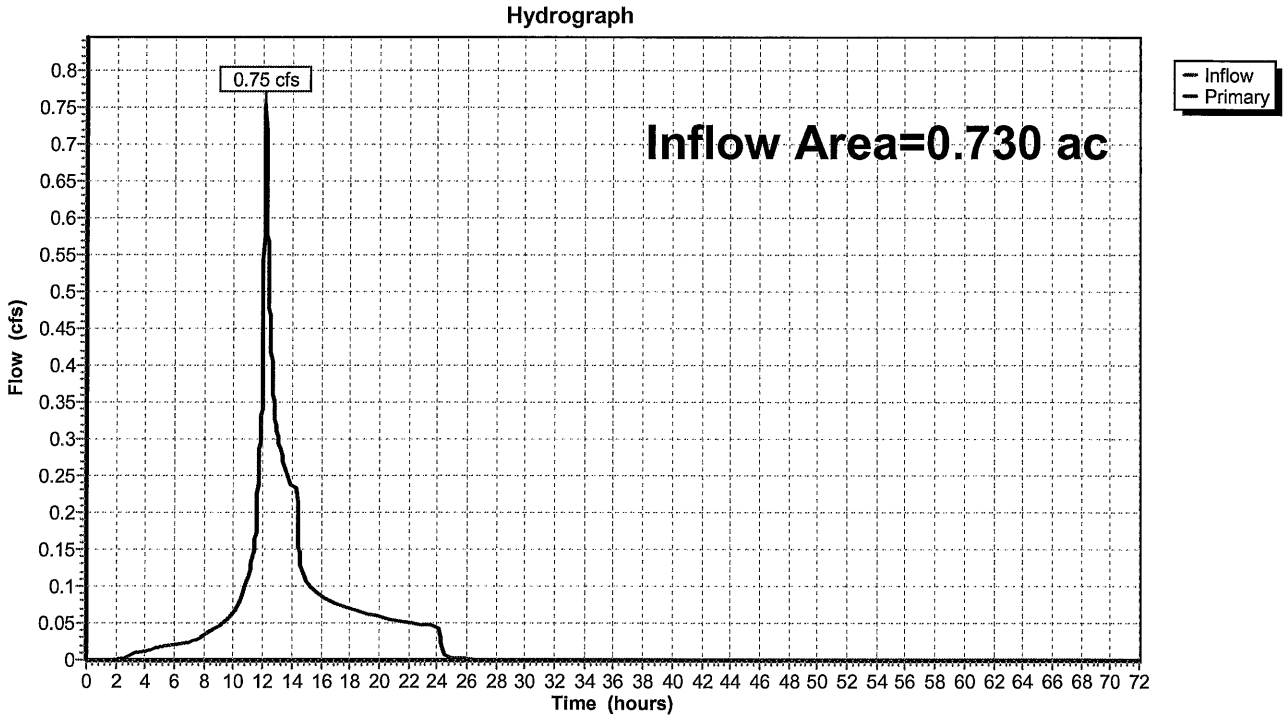


Summary for Link A: VARNEY BROOK

Inflow Area = 0.730 ac, 32.09% Impervious, Inflow Depth = 2.71" for 10-yr event
Inflow = 0.75 cfs @ 12.15 hrs, Volume= 0.165 af
Primary = 0.75 cfs @ 12.15 hrs, Volume= 0.165 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link A: VARNEY BROOK



A – 2

NODE LISTING – 25-YR

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
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 A1: A1 Runoff Area=4,641 sf 85.28% Impervious Runoff Depth=5.33"
Flow Length=79' Tc=2.4 min CN=94 Runoff=0.54 cfs 0.047 af

Subcatchment A2: A2 Runoff Area=2,928 sf 83.98% Impervious Runoff Depth=5.33"
Flow Length=73' Tc=2.3 min CN=94 Runoff=0.34 cfs 0.030 af

Subcatchment A3: A3 Runoff Area=3,603 sf 100.00% Impervious Runoff Depth=5.79"
Tc=2.0 min CN=98 Runoff=0.44 cfs 0.040 af

Subcatchment A4: A4 Runoff Area=5,031 sf 3.64% Impervious Runoff Depth=1.69"
Flow Length=80' Slope=0.0200 '/' Tc=12.0 min CN=57 Runoff=0.12 cfs 0.016 af

Subcatchment A5: A5 Runoff Area=15,593 sf 0.00% Impervious Runoff Depth=3.21"
Flow Length=347' Tc=14.1 min CN=74 Runoff=0.76 cfs 0.096 af

Subcatchment B: B Runoff Area=1,167 sf 84.92% Impervious Runoff Depth=5.33"
Flow Length=58' Tc=1.7 min CN=94 Runoff=0.14 cfs 0.012 af

Reach R1: R1 Avg. Flow Depth=0.07' Max Vel=2.96 fps Inflow=0.25 cfs 0.133 af
n=0.040 L=36.0' S=0.3917 '/' Capacity=18.31 cfs Outflow=0.25 cfs 0.133 af

Reach R2: R2 Avg. Flow Depth=0.30' Max Vel=0.47 fps Inflow=0.25 cfs 0.133 af
n=0.080 L=26.0' S=0.0058 '/' Capacity=3.37 cfs Outflow=0.25 cfs 0.133 af

Pond CB1: CB1 Peak Elev=66.41' Inflow=0.54 cfs 0.047 af
12.0" Round Culvert n=0.012 L=102.0' S=0.0064 '/' Outflow=0.54 cfs 0.047 af

Pond CB2: CB2 Peak Elev=65.73' Inflow=0.89 cfs 0.077 af
12.0" Round Culvert n=0.012 L=78.0' S=0.0096 '/' Outflow=0.89 cfs 0.077 af

Pond RD1: RD1 Peak Elev=66.34' Inflow=0.44 cfs 0.040 af
6.0" Round Culvert n=0.012 L=150.0' S=0.0050 '/' Outflow=0.44 cfs 0.040 af

Pond RG1: RG1 Peak Elev=64.27' Storage=1,179 cf Inflow=1.38 cfs 0.133 af
Outflow=0.25 cfs 0.133 af

Link A: VARNEY BROOK Inflow=0.99 cfs 0.229 af
Primary=0.99 cfs 0.229 af

Total Runoff Area = 0.757 ac Runoff Volume = 0.241 af Average Runoff Depth = 3.82"
66.04% Pervious = 0.500 ac 33.96% Impervious = 0.257 ac

A – 2

NODE LISTING – 50-YR

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
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 A1: A1 Runoff Area=4,641 sf 85.28% Impervious Runoff Depth=6.50"
Flow Length=79' Tc=2.4 min CN=94 Runoff=0.63 cfs 0.058 af

Subcatchment A2: A2 Runoff Area=2,928 sf 83.98% Impervious Runoff Depth=6.50"
Flow Length=73' Tc=2.3 min CN=94 Runoff=0.40 cfs 0.036 af

Subcatchment A3: A3 Runoff Area=3,603 sf 100.00% Impervious Runoff Depth=6.97"
Tc=2.0 min CN=98 Runoff=0.50 cfs 0.048 af

Subcatchment A4: A4 Runoff Area=5,031 sf 3.64% Impervious Runoff Depth=2.45"
Flow Length=80' Slope=0.0200 '/' Tc=12.0 min CN=57 Runoff=0.18 cfs 0.024 af

Subcatchment A5: A5 Runoff Area=15,593 sf 0.00% Impervious Runoff Depth=4.23"
Flow Length=347' Tc=14.1 min CN=74 Runoff=0.96 cfs 0.126 af

Subcatchment B: B Runoff Area=1,167 sf 84.92% Impervious Runoff Depth=6.50"
Flow Length=58' Tc=1.7 min CN=94 Runoff=0.16 cfs 0.015 af

Reach R1: R1 Avg. Flow Depth=0.07' Max Vel=3.06 fps Inflow=0.28 cfs 0.166 af
n=0.040 L=36.0' S=0.3917 '/' Capacity=18.31 cfs Outflow=0.28 cfs 0.166 af

Reach R2: R2 Avg. Flow Depth=0.31' Max Vel=0.48 fps Inflow=0.28 cfs 0.166 af
n=0.080 L=26.0' S=0.0058 '/' Capacity=3.37 cfs Outflow=0.28 cfs 0.166 af

Pond CB1: CB1 Peak Elev=66.44' Inflow=0.63 cfs 0.058 af
12.0" Round Culvert n=0.012 L=102.0' S=0.0064 '/' Outflow=0.63 cfs 0.058 af

Pond CB2: CB2 Peak Elev=65.77' Inflow=1.03 cfs 0.094 af
12.0" Round Culvert n=0.012 L=78.0' S=0.0096 '/' Outflow=1.03 cfs 0.094 af

Pond RD1: RD1 Peak Elev=66.72' Inflow=0.50 cfs 0.048 af
6.0" Round Culvert n=0.012 L=150.0' S=0.0050 '/' Outflow=0.50 cfs 0.048 af

Pond RG1: RG1 Peak Elev=64.52' Storage=1,518 cf Inflow=1.62 cfs 0.166 af
Outflow=0.28 cfs 0.166 af

Link A: VARNEY BROOK Inflow=1.22 cfs 0.292 af
Primary=1.22 cfs 0.292 af

Total Runoff Area = 0.757 ac Runoff Volume = 0.306 af Average Runoff Depth = 4.86"
66.04% Pervious = 0.500 ac 33.96% Impervious = 0.257 ac

APPENDIX B

DESIGN

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

FILTRATION PRACTICE DESIGN CRITERIA (Env-Wq 1508.07)

Type/Node Name: **Rain Garden1 (RG1)**

Enter the type of filtration practice (e.g., bioretention system) and the node name in the drainage analysis, if applicable.

Yes		Check if you reviewed the restrictions on unlined systems outlined in Env-Wq 1508.07(a).	
0.37	ac	A = Area draining to the practice	
0.23	ac	A_I = Impervious area draining to the practice	
0.62	decimal	I = Percent impervious area draining to the practice, in decimal form	
0.61	unitless	Rv = Runoff coefficient = 0.05 + (0.9 x I)	
0.23	ac-in	WQV= 1" x Rv x A	
827	cf	WQV conversion (ac-in x 43,560 sf/ac x 1ft/12")	
207	cf	25% x WQV (check calc for sediment forebay volume)	
620	cf	75% x WQV (check calc for surface sand filter volume)	
Sediment Forebay		Method of Pretreatment? (not required for clean or roof runoff)	
307	cf	V_{SED} = Sediment forebay volume, if used for pretreatment	≥ 25%WQV
Calculate time to drain if system IS NOT underdrained:			
	sf	A_{SA} = Surface area of the practice	
	iph	$Ksat_{DESIGN}$ = Design infiltration rate[1]	
	Yes/No	If Ksat (prior to factor of safety) is < 0.50 iph, has an underdrain been provided? (Use the calculations below)	
-	hours	T_{DRAIN} = Drain time = V / (A_{SA} * I_{DESIGN})	≤ 72-hrs
Calculate time to drain if system IS underdrained:			
64.50	ft	E_{WQV} = Elevation of WQV (attach stage-storage table)	
0.28	cfs	Q_{WQV} = Discharge at the E_{WQV} (attach stage-discharge table)	
1.64	hours	T_{DRAIN} = Drain time = 2WQV/Q_{WQV}	≤ 72-hrs
62.00	feet	E_{FC} = Elevation of the bottom of the filter course material[2]	
61.00	feet	E_{UD} = Invert elevation of the underdrain (UD), if applicable	
61.00	feet	E_{SHWT} = Elevation of SHWT (if none found, enter the lowest elevation of the test pit)	
61.00	feet	E_{ROCK} = Elevation of bedrock (if none found, enter the lowest elevation of the test pit)	
1.00	feet	$D_{FC\ to\ UD}$ = Depth to UD from the bottom of the filter course	≥ 1'
1.00	feet	$D_{FC\ to\ ROCK}$ = Depth to bedrock from the bottom of the filter course	≥ 1'
1.00	feet	$D_{FC\ to\ SHWT}$ = Depth to SHWT from the bottom of the filter course	≥ 1'
64.52	ft	Peak elevation of the 50-year storm event (infiltration can be used in analysis)	
65.20	ft	Elevation of the top of the practice	
YES		50 peak elevation ≤ Elevation of the top of the practice	← yes
If a surface sand filter or underground sand filter is proposed:			
YES	ac	Drainage Area check.	< 10 ac
	cf	V = Volume of storage[3] (attach a stage-storage table)	≥ 75%WQV
	inches	D_{FC} = Filter course thickness	18", or 24" if within GPA
Sheet		Note what sheet in the plan set contains the filter course specification.	
	Yes/No	Access grate provided?	← yes

If a bioretention area is proposed:			
YES	ac	Drainage Area no larger than 5 ac?	← yes
1,387	cf	V = Volume of storage[3] (attach a stage-storage table)	≥ WQV
18.0	inches	D_{FC} = Filter course thickness	18", or 24" if within GPA
Sheet		Note what sheet in the plan set contains the filter course specification	
3.0	:1	Pond side slopes	≥ 3:1
Sheet		Note what sheet in the plan set contains the planting plans and surface cover	
If porous pavement is proposed:			
		Type of pavement proposed (Concrete? Asphalt? Pavers? Etc.)	
	acres	A_{SA} = Surface area of the pervious pavement	
	:1	Ratio of the contributing area to the pervious surface area	≤ 5:1
	inches	D_{FC} = Filter course thickness	12", or 18" if within GPA mod. 304.1 (see spec)
Sheet		Note what sheet in the plan set contains the filter course spec.	

1. Rate of the limiting layer (either the filter course or the underlying soil). $Ksat_{design}$ includes factor of safey. See Env-Wq 1504.14 for guidance on determining the infiltration rate.

2. See lines 34, 40 and 48 for required depths of filter media.

3. Volume without depending on infiltration. The volume includes the storage above the filter (but below the invert of the outlet stucture, if any), the filter media voids, and the pretreatment area. The storage above the filter media shall not include the volume above the outlet structure, if any.

Designer's Notes:

Summary for Pond RG1: RG1

Inflow Area = 0.372 ac, 62.97% Impervious, Inflow Depth = 5.35" for 50-yr event
Inflow = 1.62 cfs @ 12.00 hrs, Volume= 0.166 af
Outflow = 0.28 cfs @ 12.55 hrs, Volume= 0.166 af, Atten= 83%, Lag= 32.6 min
Primary = 0.28 cfs @ 12.55 hrs, Volume= 0.166 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Starting Elev= 61.00' Surf.Area= 761 sf Storage= 67 cf
Peak Elev= 64.52' @ 12.55 hrs Surf.Area= 1,190 sf Storage= 1,518 cf (1,452 cf above start)
Flood Elev= 65.20' Surf.Area= 2,110 sf Storage= 2,691 cf (2,624 cf above start)

Plug-Flow detention time= 54.5 min calculated for 0.164 af (99% of inflow)
Center-of-Mass det. time= 41.9 min (822.8 - 780.8)

Volume	Invert	Avail.Storage	Storage Description
#1	64.00'	307 cf	**Sediment Forebay (Irregular)** Listed below (Recalc) -Impervious
#2	60.75'	2,494 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)
		2,801 cf	Total Available Storage

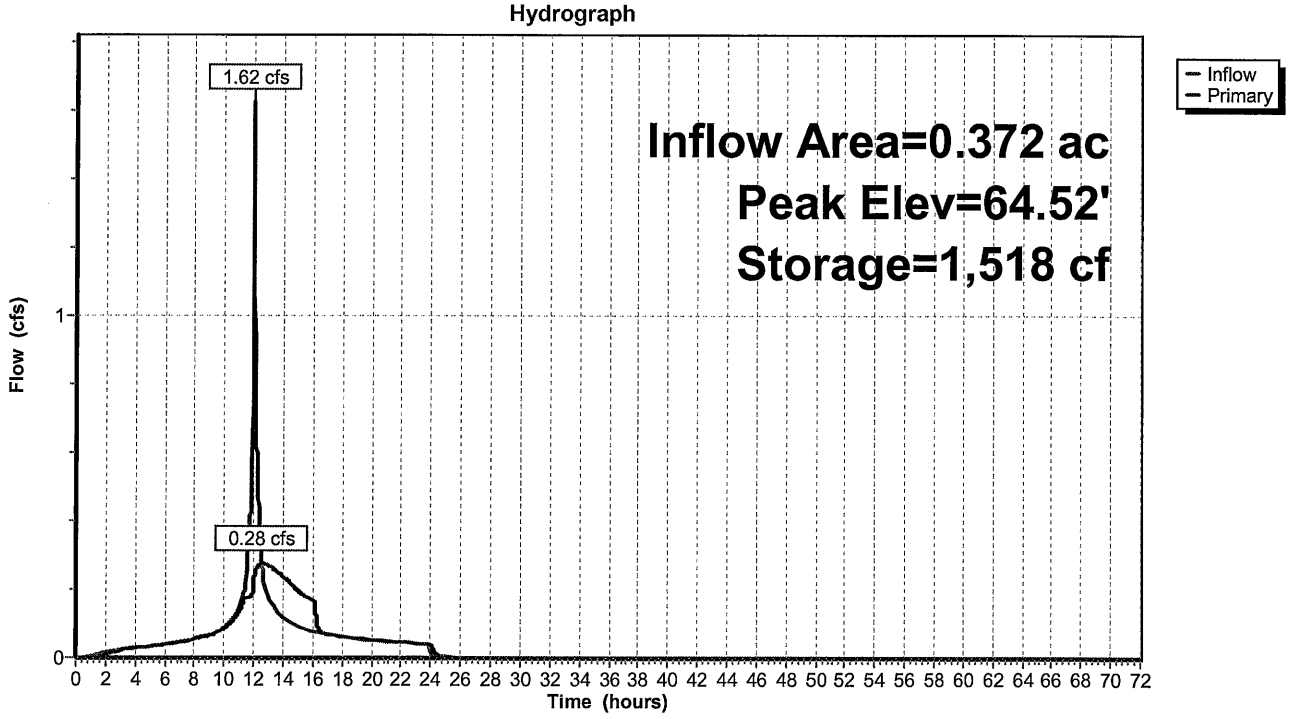
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
64.00	151	105.0	0	0	151
65.00	496	124.3	307	307	521

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
60.75	761	128.9	0.0	0	0	761
61.75	761	128.9	35.0	266	266	890
62.00	761	128.9	20.0	38	304	922
63.50	761	128.9	10.0	114	419	1,115
64.00	965	140.1	100.0	430	849	1,364
64.50	1,183	149.5	100.0	536	1,385	1,593
65.00	1,414	159.0	100.0	648	2,034	1,839
65.25	2,306	187.1	100.0	460	2,494	2,614

Device	Routing	Invert	Outlet Devices
#1	Primary	60.50'	**12.0" Round Culvert** L= 18.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 60.50' / 60.00' S= 0.0278 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	61.00'	**6.0" Round Culvert** L= 60.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.00' / 61.00' S= 0.0000 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf
#3	Device 2	60.75'	**10.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'
#4	Device 1	64.50'	**3.0" W x 3.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Device 1	64.75'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.28 cfs @ 12.55 hrs HW=64.52' TW=60.07' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.28 cfs of 7.09 cfs potential flow)
  - **2=Culvert** (Passes 0.28 cfs of 1.12 cfs potential flow)
    - **3=Exfiltration** (Exfiltration Controls 0.28 cfs)
  - **4=Orifice/Grate** (Orifice Controls 0.00 cfs @ 0.40 fps)
  - **5=Orifice/Grate** (Controls 0.00 cfs)

Pond RG1: RG1



Stage-Discharge for Pond RG1: RG1

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
60.75	0.00	63.35	0.18
60.80	0.00	63.40	0.18
60.85	0.00	63.45	0.18
60.90	0.00	63.50	0.18
60.95	0.00	63.55	0.18
61.00	0.00	63.60	0.19
61.05	0.00	63.65	0.19
61.10	0.01	63.70	0.19
61.15	0.02	63.75	0.20
61.20	0.03	63.80	0.20
61.25	0.05	63.85	0.21
61.30	0.07	63.90	0.21
61.35	0.10	63.95	0.22
61.40	0.13	64.00	0.22
61.45	0.17	64.05	0.23
61.50	0.18	64.10	0.23
61.55	0.18	64.15	0.24
61.60	0.18	64.20	0.24
61.65	0.18	64.25	0.25
61.70	0.18	64.30	0.25
61.75	0.18	64.35	0.26
61.80	0.18	64.40	0.26
61.85	0.18	64.45	0.27
61.90	0.18	64.50	0.27
61.95	0.18	64.55	0.29
62.00	0.18	64.60	0.31
62.05	0.18	64.65	0.34
62.10	0.18	64.70	0.37
62.15	0.18	64.75	0.40
62.20	0.18	64.80	0.66
62.25	0.18	64.85	1.10
62.30	0.18	64.90	1.67
62.35	0.18	64.95	2.33
62.40	0.18	65.00	3.08
62.45	0.18	65.05	3.94
62.50	0.18	65.10	4.86
62.55	0.18	65.15	5.86
62.60	0.18	65.20	6.92
62.65	0.18	65.25	**7.80**
62.70	0.18		
62.75	0.18		
62.80	0.18		
62.85	0.18		
62.90	0.18		
62.95	0.18		
63.00	0.18		
63.05	0.18		
63.10	0.18		
63.15	0.18		
63.20	0.18		
63.25	0.18		
63.30	0.18		

Stage-Area-Storage for Pond RG1: RG1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
60.75	761	0
60.80	761	13
60.85	761	27
60.90	761	40
60.95	761	53
61.00	761	67
61.05	761	80
61.10	761	93
61.15	761	107
61.20	761	120
61.25	761	133
61.30	761	146
61.35	761	160
61.40	761	173
61.45	761	186
61.50	761	200
61.55	761	213
61.60	761	226
61.65	761	240
61.70	761	253
61.75	761	266
61.80	761	274
61.85	761	282
61.90	761	289
61.95	761	297
62.00	761	304
62.05	761	308
62.10	761	312
62.15	761	316
62.20	761	320
62.25	761	323
62.30	761	327
62.35	761	331
62.40	761	335
62.45	761	339
62.50	761	342
62.55	761	346
62.60	761	350
62.65	761	354
62.70	761	358
62.75	761	361
62.80	761	365
62.85	761	369
62.90	761	373
62.95	761	377
63.00	761	381
63.05	761	384
63.10	761	388
63.15	761	392
63.20	761	396
63.25	761	400
63.30	761	403
63.35	761	407
63.40	761	411
63.45	761	415
63.50	761	419
63.55	780	457
63.60	800	497
63.65	820	537
63.70	840	579
63.75	860	621
63.80	880	665
63.85	901	709
63.90	922	755
63.95	944	801
64.00	965	849
64.05	986	906
64.10	1,007	964
64.15	1,028	1,024
64.20	1,050	1,086
64.25	1,071	1,149
64.30	1,093	1,215
64.35	1,115	1,282
64.40	1,138	1,351
64.45	1,160	1,422
64.50	1,183	1,495
64.55	1,205	1,571
64.60	1,228	1,648
64.65	1,250	1,727
64.70	1,273	1,808
64.75	1,296	1,891
64.80	1,319	1,977
64.85	1,343	2,064
64.90	1,366	2,154
64.95	1,390	2,246
65.00	1,414	2,340
65.05	1,575	2,415
65.10	1,745	2,498
65.15	1,923	2,590
65.20	2,110	2,691
65.25	**2,306**	**2,801**

APPENDIX C

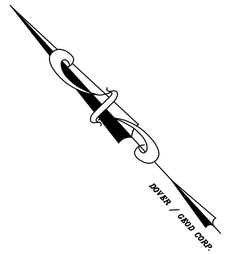
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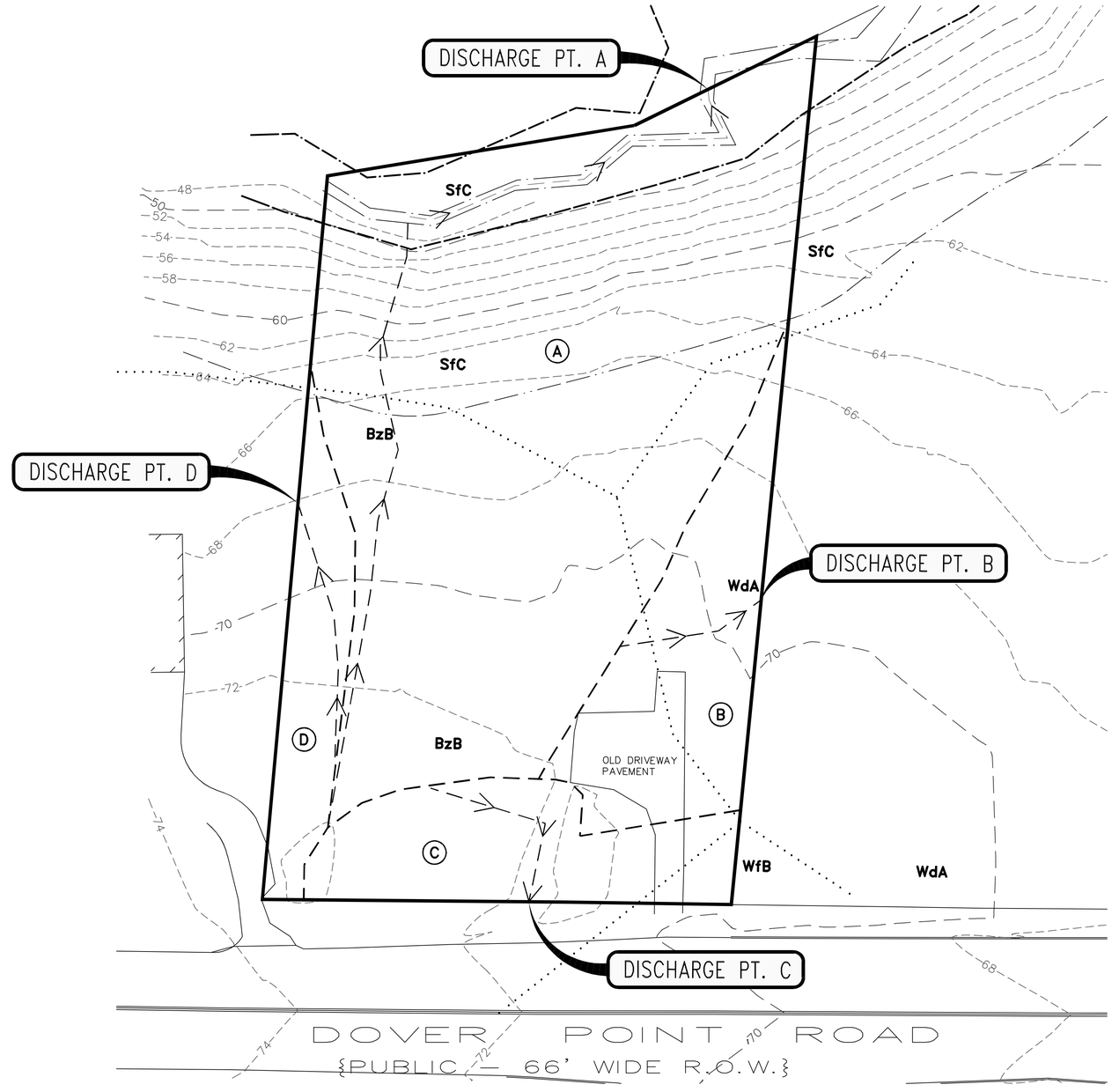
C – 1

PRE-DEVELOPED CONDITIONS

C – 2

POST-DEVELOPED CONDITIONS





LEGEND:

- EX 2' CONTOUR
- EX 10' CONTOUR
- EDGE OF PAVEMENT TBR
- EDGE OF PAVEMENT
- EDGE OF WETLAND
- SUBCATCHMENT BOUNDARY
- LONGEST FLOW PATH WITH DIRECTION OF FLOW
- (C) SUBCATCHMENT DESIGNATION
- WEB SOIL SURVEY BOUNDARY
- BzB WEB SOIL SURVEY DESIGNATION

PRE-DEVELOPMENT WATERSHED CHARACTERISTICS

SUBCATCHMENT DESIGNATION	AREA (ACRES)	LONGEST FLOW PATH (FEET)	Tc (MIN)
A	0.51	305	12.2
B	0.10	46	5.7
C	0.09	60	9.4
D	0.05	78	7.4

SOILS DATA

Hydrologic Drainage Class A:

WdA – Windsor Loamy Sand, 0 – 3 Percent Slopes
WfB – Windsor Loamy Fine Sand, 0 – 8 Percent Slopes

Hydrologic Drainage Class C:

BzB – Buxton Silt Loam, 3 – 8 Percent Slopes
SfC – Suffield Silt Loam, 8 – 15 Percent Slopes

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

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

NO.	REVISION	APP'D	DATE

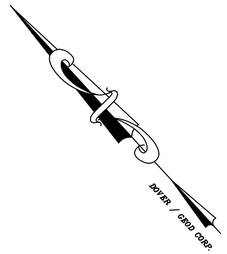
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DESIGN BY: JPG
APPROVED BY:JH
PROJECT NO:19018
FILE: DRN.dwg

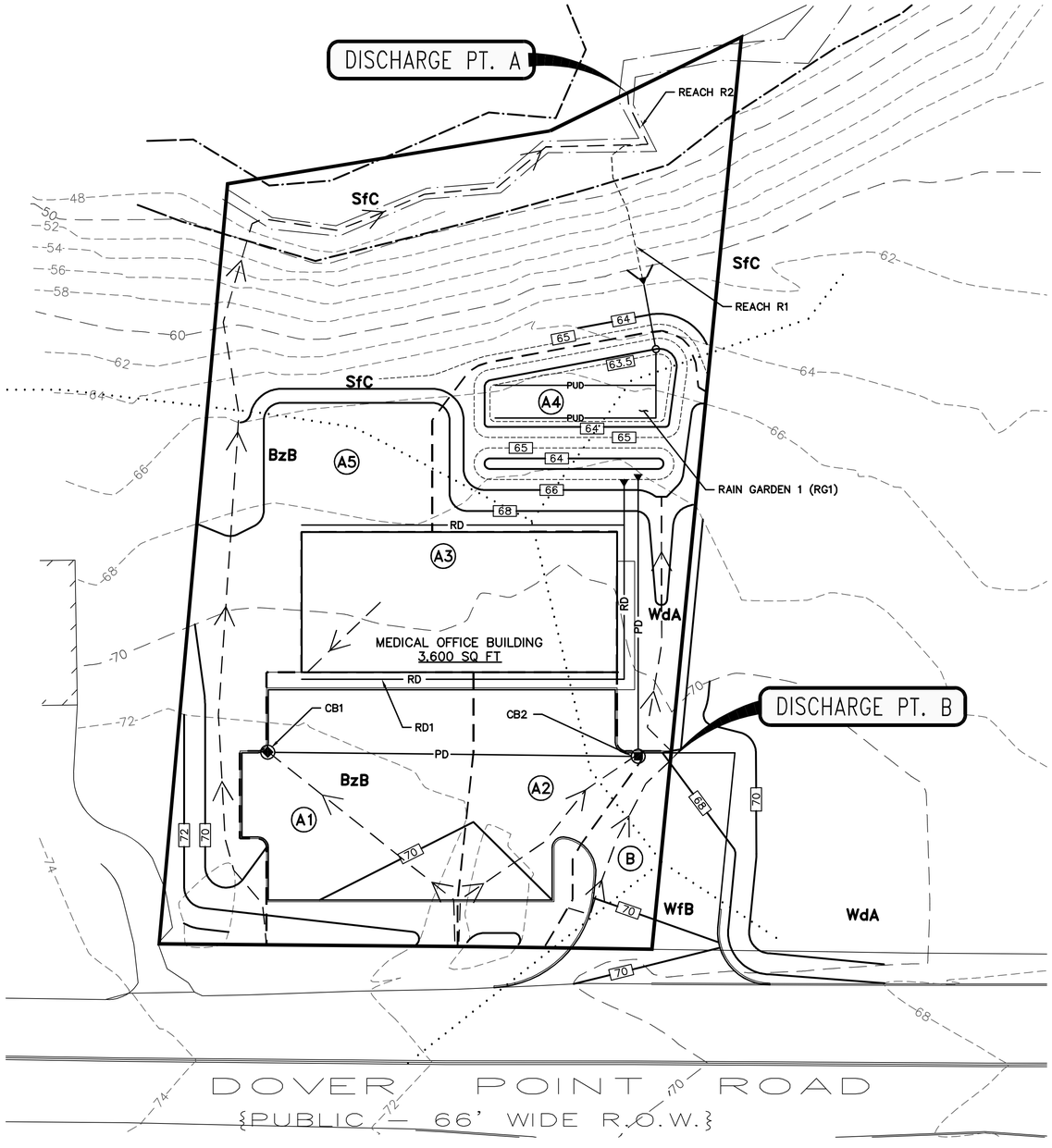
PRE DEVELOPMENT WATERSHED PLAN

OWNER:
SEBRING HOLDINGS LLC
340 CENTRAL AVE SUITE 202
DOVER, NH 03820

APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP, K, LOT 26
DOVER, NEW HAMPSHIRE

WS-1





LEGEND:

- EX 2' CONTOUR
- EX 10' CONTOUR
- 70 PROPOSED CONTOUR
- EDGE OF PAVEMENT
- EDGE OF WETLAND
- SUBCATCHMENT BOUNDARY
- LONGEST FLOW PATH WITH DIRECTION OF FLOW
- (B) SUBCATCHMENT DESIGNATION
- WEB SOIL SURVEY BOUNDARY
- BzB WEB SOIL SURVEY DESIGNATION

POST–DEVELOPMENT WATERSHED CHARACTERISTICS

SUBCATCHMENT DESIGNATION	AREA (ACRES)	LONGEST FLOW PATH (FEET)	Tc (MIN)
A1	0.11	79	2.4
A2	0.07	73	2.3
A3	0.08	--*	2.0
A4	0.12	80	12.0
A5	0.36	347	14.1
B	0.03	58	1.7

* ROOF RUNOFF

SOILS DATA

Hydrologic Drainage Class A:

WdA – Windsor Loamy Sand, 0 – 3 Percent Slopes
WfB – Windsor Loamy Fine Sand, 0 – 8 Percent Slopes

Hydrologic Drainage Class C:

BzB – Buxton Silt Loam, 3 – 8 Percent Slopes
SfC – Suffield Silt Loam, 8 – 15 Percent Slopes

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

NO.	REVISION	APP'D	DATE

DATE: 4–15–21
SCALE: 1" = 30'
DRAWN BY: SRD
DESIGN BY: JPG
APPROVED BY:JH
PROJECT NO:19018
FILE: DRN.dwg

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

OWNER:
SEBRING HOLDINGS LLC
340 CENTRAL AVE SUITE 202
DOVER, NH 03820

APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP, K, LOT 26
DOVER, NEW HAMPSHIRE

POST DEVELOPMENT WATERSHED PLAN

WS–2

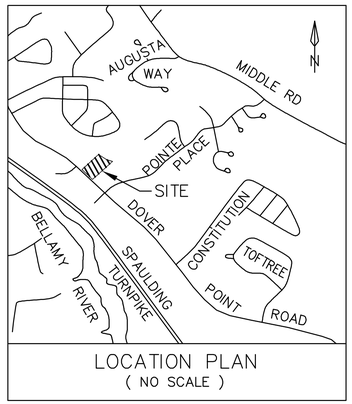
PROFESSIONAL/MEDICAL OFFICE
SITE PLAN

TAX MAP K, LOT 26

DOVER POINT ROAD

DOVER, NH

MAY 7, 2021



LOCATION PLAN
(NO SCALE)

OWNER OF RECORD:
SEBRING HOLDINGS, LLC
340 CENTRAL AVE, SUITE 202
DOVER, NH 03820

SIGNATURE DATE

APPLICANT / PREPARED FOR:
DOVER POINT VILLAGE, LLC
10 WATERLOO CIRCLE
DOVER, NH 03820

SIGNATURE DATE

CIVIL ENGINEER:

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

SURVEYOR:
MCENEANEY SURVEY OF NEW ENGLAND
P.O. BOX 681
DOVER, NEW HAMPSHIRE 03820

WETLAND SCIENTIST:
DAMON BURT
FRAGGLE ROCK ENVIRONMENTAL
38 GARLAND ROAD
STRAFFORD, NH 03884

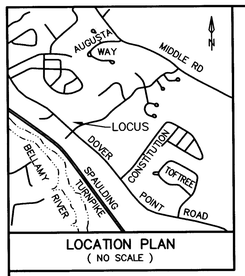
LANDSCAPE ARCHITECT:
WOODBURN & COMPANY LANDSCAPE ARCHITECTURE, LLC
103 KENT PLACE
NEWMARKET, NH 03857

ARCHITECT:
TONY FALLON ARCHITECTURE
501 BARN DOOR GAP
STRAFFORD, NH 03884

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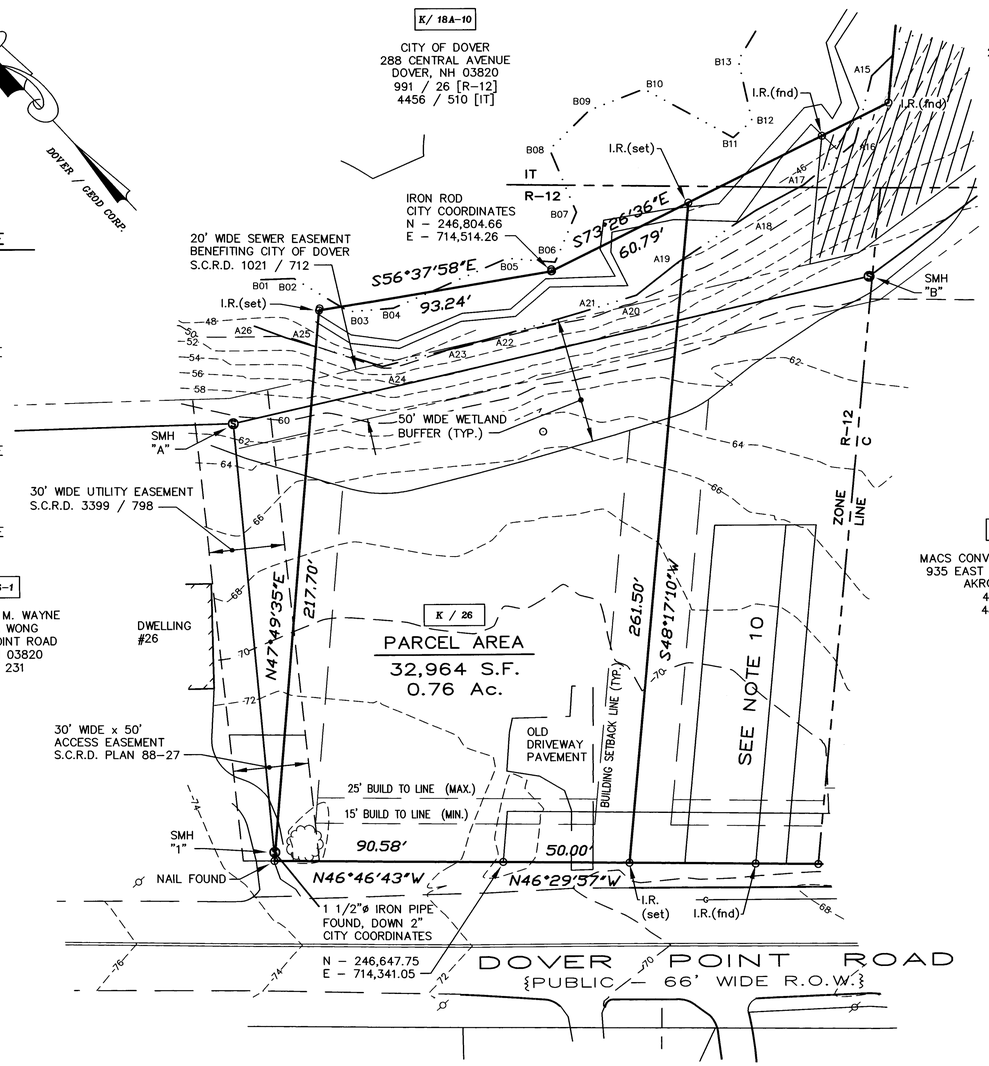


LOCATION PLAN
(NO SCALE)

DOVER / GRDD CORP.

SANITARY SEWER STRUCTURE SCHEDULE

EXIST. SMH "1"	EXISTING CROSS–COUNTRY LINE
RIM ELEV:	= 73.38
INVERT IN:	= 62.5 (8")
INVERT OUT:	= 62.4 (8")
EXIST. SMH "A"	EXISTING CITY CROSS–COUNTRY LINE
RIM ELEV:	= 60.62
INVERT IN:	= (8")
INVERT IN:	= 51.32 (12")
INVERT OUT:	= 51.30 (12")
EXIST. SMH "B"	EXISTING CITY CROSS–COUNTRY LINE
RIM ELEV:	= 59.34
INVERT IN:	= 48.74 (12")
INVERT OUT:	= 48.64 (12")
EXIST. SMH "C"	EXISTING CITY CROSS–COUNTRY LINE
RIM ELEV:	= 54.06
INVERT IN:	= 44.26 (12")
INVERT OUT:	= 44.16 (12")



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
– – – – – – – EDGE OF PAVEMENT
O.A. – OVERALL
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

REFERENCE PLANS:

1.) LOT ELIMINATION AND LOT LINE ADJUSTMENT PLAN PREPARED FOR SEBRING HOLDINGS, LLC AND MACS CONVENIENCE STORES, LLC, TAX MAP K, LOT Nos. 19A, 19C, & 26, DOVER POINT ROAD & POINTE PLACE, CITY of DOVER, COUNTY of STRAFFORD, STATE of NEW HAMPSHIRE. DOVER PLANNING FILE No. P 20–62. SCALE: 1" = 30'; DATED: SEPTEMBER 10, 2020, REVISED THROUGH 10/16/20; BY: THIS OFFICE. RECORDED S.C.R.D. PLAN 12241.

2.) BOUNDARY LINE ADJUSTMENT & SUBDIVISION PLAN – ELLIOTT ROSE COMPANY OF DOVER, INC., DOVER POINT ROAD, DOVER, NEW HAMPSHIRE. SCALE: 1" = 40'; DATED: JUNE 28, 2002, REVISED TO 8/25/03; BY: TRITECH ENGINEERING CORP. RECORDED S.C.R.D. PLAN 72–49.

NOTES:

1.) OWNERS OF RECORD:

SEBRING HOLDINGS, LLC
340 CENTRAL AVENUE, SUITE 202
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOL. 4056, PAGE 18

2.) K / 26 – DENOTES TAX MAP AND PARCEL NUMBER.

3.) ZONING DISTRICT IS R–12 (MEDIUM DENSITY RESIDENTIAL)

4.) DIMENSIONAL REGULATIONS:

MINIMUM LOT SIZE	= 12,000 S.F.
MAXIMUM LOT COVERAGE	= 30 PERCENT
MINIMUM FRONTAGE	= 100 FEET
BUILDING REQUIREMENTS:	
FRONT BUILD TO	= 15 FEET MIN.
	= 25 FEET MAX.
SIDE SETBACK	= 15 FEET
REAR SETBACK	= 30 FEET

5.) PLAN INTENT: TO SHOW THE EXISTING SITE CONDITIONS AS OF THE DATE OF THIS PLAN.

6.) PARCEL AREA = 32,964 S.F. / 0.76 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; PANEL 0340; SUFFIX E; MAP NUMBER 33017C0340E; EFFECTIVE DATE SEPTEMBER 30, 2015.

8.) BASIS OF BEARING IS THE CITY OF DOVER G.I.S. SYSTEM STATIONS TR 112 AND TR 113 WHICH WERE USED TO DETERMINE LOCATION, ORIENTATION. VERTICAL DATUM – NAVD 88.

9.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES, INC. DURING SEPTEMBER 2018 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.

10.) REFERENCE IS MADE TO AMENDED AND RESTATED RECIPROCAL EASEMENT AGREEMENT MADE BETWEEN SEBRING HOLDINGS, LLC AND MAC'S CONVENIENCE STORES LLC RECORDED AT S.C.R.D. IN BOOK 4848, PAGE 528, DATED DECEMBER 14, 2020. ALSO, REFERENCE IS MADE TO RECIPROCAL EASEMENT AGREEMENT MADE BETWEEN SEBRING HOLDINGS, LLC AND MAC'S CONVENIENCE STORES LLC RECORDED AT S.C.R.D. IN BOOK 4114, PAGE 610, DATED APRIL 4, 2013.

11.) WETLANDS FLAGGED LINES "A" & "B" SHOWN WERE DELINEATED BY DAMON E. BURT, N.H.C.W.S. #163 OF FRAGGLE ROCK ENVIRONMENTAL SERVICES ON JANUARY 14, 2021 IN ACCORDANCE WITH THE 1987 CORPS. OF ENGINEERS WETLANDS DELINEATION MANUAL AND LOCATED BY THIS OFFICE.

NO.	DATE	DESCRIPTION	BY	CHK
		REVISIONS		

21–1720	EXIST. COND.	12–1976
PROJECT NO	TYPE	FIELDBOOK & PAGES

"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."

EXISTING CONDITIONS PLAN
PREPARED FOR
SEBRING HOLDINGS, LLC
TAX MAP K, LOT No. 26
DOVER POINT ROAD
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DOVER PLANNING FILE No. P 21–___

DRAWN BY: RJM	FILE: 1720\DWGS\21–1720
SCALE: 1" = 30'	DATE: JANUARY 5, 2021

30 15 0 15 30 60 90 120

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 661 KEVIN M. McENEANEY 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. OWNERS OF RECORD:

   SEBRING HOLDINGS, LLC
   340 CENTRAL AVENUE, SUITE 202
   DOVER, NEW HAMPSHIRE 03820
   S.C.R.D. VOL. 4056, PAGE 18

2. K/26 – DENOTES TAX MAP AND PARCEL NUMBER.
3. ZONING DISTRICT IS R–12 (MEDIUM DENSITY RESIDENTIAL)
4. DIMENSIONAL REGULATIONS:

MINIMUM LOT SIZE	= 12,000 S.F.
MAXIMUM LOT COVERAGE	= 30 PERCENT
MINIMUM FRONTAGE	= 100 FEET
BUILDING SETBACK REQUIREMENTS:	
FRONT BUILD TO	= 15 FEET MIN.
	= 25 FEET MAX.
SIDE SETBACK	= 15 FEET
REAR SETBACK	= 30 FEET

5. PLAN INTENT: TO SHOW THE EXISTING SITE CONDITIONS AS OF THE DATE OF THIS PLAN.
6. PARCEL AREA = 32,964 S.F. / 0.76 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; PANEL 0340; SUFFIX E; MAP NUMBER 33017C0340E; EFFECTIVE DATE SEPTEMBER 30, 2015.
8. BASIS OF BEARING IS THE CITY OF DOVER G.I.S. SYSTEM STATIONS TR 112 AND TR 113 WHICH WERE USED TO DETERMINE LOCATION, ORIENTATION. VERTICAL DATUM – NAVD 88.
9. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES, INC. DURING SEPTEMBER 2018 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.
10. REFERENCE IS MADE TO AMENDED AND RESTATED RECIPROCAL EASEMENT AGREEMENT MADE BETWEEN SEBRING HOLDINGS, LLC AND MAC'S CONVENIENCE STORES LLC RECORDED AT S.C.R.D. IN BOOK 4848, PAGE 528, DATED DECEMBER 14, 2020. ALSO, REFERENCE IS MADE TO RECIPROCAL EASEMENT AGREEMENT MADE BETWEEN SEBRING HOLDINGS, LLC AND MAC'S CONVENIENCE STORES, LLC, RECORDED AT S.C.R.D. IN BOOK 4114, PAGE 610, DATED APRIL 4, 2013.
11. WETLANDS FLAGGED LINES "A" & "B" SHOWN WERE DELINEATED BY DAMON E. BURT, N.H.C.W.S. #163 OF FRAGGLE ROCK ENVIRONMENTAL SERVICES ON JANUARY 14, 2021 IN ACCORDANCE WITH THE 1987 CORPS. OF ENGINEERS WETLANDS DELINEATION MANUAL AND LOCATED BY THIS OFFICE.
12. TOPOGRAPHIC SURVEY BY MSANE THROUGH DECEMBER 2020.

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. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT AND POLES.
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. EXISTING ("OLD") WATER SERVICES TO THE SUBJECT SITE SHALL BE DISCONNECTED AND SHUT–OFF AT THE WATER MAIN.
11. EXISTING SEWER SERVICES TO BE CUT AND PERMANENTLY CAPPED AT PROPERTY LINE.
12. 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.

SITE NOTES:

1. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A PLAN REFERENCED AND PREPARED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND (SEE EXISTING CONDITIONS PLAN IN THIS PLAN SET).
2. THE PURPOSE OF THIS PLAN IS TO DEPICT IMPROVEMENTS ASSOCIATED WITH A 3,600 S.F. PROFESSIONAL / MEDICAL OFFICE. THE NEW ENTRANCE/EXIT ONTO DOVER POINT ROAD WILL BECOME A SHARED DRIVE WITH THE ABUTTING LOT TAX MAP K, LOT 19C.
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.

SITE NOTES CONT.:

5. ON–SITE SNOW STORAGE SHALL OCCUR ALONG THE EDGES OF PROPOSED PAVEMENT.
6. ALL CONSTRUCTION LAYOUT SHALL BE DONE BY A LICENSED SURVEYOR UNDER CONTRACT WITH THE CONTRACTOR.
7. SEE DETAILS FOR SIGN LEGENDS.
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. 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.
10. 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.
11. 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.
12. BUILDING ADDRESSES TO BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.
13. 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.
14. THE SITE SHALL BE MAINTAINED TO PROVIDE ACCESSIBILITY IN ALL WEATHER CONDITIONS.
15. COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM WITH DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.
16. THE SUBJECT PARCEL(S) IS (ARE) SERVED BY MUNICIPAL WATER AND SEWER.
17. 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.
18. 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.
19. SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY–FRIDAY 7 AM–6 PM, SATURDAY AND SUNDAY HOURS 8 AM–5 PM. 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.
20. 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.
21. 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.
22. ANY RETAINING WALL TALLER THAN FOUR FEET (4') REQUIRES ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
23. ANY FENCE TALLER THAN SEVEN FEET (7') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
24. 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.
25. 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.
26. 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.
27. FIRE DEPARTMENT ACCESS SHALL BE INSTALLED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS IN ALL WEATHER CONDITIONS AT ALL TIMES.
28. REFUSE PICKUP WILL BE BY PRIVATE CONTRACTOR AND WILL BE VIA DUMPSTER ON–SITE.
29. SNOW STORAGE WILL BE ACCORDING TO THE OPERATION AND MAINTENANCE PLAN AND WITHIN AREAS AS INDICATED.
30. ALL EXTERIOR DOORS ARE MANUAL AND OPENED FROM THE INTERIOR BY PANIC HARDWARE. ALL EXTERIOR DOORS SHALL COMPLY WITH ADA AND ALL LOCAL BUILDING CODE REQUIREMENTS.
31. THIS ENTRANCE/EXIT ONTO DOVER POINT ROAD WILL BE SHARED BY PARCELS K–19C AND K–26 AND IS DEFINED WITHIN THE "RECIPROCAL ACCESS AGREEMENT" WHICH WILL BECOME PART OF THIS PLAN WHEN THE PLAN IS APPROVED. THE COPY OF THE FULL "AGREEMENT" IS ON FILE WITH THE DOVER PLANNING OFFICE. WHEN THIS PLAN IS APPROVED THE EXISTING PAVED ACCESS FOR PARCEL K–26 WILL ABANDONED.
32. WHEN PARCEL K–26 IS DEVELOPED, ACCESS TO THE PARCEL WILL BE ALLOWED FROM THE SHARED DRIVEWAY. AS REQUESTED BY THE PLANNING BOARD A "POTENTIAL" ACCESS HAS BEEN SHOWN FOR REFERENCE ONLY AND THE ACTUAL LOCATION IS SUBJECT TO CHANGE AND WILL BE DEFINED ON FUTURE DEVELOPMENT PLANS FOR PARCEL K–26. THE DEVELOPER OF PARCEL K–26 WILL DESIGN AND IMPLEMENT THEIR ACCESS TO THE SHARED DRIVEWAY AND WILL RELOCATE THE FENCE AND VEGETATED SCREENING AS APPROPRIATE TO MAINTAIN SCREENING.
33. THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY: N/A
34. 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.
    ZBA VARIANCE Z21–03:
    FROM SECTIONS 170–12.B, 170–5 (D), 170–11 (D) – GRANTED (2–19–2021)
    PLANNING BOARD CONDITIONAL USE PERMIT: PENDING
    EPA NOI: PENDING

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 AND SEWER.
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. ALL GRAVITY SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE NOTED AND CONFORM TO THE REQUIREMENTS OF THE CITY OF DOVER SEWER DEPARTMENT STANDARDS.
10. 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.
11. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.
12. THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE BUILDING DRAWINGS AND THE UTILITY COMPANIES.
13. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
14. 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.
15. 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.
16. CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES. COORDINATE WITH GAS COMPANY.
17. 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.
18. 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.
19. SAWCUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN
20. GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF DOVER.
21. COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF DOVER.
22. 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.
23. 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.
24. SITE LIGHTING SPECIFICATIONS, CONDUIT LAYOUT AND CIRCUITRY FOR PROPOSED SITE LIGHTING AND SIGN ILLUMINATION SHALL BE PREPARED BY THE PROJECT ELECTRICAL ENGINEER.
25. APPROVED BACKFLOW PREVENTORS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.
26. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE CITY AND STATE CODES.
27. A SECURITY ALARM SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 58, ARTICLE I, SECTION 58–2 OF THE CODE OF THE CITY OF DOVER.
28. THE PROPOSED STRUCTURE SHALL COMPLY WITH CHAPTER 109, ARTICLE IV, SECTION 109–30 AND THE STATE BUILDING CODES OF THE CODE OF THE CITY OF DOVER.
29. FINAL PLANS FOR TANK LOCATIONS, DISTRIBUTION SYSTEMS, AND CROSS SECTIONS ASSOCIATED WITH THE FUEL BAYS, SHALL BE PROVIDED TO THE CITY OF DOVER ENGINEER PRIOR TO CONSTRUCTION.
30. FIRE SUPPRESSION PLANS SHALL BE PROVIDED TO THE FIRE/INSPECTION DEPARTMENT PRIOR TO INSTALLATION.
31. THE STRUCTURE SHALL BE SERVED BY A SPRINKLER SYSTEM AS REQUIRED UNDER CHAPTER 109– 30 OF THE CODE OF THE CITY OF DOVER AND THE STATE BUILDING CODES.
32. 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.
33. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13.
34. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
35. SEWAGE LOADING (PER ENV. – Wq 1008.03 TABLE 1008–1)
    250 GPD/DOCTOR x 4 = 1000 GPD

GRADING NOTES:

1. ALL ROAD 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. ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS.
15. LIMIT TREE CLEARING TO ONLY THE EXTENT NECESSARY FOR CONSTRUCTION.
16. PLACARDS SHALL BE INSTALLED ALONG THE EDGE OF WETLAND PRIOR TO CONSTRUCTION.

LEGEND

I.R. (set) o	– IRON ROD W/ I.D. CAP (SET)
⊙ I.P.	– IRON PIPE
□ G.B.	– GRANITE BOUND
○ I.R.	– IRON ROD
⊙ 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
UP	– UTILITY POLE
– · · · –	– EDGE OF WETLAND
O.A.	– OVERALL
TBR	– TO BE REMOVED
R.O.W.	– RIGHT OF WAY
D DMH	– DRAIN MANHOLE
CB	– CATCH BASIN
S SMH	– SEWER MANHOLE
HYD.	– FIRE HYDRANT
WV WV	– WATER GATE VALVE
	– TREE
GV GV	– GAS VALVE
5'R	– PROPOSED PAVEMENT RADIUS
PW	– PROPOSED WATER
PE	– PROPOSED ELECTRIC
PS	– PROPOSED SEWER
PD	– PROPOSED DRAINAGE
PG	– PROPOSED GAS
55	– PROPOSED FINISH GRADE
x 55	– PROPOSED SPOT GRADE

UTILITY CONTACTS

NATURAL GAS: – UNITIL CORPORATION
CONTACT: DAVID BEAULIEU
325 WEST ROAD
PORTSMOUTH, NH 03801
TEL: (603)–294–5144

WATER & SEWER: – CITY OF DOVER COMMUNITY SERVICES DEPARTMENT – PUBLIC WORKS & UTILITIES
CONTACT: BILL BOULANGER
271 MAST ROAD
DOVER, NH 03820
TEL: (603)–516–6450

ELECTRIC: – EVERSOURCE
CONTACT: PIERRE BOUGIE
4 OLD DOVER ROAD
ROCHESTER, NH 03867
TEL: (603)–332–4227

TELEPHONE: – FAIRPOINT COMMUNICATIONS, INC.
CONTACT: ED LANAGAN
HIGHWAY 33, BOX 307
1575 GREENLAND ROAD
GREENLAND, NH 03804
TEL (603)–528–7335

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21_

NO.	REVISION	APP'D	DATE

DATE: 5–7–21
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:19018
FILE: SITE.DWG

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

OWNER:
SEBRING HOLDINGS, LLC
340 CENTRAL AVE, SUITE 202
DOVER, NH 03820

APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP K, LOT 26
DOVER, NEW HAMPSHIRE

NOTE SHEET

3



ABUTTERS LIST
(WITHIN 200 FT)

TAX MAP	LOT NO.	NAME & ADDRESS
K 18–A	18–A	CITY OF DOVER 288 CENTRAL AVENUE DOVER, NH 03820
K 19–B	19–B	JBACK REALTY LLC 34 DOVER POINT ROAD DOVER, NH
K 19–C	19–C	MAC CONVENIENCE STORES LLC 935 EAST TALLMADGE AVE AKRON, OH 44310
K 26	26	SERBRING HOLDINGS LLC 340 CENTRAL AVENUE SUITE 202 DOVER, NH 03820
K 26–1	26–1	CHRISTOPHER M WAYNE & CHRISTINA WONG 26 DOVER POINT ROAD DOVER, NH 03820
K 35	35	FOLLANSBEE MARILYN E TRUSTEE FOLLANSBEE MARILYN E REV TRUST OF 2011 25 DOVER POINT ROAD DOVER, NH 03820
K 36	36	31 33 DOVER POINT ROAD CONDOMINIUM PAOLINI ROBERT TRUSTEE AND WILKINSON STE 15 BRIARWOOD LANE DOVER, NH 03820
K 37	37	STF DEVELOPMENT CORP. 242 CENTRAL AVENUE DOVER, NH 03820

K / 26 — TAX MAP / LOT NUMBER

MAGNETIC

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

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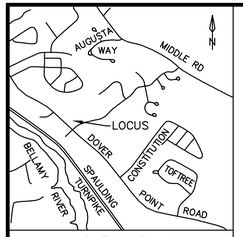
CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

NEIGHBORHOOD PLAN

APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP K, LOT 26
DOVER, NEW HAMPSHIRE

OWNER:
SEBRING HOLDINGS, LLC
340 CENTRAL AVE, SUITE 202
DOVER, NH 03820

4



LOCATION PLAN
(NO SCALE)

SANITARY SEWER STRUCTURE SCHEDULE

EXIST. SMH "1"	EXISTING CROSS-COUNTRY LINE
RIM ELEV:	= 73.38
INVERT IN:	= 62.5 (8")
INVERT OUT:	= 62.4 (8")
EXIST. SMH "A"	EXISTING CITY CROSS-COUNTRY LINE
RIM ELEV:	= 60.62
INVERT IN:	= (8")
INVERT IN:	= 51.32 (12")
INVERT OUT:	= 51.30 (12")
EXIST. SMH "B"	EXISTING CITY CROSS-COUNTRY LINE
RIM ELEV:	= 59.34
INVERT IN:	= 48.74 (12")
INVERT OUT:	= 48.64 (12")
EXIST. SMH "C"	EXISTING CITY CROSS-COUNTRY LINE
RIM ELEV:	= 54.06
INVERT IN:	= 44.26 (12")
INVERT OUT:	= 44.16 (12")

K/ 18A-10
CITY OF DOVER
288 CENTRAL AVENUE
DOVER, NH 03820
991 / 26 [R-12]
4456 / 510 [IT]

20' WIDE SEWER EASEMENT BENEFITING CITY OF DOVER S.C.R.D. 1009 / 804

IT R-12 ZONE LINE

20' WIDE SEWER EASEMENT BENEFITING CITY OF DOVER S.C.R.D. 1021 / 712

LIMITS OF WETLANDS

SMH "B"

TREE 28IN MAPLE

50' WIDE WETLAND BUFFER (TYP.)

SMH "A"

PARCEL AREA
32,964 S.F.
0.76 Ac.

K / 26

BUILDING SETBACK LINE (TYP.)

R-12 C ZONE LINE

TREE 24IN MAPLE

K / 19C
MACS CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OH 44310
4114 / 608
4848 / 526

POINTE PLACE
{PUBLIC - VARIABLE WIDTH R.O.W.}
12"W C.L.D.I.
F/K/A THORNWOOD LANE

EXIST. UGE

CB "C"

DMH "B"

CB "B1"

CB "A"

K / 26-1
CHRISTOPHER M. WAYNE
CHRISTINA WONG
26 DOVER POINT ROAD
DOVER, NH 03820
4213 / 231

DWELLING #26

TREE TO BE REMOVED
TREE MAPLE 22D

TREE TO BE REMOVED
TREE MAPLE 39D

PAVEMENT TO BE REMOVED

OLD DRIVEWAY PAVEMENT

TREE 48IN OAK

TREE 48IN OAK

25' BUILD TO LINE (MAX.)

15' BUILD TO LINE (MIN.)

30' WIDE x 50' ACCESS EASEMENT S.C.R.D. PLAN 88-27

SMH "1"
RIM = 73.38

UP 1/193A

SAWCUT LIMITS

SAWCUT LIMITS

UTILITY EASEMENT BENEFITING PARCELS K/19A & K/26

30' WIDE UTILITY EASEMENT S.C.R.D. 3399 / 798

DOVER POINT ROAD
{PUBLIC - 66' WIDE R.O.W.}

UP 1/193

UP 1/194

K / 35
HERBERT E. FOLLANSBEE
MARILYN FOLLANSBEE
25 DOVER POINT ROAD
DOVER, NH 03820
987 / 64

K /36-31
ROBERT V. PAOLINI, TRUSTEE
JNM REALTY TRUST
242 CENTRAL AVENUE
DOVER, NH 03820
3795 / 336

K /36-33
KENNETH WILKINS
HEIDI G. WILKINS
58 TEMPERANCE HILL DRIVE
NORTHWOOD, NH 03261
4164 / 663

K / 37
STF DEVELOPMENT CORPORATION
242 CENTRAL AVENUE
DOVER, NH 03820
4197 / 156

K / 38
STF DEVELOPMENT CORPORATION
242 CENTRAL AVENUE
DOVER, NH 03820
3771 / 979

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

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21_

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

NO.	REVISION	APP'D	DATE

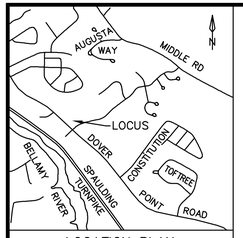
DATE: 5-7-21
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:JH
PROJECT NO:19018
FILE: SITE.DWG

DEMOLITION PLAN

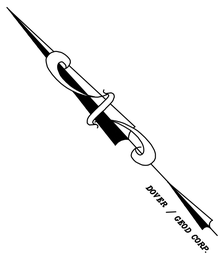
OWNER:
SEBRING HOLDINGS, LLC
340 CENTRAL AVE, SUITE 202
DOVER, NH 03820

APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP K, LOT 26
DOVER, NEW HAMPSHIRE

5



LOCATION PLAN
(NO SCALE)



K/ 18A-10

CITY OF DOVER
288 CENTRAL AVENUE
DOVER, NH 03820
991 / 26 [R-12]
4456 / 510 [IT]

IT
R-12

ZONE
LINE

20' WIDE SEWER EASEMENT
BENEFITING CITY OF DOVER
S.C.R.D. 1021 / 712

LIMITS OF
WETLANDS

TREE 28IN MAPLE

50' WIDE WETLAND
BUFFER (TYP.)

R-12
C

30' WIDE UTILITY EASEMENT
S.C.R.D. 3399 / 798

PARCEL AREA
32,964 S.F.
0.76 Ac.

K / 26

BUILDING SETBACK LINE (TYP.)

ZONE
LINE

TREE 24IN MAPLE

K / 19C

MACS CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OH 44310
4114 / 608
4848 / 526

POINTE PLACE
{PUBLIC - VARIABLE WIDTH R.O.W.}
F/K/A THORNWOOD LANE

PROPOSED R7-8
"HANDICAP PARKING)
& R7-8A (VAN
ACCESSIBLE) SIGN
IN BOLLARD

90'
PROFESSIONAL/MEDICAL OFFICE
3,600 SQ FT

40'

PROPOSED RAMP
WITH TIP DOWN
CURB

END PCC
BEGIN SGC

K / 26-1

CHRISTOPHER M. WAYNE
CHRISTINA WONG
26 DOVER POINT ROAD
DOVER, NH 03820
4213 / 231

DWELLING
#26

PROPOSED
5' SIDEWALK

END SGC
BEGIN PCC

PCC
11
18'
3'R
9'(TYP)
8'
SGC
3'R
24'
PROPOSED PAINTED
HANDICAP SYMBOL
(TYP)
3'R
25' BUILD TO LINE (MAX.)
15' BUILD TO LINE (MIN.)
18'
9
SGC
10'R

PROPOSED
PAINTED
ISLAND

END
SGC

1'R
SGC

PROPOSED
PAINTED
TRAFFIC
ARROW (TYP)

PROPOSED DOUBLE
YELLOW LINE

END SGC

TREE 36IN OAK

30' WIDE x 50' ACCESS
EASEMENT S.C.R.D. PLAN
88-27

TREE
OAK 48IN

SGC

10'R

STOP

STOP

15'R

16.52'

18.73'

PROPOSED
LIGHT POLE
BASE (TYP)

BEGIN SGC
WITH
TIP-DOWN

PROPOSED R1-1
"STOP" SIGN AND
18" STOP BAR

BEGIN SGC

UTILITY EASEMENT BENEFITING
PARCELS K/19A & K/26

DOVER POINT ROAD
{PUBLIC - 66' WIDE R.O.W.}

K / 35

HERBERT E. FOLLANSBEE
MARILYN FOLLANSBEE
25 DOVER POINT ROAD
DOVER, NH 03820
987 / 64

K /36-31

ROBERT V. PAOLINI, TRUSTEE
JNM REALTY TRUST
242 CENTRAL AVENUE
DOVER, NH 03820
3795 / 336

K /36-33

KENNETH WILKINS
HEIDI G. WILKINS
58 TEMPERANCE HILL DRIVE
NORTHWOOD, NH 03261
4164 / 663

K / 37

STF DEVELOPMENT CORPORATION
242 CENTRAL AVENUE
DOVER, NH 03820
4197 / 156

K / 38

STF DEVELOPMENT CORPORATION
242 CENTRAL AVENUE
DOVER, NH 03820
3771 / 979

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

GENERAL NOTES:

1. OWNERS OF RECORD:

   SEBRING HOLDINGS, LLC
   340 CENTRAL AVENUE, SUITE 202
   DOVER, NEW HAMPSHIRE 03820
   S.C.R.D. VOL. 4056, PAGE 18

2. K/26 – DENOTES TAX MAP AND PARCEL NUMBER.
3. ZONING DISTRICT IS R-12 (MEDIUM DENSITY RESIDENTIAL)
4. DIMENSIONAL REGULATIONS:

MINIMUM LOT SIZE	= 12,000 S.F.
MAXIMUM LOT COVERAGE	= 30 PERCENT
MINIMUM FRONTAGE	= 100 FEET
BUILDING SETBACK REQUIREMENTS:	
FRONT BUILD TO	= 15 FEET MIN.
	= 25 FEET MAX.
SIDE SETBACK	= 15 FEET
REAR SETBACK	= 30 FEET

5. PLAN INTENT: TO SHOW THE EXISTING SITE CONDITIONS AS OF THE DATE OF REFERENCE PLAN #1.
6. PARCEL AREA = 32,964 S.F. / 0.76 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; PANEL 0340; SUFFIX E; MAP NUMBER 33017C0340E; EFFECTIVE DATE SEPTEMBER 30, 2015.
8. BASIS OF BEARING IS THE CITY OF DOVER G.I.S. SYSTEM STATIONS TR 112 AND TR 113 WHICH WERE USED TO DETERMINE LOCATION, ORIENTATION. VERTICAL DATUM – NAVD 88.
9. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES, INC. DURING SEPTEMBER 2018 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.
10. REFERENCE IS MADE TO AMENDED AND RESTATED RECIPROCAL EASEMENT AGREEMENT MADE BETWEEN SEBRING HOLDINGS, LLC AND MAC'S CONVENIENCE STORES, LLC RECORDED AT S.C.R.D. IN BOOK 4848, PAGE 528, DATED DECEMBER 14, 2020. ALSO, REFERENCE IS MADE TO RECIPROCAL EASEMENT AGREEMENT MADE BETWEEN SEBRING HOLDINGS, LLC AND MAC'S CONVENIENCE STORES, LLC RECORDED AT S.C.R.D. IN BOOK 4114, PAGE 610, DATED APRIL 4, 2013.
11. WETLANDS FLAGGED LINES "A" & "B" SHOWN WERE DELINEATED BY DAMON E. BURT, N.H.C.W.S. #163 OF FRAGGLE ROCK ENVIRONMENTAL SERVICES ON JANUARY 14, 2021 IN ACCORDANCE WITH THE 1987 CORPS. OF ENGINEERS WETLANDS DELINEATION MANUAL AND LOCATED BY THIS OFFICE.

REFERENCE PLANS:

1. EXISTING CONDITIONS PLAN PREPARED FOR SEBRING HOLDINGS, LLC, TAX MAP K, LOT NO. 26, DOVER POINT ROAD, CITY OF DOVER, COUNTY OF STRAFFORD, STE OF NEW HAMPSHIRE; DRAWING BY RJM; SCALE 1"=30'; DATE JANUARY 5, 2021; PREPARED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND.

PARKING CALCULATIONS:

MEDICAL USE	MAX #	PROPOSED #
1 SP/EMPLOY(MAX SHIFT)	8	
0.5 SP/EXAM ROOM (8)	4	
OFFICE		
1 SP/300S.F. (2,400 S.F.)	8	
	20	20

VARIANCE GRANTED:

ZBA Z21-03 FROM SECTIONS 170-5(D), 170-11(D) GRANTED – 2-19-21

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21_

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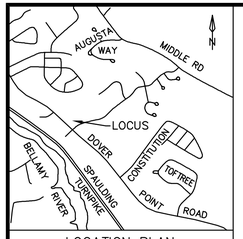
CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

SITE PLAN

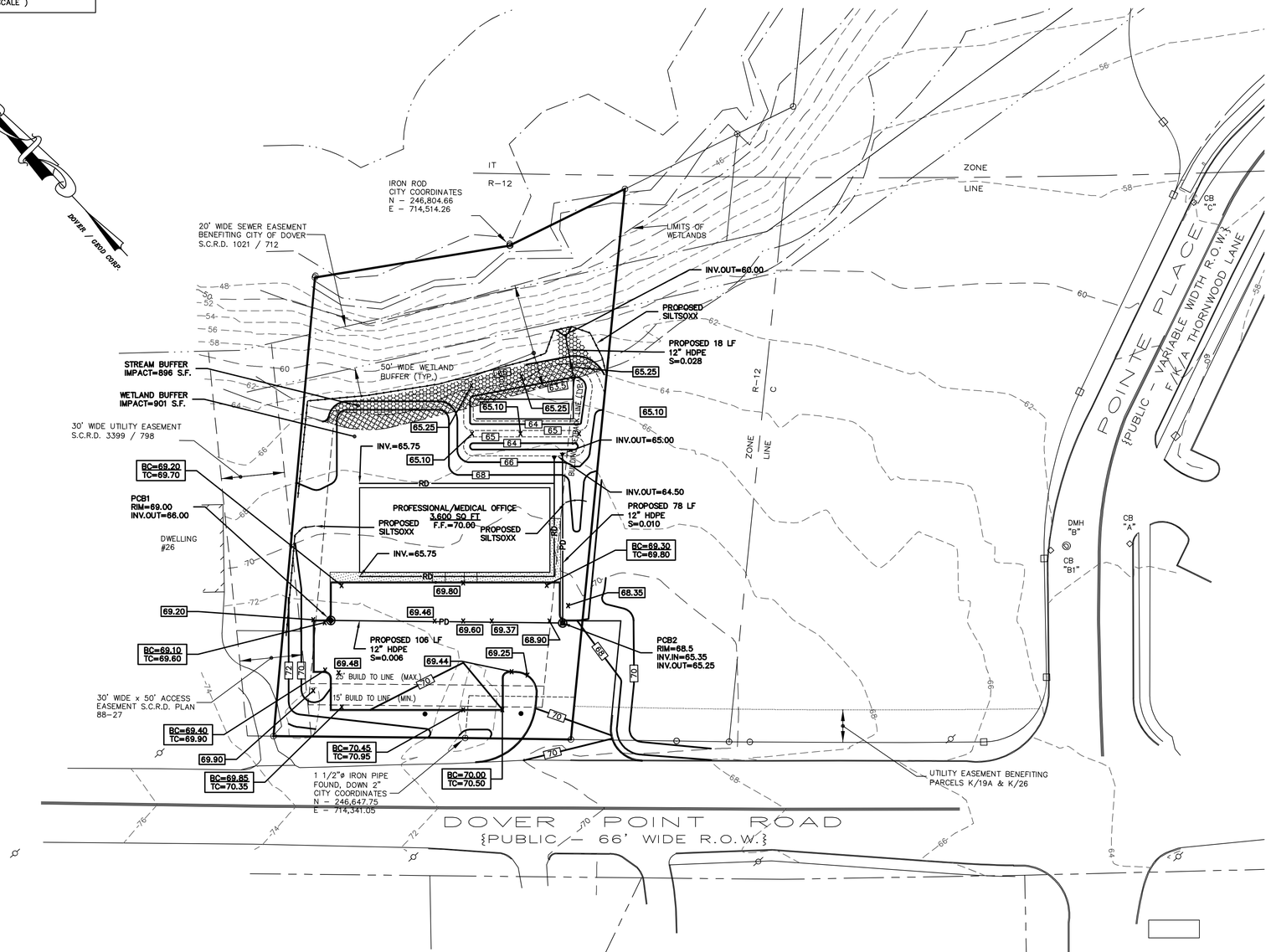
OWNER:
SEBRING HOLDINGS, LLC
340 CENTRAL AVE, SUITE 202
DOVER, NH 03820

APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP K, LOT 26
DOVER, NEW HAMPSHIRE

6



LOCATION PLAN
(NO SCALE)



DIG-SAFE
1-888-344-7233

CALL BEFORE YOU DIG !

NOTE:
CONTRACTOR IS REQUIRED TO CALL DIGSAFE AND COORDINATE LOCATIONS OF EXISTING UTILITY SERVICES A MINIMUM OF 72 HOURS PRIOR TO STARTING ANY WORK ON SITE.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21-

NO.	REVISION	APP'D	DATE

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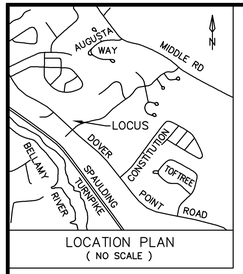
CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

GRADING, DRAINAGE & EROSION CONTROL PLAN

OWNER:
SEBRING HOLDINGS, LLC
340 CENTRAL AVE, SUITE 202
DOVER, NH 03820

APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP K, LOT 26
DOVER, NEW HAMPSHIRE

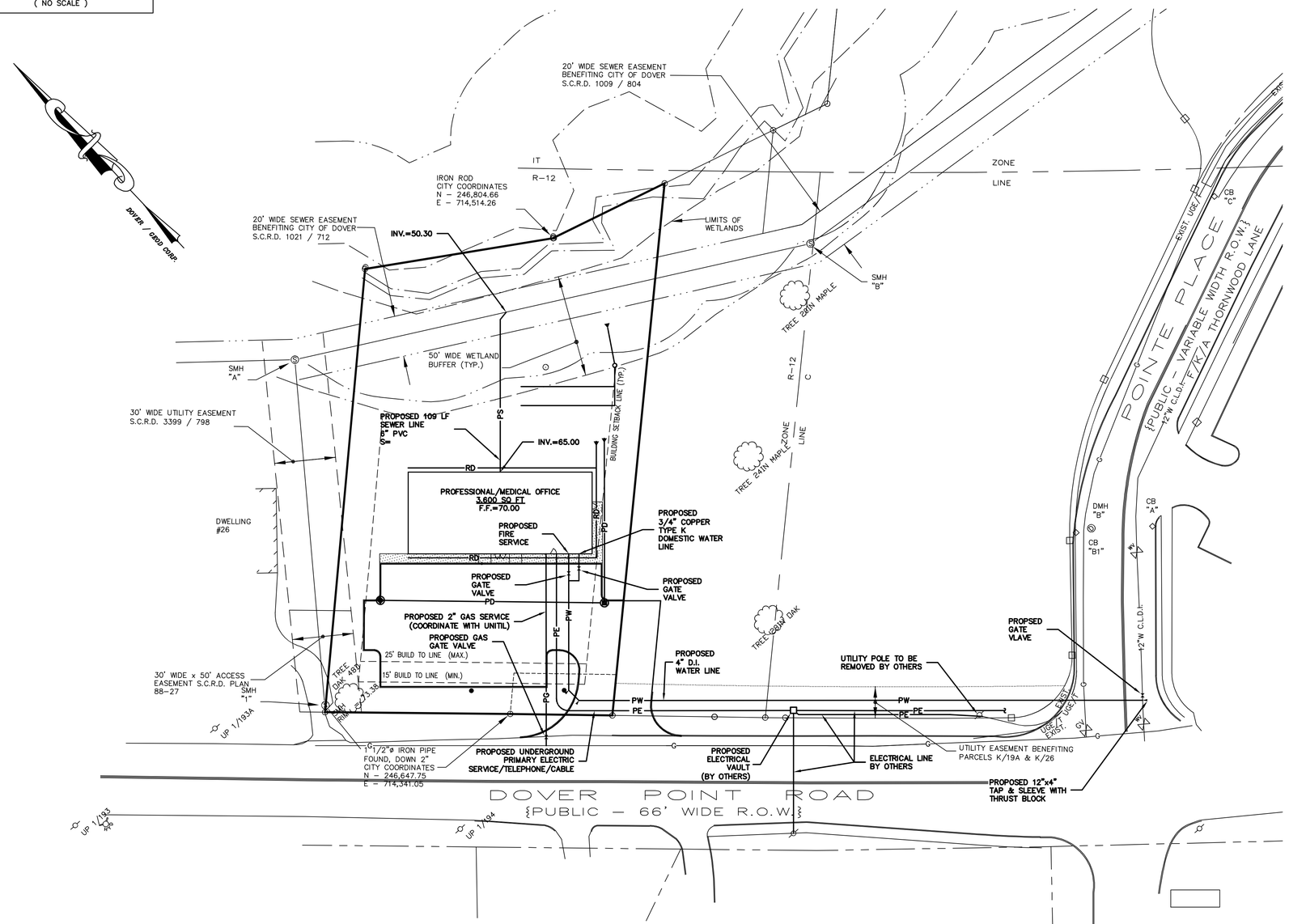
7



LOCATION PLAN
(NO SCALE)

SANITARY SEWER STRUCTURE SCHEDULE

EXIST. SMH "1"	EXISTING CROSS-COUNTRY LINE
RIM ELEV:	= 73.38
INVERT IN:	= 62.5 (8")
INVERT OUT:	= 62.4 (8")
EXIST. SMH "A"	EXISTING CITY CROSS-COUNTRY LINE
RIM ELEV:	= 60.62
INVERT IN:	= (8")
INVERT IN:	= 51.32 (12")
INVERT OUT:	= 51.30 (12")
EXIST. SMH "B"	EXISTING CITY CROSS-COUNTRY LINE
RIM ELEV:	= 59.34
INVERT IN:	= 48.74 (12")
INVERT OUT:	= 48.64 (12")
EXIST. SMH "C"	EXISTING CITY CROSS-COUNTRY LINE
RIM ELEV:	= 54.06
INVERT IN:	= 44.26 (12")
INVERT OUT:	= 44.16 (12")



DIG-SAFE
1-888-344-7233

CALL BEFORE YOU DIG !

NOTE:
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GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

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DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:JH
PROJECT NO:19018
FILE: SITE.DWG

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

UTILITY PLAN

OWNER:
SEBRING HOLDINGS, LLC
340 CENTRAL AVE, SUITE 202
DOVER, NH 03820

APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP K, LOT 26
DOVER, NEW HAMPSHIRE

8

NAME OF RECEIVING WATERS

The storm water runoff will be discharged into Varney Brook.

PROJECT NAME AND LOCATION

Middleton Chiropractic
Tax Map K, Lot 26
Dover, NH 03820

LATITUDE N43°-10'-25"
LONGITUDE W70°-51'-43"

DESCRIPTION

The project provides for the construction of a 3,600 s.f. building, driveway and associated parking areas, on a .76± acre site.

The work is anticipated to start in Spring 2021 and be completed by Fall 2021.

SOIL CHARACTERISTICS

Soil types on the sibject parcel were obtained from th U.S.D.A – S.C.S. "Soil Survey of Strafford County, New Hampshire", sheet 28; Issued March 1973. The soil decsription is Windsor loamy sand, 0 to 3 percent slopes (WdA) and Suffield silt loam (SfC).

DISTURBED AREA

The total area to be disturbed is approximately 23,712 sq.ft. or 0.54 acres.

SEQUENCE OF MAJOR ACTIVITIES

1. Install temporary erosion control siltsock and silt fences, construct stabilized entrances.
2. Construct temporary drainage facilities.
3. Construct new building, utilities and parking fields.
4. When all construction activity is complete and site is stabilized, remove all siltsock silt fences and sediment that has been trapped by these devices.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES OF EROSION AND SEDIMENT CONTROLS

A. GENERAL

These are the general inspection and maintenance practices that will be used to implement the plan.

- The smallest practical portion of the site will be denuded at one time.
- All control measures will be inspected at least once each week and following any storm event of 1/4 inch or greater.
- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of report.
- Built up sediment will be removed from silt fence or siltsock barriers when it has reached one third the height of the fence or bale.
- All diversion dikes will be inspected and any breaches promptly repaired.
- Temporary seeding and planting will be inspected for bare spots, washouts, and unhealthy growth.

B. FILTERS

1. Silt Fence

a. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the following requirements:

Physical Property	Test	Requirements
Filtering Efficiency	VTM–51	75% minimum
Tensile Strength at 20% Maximum Elongation*	VTM–52	Extra Strength 50 lb/lin in (min) Standard Strength 30 lb/lin in (min)
Flow Rate	VTM–51	0.3 gal/sf/min (min)

* Requirements reduced by 50 percent after six (6) months of installation.

Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six (6) months of expected usable construction life at a temperature range of 0 degrees F to 120 Degrees F.

b. The height of a silt fence shall not exceed thirty–six (36) inches.

c. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced together only at support post, with a minimum six (6) inch overlap, and securely sealed.

d. Posts shall be spaced a maximum of ten (10) feet apart at the barrier location and driven securely into the ground (minimum of 16 inches). When extra strength fabric is used without the wire support fence, post spacing shall not exceed 6 feet.

e. Posts for silt fences shall be 2–inch square wood with a minimum length of 5 feet.

f. Wire fence reinforcement for silt fences using standard strength filter cloth shall be a minimum of 42 inches in height, a minimum of 14 gauge and shall have a maximum mesh spacing of 6 inches.

g. A trench shall be excavated approximately four (4) inches wide and four (4) inches deep along the line of posts and upslope from the barrier.

h. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least one (1) inch long, tie wires or hog rings. The wire shall extend no more than 36 inches above the original ground surfaces.

i. The "standard strength" filter fabric shall be stapled or wired to the fence, and eight (8) inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

j. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of item (i) applying.

k. The trench shall be backfilled and the soil compacted over the filter fabric.

l. Silt fences shall be removed when they have served their useful purpose, but not before the upslope areas has been permanently stabilized.

2. Sequence of Installation

Sediment barriers shall be installed prior to any soil disturbance of the contributing drainage area above them.

3. Maintenance

a. Inlet Protection and silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired if there are any signs of erosion or sedimentation below them. Any required repairs shall be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam.

b. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier still is necessary, the fabric shall be replaced promptly.

c. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one third (1/3) the height of the barrier.

d. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform with the existing grade, prepared and seeded.

C. MULCHING

1. Timing

In order for mulch to be effective, it must be in place prior to major storm events. There are two (2) types of standards which shall be used to assure this.

a. Apply mulch prior to any storm event.

It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Concord, to have adequate warning of significant storms.

b. Required Mulching within a specified time period.

The time period can range from 14 to 21 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.

2. Application Rate

Mulch shall be applied at a rate of between 1.5 to 2 tons per acre, or 90 to 100 pounds per 1000 square feet.

3. 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 6,000 pounds of hay or straw per acre. A tackifier may be added to the mulch.

4. Maintenance

All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied.

5. Excelsior Matting

Excelsior Matting shall be used in place of mulch on all slopes steeper than 3:1.

D. TEMPORARY GRASS COVER

1. Seedbed Preparation

Apply fertilizer at the rate of 600 pounds per acre of 10–10–10. Apply limestone (equivalent to 50 percent calcium plus magnesium oxide) at a rate of three (3) tons per acre.

2. Seeding

a. Utilize annual rye grass at a rate of 40 lbs/acre.

b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.

c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer). Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.

3. Maintenance

Temporary seedings shall be periodically inspected. At a minimum, 95% 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 barriers, check dams, etc.).

E. PERMANENT SEEDING

1. Bedding – stones larger than 1 ½ ", trash, roots, and other debris interfere 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 – lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds and amounts of lime and fertilizer should be based on an evaluation of soil tests. When a soil test is not available, the following minimum amounts should be applied:

Agricultural Limestone @ 100 lbs. per 1,000 s.f.
10–20–20 fertilizer @ 12 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. Sodding – sodding is done where it is desirable to rapidly establish cover on a disturbed area. Sodding an area may be substituted for permanent seeding procedures anywhere on site. Bed preparation, fertilizing, and placement of sod shall be performed according to the S.C.S. Handbook.

Sodding is recommended for steep sloped areas, areas immediately adjacent to sensitive water courses, easily erodible soils (fine sand/silt) etc.

5. Provide a minimum of 4 inches (5 inches loose) of topsoil to all areas to be seeded.

6. When seeded areas are mulched, seeding may be made from early spring to early October.

7. When seeded areas are not mulched, seeding should be made from early spring to May 20th or August 10 to September 30.

F. STORM DRAIN INLET PROTECTION

1. Straw/Hay Bale Inlet Structure

a. Bales shall be either wire bound or string tied with the bindings oriented around the sides rather than over and under the bales.
b. Bales shall be placed lengthwise in a single row surrounding the inlet, with the ends of adjacent bales pressed together.
c. The filter barrier shall be entrenched and backfilled. A trench shall be excavated around the inlet the width of bale to a minimum depth of four (4) inches. After the bales are staked, the excavated soil shall be backfilled and compacted against the filter barrier.
d. Each bale shall be securely anchored and held in place by at least two (2) stakes or rebars driven through the bale.
e. Loose straw/hay shall be wedged between bales to prevent water from entering between bales.
f. All structures should be inspected after every rainstorm and repairs made as necessary.
g. Sediment should be removed from the devices after the sediment has reached a maximum of one–third the depth of the trap.
h. siltsock should be removed and the area repaired as soon as the contributing drainage area to the inlet has been completely stabilized.

TIMING OF CONTROLS/MEASURES

As indicated in the sequence of Major Activities the siltsock and silt fences 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 siltsock barriers and any earth/dikes will be removed once permanent measures are established.

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 personnel 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.

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 exposure of materials and substances during construction to stormwater runoff:

Good Housekeeping:

The following good housekeeping practices will be followed on site during the construction project:

- An effort will be made to store only sufficient amounts of products to do the job.
- 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.
- Manufacturer's recommendations for proper use and disposal will be followed.
- The site superintendent will inspect daily to ensure proper use and disposal of materials.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible all of a product will be used up before disposing of the container.

Hazardous Products:

The following practices will be used to reduce the risks associated with hazardous materials:

- Products will be kept in their original containers unless they are not resealable.
- Original labels and material safety data will be retained for important product information.
- 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:
Petroleum Products:

All on site vehicles will be monitored for leaks and receive regular preventive maintenance 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.

Fertilizers:

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.

Paints:
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 manufacturer's instructions or state and local regulations.

Concrete Trucks:
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:

- 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.
- 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.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate state or local government agency, regardless of the size.
- 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 recurs. A description of the spill, its cause, and the cleanup measures will be included.
- The site superintendent responsible for day–to–day site operations will be the spill prevention and cleanup coordinator.

OPERATION & MAINTENANCE PLAN OF STORMWATER MANAGEMENT FACILITIES

Facility owner will be responsible for the operation and maintenance of all stormwater management facilities on site. At a minimum, the appropriate and relevant activities for each of the storm water management systems will be performed on the prescribed schedule.

Sweeping

1. Paved surfaces should be swept or vacuumed at least once annually. In the Spring to remove all Winter sand, and on an as–needed basis to minimize transportation of sediment during rainfall events.

Ditches, Swales and Rip–rap.

1. The open swales and ditches 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. Erosion or blockage shall be immediately repaired and a vigorous growth of vegetation should be established to maintain the stability of the swale and for its proper function.

2. The Vegetated ditch should be mowed at least monthly during the growing season and brush or trees must not be allowed to become established in the channel. Any areas where the vegetation fails will be subject to erosion and should be repaired and revegetated.

3. If stones have become displaced from the rip–rap splash pads they should be replaced immediately and chinked in to assure stability. Add additional riprap as needed. Vegetation growing through riprap should be eliminated at least yearly.

Detention system.

1. Sediments accumulated in the vegetated detention pond should be removed when the depth of the sediments reaches the pond outlet.
2. The detention pond should be mowed on a monthly basis during the growing season and debris and sediments should be cleaned from the pond as needed to maintain the detention volume of the pond.
3. The Pond outlet structure should be inspected at least on a monthly basis and after each major storm event of more than ½" of rainfall. The outlet structure should be repaired immediately if deficiencies are observed.
4. In all cases any debris observed obstructing the outlet structure should be removed immediately.
5. Removal of debris from pond bottom.
6. Removal of accumulated sediment.
7. Inspection and repair of stone trench.
8. Inspection of infiltration trench at least twice annually, and following any rainfall event exceeding 2.5" in a 24 hour period, with maintenance or rehabilitation conducted as warranted by such inspection.
9. If an infiltration system does not drain within 72 hours following a rainfall event, then a qualified professional should assess the condition of the facility to determine measures required to restore infiltration functions, including but not limited to removal of accumulated sediment or reconstruction of the infiltration trench.

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 4:1, 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 ditches, swales and detention pond slopes and bottoms 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 or parking 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.

Note:

The Owner of Record shall record at he registry of deeds documentation sufficient to provide notice to all persons that may acquire and 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 purchases to the requirements for maintenance and reporting.

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21_

NO.	REVISION	APP'D	DATE

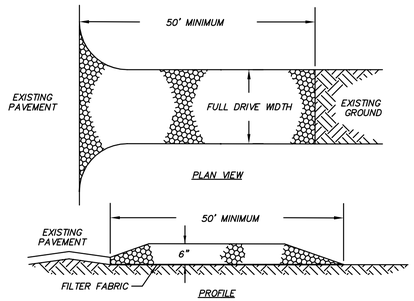
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EROSION CONTROL NOTES

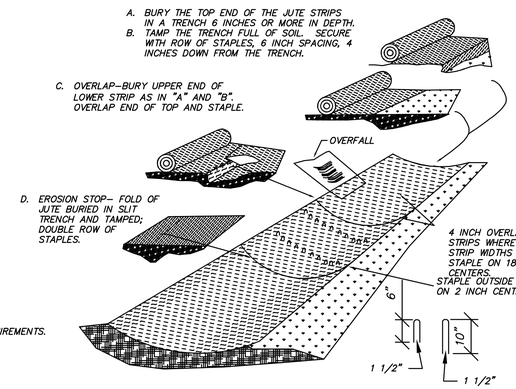


NOTES:

1. SEE EROSION CONTROL NOTES FOR MATERIAL, INSTALLATION AND MAINTENANCE REQUIREMENTS.

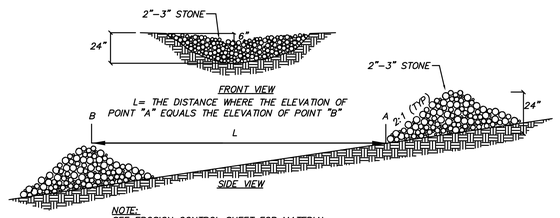
STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



JUTE MATTING DETAIL

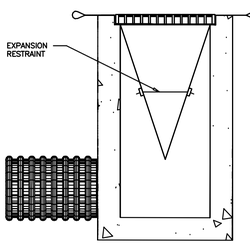
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NOTE:
SEE EROSION CONTROL SHEET FOR MATERIAL, INSTALLATION AND MAINTENANCE REQUIREMENTS.

STONE CHECK DAM

NOT TO SCALE



SILTSACK®
SPECIFICATIONS

NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS. AS SUPPLIED BY AH 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	600 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	250 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	25 %
PUNCTURE	ASTM D-4833	125 LBS
MULLEN BURST	ASTM D-3786	435 PSI
TRAPEZOID TEAR	ASTM D-4533	95 LBS
UV RESISTANCE	ASTM D-4355	70 %
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 ●

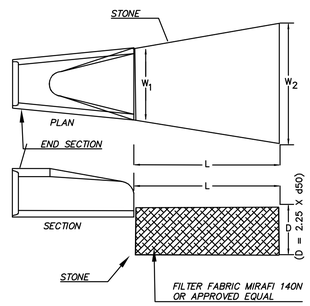
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK® CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT FILLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK®, WITH A WOVEN PILLOW INSERT.

INSTALLATION DETAIL

DETAIL OF INLET SEDIMENT CONTROL DEVICE

NOT TO SCALE



NOTES:

1. STONE SIZE AND MAT DIMENSIONS DETAILED ON PLANS.
2. STONE SHALL CONSIST OF SUB-ANGULAR FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. THE STONE SHALL BE HARD AND OF SUCH QUALITY THAT IT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING, BE CHEMICALLY STABLE AND IT SHALL BE SUITABLE IN ALL OTHER RESPECTS FOR THE PURPOSE INTENDED. THE BULK SPECIFIC GRAVITY (SATURATED SURFACE-DRY BASIS) OF THE INDIVIDUAL STONES SHALL BE AT LEAST 2.5.
3. THE STONE SHALL BE COMPOSED OF A WELL-GRADED MIXTURE DOWN TO THE ONE-INCH SIZE PARTICLE SUCH THAT 50 PERCENT OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN THE D50 SIZE SPECIFIED. A WELL-GRADED MIXTURE IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF THE LARGER STONE SIZE BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE PROGRESSIVELY SMALLER VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE SIZE IN SUCH A MIXTURE SHALL BE 1.5 TIMES THE D50 SIZE.

STONE APRON DETAIL

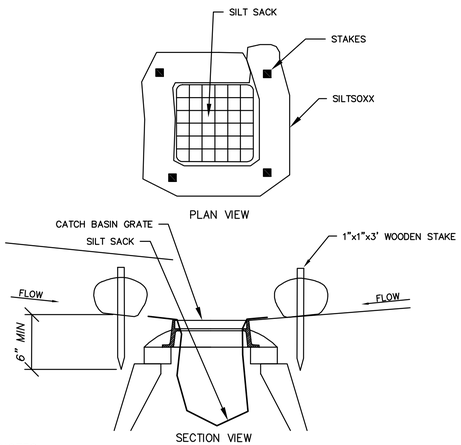
NOT TO SCALE

NOTES:

1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE (TYPE II CEMENT).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHED PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE OF THE THIRD WALL.
3. THE TONGUE AND GROOVE OF THE JOINT SHALL CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCH PER LINEAR FOOT.
4. BITUMINOUS WATERPROOF COATING TO BE APPLIED TO ENTIRE EXTERIOR OF MANHOLE.
5. THE STRUCTURE SHALL BE DESIGNED FOR H20 LOADING
6. ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT.

OUTLET STRUCTURE

NOT TO SCALE

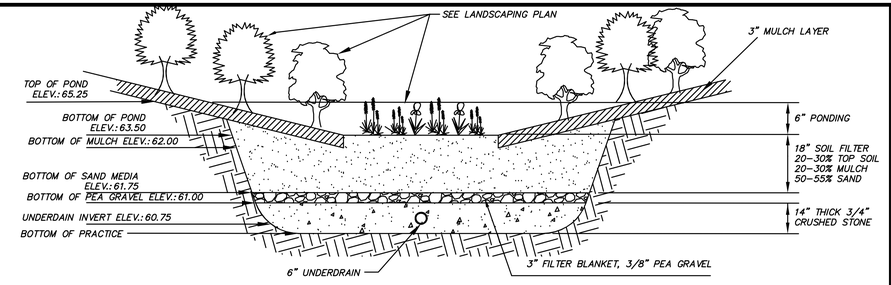


NOTES:

1. ENCLOSE STRUCTURE WITH SILTSOXX AFTER CATCH BASIN CONSTRUCTION. MAINTAIN UNTIL PAVING BINDER COURSE IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
2. IF GRATE IS AGAINST EXISTING CURB THEN SILTSOXX ARE TO BE PLACED AROUND THREE SIDES OF GRATE ONLY.
3. GRATE TO BE PLACED OVER FILTER FABRIC.
4. SILTSOXX SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

CATCH BASIN SEDIMENT TRAP

NOT TO SCALE



BIORETENTION POND SYSTEM CHART

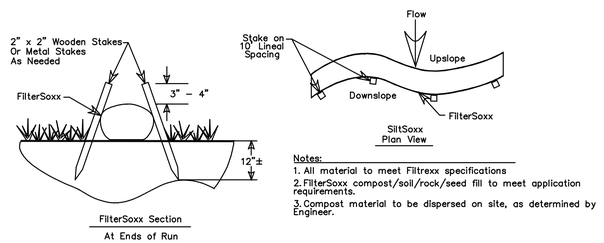
POND	POND ELEVATION						
	A	B	C	D	E	F	G
RG1	58.0	57.1	56.85	55.6	55.35	54.52	54.19

NOTES:

1. CONSTRUCT GRASSED OVERFLOW SPREADER EARLY DURING INITIAL CONSTRUCTION TO ESTABLISH TURF PRIOR TO CONSTRUCTION OF BIORETENTION SYSTEM.
2. DO NOT BEGIN CONSTRUCTION OF THE BIORETENTION AREA UNTIL LAWN AREA ON THE ENTIRE SITE AREA ESTABLISHED WITH AT LEAST 80 PERCENT TURF. FILTER ALL DRAIN INLETS IN THE SEDIMENT FOREBAYS TO PREVENT SILTATION INTO THE BIORETENTION AREA.
3. THE RAIN GARDEN SUBGRADE SHALL BE EXCAVATED TO THE DESIGN DEPTH PLUS TWO (2) INCHES. AT THAT DEPTH FOUR (4) INCHES OF COMPOST SHALL BE TILLED INTO THE EXISTING SOILS SUCH THAT THE SOILS ARE WELL MIXED.
4. DO NOT DRIVE CONSTRUCTION EQUIPMENT ON FILTER SUBGRADE NOR ON THE FILTER MATERIAL. INSTALL FILTER MATERIAL BY MEANS OF AN EXCAVATOR LOCATED ADJACENT TO THE FILTER AREA.
5. MATERIALS: CRUSHED STONE LAYER SHALL MEET NHDOT 304.4. STONE SHALL CONTAIN NO MORE THAN 5% FINES PASSING THE #200 SIEVE. TOPSOIL SHALL CONTAIN 15 TO 25% FINES PASSING THE #200 SIEVE. MULCH SHALL BE SHREDDED HARDWOOD, AGES IN A STOCKPILE OR STORED FOR AT LEAST 12 MONTH. NON-WOVEN GEOTEXTILE BE 4 TO 6 OZ. PER SQUARE YARD WITH A.O.S. OF #70 SIEVE OR LOWER, AND A MINIMUM FLOW RATE OF 125 GAL PER SQUARE FEET. UNDERDRAIN SHALL BE PERFORATED 6" PVC OR TRIPLE WALL PE PIPE; SLOPE 1/4"/FT. MINIMUM.
6. REFER TO LANDSCAPING DRAWINGS FOR GRASS SEED MIXES AND PLANTINGS. FERTILIZATION OF THE FILTER AREA SHALL BE AVOIDED UNLESS ABSOLUTELY NECESSARY TO ESTABLISH VEGETATION.
7. INITIAL ESTABLISHMENT: DURING THE FIRST 2-3 MONTHS OF ESTABLISHMENT WATER THE GARDEN ON A WEEKLY BASIS (TO SUPPLEMENT RAINFALL FOR TOTAL OF 1 INCH PER WEEK).
8. ANNUAL MAINTENANCE: IN THE SPRING OF EACH YEAR, ANY DEAD VEGETATION SHALL BE REMOVED TO ALLOW FOR NEW GROWTH, AND ANY ACCUMULATED SEDIMENT (NORMALLY AT THE ENTRANCE TO THE GARDEN) SHALL ALSO BE REMOVED. DURING THE GROWING SEASON THE RAIN GARDEN SHALL BE WEEDED TWO (2) TIMES AND ADDITIONAL HARDWOOD MULCH SHALL BE ADDED AS NEEDED TO ASSIST IN WEED SUPPRESSION. TURF AT FILTER SHALL BE MOWED NO MORE THAN 3 TIMES PER GROWING SEASON. IF WATER PONDS ON THE SURFACE FOR MORE THAN 24 HOURS DURING THE FIRST YEAR OR 72 HOURS THEREAFTER, THE FILTER SURFACE SHALL BE AERATED WITH DEEP TINES OR THE SURFACE REPLACED.
9. PLANTINGS SHALL BE NATIVE NON-INVASIVE SPECIES, SEE LANDSCAPE ARCHITECT DRAWINGS.

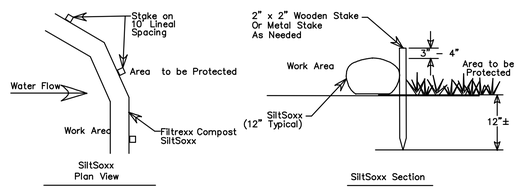
RAIN GARDEN1 (RG1)

NOT TO SCALE



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/jsoil/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

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21_

NO.	REVISION	APP'D	DATE

DATE: 5-7-21
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:19018
FILE: SITE.DWG

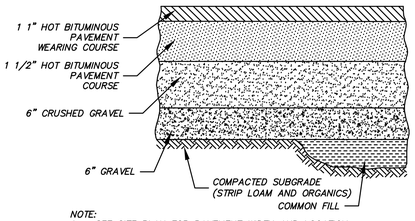
CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

EROSION CONTROL DETAILS

OWNER:
SEBRING HOLDINGS, LLC
340 CENTRAL AVE, SUITE 202
DOVER, NH 03820

APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP K, LOT 26
DOVER, NEW HAMPSHIRE

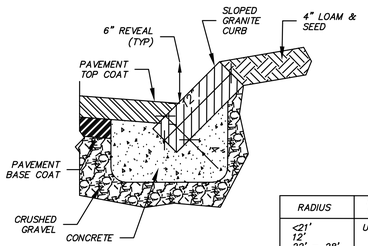
10



NOTE:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.

TYPICAL PAVEMENT SECTION

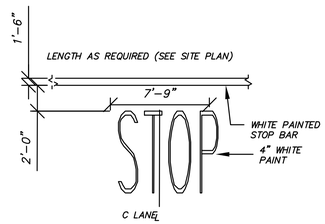
NOT TO SCALE



SLOPED GRANITE CURB

NOT TO SCALE

RADIUS	MAXIMUM LENGTH
<21'	USE CURVED CURB
12'	3'
22' – 28'	4'
29' – 35'	5'
36' – 42'	6'
43' – 49'	7'
50' – 56'	8'
57' – 60'	9'
OVER 60'	10'

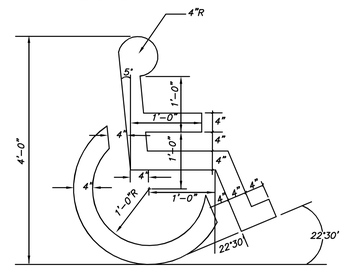


NOTE: SEE SITE PLAN FOR LOCATIONS

STOP BAR & LEGEND

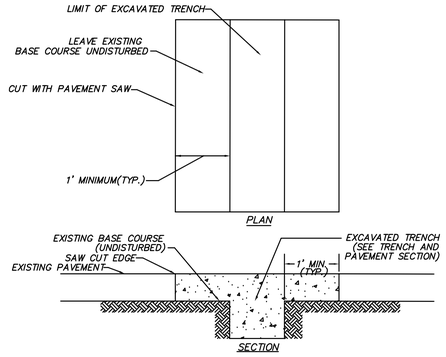
NOT TO SCALE

NOTE: SYMBOL TO BE PAINTED IN ALL HANDICAPPED SPACES



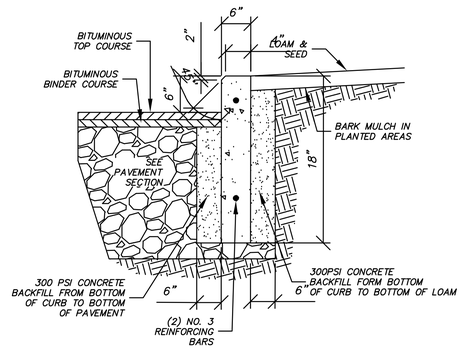
PAINTED HANDICAP SYMBOL

NOT TO SCALE



TRENCH PATCH

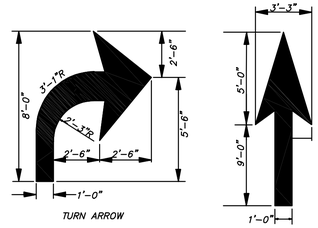
NOT TO SCALE



NOTES:
1. CONCRETE FOR CURB TO BE 4,000 PSI.
2. ALL RADII 50' AND SMALLER TO BE CONSTRUCTED USING CURVED SECTIONS.
3. JOINTS BETWEEN CURB SECTIONS SHALL BE MORTARED.

PRECAST CONCRETE CURB

NOT TO SCALE

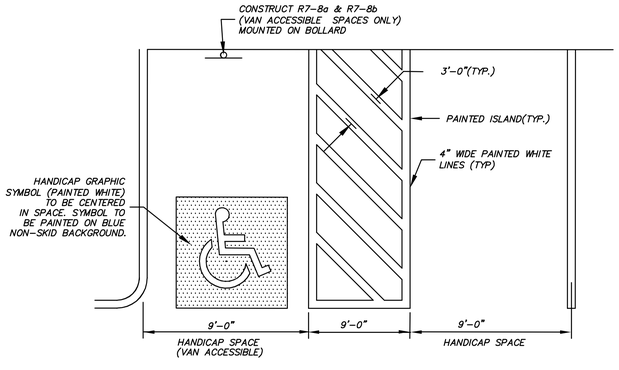


GENERAL NOTES :

1. ALL WORDS AND SYMBOLS SHALL BE RETROREFLECTIVE WHITE AND SHALL CONFORM TO THE LATEST VERSION OF THE MUTCD.
2. MULTI-WORD MESSAGES SHALL READ "UP"; THAT IS, THE FIRST WORD SHALL BE NEAREST THE APPROACHING DRIVER.
3. THE WORD "ONLY" SHALL NOT BE USED WITH THROUGH OR COMBINATION ARROWS, AND SHALL NOT BE USED ADJACENT TO A BROKEN LANE LINE. A WORD/SYMBOL SHALL PRECEED THE WORD "ONLY".
4. COMBINATION ARROWS MAY BE COMPRISED OF 2 SINGLE ARROWS (e.g. TURN AND THROUGH ARROWS). HOWEVER, THE SHAFTS OF THE ARROWS SHALL COINCIDE AS SHOWN.
5. PREFORMED WORDS AND SYMBOLS SHALL BE PRE-CUT BY THE MANUFACTURER.
6. WRONG-WAY ARROWS SHALL NOT BE SUBSTITUTED FOR THROUGH ARROWS.

PAINTED ARROWS

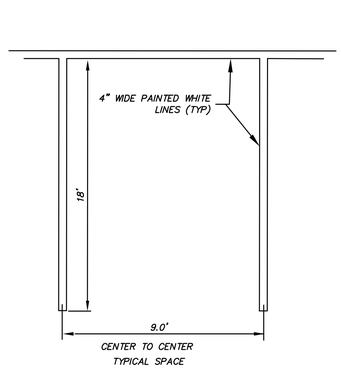
NOT TO SCALE



NOTE:
ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF ASSHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.

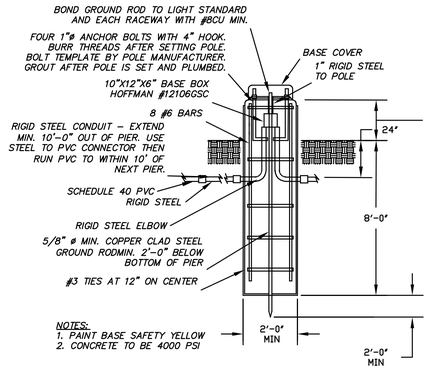
HANDICAP PARKING STALL

NOT TO SCALE



SINGLE STRIPED PARKING STALL

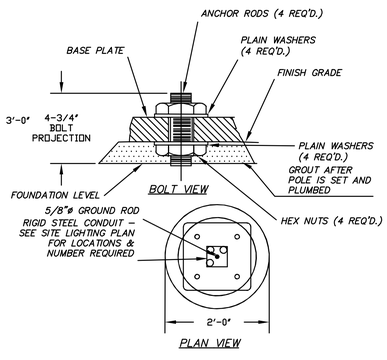
NOT TO SCALE



NOTES:
1. PAINT BASE SAFETY YELLOW
2. CONCRETE TO BE 4000 PSI

LIGHT POLE BASE

NOT TO SCALE



NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

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NO.	REVISION	APP'D	DATE

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DESIGN BY: SRD
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PROJECT NO:19018
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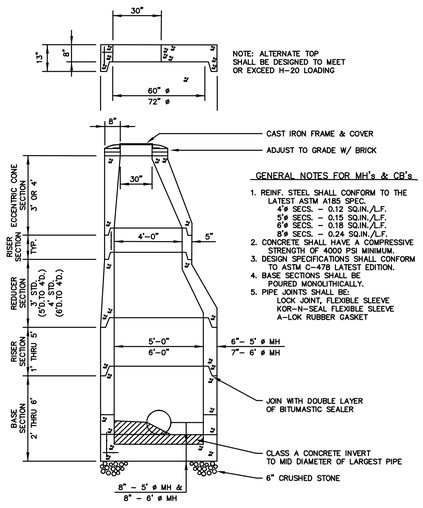
CIVILWORKS NEW ENGLAND
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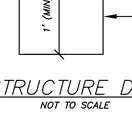
DETAIL SHEET

11



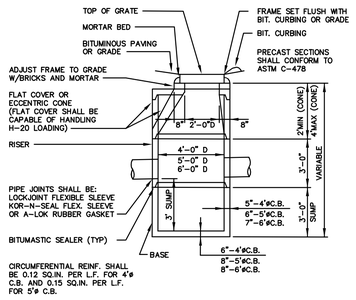
STANDARD 5 FT. & 6 FT. DIA. MANHOLES

NOT TO SCALE



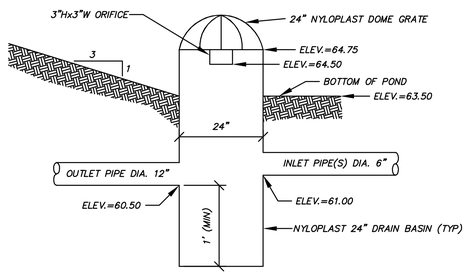
GRATE DETAIL

NOT TO SCALE



PRE-CAST REINFORCED CATCH BASIN

NOT TO SCALE

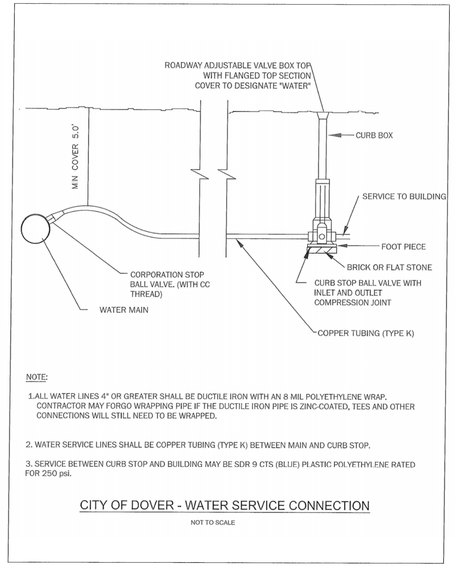


OUTLET STRUCTURE DETAIL (RG1)

NOT TO SCALE

%%u SPECIFICATIONS %%u

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 withneoprene "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 form to the Standard Specification Section 604.2.4.

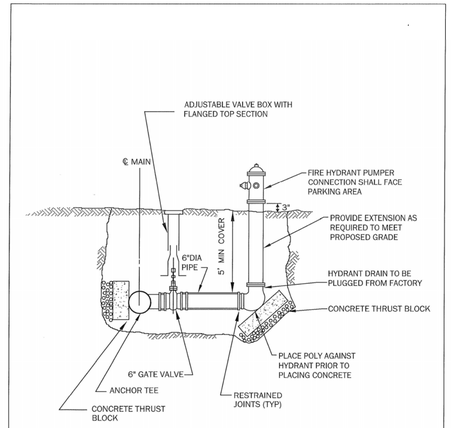


NOTE:

1. ALL WATER LINES 4" OR GREATER SHALL BE DUCTILE IRON WITH AN 8 MIL POLYETHYLENE WRAP. CONTRACTOR MAY FORGO WRAPPING PIPE IF THE DUCTILE IRON PIPE IS ZINC-COATED, TEES AND OTHER CONNECTIONS WILL STILL NEED TO BE WRAPPED.
2. WATER SERVICE LINES SHALL BE COPPER TUBING (TYPE K) BETWEEN MAIN AND CURB STOP.
3. SERVICE BETWEEN CURB STOP AND BUILDING MAY BE SDR 9 CTS (BLUE) PLASTIC POLYETHYLENE RATED FOR 250 psi.

CITY OF DOVER - WATER SERVICE CONNECTION

NOT TO SCALE



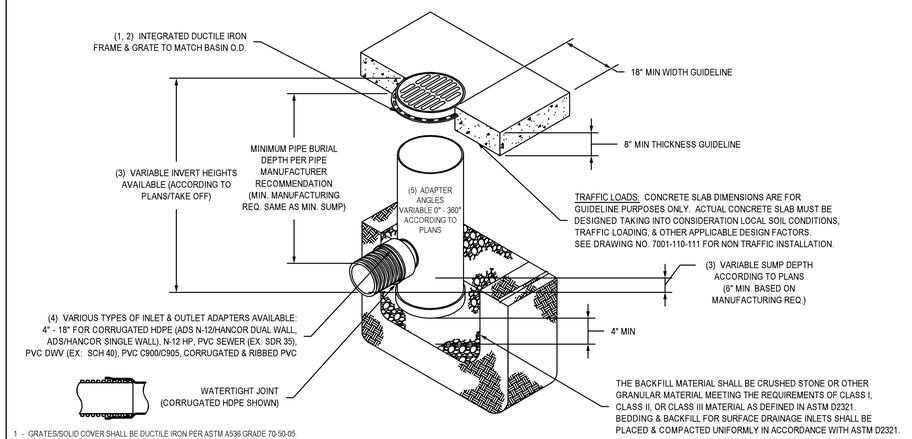
NOTES:

1. FIRE HYDRANT TO BE EDDY 2641.
2. HYDRANT TO BE PAINTED RED.
3. HYDRANT SHALL OPEN LEFT.

CITY OF DOVER - HYDRANT

NOT TO SCALE

NYLOPLAST 24" DRAIN BASIN:



1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
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

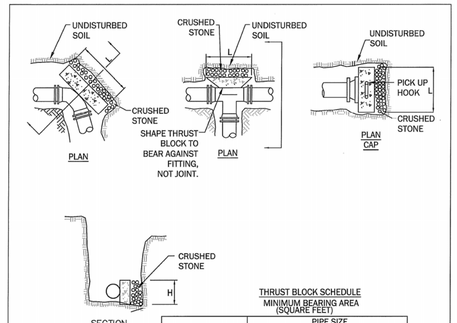
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DRAWN BY EBC	MATERIAL	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 04-03-06			
REVISED BY NMH	PROJECT NO./NAME	TITLE	
DATE 03-14-16		18 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL	
DWG SIZE A	SCALE 1:30 SHEET 1 OF 1 DWG NO. 7001-110-191 REV E		

DETAIL NOTES:
1) DRAIN MANHOLES PDMH1, PDMH2, PDMH3 & OS-RG4 TO USE SOLID COVERS.
2) RAINGARDEN AND DETENTION POND OUTLETS TO USE DOME COVERS
3) SEE DRAINAGE PLAN FOR INVERTS, INLETS AND OUTLET LOCATION AND SIZES.

TYPICAL OUTLET STRUCTURE DETAIL

NOT TO SCALE



THRUST BLOCK SCHEDULE
MINIMUM BEARING AREA (SQUARE FEET)

	PIPE SIZE					
Nominal Dia. (in)	4	6	8	10	12	16
Tees, Caps, Plugs, & Tapping Sleeves	1.05	2.32	4.15	6.37	9.15	16.23
90 Degree Bends	1.48	3.29	5.86	9.01	12.93	22.96
45 Degree Bends	0.80	1.78	3.17	4.88	7.00	12.42
22-1/2 Degree Bends	0.41	0.91	1.62	2.49	3.57	6.33
11-1/4 Degree Bends	0.21	0.46	0.81	1.25	1.79	3.18

System Pressure: 100 psi
Safety Factor: 1.5
Soil Bearing Capacity: 2,000 psf

THE MINIMUM BEARING AREAS SHOWN IN THE THRUST BLOCK SCHEDULE ARE BASED ON A SYSTEM PRESSURE OF 100 PSI. IF THE SYSTEM PRESSURE IS ABOVE 100 PSI, INCREASE THE NOTED AREAS PROPORTIONAL TO THE ACTUAL SYSTEM PRESSURE. FOR EXAMPLE, IF THE ACTUAL SYSTEM PRESSURE IS 160 PSI, MULTIPLY THE ABOVE VALUES BY 160%.

CITY OF DOVER - PRECAST CONCRETE THRUST BLOCK & ANCHOR

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21_

NO.	REVISION	APP'D	DATE

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

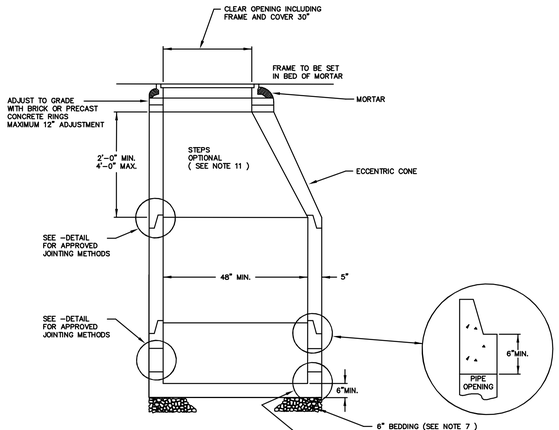
DATE: 5-7-21
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:19018
FILE: SITE.DWG

DETAIL SHEET

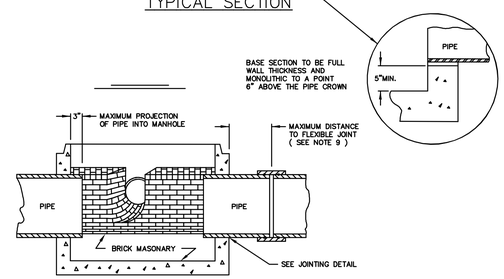
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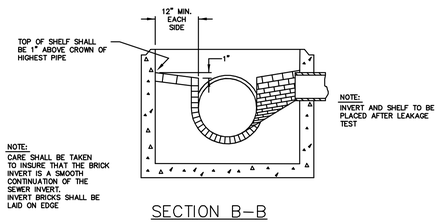
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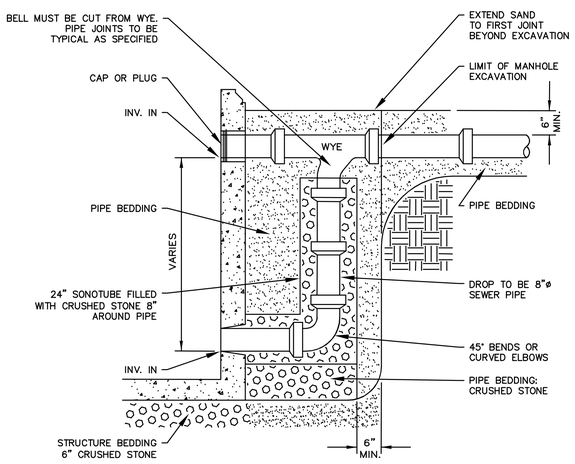
TYPICAL SECTION



SECTION A-A



SECTION B-B

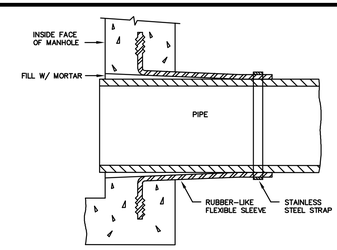


EXTERNAL DROP

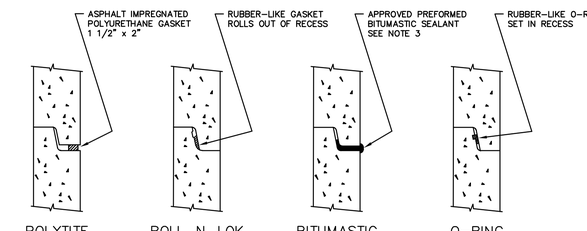
NOTE:
DIMENSIONS AND CONSTRUCTION OF DROP MANHOLE TO BE SIMILAR TO TYPICAL MANHOLE EXCEPT AS SHOWN

NOTES:

1.) IT IS THE INTENTION OF THE COMMISSION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY BY THE COMMISSION FOR THE INTENDED SERVICE SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH OR WITHOUT STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH OR WITHOUT REINFORCEMENT, IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H-20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
2.) BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED.
3.) PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478.
4.) LEAKAGE TEST SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS.
5.) INVERTS AND SHELVES MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.
6.) FRAMES AND COVERS MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING A 3-INCH (MINIMUM HEIGHT) LETTER "S" FOR SEWER OR "D" FOR DRAINS SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
7.) BEDDING SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33
100% PASSING 1 INCH SCREEN 0-10% PASSING # 4 SIEVE
90-100% PASSING 3/4 INCH SCREEN 0- 5% PASSING # 8 SIEVE
20-55% PASSING 3/8 INCH SCREEN
WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1 1/2 INCH TO 1/2 INCH SHALL BE USED.
8.) CONCRETE FOR DROP SUPPORT SHALL CONFORM TO THE REQUIREMENT FOR CLASS A (3000#) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATIONS AS FOLLOWS:
CEMENT: 6.0 BAGS PER CUBIC YARD
WATER: 5.75 GALLONS PER BAG CEMENT
MAXIMUM SIZE OF AGGREGATE: 1 INCH
9.) FLEXIBLE JOINT A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:
RCP & CI PIPE - ALL SIZES - 48"
AC & VC PIPE - UP THROUGH 12" DIA -18"
AC & VC PIPE - LARGER THAN 12" DIA - 36"
DI PIPE - NONE REQUIRED
PVC (ASTM 3034) - UP THROUGH 15" DIA. - NONE REQUIRED
PVC (ASTM F 679) - LARGER THAN 15" DIA. - 48" - 60"
PVC (ASTM F 789) - ALL SIZES - 48" - 60"
ABS (ASTM D 2680) - ALL SIZES - SAME AS VC ABOVE
- UNDER SEVERE CONDITIONS WHEN DIFFERENTIAL SETTING CANNOT BE CONTROLLED WITHIN NORMAL LIMITS, VARIATIONS IN THE STUB LENGTH MAY BE NECESSARY. OTHER PLASTIC PIPES SHALL BE REVIEWED ON A CASE BY CASE BASIS.
10.) SHALLOW MANHOLE IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS.
11.) MANHOLE STEPS MAY BE PERMITTED UPON REQUEST BY THE OWNER AS SECONDARY ADDITIONAL SAFETY FEATURE SUPPLEMENTARY TO THE PRIMARY PORTABLE LADDER ENTRY AND WHEN INSTALLED UNDER THE FOLLOWING CONDITIONS:
1. THE STEPS SHALL BE MANUFACTURED OF 5/8 INCH ROUND STAINLESS STEEL OR FORGED ALUMINUM ALLOY. THEY SHALL BE SHAPED SO THAT THEY CANNOT BE PULLED OUT OF THE CONCRETE WALL IN WHICH THEY ARE EMBEDDED.
2 THE STEPS SHALL BE EMBEDDED IN THE CONCRETE BY THE MANUFACTURER DURING MANUFACTURE OR IMMEDIATELY FOLLOWING REMOVAL OF THE FORMS. SECURING THE STEPS WITH MORTAR IN DRILLED OR CAST HOLES, WILL NOT BE ACCEPTABLE.
3 THE STEPS SHALL BE OF THE DROP TYPE WITH A DEPRESSED SECTION FOR HANDHOLD, APPROXIMATELY 14" X 10" IN DIMENSION.

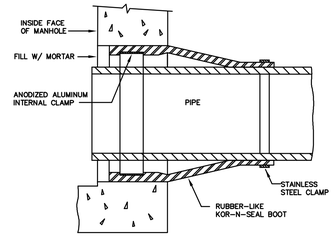


LOCK-JOINT FLEXIBLE MANHOLE SLEEVE
(OR EQUAL)

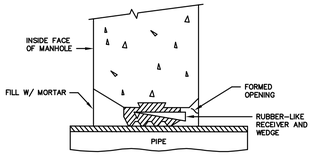


NOTE: ALL GASKETS AND SEALANTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

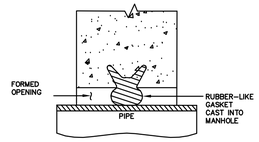
DETAIL - B



KOR - N - SEAL JOINT SLEEVE
(OR EQUAL)



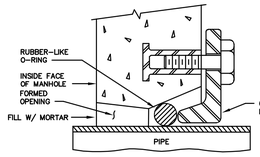
PRESS-WEDGE II
(OR EQUAL)



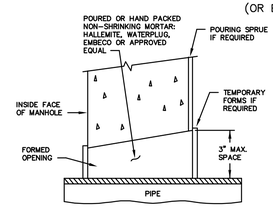
A - LOK
(OR EQUAL)

NOTE: ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS

DETAIL - A



RES-SEAL
(OR EQUAL)



NON-SHRINKING MORTAR

NOTES:

1.) HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE COMMISSION, WHICH TYPE SHALL, IN GENERAL, DEPEND FOR WATERTIGHTNESS UPON AN ELASTOMERIC OR MASTIC-LIKE GASKET.

2.) PIPE TO MANHOLE JOINTS SHALL BE ONLY AS APPROVED BY THE COMMISSION AND IN GENERAL, WILL DEPEND FOR WATERTIGHTNESS UPON EITHER AN APPROVED NON-SHRINKING MORTAR OR ELASTOMERIC SEALANT.

3.) FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY. APPROVED BITUMASTIC SEALANTS:
RAM-NEK
KENT SEAL NO. 2
EZ

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21_

NO.	REVISION	APP'D	DATE

DATE: 5-7-21
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:19018
FILE: SITE.DWG

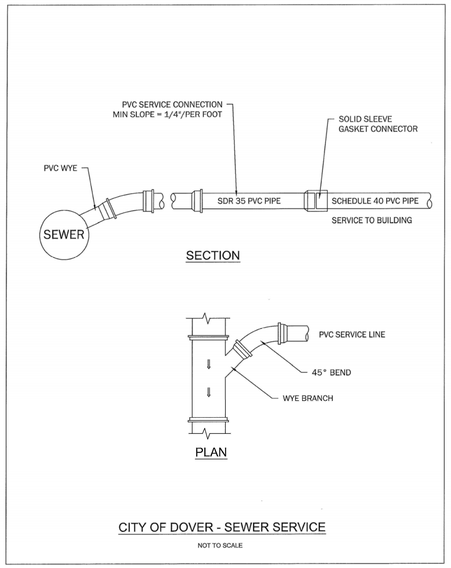
CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

DETAIL SHEET

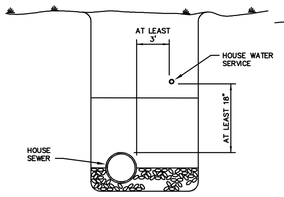
OWNER:
SEBRING HOLDINGS, LLC
340 CENTRAL AVE, SUITE 202
DOVER, NH 03820

APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP K, LOT 26
DOVER, NEW HAMPSHIRE

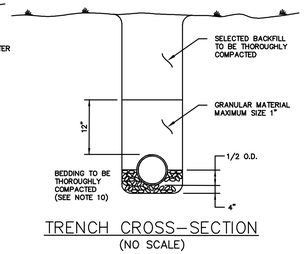
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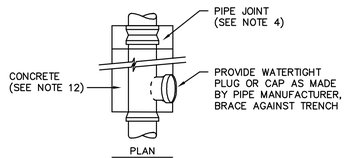
Appendix B Page 15

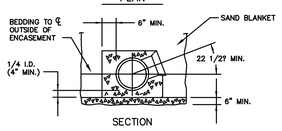


WATER AND SEWER
IN SAME TRENCH
(NO SCALE) – (SEE NOTE 9)

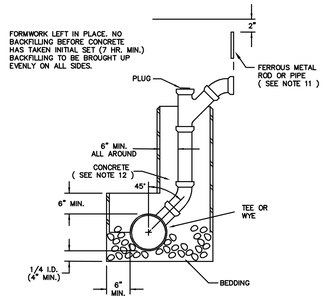


TRENCH CROSS–SECTION
(NO SCALE)





CONCRETE FULL ENCASEMENT
(NO SCALE)



CHIMNEY
(SEE NOTE 13)
(NO SCALE)

NOTES:

1.) MINIMUM SIZE PIPE FOR HOUSE SERVICE SHALL BE FOUR INCHES.

2.) PIPE AND JOINT MATERIALS:
- A) VITRIFIED CLAY PIPE
  - 1 – PIPE AND FITTINGS SHALL BE EXTRA STRENGTH CLAY PIPE CONFORMING TO THE REQUIREMENTS OF ASTM C–700
  - 2 – JOINTS SHALL BE MADE WITH OIL RESISTANT GASKET IN ACCORDANCE WITH ASTM C–425 TYPE III. MANUFACTURERS INSTRUCTIONS FOR INSTALLATION SHALL BE FOLLOWED.
- B) ASBESTOS–CEMENT–NON–PRESSURE SEWER PIPE
  - 1 – PIPE AND FITTINGS SHALL CONFORM TO ASTM TENTATIVE SPECIFICATIONS C 644 TYPE II.
  - 2 – JOINTS SHALL BE OF THE SLEEVE – COUPLING TYPE CONFORMING TO ASTM SPECIFICATIONS C 644 TYPE II. COMPRESSION RINGS SHALL BE OF OIL RESISTANT RUBBER TYPE OR ELASTOMERIC MATERIAL AND SHALL CONFORM TO ASTM SPECIFICATION D 1869. MANUFACTURERS INSTRUCTIONS FOR INSTALLATION SHALL BE FOLLOWED.
- C) CAST – IRON PIPE FITTINGS AND JOINTS
  - 1 – CAST IRON PIPE ⅝u AND FITTINGS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE AMERICAN NATIONAL STANDARDS INSTITUTE
    - A21 1 THICKNESS DESIGN OF CAST IRON PIPE.
    - A21 4 CEMENT MORTAR LINING FOR CAST IRON PIPE AND FITTINGS
    - A21 6 CAST IRON PIPE CENTRIFUGALLY CAST IN METAL MOLDS FOR WATER OR OTHER LIQUIDS.
    - A21 8 CAST IRON PIPE CENTRIFUGALLY CAST IN SAND LINED MOLDS FOR WATER OR OTHER LIQUIDS.
    - A21 10 CAST IRON FITTINGS, 2 INCHES THROUGH 48 INCHES FOR WATER AND OTHER LIQUIDS.
  - 2 – JOINTS SHALL BE OF THE MECHANICAL OR PUSH–ON TYPE JOINTS AND GASKETS SHALL CONFORM TO
    - A21 11 RUBBER GASKET JOINTS FOR CAST IRON PRESSURE PIPE AND FITTINGS.
- D) DUCTILE – IRON PIPE, FITTINGS AND JOINTS
  - 1 – DUCTILE IRON PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE UNITED STATES OF AMERICA STANDARDS INSTITUTE
    - A21 50 THICKNESS DESIGN OF DUCTILE IRON PIPE AND WITH ASTM A–536 DUCTILE IRON CASTINGS.
    - A21 51 DUCTILE IRON PIPE, CENTRIFUGALLY CAST IN METAL MOLDS OR SAND–LINED MOLDS FOR WATER OR OTHER LIQUIDS.
  - 2 – JOINTS SHALL BE AS SPECIFIED IN C2 ABOVE, CAST IRON PIPE JOINTS.

3.) DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.

4.) JOINTS SHALL BE DEPENDENT UPON A NEOPRENE OR ELASTOMERIC GASKET FOR WATER–TIGHTNESS. ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIALS USED. WHERE DIFFERING MATERIALS ARE TO BE CONNECTED, AS AT THE STREET SEWER WYE OR AT THE FOUNDATION WALL, APPROPRIATE MANUFACTURED ADAPTORS SHALL BE USED.

5.) TEES OR WYES. WHERE A TEE OR WYE IS NOT AVAILABLE IN THE EXISTING STREET SEWER, AN APPROPRIATE CONNECTION SHALL BE MADE FOLLOWING MANUFACTURERS INSTRUCTIONS USING A BOLTED, CLAMPED, OR EPOXY – CEMENTED SADDLE TAPPED INTO A SMOOTHLY DRILLED OR SAWN OPENING IN THE SEWER. THE PRACTICE OF BREAKING AN OPENING WITH A SLEDGE HAMMER, STUFFING CLOTH OR OTHER SUCH MATERIAL AROUND THE JOINT, OR APPLYING MORTAR TO HOLD THE CONNECTION, AND ANY OTHER SIMILAR CRUDE PRACTICES OR INEPT OR HASTY IMPROVISATIONS WILL NOT BE PERMITTED. THE CONNECTION SHALL BE CONCRETE ENCASED AS SHOWN IN THE DETAIL UP TO AND INCLUDING 15" DIAMETER. (DOES NOT APPLY TO INSTALLATIONS WHERE 'Ts' & 'Ys' ARE USED).

6.) PIPE INSTALLATION. THE PIPE SHALL BE HANDLED, PLACED, AND JOINTED IN ACCORDANCE WITH THE INSTALLATION GUIDES OF THE APPROPRIATE MANUFACTURER. IT SHALL BE CAREFULLY BEDDED ON A 4 INCH LAYER OF CRUSHED STONE AND/OR GRAVEL AS SPECIFIED IN NOTE 10. BEDDING AND RE–FILL FOR A DEPTH OF 12 INCHES ABOVE THE TOP OF THE PIPE SHALL BE CAREFULLY AND THOROUGHLY TAMPED BY HAND OR WITH APPROPRIATE MECHANICAL DEVICES.

THE PIPE SHALL BE LAID AT A CONTINUOUS AND CONSTANT GRADE FROM THE STREET SEWER CONNECTION TO THE HOUSE FOUNDATION AT A GRADE OF NOT LESS THAN 1/8 INCH PER FOOT. PIPE JOINTS MUST BE MADE UNDER DRY CONDITIONS. IF WATER IS PRESENT, ALL NECESSARY STEPS SHALL BE TAKEN TO DEWATER THE TRENCH.

7.) TESTING. THE COMPLETED HOUSE SEWER SHALL BE SUBJECTED TO A LEAKAGE TEST IN ANY OF THE FOLLOWING MANNERS (PRIOR TO BACKFILLING):
- A) AN OBSERVATION TEE SHALL BE INSTALLED AS SHOWN AND, WHEN READY FOR TESTING, AN INFLATABLE BLADDER OR PLUG SHALL BE INSERTED JUST UPSTREAM FROM THE OPENING IN THE TEE. AFTER INFLATION, WATER SHALL BE INTRODUCED INTO THE SYSTEM ABOVE THE PLUG TO A HEIGHT OF 5 FEET ABOVE THE LEVEL OF THE PLUG.
- B) THE PIPE SHALL BE LEFT EXPOSED AND LIBERALLY HOSED WITH WATER, TO SIMULATE, AS NEARLY AS POSSIBLE, WET TRENCH CONDITIONS OR, IF THE TRENCH IS WET, THE GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. INSPECTIONS FOR LEAKS SHALL BE MADE THROUGH THE CLEANOUT WITH A FLASHLIGHT.
- C) DRY FLUORESCENE DYE SHALL BE SPRINKLED INTO THE TRENCH OVER THE PIPE. IF THE TRENCH IS DRY, THE PIPE SHALL BE LIBERALLY HOSED WITH WATER, OR IF THE TRENCH IS WET, GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. OBSERVATION FOR LEAKS SHALL BE MADE IN THE FIRST DOWNSTREAM MANHOLE.

LEAKAGE OBSERVED IN ANY OF THE ABOVE ALTERNATE TESTS SHALL BE CAUSE FOR NON–ACCEPTANCE AND THE PIPE SHALL BE DUG–UP IF NECESSARY AND RE–LAID SO AS TO ASSURE WATER TIGHTNESS.

8.) ILLEGAL CONNECTION. NOTHING BUT SANITARY WASTE FLOW FROM HOUSE TOILETS, SINKS, LAUNDRY ETC. SHALL BE PERMITTED. ROOF LEADERS, FOOTING DRAINS OR SUMP PUMPS OR ANY OTHER SIMILAR CONNECTION CARRYING RAIN WATER, DRAINAGE OR GROUND WATER, SHALL NOT BE PERMITTED.

9.) HOUSE WATER SERVICE SHOULD NOT BE LAID IN THE SAME TRENCH AS SEWER SERVICE, BUT WHEN NECESSARY, SHALL BE PLACED ABOVE AND TO ONE SIDE OF THE HOUSE SEWER AS SHOWN.

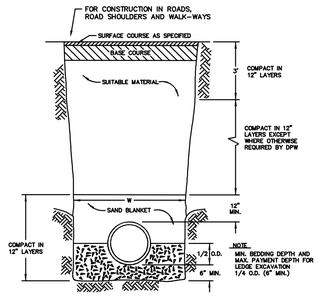
10.) BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATERIAL AND MEETING ASTM C33–67.
100% PASSING 1 INCH SCREEN; 90–100% PASSING 3/4 INCH SCREEN
20–55% PASSING 3/8 INCH SCREEN; 0– 10% PASSING #4 SIEVE
0– 5% PASSING #8 SIEVE
WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, SCREENED GRAVEL OR CRUSHED STONE 1 1/2 INCH TO 1/2 INCH SHALL BE USED.

11.) LOCATION. THE LOCATION OF THE TEE OR WYE SHALL BE RECORDED AND FILED IN THE MUNICIPAL RECORDS. IN ADDITION, A FERROUS METAL ROD OR PIPE SHALL BE PLACED OVER THE TEE OR WYE AS DESCRIBED IN THE TYPICAL "CHIMNEY" DETAIL TO AID IN LOCATING THE BURIED PIPE WITH A DIP NEEDLE OR PIPEFINDER.

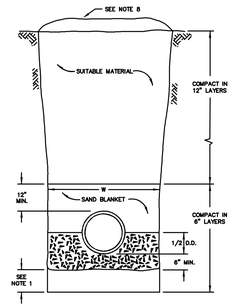
12.) CONCRETE. CONCRETE SHALL CONFORM TO THE REQUIREMENTS FOR CLASS A (3000 PSI) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATIONS AS FOLLOWS:
CEMENT – 6.0 BAGS / C.Y. WATER – 5.75 GALS. / BAG CEMENT
AGGREGATE – 1 1/2" MAX.

13.) CHIMNEYS: IF VERTICAL DROP INTO SEWER IS GREATER THAN 4', A CHIMNEY SHALL BE CONSTRUCTED FOR THE HOUSE CONNECTION.

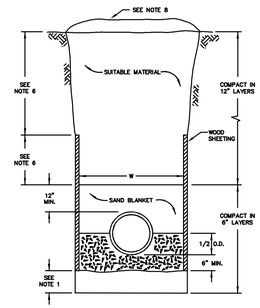
STANDARD TRENCH SECTION



LEDGE CONSTRUCTION



EARTH CONSTRUCTION



EARTH CONSTRUCTION WITH SHEETING

NOTES:

1.) ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE. REFILL WITH BEDDING MATERIAL. SEE ALSO NOTE 7.

2.) BEDDING : SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33 STONE SIZE NO. 67.

100% PASSING	1 INCH SCREEN
90 – 100% PASSING	3/4 INCH SCREEN
20 – 55% PASSING	3/8 INCH SCREEN
0 – 10% PASSING	#4 SIEVE
0 – 5% PASSING	#8 SIEVE

– CRUSHED STONE 1/2 INCH – 1 1/2 INCH MAY BE USED INSTEAD OF SCREENED GRAVEL WHERE ALLOWED BY THE ENGINEER.

3.) SAND BLANKET : CLEAN SAND FREE FROM ORGANIC MATTER SO GRADED THAT 90–100% PASSES A 1/2 INCH SIEVE AND NOT MORE THAN 15% WILL PASS A #200 SIEVE.

4.) SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALK–WAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX 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.

IN CROSS–COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK OR PEAT, IF HE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE SEWER FOR MAINTENANCE AND POSSIBLY RECONSTRUCTION, WHEN NECESSARY, WILL BE PRESERVED.

5.) BASE COURSE , IF ORDERED BY THE ENGINEER, SHALL MEET THE REQUIREMENTS OF DIVISION 300 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF NEW HAMPSHIRE, DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS, (D.O.T.).

6.) WOOD SHEETING . IF REQUIRED. WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID–DIAMETER, IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE. WHERE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE.

7.) W = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE O.D. W SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.

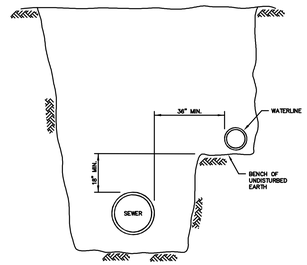
8.) FOR CROSS COUNTRY CONSTRUCTION , BACKFILL OR FILL SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

9.) CONCRETE FOR ENCASEMENT SHALL CONFORM TO THE REQUIREMENTS FOR CLASS A (3000#) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATIONS AS FOLLOWS:
CEMENT: 6.0 BAGS PER CUBIC YARD
WATER : 5.75 GALLONS PER BAG CEMENT
MAXIMUM SIZE OF AGGREGATE: 1 INCH

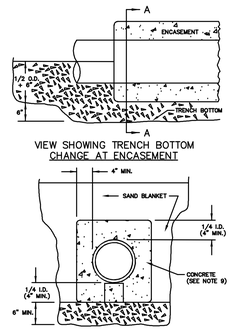
10.) NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL COMMISSION (NH DES) DESIGN STANDARDS REQUIRE 10 FT. SEPARATION. HOWEVER, SHOULD CONSTRUCTION OPERATIONS REVEAL OR EXPOSE A WATERLINE (MAIN OR SERVICE) RUNNING APPROXIMATELY PARALLEL AND LESS THAN 10 FT. HORIZONTAL FROM THE PROPOSED SEWER INSTALLATION AND WHERE IT IS NOT PRACTICABLE TO RELOCATE THE SEWER, THE FOLLOWING METHODS OF PROTECTION MUST BE EMPLOYED.

A. IF THE WATERLINE CAN BE KEPT AT LEAST 18 INCHES ABOVE AND 3 FEET TO ONE SIDE OF THE SEWER, AS SHOWN AND SUPPORTED ON A BENCH OF ORIGINAL SOIL, NO OTHER PROTECTION IS REQUIRED.

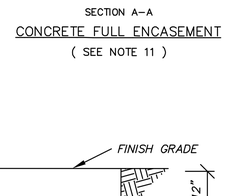
11.) IF FULL CASEMENT IS UTILIZED, DEPTH OF CONCRETE BELOW PIPE SHALL BE 1/4 I.D. (4" MIN.) BLOCK SUPPORT SHALL BE SOLID CONCRETE BLOCKS.



WATER AND SEWER IN SAME TRENCH
(SPECIAL CONDITIONS SEE NOTE 10)

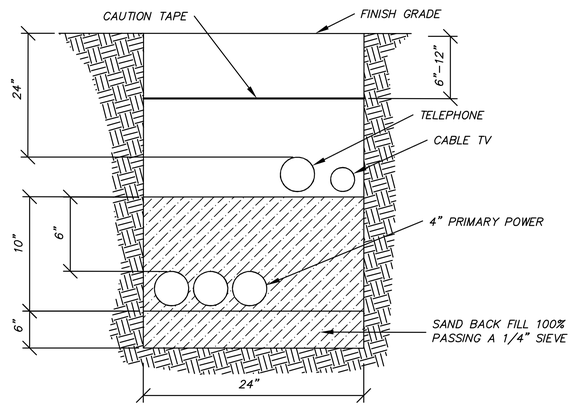


VIEW SHOWING TRENCH BOTTOM
CHANGE AT ENCASEMENT



SECTION A–A

CONCRETE FULL ENCASEMENT
(SEE NOTE 11)



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

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21_

NO.	REVISION	APP'D	DATE

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

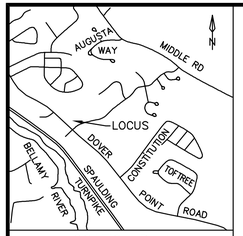
DATE: 5–7–21
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:19018
FILE: SITE.DWG

OWNER:
SEBRING HOLDINGS, LLC
340 CENTRAL AVE, SUITE 202
DOVER, NH 03820

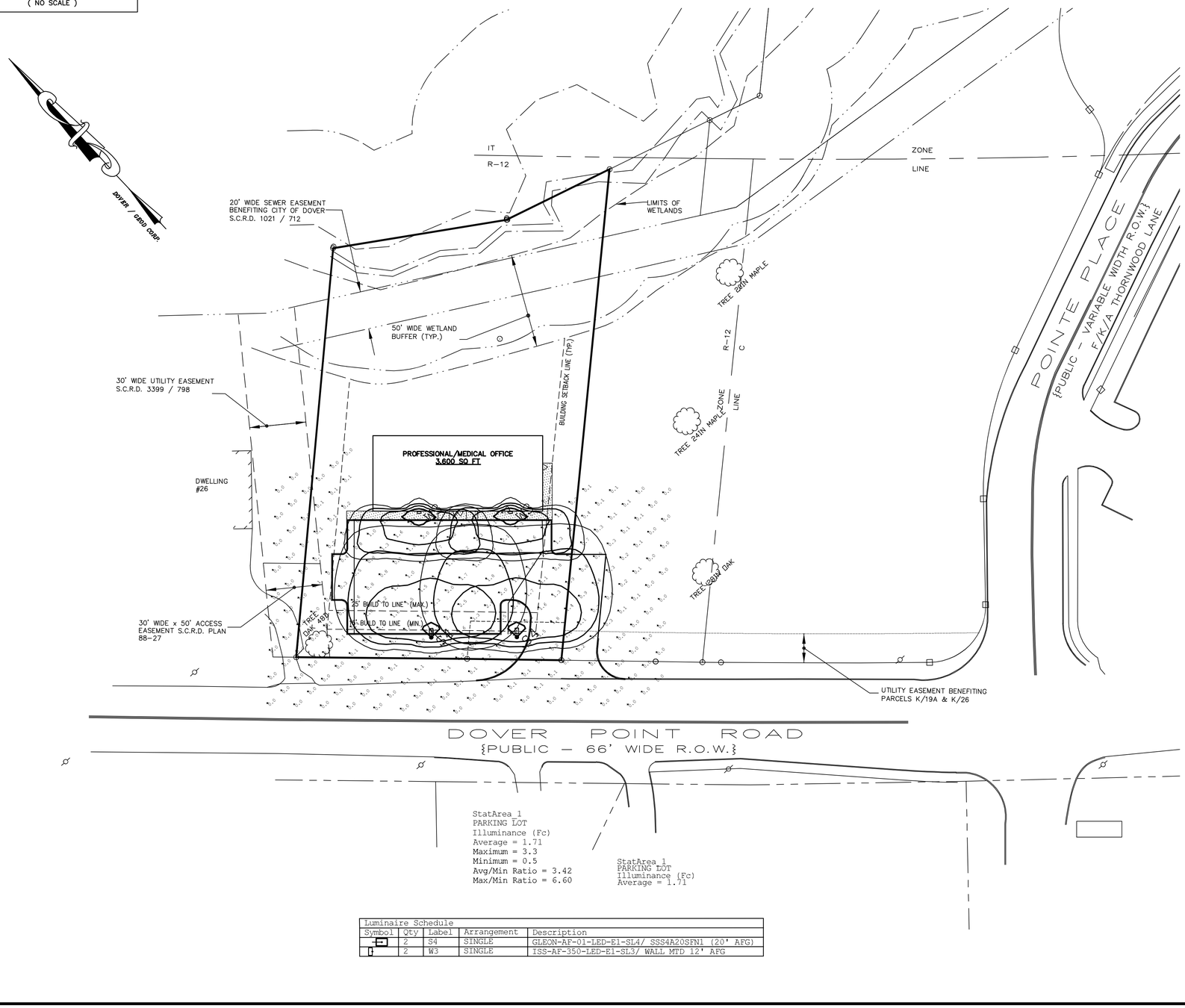
APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP K, LOT 26
DOVER, NEW HAMPSHIRE

DETAIL SHEET

14



LOCATION PLAN
(NO SCALE)



Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
	2	S4	SINGLE	GLEON-AF-01-LED-E1-SL4/ SSS4A20SFN1 (20' AFG)
	2	W3	SINGLE	ISS-AP-350-LED-E1-SL3/ WALL MTD 12' AFG

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

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PLANNING FILE NO.: P21_

NO.	REVISION	APP'D	DATE

DATE: 5-7-21
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:JH
PROJECT NO:19018
FILE: SITE.DWG

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

LIGHTING PLAN

OWNER:
SEBRING HOLDINGS, LLC
340 CENTRAL AVE, SUITE 202
DOVER, NH 03820

APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP K, LOT 26
DOVER, NEW HAMPSHIRE

15

Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

Impact Elite LED

Wall Mount Luminaire

Typical Applications

Outdoor • Wall Mount • Walkways

Interactive Menu

- Ordering Information page 2
- Product Specifications page 2
- Energy and Performance Data page 3
- Control Options page 4

Product Certifications

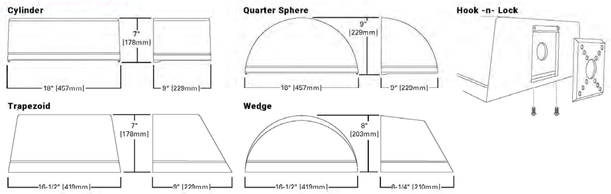
Quick Facts

- 10 Optical Distributions
- Lumen packages range from 2,459 to 8,123 (20W - 66W)
- Efficacy up to 143 lumens per watt

Connected Systems

- Enlighted
- WaveLinx

Dimensional Details



Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

Impact Elite LED

Wall Mount Luminaire

Typical Applications

Outdoor • Wall Mount • Walkways

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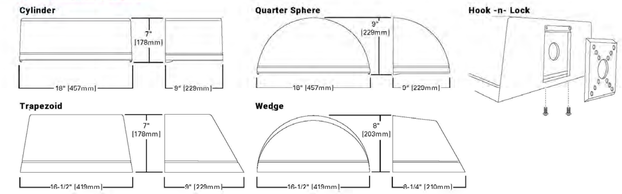
Quick Facts

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Connected Systems

- Enlighted
- WaveLinx

Dimensional Details



COOPER Lighting Solutions

PS500043EN page 1
January 7, 2021 4:45 PM



SSS SQUARE
STRAIGHT STEEL

Steel Poles

Catalog #		Type	
Project			
Comments		Date	
Prepared by			

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.

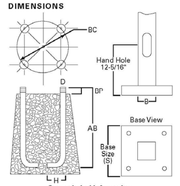
ORDERING INFORMATION

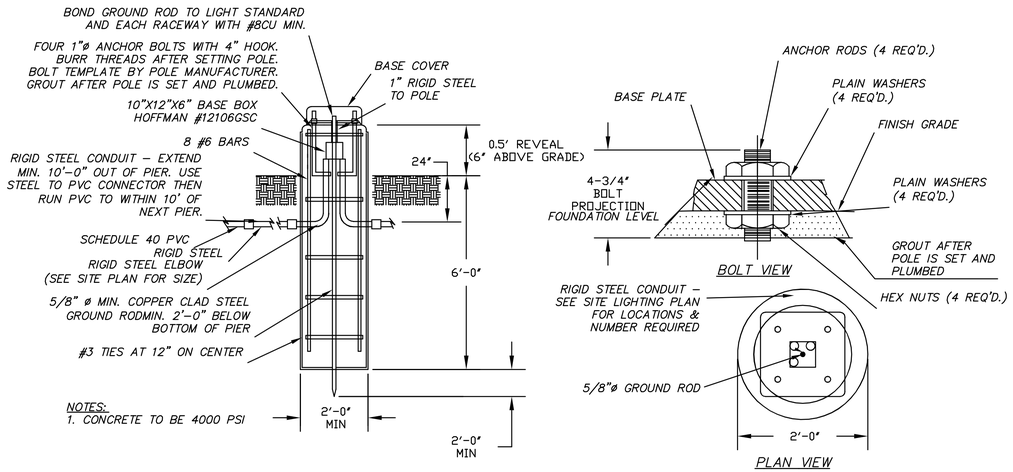
SAMPLE NUMBER: SSA5A20SFM1XG

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 (5" 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[2] 4=4 at 90° 5=2 at 90° X=None	X=None 2=2' 2=2.5' 4=4' 6=6' 8=8'	A=1/2" Tapped Hub[3] B=2/4" Tapped Hub[3] 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





LIGHT POLE BASE

NOT TO SCALE

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PLANNING FILE NO.: P21_

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Dover, New Hampshire 03821
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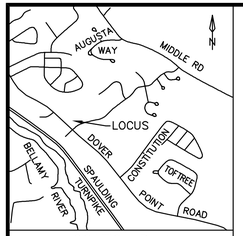
NO.	REVISION	APP'D	DATE

DATE: 5-7-21
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:JH
PROJECT NO: 19018
FILE: SITE.DWG

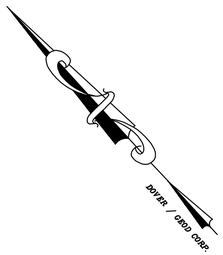
LIGHTING DETAILS

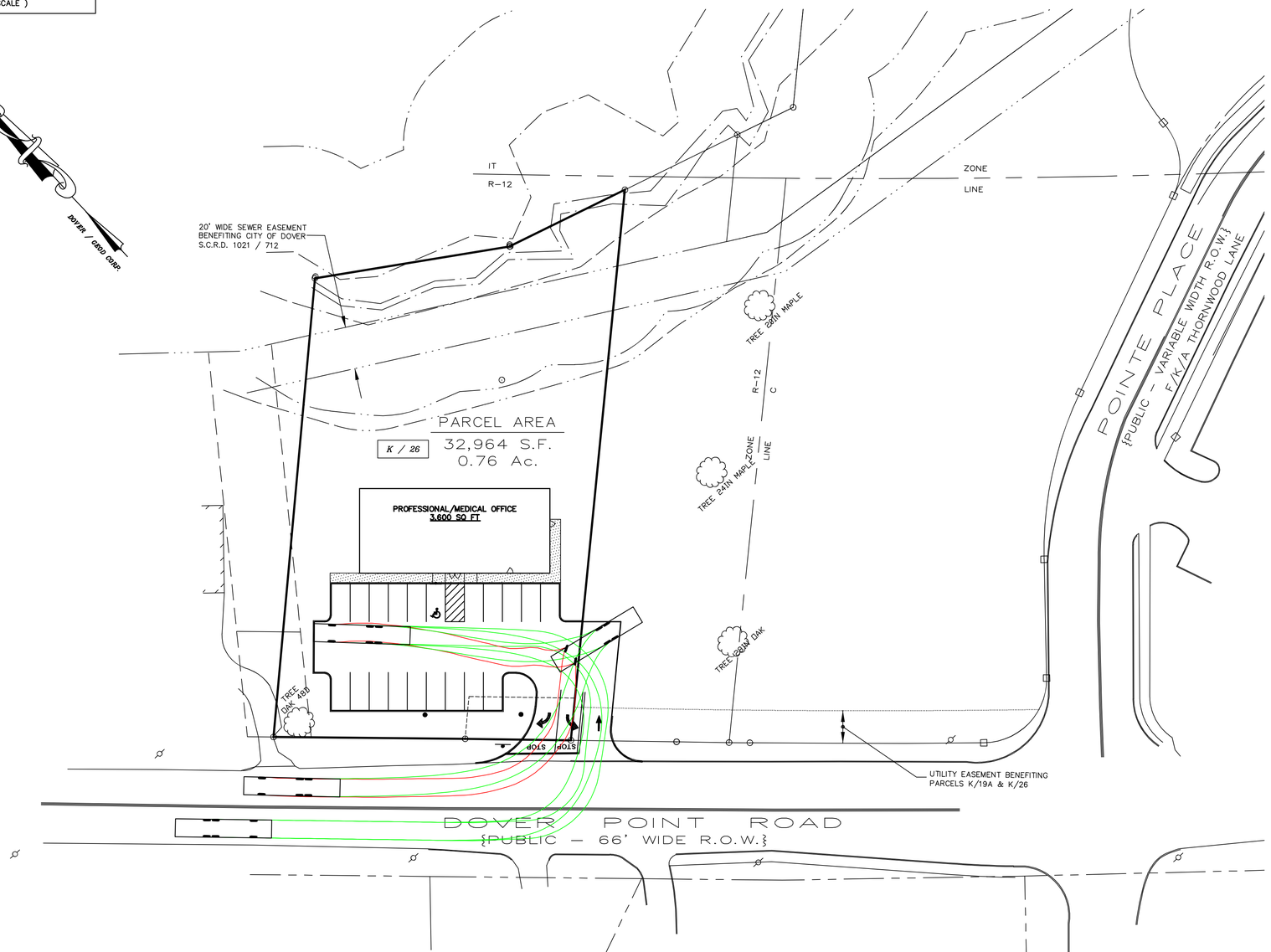
OWNER:
SEBRING HOLDINGS, LLC
340 CENTRAL AVE, SUITE 202
DOVER, NH 03820

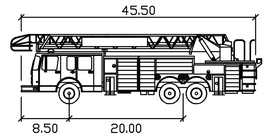
APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP K, LOT 26
DOVER, NEW HAMPSHIRE



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

30 0 15 30 60 120

(IN FEET)

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PLANNING FILE NO.: P21_

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NO.	REVISION	APP'D	DATE

DATE: 5-7-21
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:JH
PROJECT NO: 19018
FILE: SITE.DWG

DOVER LADDER TRUCK MOVEMENT PLAN

OWNER:
SEBRING HOLDINGS, LLC
340 CENTRAL AVE, SUITE 202
DOVER, NH 03820

APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP K, LOT 26
DOVER, NEW HAMPSHIRE

17

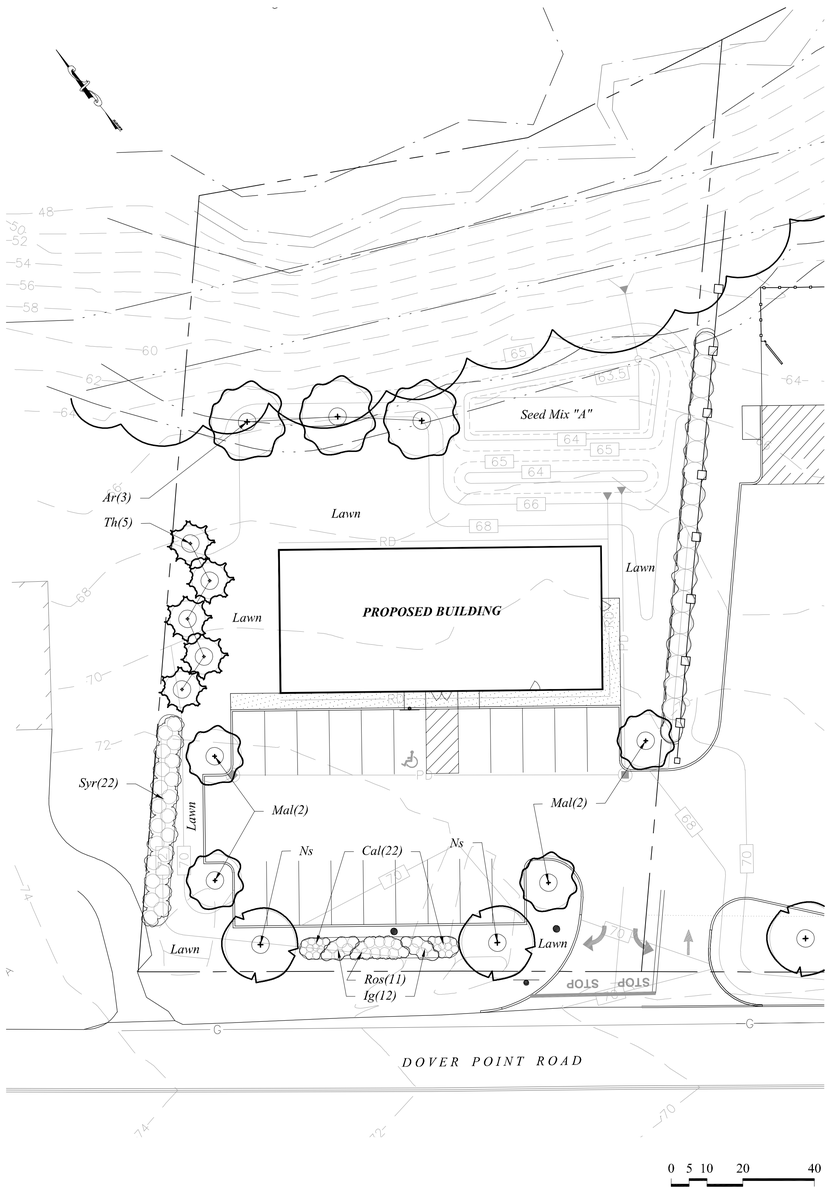
Plant List

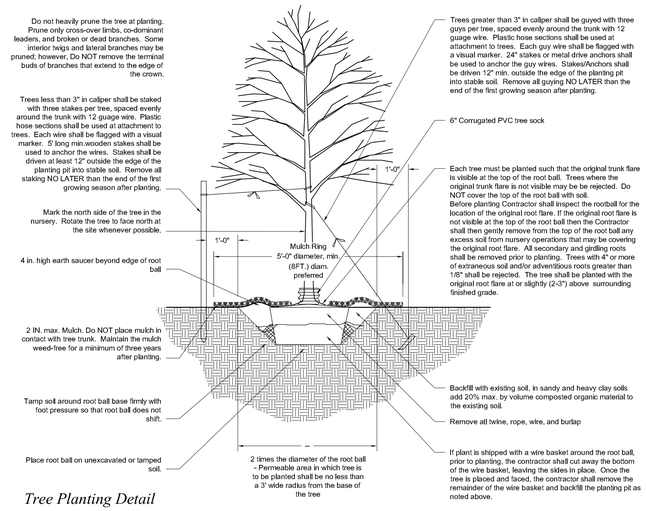
TREES

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Ar	*Acer rubrum 'October Glory'*	October Glory Red Maple	3	3-3.5" Cal	B&B
Mal	*Malus 'Prairefire'*	Prairefire Crabapple	4	3-3.5" Cal	B&B
Ns	*Nyssa Sylvatica*	Black Tupelo	2	3-3.5" Cal	B&B
Th	*Thuja plicata 'Green Giant'*	Green Giant Arborvitae	5	8-10' Ht	B&B

SHRUBS & PERENNIALS

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Cal	*Calamagrostis acutifolia 'Karl Foerster'*	Feather Reed Grass	22	3 gal	
Ig	*Ilex glabra 'Shamrock'*	Shamrock Inkberry	12	5 gal	
Ros	*Rosa 'Double Knockout'*	Double Knockout Rose	11	3 gal	
Syr	*Syringa 'Bloomerang'*	Bloomerang Lilac	22	5 gal	
Seed Mix "A"	*50% New England Conservation/Wildlife Mix 50% New England Showy Wildflower Mix, by New England Wetland Plants, Inc.*				
Lawn Areas	Pennington Smart Seed Tall Fescue Blend				





Tree Planting Detail

Landscape Notes

1. Design is based on drawings by Civilworks New England and may require adjustment due to actual field conditions.
2. The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
3. Erosion Control shall be in place prior to construction.
4. Erosion Control to consist of Hay Bales and Erosion Control Fabric shall be staked in place between the work and Water bodies, Wetlands and/or drainage ways prior to any construction.
5. The Contractor shall verify layout and grades and inform the Landscape Architect or Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
6. It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
7. Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portalets within the tree protection area.
8. Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
9. The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
10. The Contractor shall procure any required permits prior to construction.
11. Prior to any landscape construction activities Contractor shall test all existing loam and loam from off-site intended to be used for lawns and plant beds using a thorough sampling throughout the supply. Soil testing shall indicate levels of pH, nitrates, macro and micro nutrients, texture, soluble salts, and organic matter. Contractor shall provide Landscape Architect with test results and recommendations from the testing facility along with soil amendment plans as necessary for the proposed plantings to thrive. All loam to be used on site shall be amended as approved by the Landscape Architect prior to placement.
12. Contractor shall notify landscape architect or owner's representative immediately if at any point during demolition or construction a site condition is discovered which may negatively impact the completed project. This includes, but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the plan and the site. If a contractor is aware of a potential issue, and does not bring it to the attention of the landscape architect or owner's representative immediately, they may be responsible for the labor and materials associated with correcting the problem.
13. The Contractor shall furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery-grown under climatic conditions similar to those in the locality of the project. Plants shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. in the American Standard of Nursery Stock, American Standards Institute, Inc. 230 Southern Building, Washington, D.C. 20005.
14. A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.
15. All plants shall be legibly tagged with proper botanical name.
16. The Contractor shall guarantee all plants for not less than one year from time of acceptance.
17. Owner or Owner's Representative will inspect plants upon delivery for conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during or after the progress of the work. The Owner reserves the right to inspect and/or select all trees at the place of growth and reserves the right to approve a representative sample of each type of shrub, herbaceous perennial, annual, and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work.
18. No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason.
19. All landscaping shall be provided with either of the following
    a. An underground sprinkling system
    b. An outside hose attachment within 150 feet
20. If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas.
21. All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
22. Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and ½" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black.
23. In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
24. Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 6' to allow clear and safe passage of vehicles and pedestrians under tree canopy.
25. Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
26. Landscape Architect is not responsible for the means and methods of the contractor.

woodburn &company
LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

~PERMIT PLAN~
NOT FOR CONSTRUCTION

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, P.O. Box 1166
Dover, New Hampshire 03820
(603) 749-0443

NO.	REVISION	APPD	DATE
1	INITIAL SUBMISSION	VM	5.6.21

DATE: 5-6-21
SCALE: 1"=20'
DRAWN BY: VM
DESIGN BY: VM
APPROVED BY:RW
PROJECT NO:19018
FILE:SITE.DWG

OWNER:
SBRING HOLDINGS, LLC
340 CENTRAL AVE, SUITE 202
DOVER, NH 03820

APPLICANT:
MIDDLETON CHIROPRACTIC
TAX MAP K, LOT 26
DOVER, NEW HAMPSHIRE

PLANNING FILE:

LANDSCAPE PLAN

L-1



EXISTING DRIVEWAY

PROPOSED BUILDING

PROPOSED ENTRY

CIRCLE K SITE

0 5 10 20 40

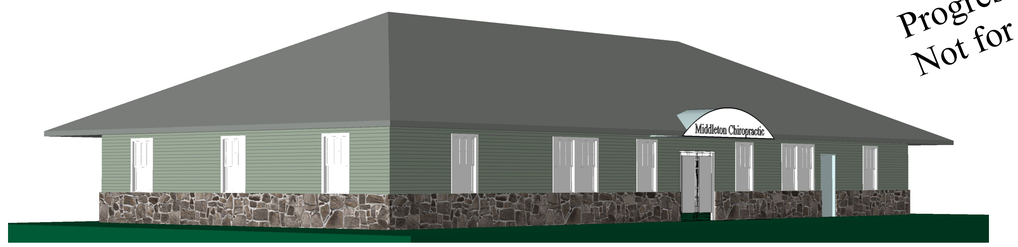
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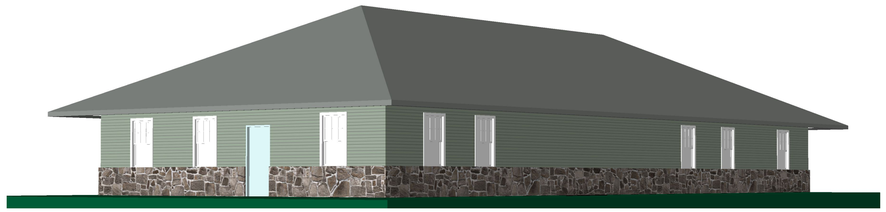
Middleton Chiropractic

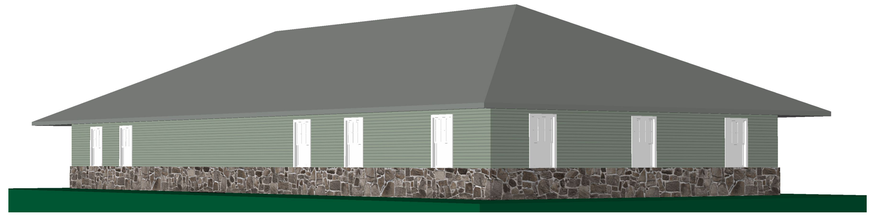
Streetscape - View from Dover Point Road

May 6, 2021





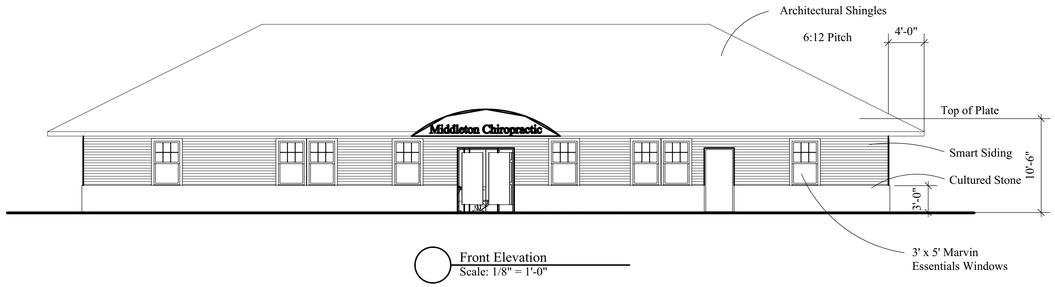




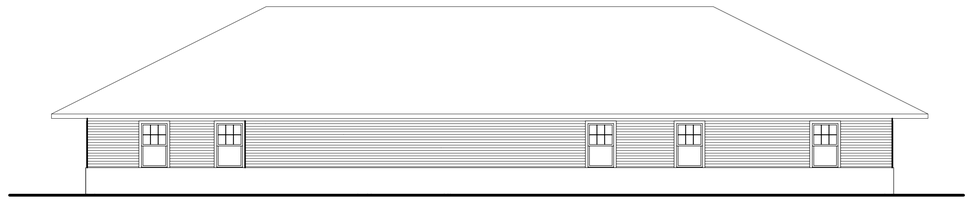
Progress Drawings
Not for Construction

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9 April 2021



Front Elevation
Scale: 1/8" = 1'-0"



Rear Elevation
Scale: 1/8" = 1'-0"



Right Elevation
Scale: 1/8" = 1'-0"



Left Elevation
Scale: 1/8" = 1'-0"

Code Notes

Under Height and Area Tables, IBC 2009, we are allowed 9,000 SF for Type 5B construction and so fine at 3,600 Sf for 5B

Use Group is Business B

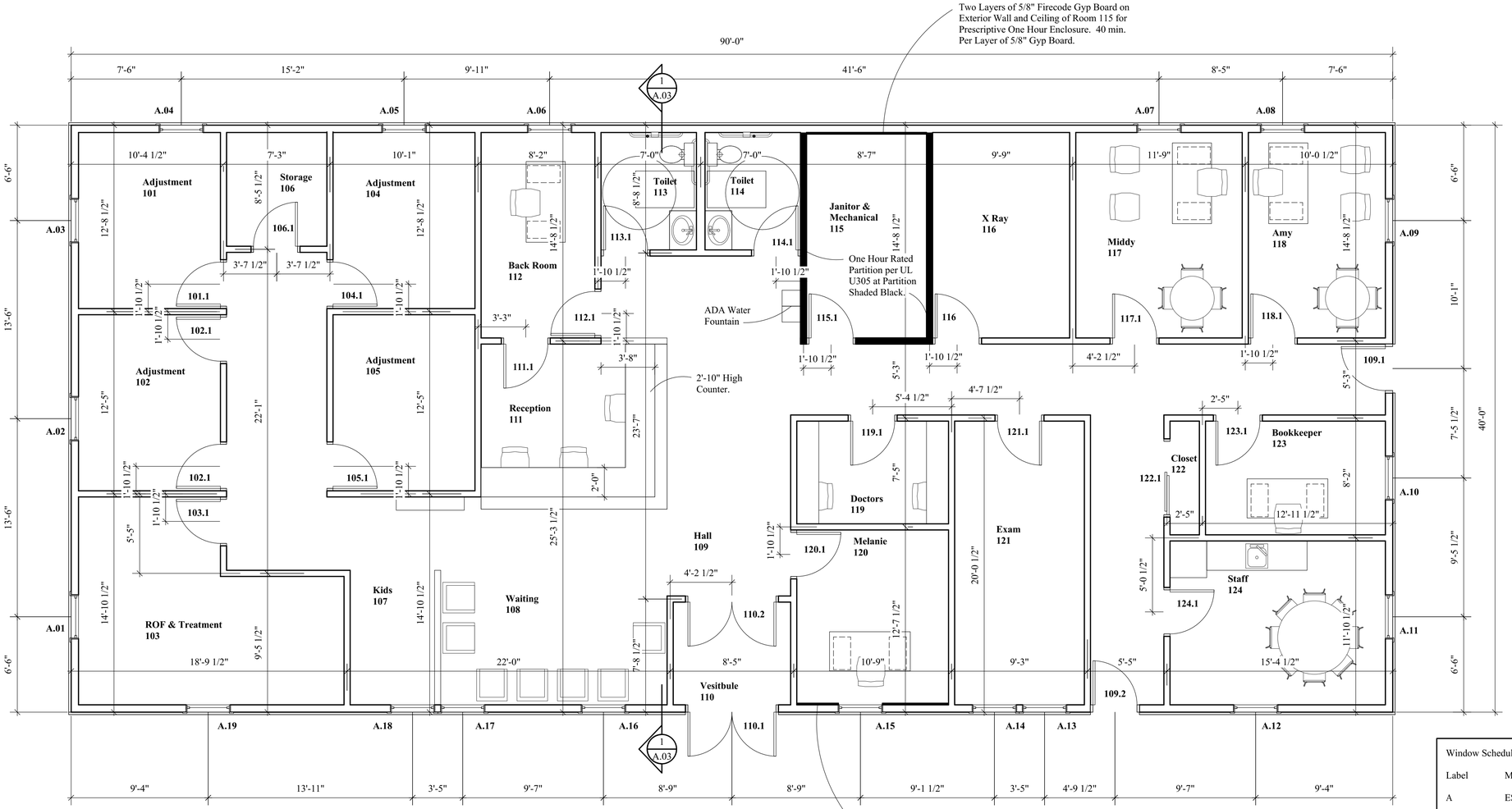
FAS is not required unless needed to monitor sprinkler (Reference Section 38.3.4 in 101, Section 907.2.2 in IBC).

Corridors are allowed to be unrated as the building will be served by one tenant (Reference Section 38.3.6 in 101 and Section 1020.1, Exception 4 in IBC).

Middleton Chiropractic
Pointe Place
Dover, New Hampshire

Sketches & Elevations

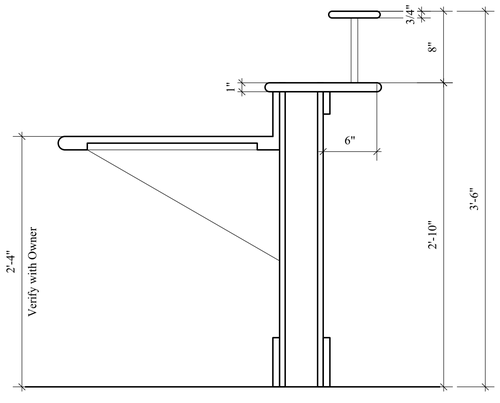
A.01



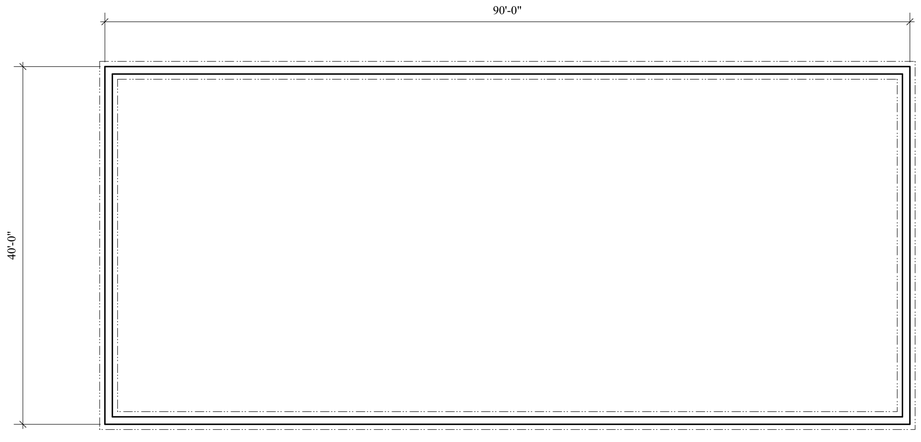
First Floor Plan
Scale: 1/4" = 1'-0"

Window Schedule		
Label	Marvin Essential No.	Quantity
A	ESDH3050	19

All Doors and Windows Flashed in with Tyvek Tape per Manufacturer's Instructions.



Reception Desk and Check Writing Stainds
Scale: 1 1/2" = 1'-0"



Foundation Plan
Scale: 1/8" = 1'-0"

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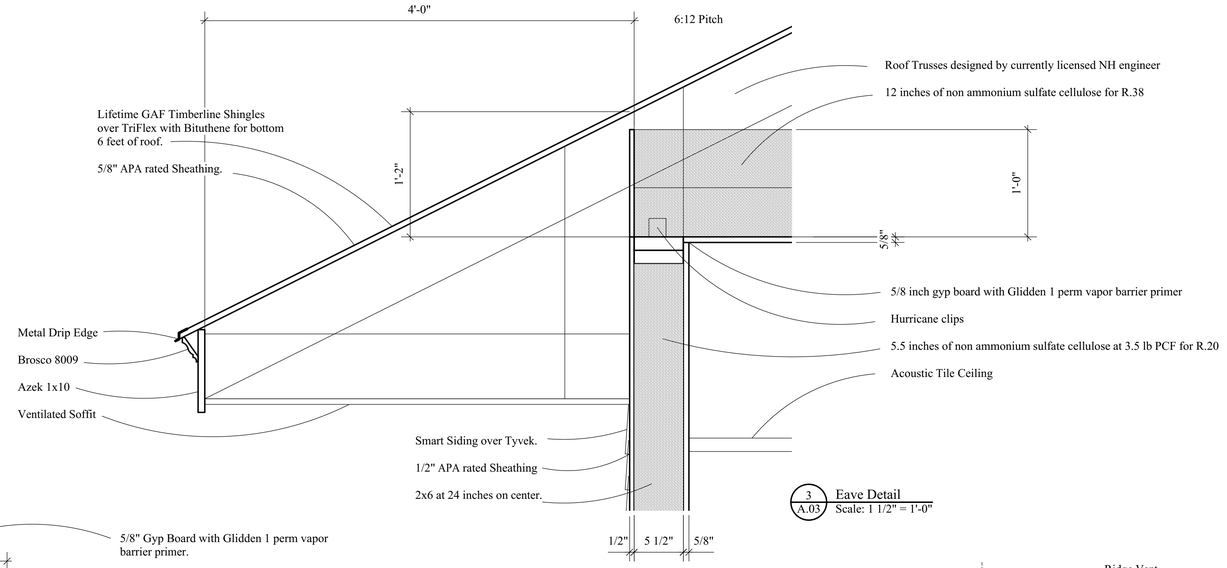
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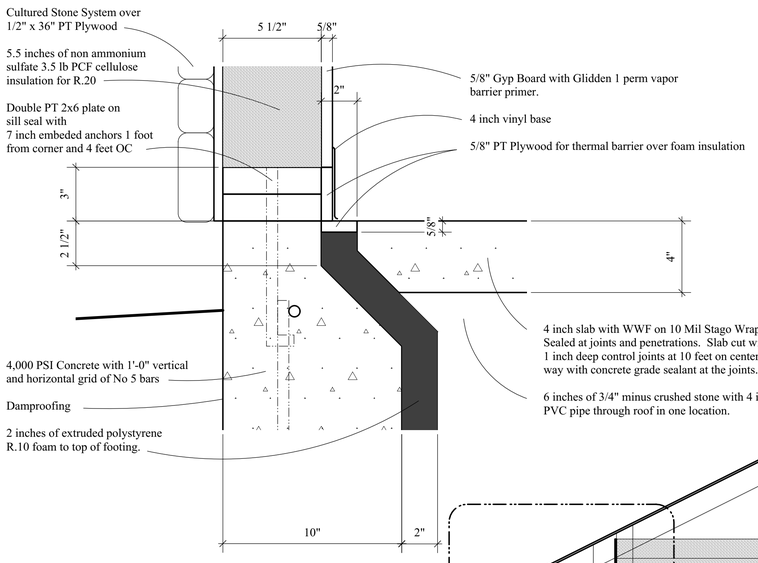
Progress Drawings
Not for Construction

Foundation & First Floor Plans

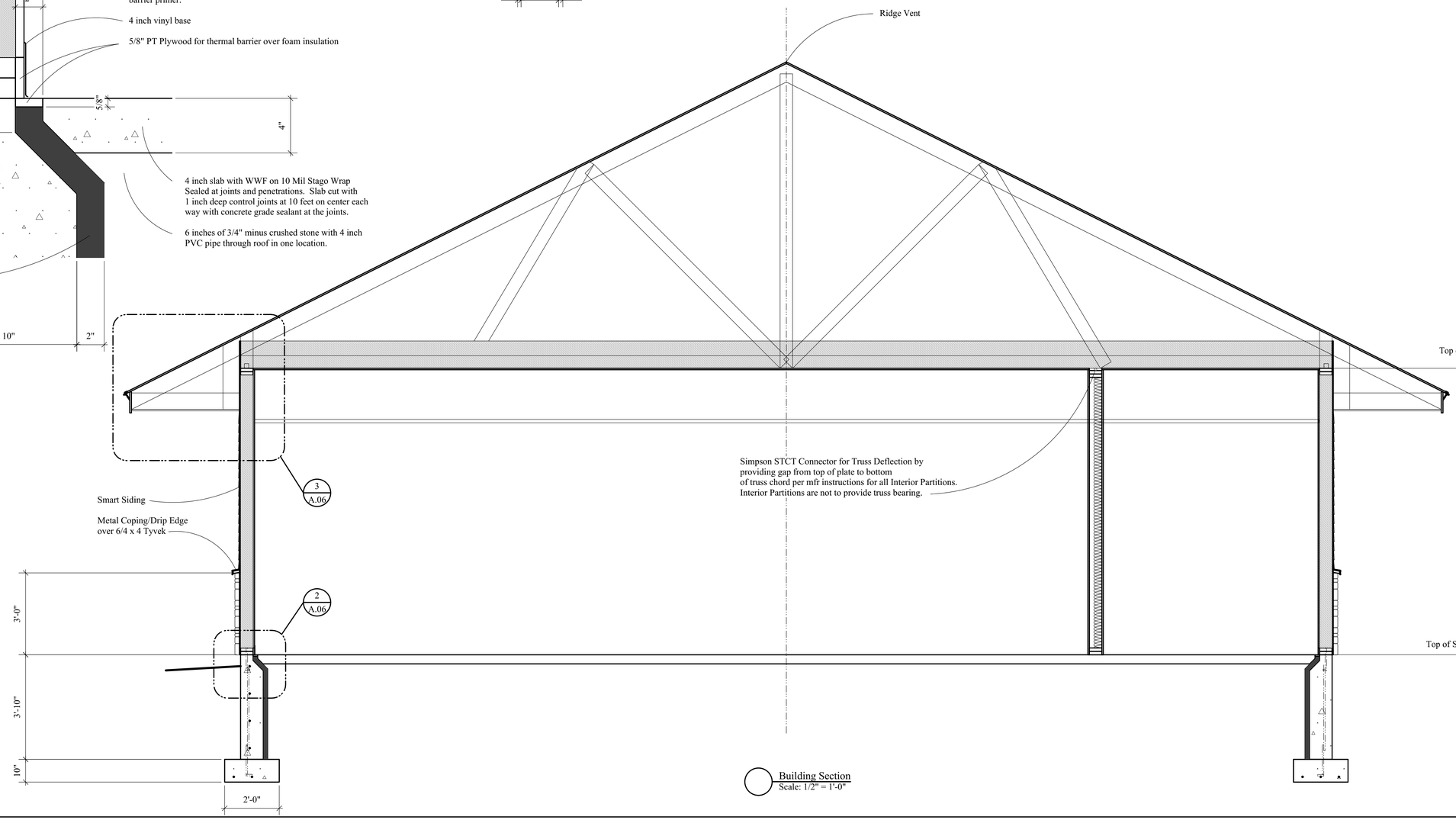
A.02



3 / A.03 Eave Detail
Scale: 1 1/2" = 1'-0"



2 / A.03 Top of Foundation Detail
Scale: 3" = 1'-0"



Building Section
Scale: 1/2" = 1'-0"

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Building Section & Details

A.03

Number	Size	Type	Leaf	Finish	Frame	Finish	Hardware Set	Fire Rating	Comments
101.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	
102.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	
103.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	
104.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	
105.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	
106.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	
109.1	3'x7'	Flush	Galv HM	Paint	Galv HM	Paint	2	Zero	Max U 0.45
109.2	3'x7'	Flush	Galv HM	Paint	Galv HM	Paint	2	Zero	Max U 0.45
110.1	(2) 3'x7'	Full Lite	Alum/Glass	Anodized	Alum	Anodized	3	Zero	Max U 0.77
110.2	(2) 3'x7'	Full Lite	Alum/Glass	Anodized	Alum	Anodized	4	Zero	Max U 0.77
111.1	3'x7'	Flush	Birch	Clear	HM	Paint	5	Zero	
112.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	
113.1	3'x7'	Flush	Birch	Clear	HM	Paint	6	Zero	
114.1	3'x7'	Flush	Birch	Clear	HM	Paint	6	Zero	
115.1	3'x7'	Flush	HM	Paint	HM	Paint	7	60 Minutes	
116.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	
117.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	
118.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	
119.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	
120.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	
121.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	
122.1	5'x7'	Flush	Birch	Clear	Wood	Paint	8		
123.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	
124.1	3'x7'	Flush	Birch	Clear	HM	Paint	1	Zero	

HW Set 1

1.5 Hinges
1.0 ADA Leverset Office Function
1.0 Door Stop
3.0 Silencers

HW Set 2

1.5 Hinges
1.0 Schlage Mortise ADA Leverset L5493 (Ansi 20)
1.0 Closer
1.0 ADA Threshold
1.0 Weatherstripping
1.0 Door Bottom

HW Set 3

3.0 Hinges NRP
1.0 Closer
1.0 Closer/Operator with Paddles set to Power only when called for
2.0 Vertical Rod Panic Bars with Pulls
1.0 Cylinder
1.0 ADA Threshold
1.0 Weather Strip
1.0 Door Bottom

HW Set 3

3.0 Hinges NRP
1.0 Closer
1.0 Closer/Operator with Paddles set to Power only when called for
2.0 Vertical Rod Panic Bars with Pulls
1.0 ADA Threshold
1.0 Weather Strip
1.0 Door Bottom

HW Set 5

1.5 Hinges
1.0 ADA Leverset Passage Function
1.0 Door Stop
3.0 Silencers

HW Set 6

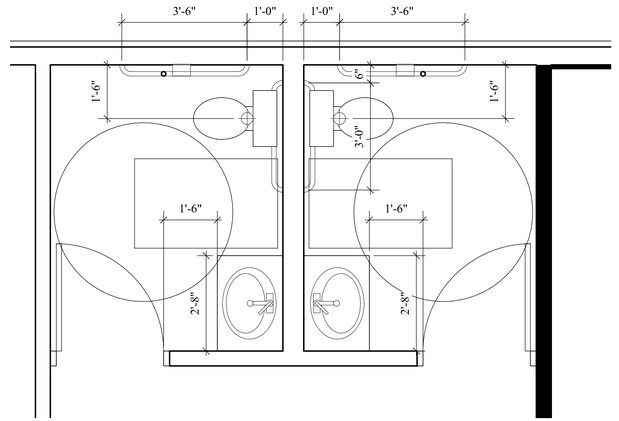
1.5 Hinges
1.0 ADA Leverset Privacy Function
1.0 Door Stop
3.0 Silencers

HW Set 7

1.5 Hinges
1.0 ADA Leverset Office Function
1.0 ADA Closer
3.0 Silencers

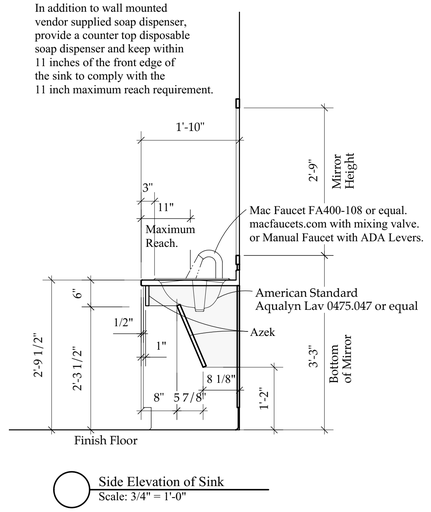
HW Set 8

Slider Door Kit

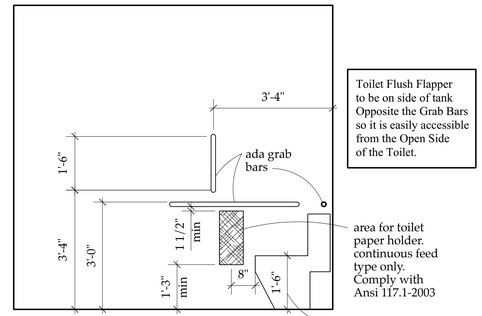


Toilet Plans
Scale: 1/2" = 1'-0"

In addition to wall mounted vendor supplied soap dispenser, provide a counter top disposable soap dispenser and keep within 11 inches of the front edge of the sink to comply with the 11 inch maximum reach requirement.



Side Elevation of Sink
Scale: 3/4" = 1'-0"



Toilet Flush Flapper to be on side of tank Opposite the Grab Bars so it is easily accessible from the Open Side of the Toilet.

Toilet Detail
Scale: 1/2" = 1'-0"

Progress Drawings
Not for Construction

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Dover, New Hampshire

Details

A.04

City of Dover, New Hampshire
SITE REVIEW APPLICATION

[Revision Date: June 4, 2019]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: Macs Convenience Stores, LLC Telephone # 330-696-9715

Address of Applicant: 935 East Tallmadge Avenue Akron, OH 44310

E-Mail Address: sjpeet@circlek.com

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

Address of Property Owner:

PROPERTY INFORMATION

Address of Property: Dover Point Road

Assessor's Map # K Lot(s) # 19C

Zoning District(s) C, IT, R-12 Overlay District(s) Conservation District

Size of Parcel: 91,443 sq. ft. 2.10 ac. Property Deed: Book 4114 / 4848 Page: 608 / 526

Existing Use of Property: Vacant

SITE PLAN INFORMATION

Describe Proposed Use: Vehicle Refueling & Charging Station with Convenience Store

Area of Parcel to be Developed: 65,870 sq. ft.

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

Number of Parking Spaces: Existing 0 Proposed 29

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

Number of Employees Total: 4 In Maximum Shift: 4

Disposition of Parcel:

Building Footprint 5358 sq. ft.
Canopy Footprint 3698
Total Building Area 9056 sq. ft.

Paved Area 28,885 sq. ft.

Building Setbacks:

Front Yard 164 ft.

Rear Yard 67 ft.

Side Yard: Right 52 ft. Left 50 ft.

City Water? X Yes ___ No How far is city water from the property? Pointe Place ROW

City Sewer? X Yes ___ No How far is city sewer from the property? Crosses Subject Parcel

BUILDING INFORMATION

Type of Building to be Built: Masonry & Mortar

Height of Building: 25' Finished Floor Elevation: 66.2'

Number of Seats (where applicable) N/A

Estimated value of construction: $600,000 Refuse removal: Public/Private (circle one)

WAIVER REQUESTS

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 M. McEneaney, LLS
McEneaney Survey Associates

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

Professional License #: Kevin M. McEneaney 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 P.O. Box 1166 Dover, NH 03821 Telephone #: 603-749-0443

Professional License #: Stephen J. Haight, P.E.#7978 E-mail address: shaight@civilworksne.com

ARCHITECT INFORMATION

Name of Architect and Company (Licensed in N.H.) Susan Moore, Sr. Project Architect
CUPKOVIC Architecture, LLC

Address 6060 Rockside Woods Blvd., Ste 100 Cleveland, OH 44131 Telephone #: 216-524-8400

Professional License #: _____ E-mail address: _____

LANDSCAPE ARCHITECT INFORMATION

Name of Landscape Architect and Company (Licensed in N.H.) Roberta N. Woodburn
Woodburn & Company Landscape Architecture, LLC

Address 103 Kent Place Newmarket, NH 03857 Telephone #: 603-659-5949

Professional License #: Roberta N. Woodburn, NH Licensed Architect #00002 E-mail address: robbi@woodburnandcompany.com

WETLAND
~~**SOIL**~~ **SCIENTIST INFORMATION**
Wetland

Name of ~~Soil~~ 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 #: Damon E. Burt, NH CWS#163 E-mail address: frenvironmental@gmail.com

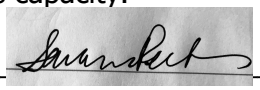
CONSERVATION EASEMENT HOLDER N/A

Name of Easement Holder: _____ 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.

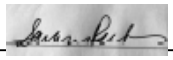
X Signature of Property Owner:  Date:2/26/21

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

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

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

Signature of Property Owner:  Date: 2/26/21

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
X called. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

if different from owner

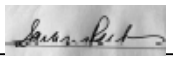
Signature of Property Owner: _____ Date: _____

Signature of Applicant (): _____ Date: 2/26/21

CERTIFICATION OF FEES

Additionally, should the property be in "Current Use" it will be subject to the Land Use Change Tax.
I, and my successors, hereby certify that I understand that the City of Dover collects impact fees,
X 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.

if different from owner

Signature of Property Owner:  Date: 2/26/21

Signature of Applicant ( ): same as owner Date: _____

PLANNING BOARD FEE SCHEDULE

(Revised September 17, 2020)

Below are the fees associated with plan review and are subject to a nonrefundable application fee to cover administrative expenses. Please complete the information below and provide payment with your application submittal. **Plan review fees shall be paid prior to technical review committee (TRC) being scheduled.** For plans not requiring TRC review, **fees are due 21 days prior** to the Planning Board meeting. Staff will coordinate abutter/notice fees, which will be invoiced and must be paid 28 hours before the Planning Board meeting for an application to be heard. Fees shall be paid by cash or check made payable to "City of Dover".

A. Plan Review Fees

1. Application fee for the following (SELECT ALL THAT APPLY):

- ☐ SUBDIVISION Application fee $200.00 + $150.00 x # _____ new lots created = $_____
- ☐ LOT LINE ADJUSTMENT Application fee $200.00 + $100.00 X # ___ of lots involved = $_____
- ☐ TRANSFER OF DEVELOPMENT RIGHTS Application fee $200.00 = $_____
- ☐ SITE REVIEW – RESIDENTIAL Application fee $200.00+ $100.00 x # __ per dwelling unit =$_____
- ☒ SITE REVIEW – NON-RESIDENTIAL Application fee $200.00 + (not to exceed $10,000) $ 200.00
  - New construction $.15 sq. ft. x # 9056 sq. ft.= $1358.40
  - Additions (new floor space) $.10 per sq. ft. x # _____sq. ft.= $_____
- ☐ MOTEL/HOTEL $35.00 x # ___ per lodging unit= $_____
- ☐ CHANGE OF USE Application fee $200.00 + (not to exceed $5,000)
  - Existing floor spaces $.10 per sq. ft. x # _____ sq. ft. = $_____
- ☒ CONDITIONAL USE PERMIT Application fee $200.00 x # 1 per Application = $ 200.00
- ☐ GRAVEL PIT/ EXCAVATIONS
  - Application fee $50.00= $_____
  - Permit fee $75.00= $_____
- ☐ EXTENSIONS/AMENDMENTS/WAIVERS FOR AN APPROVED PLAN Application fee $200.00 = $_____
- ☐ REQUEST FOR REZONING Application fee $200.00 = $_____
- ☐ DRIVEWAY WAIVER Application fee $200.00 = $_____

SUB TOTAL= $ 1758.40

AND

2. TOTAL IMPERVIOUS PAVED AREA (for new development, roadways or additions to existing parking lots, (not to exceed $10,000)) Application fee $200.00 + $.07 sq. ft. x # 28,885 = **$** 2021.95

TOTAL PLAN REVIEW FEE= $3780.35

B. Abutter Notification/Mailing Labels - this office will create and print the abutter list and provide labels in triplicate for each abutter. The applicant/owner will need to review the list and provide to this office the engineer, architect, licensed land surveyor (LLS), licensed landscape architect (LLA) and/or soil scientist whose professional seal appears on the plan with names and addresses for notices.

- ☐ Applicant & Owner, engineer, architect, LLS, LLA and/or soil scientist
  - Certified letters fee # _____ of x $8.00= $_____
- ☐ Certified letters fee: # of abutters _____ X $8.00= $_____
- ☐ First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X $1.00= $_____
- ☐ Creating/Printing Abutter Labels in triplicate per sheet _____ x $10.00= $_____

SUB TOTAL= $_____

C. Foster's newspaper public notice fee $100.00 x # _____ applications = $_____

TOTAL NOTICE FEE= $_____

The above amount must be paid 28 hours prior to the Planning Board meeting, to be heard.

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: Macs Convenience Stores, LLC File Number: P21-_____

PROJECT TITLE: Vehicle Refueling & Charging Station with Convenience Store

PROPERTY LOCATION: Dover Point Road Tax Map: K Lot: 19C

	Where/How Provided	Reviewed
1. Completed and signed Application form	ATTACHED	
2. Plan Review Fees are provided	ATTACHED	
3. Electronic copy of the engineered/surveyed plan layout	VIA EMAIL	
4. Electronic copy of supplementary materials and application	VIA EMAIL	
5. Traffic Impact Assessment and Analysis (Standard or Advanced)	ATTACHED/STANDARD	
6. Waiver requests to the Site Plan Review Regulations, with written justification	NONE REQUIRED	
7. Conditional Use Permit applications	ATTACHED	
8. A colored rendering of the streetscape that will be created along the existing public right-of-way	INCLUDED IN PLAN SET	
9. A colored architectural plan showing all sides of buildings	INCLUDED IN PLAN SET	
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:	8 SETS FOR TRC	
Location map at appropriate scale	SHOWN ON PLAN SHEETS 2,3,5,6,7,8	
Proposed Project name and title and Planning File #	SHOWN ON PLAN SHEETS 2,3,5,6,7,8, 17, 20	
Date, north arrow and scale	SHOWN ON PLAN SHEETS 2,3,5,6,7,8, 17, 20	
Names of all abutting property owners	SHOWN ON PLAN SHEETS 2, 3, 5	
Name and address of owners and/or applicants	SHOWN ON PLAN SHEETS 1 - 20	
Signature & stamp of NH licensed land surveyor and/or engineer	PROVIDED UPON APPROVALS	
Zoning District boundaries, including any special or overlay districts	SHOWN ON PLAN SHEETS 2,5,6,7,8	
Location of Conservation District areas	SHOWN ON PLAN SHEETS 2,5,6,7,8	
Location, names and widths of existing and proposed streets, including pavement widths, grades, curbs and crosswalks	SHOWN ON PLAN SHEETS 2,5,6,7,8	
Location and widths of existing & proposed easements & right of ways	SHOWN ON PLAN SHEETS 2, 5, 6, 7, 8	
Location and width of existing and proposed access/egress ways	SHOWN ON PLAN SHEETS 2, 5, 6, 7, 8	

	Explain How Provided	Reviewed
Depict pedestrian walkways and accessible access	SHOWN ON PLAN SHEET 6	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	SHOWN ON PLAN SHEET 2	
Existing and proposed topographic information at two foot intervals	SHOWN ON PLAN SHEET 2	
Existing and proposed buildings and structure locations	SHOWN ON PLAN SHEETS 5, 6, 7, 8	
Minimum building setbacks or build to lines on all lots	SHOWN ON PLAN SHEETS 5, 6, 7, 8	
Location and size of existing and proposed electric, telephone, gas cable and other underground utilities	SHOWN ON PLAN SHEETS 2, 5, 6, 7, 8	
Existing and proposed water lines and fire hydrants, including materials and capacity needed	SHOWN ON PLAN SHEETS 2, 6, 8, 16	
Location and materials of sanitary sewage facilities within project site and projected additional peak hour sewer load	N/A	
Existing and proposed stormwater lines and facilities	SHOWN ON PLAN SHEETS 2, 6, 7	
Lighting plan depicting all existing and proposed exterior light fixtures and a lighting level analysis for parking lots	SHOWN ON PLAN SHEETS 17, 18	
Location of Flood Hazard Zone	N/A	
Location of all bodies of water and watercourses	N/A	
Location of wetlands and buffers	SHOWN ON PLAN SHEETS 2, 5, 6, 7, 8	
Neighborhood plan with aerial underlay showing how project relates to abutting uses within the plan set	SHOWN ON PLAN SHEET 3	
Existing natural features and/or significant vegetation on property	SHOWN ON PLAN SHEETS 2, 5, 6, 7, 8	
Depict existing contours up to 100 ft. beyond project limits	SHOWN ON PLAN SHEETS 2, 7	
Landscape plan depicting existing and proposed landscaping, prepared by a licensed Professional Landscape Architect	SHOWN ON PLAN SHEET 19	
Location of parking layout delineating spaces and arrangement; note addressing maximum required spaces	SHOWN ON PLAN SHEET 6	
Location, material and size of existing and proposed pavement area	SHOWN ON PLAN SHEETS 2, 5, 6	
Location of proposed fire lanes	SHOWN ON PLAN SHEET 6	
Specify finished floor elevations of buildings	SHOWN ON PLAN SHEET 7, 8	
Location of solid waste disposal facilities (dumpster, pad and screening, etc.), including required screening	SHOWN ON PLAN SHEETS 6, 11	
Depict all service, storage, loading bays and utility areas	SHOWN ON PLAN SHEETS 6, 11	
All applicable Dover Common Site Plan notes	SHOWN ON PLAN SHEET 4	
11. Additional Information if appropriate		
Stormwater Management Plan depicting the existing & proposed storm drainage system and engineered drainage analysis	ATTACHED	
Stormwater Management System Operation and Maintenance Plan	ATTACHED	
Letter to Serve from Public and Private Utilities PROVIDED FOR	PREVIOUS APPLICATION SUBMITTALS	
Erosion and Sedimentation Control Plan	SHOWN ON PLAN SHEETS 7, 9, 10	
Landscape Operation and Maintenance Plan	ATTACHED	
Proposed restrictive covenants or homeowners association documents	N/A	
Dates and permit numbers of all required state and federal permits	SHOWN ON PLAN SHEET 4, SITE NOTE 36	
If wetland buffer, indicate placards locations, as applicable	TBD	
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	ATTACHED	

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: Macs Convenience Stores, LLC Telephone # 330-696-9715

Address of Applicant: 935 East Tallmadge Avenue Akron, OH 44310

E-Mail Address: sjpeet@circlek.com

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

Address of Property Owner:

PROPERTY INFORMATION

Assessor's Map # K Lot(s) # 19C

Address of Property: Dover Point Road

Zoning District(s) C, R-12, IT Overlay District(s) Conservation 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:

To allow disturbance of 967 s.f. within the Wetland Buffer during site construction. The disturbance would be for grading activity associated with the proposed building and stormwater drainage structures. See Site Plan, sheet 7, Impact Area A (627 s.f.) and Impact Area B (340 s.f.). No structures are proposed within the buffer.

List Any Associated State or Federal Permits That Have Been or Will Be Applied For and Indicate Their Status: NONE REQUIRED

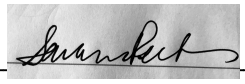
Name of Professional That Prepared Plans: Stephen J. Haight, P.E. - Civilworks New England

Address P.O. Box 1166 Dover, NH 03821 Telephone #: 603-749-0443

Professional License #: Stephen J. Haight, P.E.#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.

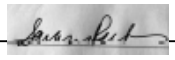
X Signature of Property Owner:  Date: 2/26/21

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

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

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

X Signature of Property Owner:  Date: 2/26/21

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
K	19C	Macs Convenience Stores, LLC	935 East Tallmadge Avenue Akron, OH 44310

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Stephen J. Haight, P.E.	Civilworks New England	P.O. 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

PROJECT NARRATIVE

for

MAC'S CONVENIENCE STORES, LLC

CIRCLE K

30 Dover Point Road, Dover, NH

Tax Map K, Lots 19C

February 2021

PROJECT OVERVIEW

The project applicant is proposing to construct a +/- 5,358 SF commercial building with (6) refueling stations and canopy, including new driveway entrances along Dover Point Road and Point Place. The proposed site will include a new convenience store and refueling stations, (1) electric recharging station, public water and sewer connections, underground electric service, natural gas service and associated drainage improvements. A small portion (+/- 967 SF) of the work is within the 50' conservation district buffer but does not disturb any wetlands.

The project consists of the following general improvements:

- Remove existing portion of curbing and asphalt
- Construction of +/- 5,358 SF new convenience store, (6) vehicle refueling stations and +/- 3,698 SF canopy, and (1) electric vehicle recharge station.
- Construction of stormwater treatment structures, grading, and other drainage requirements
- Site utility construction
- Construction of (2) new entrances and internal access ways
- Stabilize remaining areas with loam and seed
- Special Exception Z18-18 was granted 3/21/19 to allow a refueling station in the B3 zone. The Zoning for this area has since been amended by the City to the C-Commercial District.

PROJECT LOCATION AND SITE CHARACTERISTICS

The project area consists of a parcel of land shown on Tax Map K as Lot 19C and is located within the C - Commercial and R-12 – Residential Districts. Lot K/19C contains +/- 2.10 acres and is currently undeveloped. The project proposes to develop the existing lot with access from Dover Point Road as well as Point Place.

DRIVEWAY AND PARKING LOT

There are two proposed driveway entrances. The Dover Point Road entrance will be 35' wide, and the Pointe Place entrance will be 40' wide with curbing, including a newly proposed sidewalk along Pointe Place. Lighting for the proposed parking lot and driveway will be per the Lighting Plan.

For the proposed development, the City of Dover parking maximums allow for the following:

Allowed:

- Retail (5,358 SF)/(275 SF) = 19 Spaces Maximum
    - Total for Site = **19 Spaces Maximum (Surface)**
    - 10 additional spaces are allowable based on review and at discretion of the by Planning with the addition of the electric vehicle charging station.

Proposed:

- Proposed Retail = 17 Surface Spaces**
- Proposed Gas Island = 12 Surface Spaces
    - Total proposed = **29 Spaces (includes 2 Accessible Spaces)**
- ** (1) space is an electric vehicle recharge station

WETLAND SETBACK IMPACT TYPE

The project work requires a conditional use permit from the City of Dover. Approximately +/- 967 SF of non-tidal wetland buffer will be impacted. The total area of the 50' wetland buffer is 18,539 S.F. on the lot. 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 at 30 Dover Point Road, Dover, NH. The site contains approximately 2.10 acres and is bounded on the west by Dover Point Road, the east by commercial development, and the north by residential and mixed use properties. The watershed of the parcel includes the project site. The project site consists of undeveloped land adjacent to Pointe Place. On site soils are a mix of Windsor Loamy Fine Sand, Windsor Loamy Sand, Suffield Silt Loam, and Buxton Silt Loam. The Windsor series soils are HSG A with the Suffield and Buxton series soils classified as HSG C. The proposed development of the site includes the demolition of some structures in the right-of-way, as well as the construction of a convenience store and refueling area with canopy. The project also includes the construction of two access points, parking for the commercial use of the site, utility upgrades, and drainage improvements including stormwater quality treatment using a rain garden, detention pond, and a closed stormwater conveyance system.

The post development watershed is modeled utilizing the same point of analysis as the predevelopment watershed, allowing direct comparison of the peak runoff between the pre and post developed conditions (see drainage report).

The analysis indicates that the proposed development of the site will have negligible impact on the watershed leading to Varney Brook. Slight increases in runoff due to sidewalk and entrance improvements within the Point Place right-of-way are shown at the catch basin system within Pointe Place. However minimal these increases are, there is still additional pavement being removed outside of this analysis area where the existing cul-de-sac area is located which further mitigate any increases.

UTILITIES

The proposed project expects to connect to City of Dover water and sewer as well as Unitil for natural gas, and Eversource for electricity. Natural Gas lines are located within the Dover Point Road right-of-way which is the anticipated location for this connection. The existing site is undeveloped and will require new services. City of Dover water lines are located within the Dover Point Road and Pointe Place. There is an existing service connection from the 8” line in Pointe Place that is anticipated to be used. A sewer easement and gravity sewer line runs through the property which is the intended point of connection for the project. Buildings will be sprinkled and connections made per the City’s Community Services Utility Division and Fire Department requirements and standards. Underground electric for the site is to be provided by the existing electric lines located along Dover Point Road.

Fraggle Rock Environmental
Damon E. Burt, CWS, CPESC
38 Garland Road, Strafford NH 03884
603-969-5574
FRenvironmental@gmail.com

Wetland Report March 1, 2021
Circle K and Seabring Lots
Dover Point Road/Point Place
Dover NH

Fraggle Rock Environmental performed wetlands delineation on January 14, 2021. Wetland Flags A1 – A26; B1 –B32: Wetlands were delineated according to the following standards:

Wetland Delineation Standards

- Corps of Engineers Wetland Delineation Manual, Technical Report 4-87-1, (January, 1987)
- U.S. Army Corps of Engineers, Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0, U.S. Army Engineer Research and Development Center, 3909 Halls Ferry Road, Vicksburg, MS 39180-6199, January 2012, ERDC/EL TR-12-1
- Cowardin, Lewis M., Golet, Francis C. and LaRoe, Edward T, Classification of Wetlands and Deepwater Habitats of the United States, USFWS, Dept. of the Interior, Wash. D.C., 1979.
- Field Indicators of Hydric Soils in the United States A Guide for Identifying and Delineating Hydric Soils, Version 8.1, 2017 (Including corrections to version 8.0, 2016, on pages 21, 25, and 34)
- New England Hydric Soils Technical Committee. 2017 Version 4, Field Indicators for Identifying Hydric Soils in New England. New England Interstate Water Pollution Control Commission, Lowell, MA
- U.S. Army Corps of Engineers 2016. National Wetland Plant List/State List, Version 3.3

Sincerely,

Damon E. Burt

Damon E. Burt, CWS, CPESC
Fraggle Rock Environmental Services
NH Certified Wetland Scientist
Certified Professional in Erosion and Sediment Control

STATE OF NEW HAMPSHIRE
DAMON E. BURT
No. 163
CERTIFIED WETLAND SCIENTIST
3/2/2021

Landscape Operation & Maintenance Plan For Circle K – Dover Point Road

Weekly Tasks

1. Mow and edge lawns if needed. Lawns to be cut to 3.5" height.
2. Prune back any shrubs overhanging curbs or sidewalks.
3. Prune back any groundcover overhanging curbs or sidewalks.
4. Remove litter and leaves from plants, planters, and parking lots.
5. Remove any broken or fallen branches from trees. Remove sucker growth from tree trunks.
6. Remove any weeds larger than 2 inches (5 cm) high or wide from planters. Weeds 2 inches (5 cm) and larger must be removed, not just killed.
7. Replace bark mulch which has been knocked or washed out of planters. Smooth mulch layer if it has been disturbed.
8. Replace decorative rock which has been knocked or washed out of drip strips. Smooth decorative rock surface if it has been disturbed.
9. Check plants for signs of stress, pests or disease. Request authorization to replace other dead or missing plants. Note: Maintenance contractor must request authorization to make replacements within one week of the damage becoming evident.
10. Sweep or blow clean all walkways, curbs, and gutters.
11. Treat for any signs of disease or pest infestation.
12. Complete any items required on the Monthly Checklist.
13. Hand water any plants that are dry and stressed.
14. Check the irrigation system (if there is a system). Make emergency repairs as needed or request authorization to make major repairs. Note: Maintenance contractor must request authorization for repairs within one week of the damage becoming evident.
15. Adjust the irrigation controllers for current water needs of plants.
16. **Gently prune shrubs at appropriate time of year based on species, for shape and form. DO NOT shear.**

Yearly Tasks

Early Spring

1. Prune any tree branches that interfere with public safety. Prune all parking lot and street trees yearly to encourage strong growth.
2. Apply granular fertilizer to shrubs beds and lawns. Be sure to make application prior to a moderate rainfall in drip-irrigated planters so the rain will wash the fertilizer in.
3. Submit receipts to owner's authorized representative as proof of fertilizer purchase.
4. Trim any perennial foliage left in the fall for winter interest to within six inches of the ground.
5. Add new mulch to planters where the mulch depth has been reduced to less than 2 inches (5 cm) thick. Mulch depth shall not exceed 2". Additional mulch not required where shrubs or groundcover completely hide the soil surface from view.
6. Where there is irrigation and after threat of frost is gone, flush out irrigation systems as needed and check for proper operation of each valve zone.

7. Clean or replace plugged sprinkler nozzles. Replace plugged drip emitters.
8. Replace irrigation controller program back-up batteries.

June:

No additional items

July:

No additional items

August:

No additional items

September:

1. Inventory all plant materials. Inventory shall include an exact count of all shrubs and trees, itemized by planter. Replace any dead or missing plants.

October:

1. Prepare irrigation system for winter. Make sure backflow preventer is well insulated or drained prior to first freeze. Blow out pipes using compressed air in areas where freezing could result in breakage.
2. Mow field areas.

November:

1. "WILT-PRUF" broadleaf evergreens when temperature permits.

December:

1. Prune any tree branches that interfere with public safety. Prune all parking lot and street trees yearly to encourage strong growth.

Stormwater Management System Inspection & Maintenance Plan

For

CIRCLE K
MAP K, LOT 19

30 Dover Point Road
Dover, New Hampshire
Strafford County

February, 2021

Prepared For:

MAC'S CONVENIENCE STORES, LLC
935 E Talmadge Ave
Akron, OH 44310

Prepared By:

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

Introduction

Civilworks NE, has prepared the following Stormwater Management System Inspection & Maintenance Plan for Circle K, Dover, NH. 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 NHDES 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

MAC'S CONVENIENCE STORES, LLC
935 E Talmadge Ave
Akron, OH 44310

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

MAC'S CONVENIENCE STORES, LLC
935 E Talmadge Ave
Akron, OH 44310
Richard Lawrence
(330) 630-6300 x1830

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

Management Company

MAC'S CONVENIENCE STORES, LLC
935 E Talmadge Ave
Akron, OH 44310

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 NHDES. 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.

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:

- Culverts
- Raingarden
- Energy Dissipation Structures (Rip Rap)
- Catch Basins
- Pavement
- Outlet Structures
- Litter / Trash Removal

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

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.

CULVERTS:

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

RAINGARDEN:

- Inspection, by a **qualified professional**, of raingarden at least twice annually, and following any rainfall event exceeding 2.5 inches in a 24 hour period, with maintenance or rehabilitation conducted as warranted by such inspection.
- Embankments and spillways should be inspected by a **qualified professional** for settlement, erosion, seepage, animal burrows, woody vegetation, and other conditions that could degrade the embankment and reduce its stability for impounding water. Immediate corrective action should be implemented if any such conditions are found.
- Inlet and outlet pipes, inlet and outlet structures, energy dissipation structures or practices, and other structural appurtenances should be inspected by a **qualified professional**, and corrective action implemented (e.g., maintenance, repairs, or replacement) as indicated by such inspection.
- The bottoms, interior and exterior side slopes, and crest of earthen detention basins should be mowed, and the vegetation maintained in healthy condition, as appropriate to the function of the facility and type of vegetation.
- Vegetated embankments that serve as "berms" or "dams" that impound water should be mowed at least once annually to prevent the establishment of woody vegetation.
- Trash and debris should be removed from the pond and any inlet or outlet structures whenever observed.
- Accumulated sediment should be removed when it significantly affects pond capacity.

ENERGY DISSIPATION STRUCTURES (RIP RAP): As Applicable

- 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.

OUTLET STRUCTURE(S):

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

CATCH BASIN(S):

- Inspect once per year.
- Inspect for floatables, sediment accumulation, and hydrocarbons (oils and grease).
- Remove all floatables immediately and sediment accumulations ≥ 2 feet.
- 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.

PAVEMENT:

- Minimize sanding.
- Minimize application of salt for ice control.
- Monitor periodically to ensure that the pavement surface drains effectively after storms.
- Clean periodically (1-2 times per year) using a sweeper or vacuum sweeper.

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.

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.

Inspection & Maintenance Table

System Component / BMP	Minimum Inspection Frequency	Minimum Inspection Requirements	Maintenance / Cleanout Threshold
Culverts	Annually	Check for sediment accumulation and clogging	≥ 2 in. sediment depth
Raingarden • Outlet Structure • Inlet/Outlet Piping • Embankments • Pond Sediment • Trash/Debris • Vegetation (Veg.)	Bi-Annually " " " " Periodically " " " "	See Catch Basin (CB) Requirements (Req.) See Outlet Structure (OS) Req. Check for erosion, settlement, seepage, etc. Check for sediment accumulation in pond Check for trash (in pond and structures) • Maintain 95% veg. (pond & slopes) • Maintain healthy stand of veg.	See CB Req. See OS Req. Repair immediately ≥ 2 in. sediment Remove all trash/debris Restore veg. in-kind Mow when ≥ 6 in
Energy Dissipation (ED) Structures (RipRap)	Annually	Check for displaced stones Check for woody vegetation	Replace immediately Remove annually
Outlet Structure(s)	Annually	• Inspect once per year. • Inspect for clogging and sediment accumulation. • Remove all debris immediately and sediment accumulations ≥ 2 inches.	≥ 2 in. sediment Remove immediately
Catch Basins	Annually	• Check for sediment accumulation • Check for floatable contaminants	≥ 2 ft. sediment depth Remove all floatables
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 pages contain 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

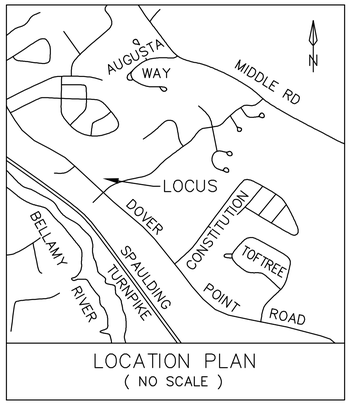
Deicing Salt Quantity Use Log

Date	Amount of Material Applied	Comments

PROPOSED
VEHICLE REFUELING & RECHARGING STATION & CONVENIENCE STORE

CIRCLE K #7264 DOVER
DOVER POINT ROAD
TAX MAP K, LOT 19C
DOVER, NEW HAMPSHIRE

MARCH 1, 2021
REVISED: APRIL 22, 2021
REVISED: MAY 7, 2021



LOCATION PLAN
(NO SCALE)

OWNER / APPLICANT:
MAC'S CONVENIENCE STORES, LLC
935 E TALLMADGE AVE
AKRON, OH 44310
TEL.: 330-696-9715

OWNER REPRESENTATIVE SIGNATURE

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

SURVEYOR:
MCENEANEY SURVEY OF NEW ENGLAND
P.O. BOX 681
DOVER, NEW HAMPSHIRE 03820
TEL.: 603-742-0911

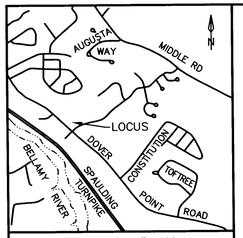
WETLAND SCIENTIST:
DAMON BURT
FRAGGLE ROCK ENVIRONMENTAL
38 GARLAND ROAD
STRAFFORD, NH 03884
TEL.: 603-969-5574

LANDSCAPE ARCHITECT:
WOODBURN & COMPANY LANDSCAPE ARCHITECTURE, LLC
103 KENT PLACE
NEWMARKET, NH 03857
TEL: 603-659-5949

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Erosion Control Detail Sheet	10
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Landscape Plan	19
Dover Ladder Truck Movement Plan	20
Streetscape Plan	–
Architectural Plans	–

P21-15



LOCATION PLAN
(NO SCALE)

No.	Central Angle	Radius	Arc Length	Chord Length	Chord Bearing
C1	137°56'13"	65.00	156.48	121.34	S70°15'47"W
C2	66°49'33"	31.63	36.89	34.84	S34°42'27"W
C3	26°38'00"	175.00	81.35	80.62	S54°48'14"W
C4	90°39'01"	30.00	47.46	42.67	S86°48'44"W
C5	01°06'45"	5696.65	110.60	110.60	N47°18'23"W

No.	Bearing	Distance
L1	N46°29'57"W	50.00'
L2	S73°26'36"E	29.44'
L3	N46°45'01"W	9.82'
L4	N46°29'57"W	24.79'

REFERENCE PLANS:

1.) LOT ELIMINATION AND LOT LINE ADJUSTMENT PLAN PREPARED FOR SEBRING HOLDINGS, LLC AND MACS CONVENIENCE STORES, LLC, TAX MAP K, LOT Nos. 19A, 19C, & 26, DOVER POINT ROAD & POINTE PLACE, CITY of DOVER, COUNTY of STRAFFORD, STATE of NEW HAMPSHIRE. DOVER PLANNING FILE No. P 20-62. SCALE: 1" = 30'; DATED: SEPTEMBER 10, 2020, REVISED THROUGH 10/16/20; BY: THIS OFFICE. RECORDED S.C.R.D. PLAN 12241.

2.) BOUNDARY LINE ADJUSTMENT & SUBDIVISION PLAN - ELLIOTT ROSE COMPANY OF DOVER, INC., DOVER POINT ROAD, DOVER, NEW HAMPSHIRE. SCALE: 1" = 40'; DATED: JUNE 28, 2002, REVISED TO 8/25/03; BY: TRITECH ENGINEERING CORP. RECORDED S.C.R.D. PLAN 72-49.

SANITARY SEWER STRUCTURE SCHEDULE

EXIST. SMH "A" EXISTING CITY CROSS-COUNTRY LINE
- RIM ELEV: = 60.62
- INVERT IN: = (8")
- INVERT IN: = 51.32 (12")
- INVERT OUT: = 51.30 (12")

EXIST. SMH "B" EXISTING CITY CROSS-COUNTRY LINE
- RIM ELEV: = 59.34
- INVERT IN: = 48.74 (12")
- INVERT OUT: = 48.64 (12")

EXIST. SMH "C" EXISTING CITY CROSS-COUNTRY LINE
- RIM ELEV: = 54.06
- INVERT IN: = 44.26 (12")
- INVERT OUT: = 44.16 (12")

STORMDRAINAGE STRUCTURE SCHEDULE

EXIST. CB "A"
- RIM = 61.38
- INVERT OUT: = 57.28 (CB "B")
- SUMP = 54.2
- 12" HDPE
- LENGTH: = 29.8

EXIST. DMH "B"
- RIM = 62.27
- INVERT IN: = 57.57 (CB "A")
- INVERT IN: = 57.7 (CB "B1")
- INVERT OUT: = 57.47 (CB "C")
- SUMP = 54.8
- 12" HDPE
- LENGTH: = 173.0

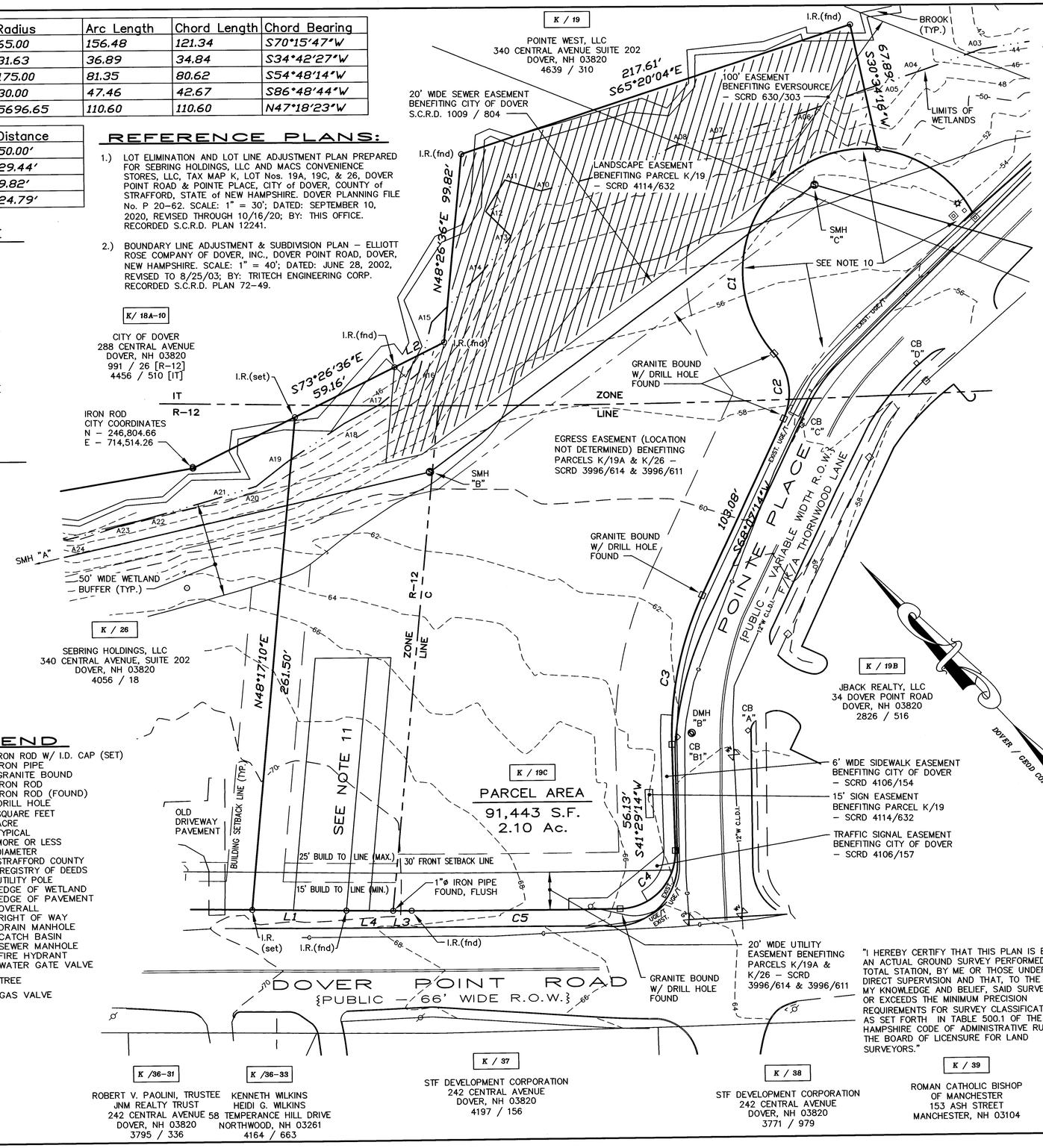
EXIST. CB "C"
- RIM = 58.46
- INVERT IN: = 54.06 (CB "B")
- INVERT OUT: = 53.96 (CB "D")
- SUMP = 51.0
- 12" HDPE
- LENGTH: = 69.5

EXIST. CB "D"
- RIM = 56.96
- INVERT IN: = 52.76 (CB "C")
- INVERT OUT: = 52.66
- SUMP = 49.5
- 12" HDPE

EXIST. CB "B1"
- RIM = 61.55
- INVERT OUT: = 57.0
- SUMP = 54.8
- 12" HDPE

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
- – – – – – EDGE OF PAVEMENT
- O.A. - OVERALL
- R.O.W. - RIGHT OF WAY
- Ⓓ DMH - DRAIN MANHOLE
- □ CB - CATCH BASIN
- Ⓢ SMH - SEWER MANHOLE
- HYD. - FIRE HYDRANT
- WV - WATER GATE VALVE
- GV - GAS VALVE
- TREE



NOTES:

1.) OWNERS OF RECORD:

MACS CONVENIENCE STORES LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310
S.C.R.D. VOL. 4114, PAGE 608
S.C.R.D. VOL. 4848, PAGE 526

2.) K / 19C - DENOTES TAX MAP AND PARCEL NUMBER.

3.) ZONING DISTRICT IS R-12 (MEDIUM DENSITY RESIDENTIAL) AND THE C (COMMERCIAL DISTRICT) AND IT (INNOVATIVE TECHNOLOGY DISTRICT).

4.) DIMENSIONAL REGULATIONS:

ZONE:	R-12 - MEDIUM DENSITY RESIDENTIAL
MINIMUM LOT SIZE	= 12,000 S.F.
MAXIMUM LOT COVERAGE	= 30 PERCENT
MINIMUM FRONTAGE	= 100 FEET
BUILDING REQUIREMENTS:	
FRONT BUILD TO	= 15 FEET MIN.
	= 25 FEET MAX.
SIDE SETBACK	= 15 FEET
REAR SETBACK	= 30 FEET
ZONE:	C - COMMERCIAL
MINIMUM LOT SIZE	= 20,000 S.F.
MAXIMUM LOT COVERAGE	= 50 PERCENT
MINIMUM FRONTAGE	= 125 FEET
BUILDING REQUIREMENTS:	
FRONT	= 30 FEET
SIDE SETBACK	= 12 FEET
REAR SETBACK	= 15 FEET
ZONE:	IT - INNOVATIVE TECHNOLOGY
MINIMUM LOT SIZE	= 2 ACRES
MAXIMUM LOT COVERAGE	= 33 PERCENT
MINIMUM FRONTAGE	= 200 FEET
BUILDING REQUIREMENTS:	
FRONT BUILD TO	= 50 FEET
SIDE SETBACK	= 50 FEET
REAR SETBACK	= 50 FEET

5.) PLAN INTENT: TO SHOW THE EXISTING SITE CONDITIONS AS OF THE DATE OF THIS PLAN.

6.) PARCEL AREA = 91,443 S.F. / 2.10 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; PANEL 0340; SUFFIX E; MAP NUMBER 33017C0340E; EFFECTIVE DATE SEPTEMBER 30, 2015.

8.) BASIS OF BEARING IS THE CITY OF DOVER G.I.S. SYSTEM STATIONS TR 112 AND TR 113 WHICH WERE USED TO DETERMINE LOCATION, ORIENTATION. VERTICAL DATUM - NAVD 88.

9.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES, INC. DURING SEPTEMBER 2018 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.

10.) THIS PORTION OF THE CUL-DE-SAC IS TO BECOME PART OF PARCEL K / 19C WHEN THE (FKA THORNWOOD LANE), (NOW POINTE PLACE) RIGHT OF WAY IS CONTINUED. SEE REFERENCE PLAN #1.

11.) REFERENCE IS MADE TO AMENDED AND RESTATED RECIPROCAL EASEMENT AGREEMENT MADE BETWEEN SEBRING HOLDINGS, LLC AND MAC'S CONVENIENCE STORES LLC RECORDED AT S.C.R.D. IN BOOK 4848, PAGE 528, DATED DECEMBER 14, 2020. ALSO, REFERENCE IS MADE TO RECIPROCAL EASEMENT AGREEMENT MADE BETWEEN SEBRING HOLDINGS, LLC AND MAC'S CONVENIENCE STORES LLC RECORDED AT S.C.R.D. IN BOOK 4114, PAGE 610, DATED APRIL 4, 2013.

12.) WETLANDS FLAGGED LINE "A" SHOWN WERE DELINEATED BY DAMON E. BURT, N.H.C.W.S. #163 OF FRAGGLE ROCK ENVIRONMENTAL SERVICES ON JANUARY 14, 2021 IN ACCORDANCE WITH THE 1987 CORPS. OF ENGINEERS WETLANDS DELINEATION MANUAL AND LOCATED BY THIS OFFICE.

"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		

21-1720	EXIST. COND.	
PROJECT NO	TYPE	FIELDBOOK & PAGES

EXISTING CONDITIONS PLAN
PREPARED FOR
MACS CONVENIENCE STORES LLC
TAX MAP K, LOT No. 19C
DOVER POINT ROAD & POINTE PLACE
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DOVER PLANNING FILE No. P 21-15

DRAWN BY: RJM	FILE: 1720\DWGS\21-1720
SCALE: 1" = 30'	DATE: JANUARY 5, 2021

30 15 0 15 30 60 90 120

STATE OF NEW HAMPSHIRE No. 661 KEVIN M. McENEANEY LICENSED LAND SURVEYOR

McEneaney Survey Associates of NEW ENGLAND

P.O. Box 681 - 24 CHESTNUT STREET
DOVER, NH 03820 (603) 742-0911

SURVEYING - PLANNING - CONSULTING

ABUTTERS LIST
(WITHIN 200 FT)

TAX MAP	LOT NO.	NAME & ADDRESS
K 18-A	K 18-A	CITY OF DOVER 288 CENTRAL AVENUE DOVER, NH 03820
K 26	K 19-A	SERBRING HOLDINGS LLC 340 CENTRAL AVENUE SUITE 202 DOVER, NH 03820
K 19-B	K 19-B	JBACK REALTY LLC 34 DOVER POINT ROAD DOVER, NH
K 19-C	K 19-C	MAC CONVENIENCE STORES LLC. 935 EAST TALLMADGE AVE AKRON, OH 44310
K 26	K 26	CHRISTOPHER M WAYNE & CHRISTINA WONG 26 DOVER POINT ROAD DOVER, NH 03820
K 35	K 35	FOLLANSBEE MARILYN E TRUSTEE FOLLANSBEE MARILYN E REV TRUST OF 2011 25 DOVER POINT ROAD DOVER, NH 03820
K 36	K 36	31 33 DOVER POINT ROAD CONDOMINIUM PAOLINI ROBERT TRUSTEE AND WILKINSON STE 15 BRIARWOOD LANE DOVER, NH 03820
K 37	K 37	STF DEVELOPMENT CORP. 242 CENTRAL AVENUE DOVER, NH 03820

K / 19-C — TAX MAP / LOT NUMBER

MAGNETIC

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21-15

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

NO.	REVISION	APP'D	DATE
2	REV PER STAFF COMMENTS	SLH	5-7-21
1	REV PER STAFF COMMENTS	SLH	4-22-21

DATE: 3-1-21
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:1677
FILE: SITE.DWG

NEIGHBORHOOD PLAN

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

3

GENERAL NOTES:

1. OWNERS OF RECORD:
   MACS CONVENIENCE STORES, LLC
   935 EAST TALLMADGE AVENUE
   AKRON, OHIO 44310
   S.C.R.D. VOL. 4114, PAGE 608
   S.C.R.D. VOL. 4848, PAGE 526
2. K/ 19C – DENOTES TAX MAP AND PARCEL NUMBER.
3. THIS PARCEL IS SHOWN AS LOT 19C MAP K OF THE CITY OF DOVER TAX MAPS.
4. ZONING DISTRICT IS R–12 (MEDIUM DENSITY RESIDENTIAL) AND THE C (COMMERCIAL DISTRICT) AND IT (INNOVATIVE TECHNOLOGY DISTRICT)
5. DIMENSIONAL REGULATIONS:

	ZONE: R–12 – MEDIUM DENSITY RESIDENTIAL
	MINIMUM LOT SIZE = 12,000 S.F. MAXIMUM LOT COVERAGE = 30 PERCENT
	MINIMUM FRONTAGE= 100 FEET
	BUILDING REQUIREMENTS:
	FRONT BUILD TO = 15 FEET MIN. = 25 FEET MAX.
	SIDE SETBACK= 15 FEET
	REAR SETBACK = 30 FEET
ZONE:	C – COMMERCIAL
MINIMUM LOT SIZE	= 20,000 S.F.
MAXIMUM LOT COVERAGE	= 50 PERCENT
MINIMUM FRONTAGE	= 125 FEET
BUILDING REQUIREMENTS:	
FRONT	= 30 FEET
SIDE SETBACK	= 12 FEET
REAR SETBACK	= 15 FEET
ZONE:	IT – INNOVATIVE TECHNOLOGY
MINIMUM LOT SIZE	= 2 ACRES
MAXIMUM LOT COVERAGE	= 33 PERCENT
MINIMUM FRONTAGE	= 200 FEET
BUILDING REQUIREMENTS:	
FRONT BUILD TO	= 50 FEET
SIDE SETBACK	= 50 FEET
REAR SETBACK	= 50 FEET

6. PARCEL AREA = 91,443 S.F. / 2.10 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; PANEL 0340; SUFFIX E; MAP NUMBER 33017C0340E; EFFECTIVE DATE SEPTEMBER 30, 2015.
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11. WETLANDS FLAGGED LINE "A"SHOWN WERE DELINEATED BY DAMON E. BURT, N.H.C.W.S. #163 OF FRAGGLE ROCK ENVIRONMENTAL SERVICES ON JANUARY 14, 2021 IN ACCORDANCE WITH THE 1987 CORPS. OF ENGINEERS WETLANDS DELINEATION MANUAL AND LOCATED BY THIS OFFICE.

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. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT AND POLES.
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. EXISTING ("OLD") WATER SERVICES TO THE SUBJECT SITE SHALL BE DISCONNECTED AND SHUT–OFF AT THE WATER MAIN.
11. EXISTING SEWER SERVICES TO BE CUT AND PERMANENTLY CAPPED AT PROPERTY LINE.
12. 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.

SITE NOTES:

1. CURRENT OWNER: MAC'S CONVENIENCE STORES, LLC
   935 E TALLMADGE AVE
   AKRON, OH 44310
2. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A PLAN REFERENCED AND PREPARED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND (SEE EXISTING CONDITIONS PLAN IN THIS PLAN SET)
3. THE PURPOSE OF THIS PLAN IS TO DEPICT IMPROVEMENTS ASSOCIATED WITH A 5,358 SF REFUELING STATION & CONVENIENCE STORE ALONG WITH A GAS PUMP CANOPY. THE NEW ENTRANCE/EXIT ONTO DOVER POINT ROAD WILL BECOME A SHARED DRIVE WITH THE ABUTTING LOT TAX MAP K, LOT 26.
4. TITLE REFERENCE FOR THE PROJECT PARCEL(S) IS THE STRAFFORD COUNTY REGISTRY OF DEEDS, BOOK NO. VOL 4114 PAGE 608.
5. EXTERIOR LIGHTING SHALL BE CUT–OFF TYPE FIXTURES PER CHAPTER 153–14–E AND SHALL PROVIDE LIGHTING DIRECTED ON–SITE ONLY.
6. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY AND STATE CODES.

SITE NOTES CONT.:

7. ON–SITE SNOW STORAGE SHALL OCCUR ALONG THE EDGES OF PROPOSED PAVEMENT.
8. ALL CONSTRUCTION LAYOUT SHALL BE DONE BY A LICENSED SURVEYOR UNDER CONTRACT WITH THE CONTRACTOR.
9. SEE DETAILS FOR SIGN LEGENDS.
10. 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.
11. 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.
12. 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.
13. 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.
14. BUILDING ADDRESSES TO BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.
15. 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.
16. THE SITE SHALL BE MAINTAINED TO PROVIDE ACCESSIBILITY IN ALL WEATHER CONDITIONS.
17. COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM WITH DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.
18. THE SUBJECT PARCEL(S) IS (ARE) SERVED BY MUNICIPAL WATER AND SEWER.
19. 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.
20. 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.
21. SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY–FRIDAY 7 AM–6 PM, SATURDAY AND NO SUNDAY 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.
22. 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.
23. 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.
24. ANY RETAINING WALL TALLER THAN FOUR FEET (4') REQUIRES ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
25. ANY FENCE TALLER THAN SEVEN FEET (7') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
26. 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.
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 OCCURS.
28. 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.
29. FIRE DEPARTMENT ACCESS SHALL BE INSTALLED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS IN ALL WEATHER CONDITIONS AT ALL TIMES.
30. REFUSE PICKUP WILL BE BY PRIVATE CONTRACTOR AND WILL BE VIA DUMPSTER ON–SITE.
31. SNOW STORAGE WILL BE ACCORDING TO THE OPERATION AND MAINTENANCE PLAN AND WITHIN AREAS AS INDICATED.
32. ALL EXTERIOR DOORS ARE MANUAL AND OPENED FROM THE INTERIOR BY PANIC HARDWARE. ALL EXTERIOR DOORS SHALL COMPLY WITH ADA AND ALL LOCAL BUILDING CODE REQUIREMENTS.
33. THIS ENTRANCE/EXIT ONTO DOVER POINT ROAD WILL BE SHARED BY PARCELS K–19C AND K–26 AND IS DEFINED WITHIN THE "RECIPROCAL ACCESS AGREEMENT" WHICH WILL BECOME PART OF THIS PLAN WHEN THE PLAN IS APPROVED. THE COPY OF THE FULL "AGREEMENT" IS ON FILE WITH THE DOVER PLANNING OFFICE. WHEN THIS PLAN IS APPROVED THE EXISTING PAVED ACCESS FOR PARCEL K–26 WILL ABANDONED.
34. WHEN PARCEL K–26 IS DEVELOPED, ACCESS TO THE PARCEL WILL BE ALLOWED FROM THE SHARED DRIVEWAY. AS REQUESTED BY THE PLANNING BOARD A "POTENTIAL" ACCESS HAS BEEN SHOWN FOR REFERENCE ONLY AND THE ACTUAL LOCATION IS SUBJECT TO CHANGE AND WILL BE DEFINED ON FUTURE DEVELOPMENT PLANS FOR PARCEL K–26. THE DEVELOPER OF PARCEL K–26 WILL DESIGN AND IMPLEMENT THEIR ACCESS TO THE SHARED DRIVEWAY AND WILL RELOCATE THE FENCE AND VEGETATED SCREENING AS APPROPRIATE TO MAINTAIN SCREENING.
35. THE FOLLOWING FEDERAL AND STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY: N/A
36. 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.
    ZBA SPECIAL EXCEPTION Z18–18: GRANTED MARCH 21, 2019
    PLANNING BOARD CONDITIONAL USE PERMIT: PENDING
    EPA NOI: PENDING

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.
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.
3. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
4. THE SUBJECT PARCEL(S) IS (ARE) SERVED BY MUNICIPAL WATER AND SEWER.
5. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.
6. ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, DOUBLE CEMENT LINED DUCTILE IRON PIPE OR TYPE "K" COPPER, OR CITY APPROVED MATERIAL.
7. 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.
8. ALL GRAVITY SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE NOTED AND CONFORM TO THE REQUIREMENTS OF THE CITY OF DOVER SEWER DEPARTMENT STANDARDS.
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 SEWER 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.
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 58, ARTICLE I, SECTION 58–2 OF THE CODE OF THE CITY OF DOVER.
28. THE PROPOSED STRUCTURE SHALL COMPLY WITH CHAPTER 109, ARTICLE IV, SECTION 109–30 AND THE STATE BUILDING CODES OF THE CODE OF THE CITY OF DOVER.
29. FINAL PLANS FOR TANK LOCATIONS, DISTRIBUTION SYSTEMS, AND CROSS SECTIONS ASSOCIATED WITH THE FUEL BAYS, SHALL BE PROVIDED TO THE CITY OF DOVER ENGINEER PRIOR TO CONSTRUCTION.
30. FIRE SUPPRESSION PLANS SHALL BE PROVIDED TO THE FIRE/INSPECTION DEPARTMENT PRIOR TO INSTALLATION.
31. THE STRUCTURE SHALL BE SERVED BY A SPRINKLER SYSTEM AS REQUIRED UNDER CHAPTER 109– 30 OF THE CODE OF THE CITY OF DOVER AND THE STATE BUILDING CODES.
32. 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.
33. FIRE DEPARTMENT CONNECTIONS SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13. ACCESS TO FDC SHALL BE MAINTAIN A CLEAR AND UNOBSTRUCTED PATH AT ALL TIMES.
34. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
35. SEWAGE LOADING (PER ENV. – Wq 1008.03 TABLE 1008–1)

SERVICE STATION:	75 GPD/ISLAND x 6	= 450
	10 GPD/EMPLOYEE x	= 800
	TOTAL	= 1250 GPD

LEGEND

I.R. (set) o	– IRON ROD W/ I.D. CAP (SET)
⊙ I.P.	– IRON PIPE
□ G.B.	– GRANITE BOUND
○ I.R.	– IRON ROD
⊙ 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
UP	– UTILITY POLE
— · · · —	– EDGE OF WETLAND
O.A.	– OVERALL
TBR	– TO BE REMOVED
R.O.W.	– RIGHT OF WAY
D DMH	– DRAIN MANHOLE
CB	– CATCH BASIN
S SMH	– SEWER MANHOLE
HYD.	– FIRE HYDRANT
WV WV	– WATER GATE VALVE
	– TREE
GV GV	– GAS VALVE
5'R	– PROPOSED PAVEMENT RADIUS
PW	– PROPOSED WATER
PE	– PROPOSED ELECTRIC
PS	– PROPOSED SEWER
PD	– PROPOSED DRAINAGE
PG	– PROPOSED GAS
55	– PROPOSED FINISH GRADE
x 55	– PROPOSED SPOT GRADE

GRADING NOTES:

1. ALL ROAD 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. ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS.
15. LIMIT TREE CLEARING TO ONLY THE EXTENT NECESSARY FOR CONSTRUCTION.
16. PLACARDS SHALL BE INSTALLED ALONG THE EDGE OF WETLAND PRIOR TO CONSTRUCTION.

UTILITY CONTACTS

NATURAL GAS: – UNITIL CORPORATION
CONTACT: DAVID BEAULIEU
325 WEST ROAD
PORTSMOUTH, NH 03801
TEL: (603)–294–5144

WATER & SEWER: – CITY OF DOVER COMMUNITY SERVICES DEPARTMENT – PUBLIC WORKS & UTILITIES
CONTACT: BILL BOULANGER
271 MAST ROAD
DOVER, NH 03820
TEL: (603)–516–6450

ELECTRIC: – EVERSOURCE
CONTACT: PIERRE BOUGIE
4 OLD DOVER ROAD
ROCHESTER, NH 03867
TEL: (603)–332–4227

TELEPHONE: – FAIRPOINT COMMUNICATIONS, INC.
CONTACT: ED LANAGAN
HIGHWAY 33, BOX 307
1575 GREENLAND ROAD
GREENLAND, NH 03804
TEL (603)–528–7335

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21–15

NO.	REVISION	APP'D	DATE
2	REV PER STAFF COMMENTS	SLH	5–7–21
1	REV PER STAFF COMMENTS	SLH	4–22–21

DATE: 3–1–21
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:1677
FILE: SITE.DWG

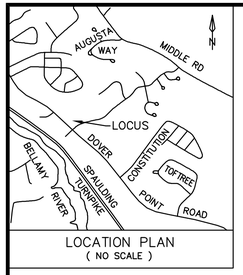
CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD & POINTE PLACE
DOVER, NH

NOTE SHEET

4



LOCATION PLAN
(NO SCALE)

SANITARY SEWER STRUCTURE SCHEDULE

EXIST. SMH "A" — EXISTING CITY CROSS-COUNTRY LINE
- RIM ELEV: = 60.62
- INVERT IN: = (8")
- INVERT IN: = 51.32 (12")
- INVERT OUT: = 51.30 (12")

EXIST. SMH "B" — EXISTING CITY CROSS-COUNTRY LINE
- RIM ELEV: = 59.34
- INVERT IN: = 48.74 (12")
- INVERT OUT: = 48.64 (12")

EXIST. SMH "C" — EXISTING CITY CROSS-COUNTRY LINE
- RIM ELEV: = 54.06
- INVERT IN: = 44.26 (12")
- INVERT OUT: = 44.16 (12")

STORMDRAINAGE STRUCTURE SCHEDULE

EXIST. CB "A"
- RIM = 61.38
- INVERT OUT: = 57.28 (CB "B")
- SUMP = 54.2
- 12" HDPE
- LENGTH: = 29.8

EXIST. DMH "B"
- RIM = 62.27
- INVERT IN: = 57.57 (CB "A")
- INVERT IN: = 57.7 (CB "B1")
- INVERT OUT: = 57.47 (CB "C")
- SUMP = 54.8
- 12" HDPE
- LENGTH: = 173.0

EXIST. CB "C"
- RIM = 58.46
- INVERT IN: = 54.06 (CB "B")
- INVERT OUT: = 53.96 (CB "D")
- SUMP = 51.0
- 12" HDPE
- LENGTH: = 69.5

EXIST. CB "D"
- RIM = 56.96
- INVERT IN: = 52.76 (CB "C")
- INVERT OUT: = 52.66
- SUMP = 49.5
- 12" HDPE

EXIST. CB "B1"
- RIM = 61.55
- INVERT OUT: = 57.0
- SUMP = 54.8
- 12" HDPE

K / 19
POINTE WEST, LLC
340 CENTRAL AVENUE SUITE 202
DOVER, NH 03820
4639 / 310

K / 18A-10
CITY OF DOVER
288 CENTRAL AVENUE
DOVER, NH 03820
991 / 26 [R-12]
4456 / 510 [IT]

K / 19C
PARCEL AREA
91,443 S.F.
2.10 Ac.

K / 26
SEBRING HOLDINGS, LLC
340 CENTRAL AVENUE, SUITE 202
DOVER, NH 03820
4056 / 18

K / 26-1
CHRISTOPHER M. WAYNE
CHRISTINA WONG
26 DOVER POINT ROAD
DOVER, NH 03820
4213 / 231
DWELLING #26

K / 19B
JBACK REALTY, LLC
34 DOVER POINT ROAD
DOVER, NH 03820
2826 / 516

K / 35
HERBERT E. FOLLANSBEE
MARILYN FOLLANSBEE
25 DOVER POINT ROAD
DOVER, NH 03820
987 / 64

K / 36-31
ROBERT V. PAOLINI, TRUSTEE
JNM REALTY TRUST
242 CENTRAL AVENUE
DOVER, NH 03820
3795 / 336

K / 36-33
KENNETH WILKINS
HEIDI G. WILKINS
58 TEMPERANCE HILL DRIVE
NORTHWOOD, NH 03261
4164 / 663

K / 37
STF DEVELOPMENT CORPORATION
242 CENTRAL AVENUE
DOVER, NH 03820
4197 / 156

K / 38
STF DEVELOPMENT CORPORATION
242 CENTRAL AVENUE
DOVER, NH 03820
3771 / 979

K / 39
ROMAN CATHOLIC BISHOP
OF MANCHESTER
153 ASH STREET
MANCHESTER, NH 03104

20' WIDE SEWER EASEMENT BENEFITING CITY OF DOVER S.C.R.D. 1009 / 804
100' EASEMENT BENEFITING EVERSOURCE-SCRD 630/303
LANDSCAPE EASEMENT BENEFITING PARCEL K/19 - SCRD 4114/632
LIMITS OF WETLANDS
BROOK (TYP.)
SMH "C"
LIGHT POLE
SEE NOTE 10 ON EXISTING CONDITIONS PLAN
EXIST. USE/F
CB "D"
CB "C"
IT
R-12
ZONE LINE
IT
C
DOVER / GRDD CORP.
20' WIDE SEWER EASEMENT BENEFITING CITY OF DOVER S.C.R.D. 1021 / 712
50' BROOK SETBACK
SMH "B"
TREE 30IN MAPLE (TBR)
R-12
C
LIMIT OF CURBING TO BE REMOVED
CURBING TO BE REMOVED
POINTE PLACE
{PUBLIC - VARIABLE WIDTH R.O.W.}
12"W C.L.D.I.
F/K/A THORNWOOD LANE
50' WIDE WETLAND BUFFER (TYP.)
SMH "A"
30' WIDE UTILITY EASEMENT S.C.R.D. 3399 / 798
TREE 30IN MAPLE (TBR)
ZONE LINE
SEE NOTE 11 REFERENCE PLAN
APPROXIMATE LOCATION OF WATERLINE STUB (TO BE FIELD VERIFIED)
DMH "B"
CB "B1"
CB "A"
W
6' WIDE SIDEWALK EASEMENT BENEFITING CITY OF DOVER - SCRD 4106/154
LIMIT OF CURBING TO BE REMOVED
15' SIGN EASEMENT BENEFITING PARCEL K/19 - SCRD 4114/632
12"W C.L.D.I.
30' WIDE x 50' ACCESS EASEMENT S.C.R.D. PLAN 88-27
OLD DRIVEWAY PAVEMENT
TREE 33IN MAPLE
TREE 22D MAPLE
TREE 30IN MAPLE (TBR)
TREE GOBLN OAK (TBR)
BUILDING SETBACK LINE (TYP.)
25' BUILD TO LINE (MAX.)
15' BUILD TO LINE (MIN.)
25' BUILD TO LINE (MAX.)
15' BUILD TO LINE (MIN.)
30' FRONT SETBACK LINE
UTILITY POLE TO BE REMOVED
SMH "1"
UP 1/193A
TREE 14DBL MAP
CURBING TO BE REMOVED
LIMITS OF CURBING TO BE REMOVED
EXIST. USE/F
GV
TRAFFIC SIGNAL EASEMENT BENEFITING CITY OF DOVER - SCRD 4106/157
UTILITY EASEMENT BENEFITING PARCELS K/19A & K/26 - SCRD 3996/614 & 3996/611
OHW
OVERHEAD WIRE TO BE REMOVED AND INSTALLED UNDERGROUND
DOVER POINT ROAD
{PUBLIC - 66' WIDE R.O.W.}
UP 1/193
UP 1/194

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

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21-15

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

NO.	REVISION	APP'D	DATE
2	REV PER STAFF COMMENTS	SLH	5-7-21
1	REV PER STAFF COMMENTS	SLH	4-22-21

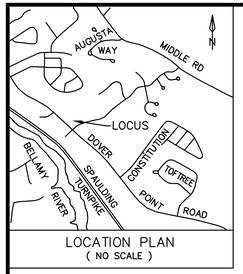
DATE: 3-1-21
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:1677
FILE: SITE.DWG

DEMOLITION PLAN

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

5



LOCATION PLAN
(NO SCALE)

REFERENCE PLAN:

1. "EXISTING CONDITIONS PLAN" PREPARED FOR MACS CONVENIENCE STORES, LLC; TAX MAP K, LOT NO. 19C; DOVER POINT ROAD & POINTE PLACE; CITY OF DOVER; COUNTY OF STRAFFORD; STATE OF NEW HAMPSHIRE; PREPARED BY: MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND; SCALE: 1"=30'; DATE: JANUARY 5, 2021.

BROOK (TYP.)
100' EASEMENT BENEFITING EVERSOURCE–SCRD 630/303
LIMITS OF WETLANDS
100' PSNH EASEMENT
LIGHT POLE
LANDSCAPE EASEMENT BENEFITING PARCEL K/19 – SCRD 4114/632
SEE NOTE 10 ON EXISTING CONDITIONS PLAN
50' BROOK SETBACK (CONSERVATION DISTRICT)
PARCEL AREA
91,443 S.F.
2.10 Ac.
ZONE LINE
20.0' SSDR-1 EASEMENT
SNOW STORAGE
IT
R-12
IT
C
20' WIDE SEWER EASEMENT BENEFITING CITY OF DOVER S.C.R.D. 1021 / 712
PROPOSED 12'x34' CONCRETE PAD WITH (2) BOLLARDS AT END
50' BROOK SETBACK
PROPOSED CONCRETE SIDEWALK
PROPOSED CONCRETE TRANSFORMER PAD (COORDINATE SIZE AND LOCATION WITH LOCAL UTILITY COMPANY)
PROPOSED 8' HIGH WHITE VINYL FENCE
114'
PROPOSED BUILDING
5,358 S.F.
DOOR
6.25'
47'
PROPOSED R7-8 AND R7-8a SIGN
PROPOSED QUICK CHARGE RECHARGING STATION
DOOR
DOOR
5' CONCRETE SIDEWALK
6'
9.5' (TYP)
18'
NO REVEAL
NO REVEAL
50' WIDE WETLAND BUFFER (TYP.)
30' WIDE UTILITY EASEMENT S.C.R.D. 3399 / 798
PROPOSED FENCED DUMPSTER ENCLOSURE (SEE DETAILS)
NO PARKING
18'
9.35'
9.5' (TYP)
PROPOSED FIRE DEPT. CONNECTION WITH SIGN
PROPOSED PAINTED TRAFFIC ARROW
PROPOSED BIKE RACK ON CONCRETE PAD
ZONE LINE
37'
NO REVEAL
86'
11'
32'
32'
11'
DWELLING #26
SEE NOTE 11 REFERENCE PLAN
PROPOSED 3,698 S.F. CANOPY
END SGC BEGIN PCC
30'
PROPOSED 8' LONG TRANSITION FENCE PANEL (4' HIGH TO 8' HIGH)
30' WIDE x 50' ACCESS EASEMENT S.C.R.D. PLAN 88-27
OLD DRIVEWAY PAVEMENT
BUILDING SETBACK LINE (TYP.)
PROPOSED UNDERGROUND TANKS
PROPOSED CONCRETE PAD
PROPOSED CANOPY 3,698 SF
42'
30' FRONT SETBACK LINE
25' BUILD TO LINE (MAX.)
15' BUILD TO LINE (MIN.)
BEGIN SGC WITH TIP-DOWN
PROPOSED PAINTED TRAFFIC ARROW (TYP)
25' BUILD TO LINE (MAX.)
15' BUILD TO LINE (MIN.)
END SGC BEGIN PCC
15.5'
PROPOSED TIP-DOWN RAMP
PROPOSED 6' WIDE CROSSWALK
PROPOSED SD-R-53RA5 "NO PARKING FIRE LANE" SIGN
TRAFFIC SIGNAL EASEMENT BENEFITING CITY OF DOVER – SCRD 4106/157
UP 1/193A
16.52'
18.73'
PROPOSED R1-1 "STOP" SIGN AND 18" STOP BAR
PROPOSED LIGHT POLE BASE (TYP)
PROPOSED SD-R-53RA5 "NO PARKING FIRE LANE" SIGN
PROPOSED SIGN
PROPOSED R1-1 "STOP" SIGN
UTILITY EASEMENT BENEFITING PARCELS K/19A & K/26 – SCRD 3996/614 & 3996/611
DOVER POINT ROAD
(PUBLIC – 66' WIDE R.O.W.)
UP 1/193
UP 1/194
POINTE PLACE
(PUBLIC – VARIABLE WIDTH R.O.W.)
F/K/A THORNWOOD LANE
PROPOSED CONCRETE PAD WITH ADA APPROVED TACTILE MAT
PROPOSED 40' WIDE ENTRANCE
PROPOSED 8' WIDE PAINTED CROSSWALK
PROPOSED R1-1 "STOP" SIGN AND 18" STOP BAR & LEGEND
PROPOSED CONCRETE PAD WITH ADA APPROVED TACTILE MAT
6' WIDE SIDEWALK EASEMENT BENEFITING CITY OF DOVER – SCRD 4106/154
15' SIGN EASEMENT BENEFITING PARCEL K/19 – SCRD 4114/632
DOVER / GRDD CORP.

BICYCLE RACK REQUIREMENTS

MINIMUM NUMBER OF BIKE STORAGE SPACES: 5% TOTAL REQUIRED PARKING	REQUIRED 2 SPACES	PROVIDED 5 SPACES

DRIVEWAY REQUIREMENTS

# OF DRIVEWAYS 1/400 FT OF FRONTAGE (ARTERIAL ROAD)	1	1
# OF DRIVEWAYS 1/125 FT OF FRONTAGE (LOCAL ROAD)	3	1
MINIMUM DISTANCE FROM INTERSECTION (LOCAL ROAD – 35 MPH)	250'	*135

DIMENSIONAL REQUIREMENTS

(ZONE R-12)	REQUIRED	PROPOSED
MINIMUM LOT SIZE	12,000 S.F	±91,443 .SF
MIN LOT COVERAGE	30%	5%
MINIMUM LOT FRONTAGE	100'	±219'
BUILDING REQUIREMENTS		
FRONT BUILD TO	15' MIN 25' MAX	±164'
SIDE SETBACK	15'	±50'
REAR SETBACK	30'	±65'
(ZONE C)		
MINUMIN LOT SIZE	20,000 S.F.	±91,443 S.F.
MINIMUM LOT COVERAGE	50%	10.6%
MIN FRONTAGE	125'	>125'
BUILDING REQUIREMENTS		
FRONT SETBACK	30'	±164'
SIDE SETBACK	12'	±50'
REAR SETBACK	15'	±89'

REQUIRED AS SPECIAL EXCEPTION CRITERIA FOR VEHICLE REFUELING AND RECHARGING STATION

	REQUIRED	PROPOSED
MIN. LOT SIZE	80,000 S.F.	91,443 S.F.
MIN LOT WIDTH	150 FT	214 FT
OPEN SPACE	30%	45%
SIGN AREA	100 S.F.	NOT REQUESTING SIGNAGE AT THIS TIME

ZBA SPEICAL EXCEPTION – , GRANTED 3–21–19

PARKING REQUIREMENTS

	MAX ALLOWED	PROPOSED
PARKING STALL SIZE (90°)	9'x18'	9.5'x18'
MINIMUM ACCESS WAY WIDTH	22' AISLE	24' AISLE
PARKING CALCULATIONS:		
RETAIL (1 SPACE PER 275 SF) (±5,358 SF)	20 SPACES	16 SPACES 1 RECHARGE STATION
GAS ISLAND (2 SPACES PER FUELING LOCATION)	(6 X 2)	12 SPACES
TOTAL		29* SPACES

* 1 SPACE IS A RECHARGING STATION

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

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PLANNING FILE NO.: P21–15

NO.	REVISION	APP'D	DATE
2	REV PER STAFF COMMENTS	SLH	5–7–21
1	REV PER STAFF COMMENTS	SLH	4–22–21

DATE: 3–1–21
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:1677
FILE: SITE.DWG

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

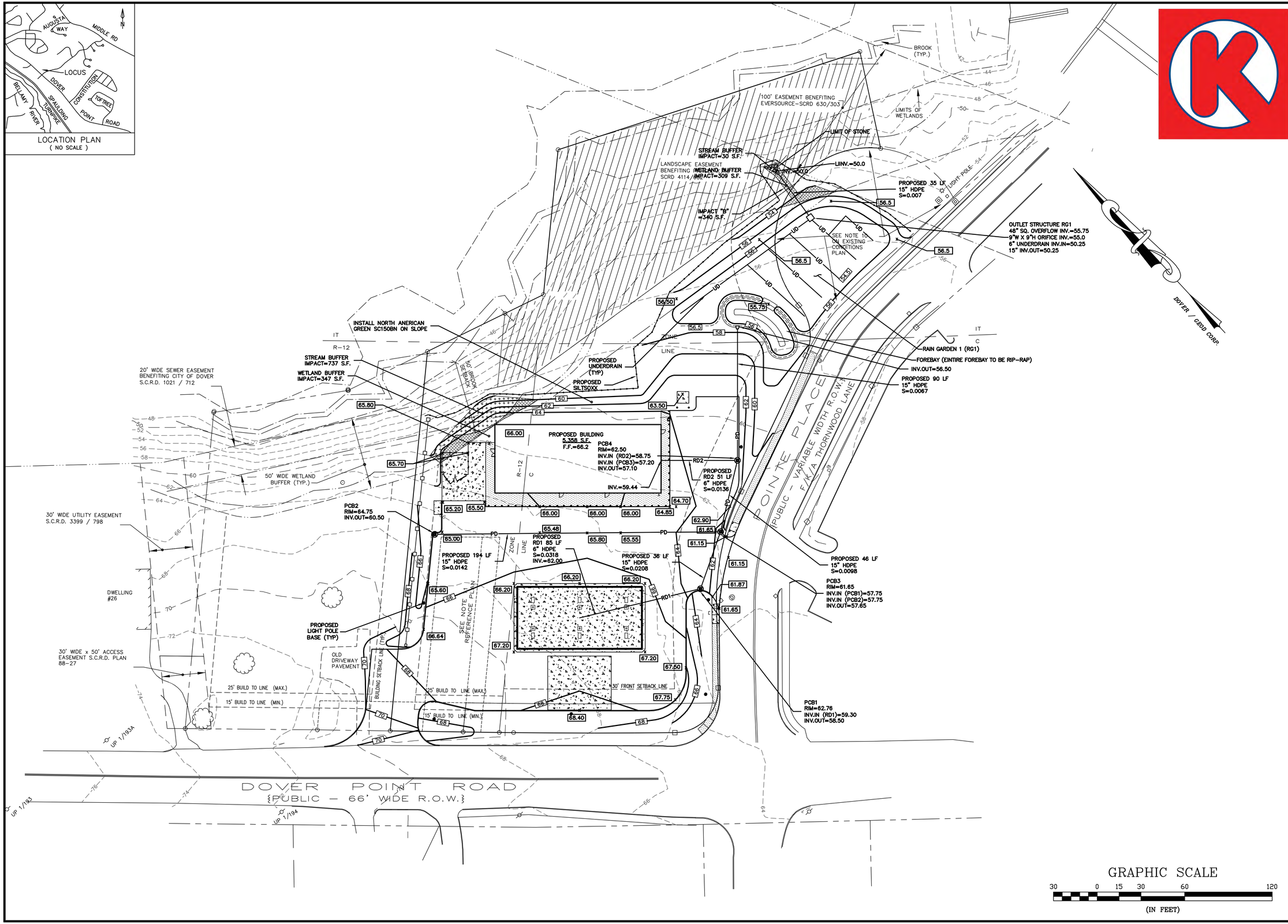
MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

SITE PLAN

6

LOCATION PLAN
(NO SCALE)



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

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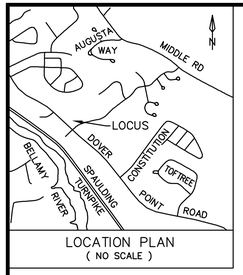
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GRADING, DRAINAGE & EROSION CONTROL PLAN

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

7



LOCATION PLAN
(NO SCALE)

SANITARY SEWER STRUCTURE SCHEDULE

EXIST. SMH "A"	EXISTING CITY CROSS-COUNTRY LINE
RIM ELEV:	= 60.62
INVERT IN:	= (8")
INVERT IN:	= 51.32 (12")
INVERT OUT:	= 51.30 (12")
EXIST. SMH "B"	EXISTING CITY CROSS-COUNTRY LINE
RIM ELEV:	= 59.34
INVERT IN:	= 48.74 (12")
INVERT OUT:	= 48.64 (12")
EXIST. SMH "C"	EXISTING CITY CROSS-COUNTRY LINE
RIM ELEV:	= 54.06
INVERT IN:	= 44.26 (12")
INVERT OUT:	= 44.16 (12")

20' WIDE SEWER EASEMENT BENEFITING CITY OF DOVER S.C.R.D. 1009 / 804

100' EASEMENT BENEFITING EVERSOURCE-SCRD 630/303

BROOK (TYP.)

LIMITS OF WETLANDS

LANDSCAPE EASEMENT BENEFITING PARCEL K/19 - SCRD 4114/632

LIGHT POLE

SMH "C"

SEE NOTE 10 ON EXISTING CONDITIONS PLAN

EXIST. UP 1/193

DOVER / GRODI CORP.

IT R-12

IT C

ZONE LINE

INV.=47.04

PROPOSED 59.2 LF 6" PVC S=0.080

PROPOSED CLEAN OUT RIM=61.75 INV.IN=59.38 INV.OUT=51.78

PROPOSED 1000 GAL GREASE TRAP RIM=64.0 INV.IN=60.0 INV.OUT=59.7

SMH "B"

INV.=59.54

PROPOSED 22.3 LF 6" PVC S=0.029

PROPOSED TRANSFORMER PAD (COORD. SIZE & LOCATION W/EVERSOURCE)

20' WIDE SEWER EASEMENT BENEFITING CITY OF DOVER S.C.R.D. 1021 / 712

50' BROOK SETBACK

PROPOSED BUILDING 5,358 S.F.

INV.OUT=60.2

F.F.=66.2

PROPOSED CHARGING STATION

RD2

50' WIDE WETLAND BUFFER (TYP.)

SMH "A"

30' WIDE UTILITY EASEMENT S.C.R.D. 3399 / 798

PROPOSED 2" & 6" DI WITH GATE VALVES (COORDINATE LOCATIONS WITH BUILDING DRAWINGS)

PROPOSED FIRE DEPT. CONNECTION WITH SIGN

POINTE PLACE

{PUBLIC - VARIABLE WIDTH R.O.W.}

12"W CL.D.I. F/K/A THORNWOOD LANE

PROPOSED TRUST BLOCK (TYP)

APPROXIMATE LOCATION OF WATERLINE STUB (TO BE FIELD VERIFIED)

PROPOSED 6" D.I. WATER LINE

PROPOSED LIGHT POLE BASE (TYP)

DWELLING #26

SEE NOTE 11 REFERENCE PLAN

RD1

PROPOSED 2" GAS SERVICE (COORDINATE LOCATION WITH BUILDING DRAWINGS) MAINTAIN REQUIRED SEPARATION

PROPOSED UNDERGROUND PRIMARY ELECTRIC SERVICE/TELEPHONE/CABLE (COORDINATE SIZE & LOCATION WITH ELECTRIC PLANS & LOCAL UTILITY COMPANIES

30' WIDE x 50' ACCESS EASEMENT S.C.R.D. PLAN 88-27

OLD DRIVEWAY PAVEMENT

BUILDING SETBACK LINE (TYP.)

25' BUILD TO LINE (MAX.)

15' BUILD TO LINE (MIN.)

30' FRONT SETBACK LINE

PROPOSED UNDERGROUND TANK 10,000 GAL. CAPICITY (3-EA)

PROPOSED STREET LIGHT TO BE INSTALLED PER DIRECTION OF CITY OF DOVER ENGINEERING DEPARTMENT

SMH "1"

UP 1/193A

PROPOSED UNDERGROUND PRIMARY ELECTRIC SERVICE/TELEPHONE/CABLE (BY OTHERS)

PROPOSED WATER (BY OTHERS)

PROPOSED ELECTRICAL VAULT

PROPOSED 2" GAS SERVICE CONNECT TO EXISTING (COORDINATE WITH UNITIL)

DOVER POINT ROAD

{PUBLIC - 66' WIDE R.O.W.}

UP 1/193

UP 1/194

UTILITY EASEMENT BENEFITING PARCELS K/19A & K/26 - SCRD 3996/614 & 3996/611

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

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UTILITY PLAN

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

8

NAME OF RECEIVING WATERS

The storm water runoff will be discharged into Varney Brook.

PROJECT NAME AND LOCATION

Vehicle Refueling, Recharging Station & Convenience Store
Dover Point Road & Pointe Place
Dover, NH 03820

LATITUDE N43°-10'-'26"
LONGITUDE W70°-51'-44"

DESCRIPTION

The project provides for the construction of a 5,358 s.f. building, driveway and associated parking areas, on a 2.10± acre site.

The work is anticipated to start in Spring 2021 and be completed by Fall 2021.

SOIL CHARACTERISTICS

Soil types on the sibject parcel were obtained from th U.S.D.A – S.C.S. "Soil Survey of Strafford County, New Hampshire", sheet 28; Issued March 1973. The soil decsription is Windsor loamy sand, 0 to 3 percent slopes (WdA) and Suffield silt loam (SfC).

DISTURBED AREA

The total area to be disturbed is approximately 65,870 sq.ft. or 1.35 acres.

SEQUENCE OF MAJOR ACTIVITIES

1. Install temporary erosion control siltsock and silt fences, construct stabilized entrances.
2. Construct temporary drainage facilities.
3. Construct new building, utilities and parking fields.
4. When all construction activity is complete and site is stabilized, remove all siltsock silt fences and sediment that has been trapped by these devices.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES OF EROSION AND SEDIMENT CONTROLS

A. GENERAL

These are the general inspection and maintenance practices that will be used to implement the plan.

- o The smallest practical portion of the site will be denuded at one time.
- o All control measures will be inspected at least once each week and following any storm event of 1/4 inch or greater.
- o All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of report.
- o Built up sediment will be removed from silt fence or siltsock barriers when it has reached one third the height of the fence or bale.
- o All diversion dikes will be inspected and any breaches promptly repaired.
- o Temporary seeding and planting will be inspected for bare spots, washouts, and unhealthy growth.

B. FILTERS

1. Silt Fence

a. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the following requirements:

Physical Property	Test	Requirements
Filtering Efficiency	VTM–51	75% minimum
Tensile Strength at 20% Maximum Elongation*	VTM–52	Extra Strength 50 lb/lin in (min) Standard Strength 30 lb/lin in (min)
Flow Rate	VTM–51	0.3 gal/sf/min (min)

* Requirements reduced by 50 percent after six (6) months of installation.

Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six (6) months of expected usable construction life at a temperature range of 0 degrees F to 120 Degrees F.

b. The height of a silt fence shall not exceed thirty–six (36) inches.

c. The filter fabric shall be purchased in a continuous roll cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth shall be spliced together only at support post, with a minimum six (6) inch overlap, and securely sealed.

d. Posts shall be spaced a maximum of ten (10) feet apart at the barrier location and driven securely into the ground (minimum of 16 inches). When extra strength fabric is used without the wire support fence, post spacing shall not exceed 6 feet.

e. Posts for silt fences shall be 2–inch square wood with a minimum length of 5 feet.

f. Wire fence reinforcement for silt fences using standard strength filter cloth shall be a minimum of 42 inches in height, a minimum of 14 gauge and shall have a maximum mesh spacing of 6 inches.

g. A trench shall be excavated approximately four (4) inches wide and four (4) inches deep along the line of posts and upslope from the barrier.

h. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least one (1) inch long, tie wires or hog rings. The wire shall extend no more than 36 inches above the original ground surfaces.

i. The "standard strength" filter fabric shall be stapled or wired to the fence, and eight (8) inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

j. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of item (i) applying.

k. The trench shall be backfilled and the soil compacted over the filter fabric.

l. Silt fences shall be removed when they have served their useful purpose, but not before the upslope areas has been permanently stabilized.

2. Sequence of Installation

Sediment barriers shall be installed prior to any soil disturbance of the contributing drainage area above them.

3. Maintenance

a. Inlet Protection and silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired if there are any signs of erosion or sedimentation below them. Any required repairs shall be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam.

b. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier still is necessary, the fabric shall be replaced promptly.

c. Sediment deposits should be removed after each storm event. They must be removed when deposits reach approximately one third (1/3) the height of the barrier.

d. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform with the existing grade, prepared and seeded.

C. MULCHING

1. Timing

In order for mulch to be effective, it must be in place prior to major storm events. There are two (2) types of standards which shall be used to assure this.

a. Apply mulch prior to any storm event.

It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Concord, to have adequate warning of significant storms.

b. Required Mulching within a specified time period.

The time period can range from 14 to 21 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.

2. Application Rate

Mulch shall be applied at a rate of between 1.5 to 2 tons per acre, or 90 to 100 pounds per 1000 square feet.

3. 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 6,000 pounds of hay or straw per acre. A tackifier may be added to the mulch.

4. Maintenance

All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied.

5. Excelsior Matting

Excelsior Matting shall be used in place of mulch on all slopes steeper than 3:1.

D. TEMPORARY GRASS COVER

1. Seedbed Preparation

Apply fertilizer at the rate of 600 pounds per acre of 10–10–10. Apply limestone (equivalent to 50 percent calcium plus magnesium oxide) at a rate of three (3) tons per acre.

2. Seeding

a. Utilize annual rye grass at a rate of 40 lbs/acre.

b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.

c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer). Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.

3. Maintenance

Temporary seedings shall be periodically inspected. At a minimum, 95% 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 barriers, check dams, etc.).

E. PERMANENT SEEDING

1. Bedding – stones larger than 1 ½ ", trash, roots, and other debris interfere 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 – lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds and amounts of lime and fertilizer should be based on an evaluation of soil tests. When a soil test is not available, the following minimum amounts should be applied:

Agricultural Limestone @ 100 lbs. per 1,000 s.f.
10–20–20 fertilizer @ 12 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. Sodding – sodding is done where it is desirable to rapidly establish cover on a disturbed area. Sodding an area may be substituted for permanent seeding procedures anywhere on site. Bed preparation, fertilizing, and placement of sod shall be performed according to the S.C.S. Handbook.

Sodding is recommended for steep sloped areas, areas immediately adjacent to sensitive water courses, easily erodible soils (fine sand/silt) etc.

5. Provide a minimum of 4 inches (5 inches loose) of topsoil to all areas to be seeded.

6. When seeded areas are mulched, seeding may be made from early spring to early October.

7. When seeded areas are not mulched, seeding should be made from early spring to May 20th or August 10 to September 30.

F. STORM DRAIN INLET PROTECTION

1. Straw/Hay Bale Inlet Structure

a. Bales shall be either wire bound or string tied with the bindings oriented around the sides rather than over and under the bales.
b. Bales shall be placed lengthwise in a single row surrounding the inlet, with the ends of adjacent bales pressed together.
c. The filter barrier shall be entrenched and backfilled. A trench shall be excavated around the inlet the width of bale to a minimum depth of four (4) inches. After the bales are staked, the excavated soil shall be backfilled and compacted against the filter barrier.
d. Each bale shall be securely anchored and held in place by at least two (2) stakes or rebars driven through the bale.
e. Loose straw/hay shall be wedged between bales to prevent water from entering between bales.
f. All structures should be inspected after every rainstorm and repairs made as necessary.
g. Sediment should be removed from the devices after the sediment has reached a maximum of one–third the depth of the trap.
h. siltsock should be removed and the area repaired as soon as the contributing drainage area to the inlet has been completely stabilized.

TIMING OF CONTROLS/MEASURES

As indicated in the sequence of Major Activities the siltsock and silt fences 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 siltsock barriers and any earth/dikes will be removed once permanent measures are established.

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 personnel 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.

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 exposure of materials and substances during construction to stormwater runoff:

Good Housekeeping:

The following good housekeeping practices will be followed on site during the construction project:

- o An effort will be made to store only sufficient amounts of products to do the job.
- o 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.
- o Manufacturer's recommendations for proper use and disposal will be followed.
- o The site superintendent will inspect daily to ensure proper use and disposal of materials.
- o Substances will not be mixed with one another unless recommended by the manufacturer.
- o Whenever possible all of a product will be used up before disposing of the container.

Hazardous Products:

The following practices will be used to reduce the risks associated with hazardous materials:

- o Products will be kept in their original containers unless they are not resealable.
- o Original labels and material safety data will be retained for important product information.
- o 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:
Petroleum Products:

All on site vehicles will be monitored for leaks and receive regular preventive maintenance 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.

Fertilizers:

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.

Paints:

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 manufacturer's instructions or state and local regulations.

Concrete Trucks:

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:

- o 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.
- o 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.
- o All spills will be cleaned up immediately after discovery.
- o The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- o Spills of toxic or hazardous material will be reported to the appropriate state or local government agency, regardless of the size.
- o 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 recurs. A description of the spill, its cause, and the cleanup measures will be included.
- o The site superintendent responsible for day–to–day site operations will be the spill prevention and cleanup coordinator.

OPERATION & MAINTENANCE PLAN OF STORMWATER MANAGEMENT FACILITIES

Facility owner will be responsible for the operation and maintenance of all stormwater management facilities on site. At a minimum, the appropriate and relevant activities for each of the storm water management systems will be performed on the prescribed schedule.

Sweeping

1. Paved surfaces should be swept or vacuumed at least once annually. In the Spring to remove all Winter sand, and on an as–needed basis to minimize transportation of sediment during rainfall events.

Ditches, Swales and Rip–rap.

1. The open swales and ditches 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. Erosion or blockage shall be immediately repaired and a vigorous growth of vegetation should be established to maintain the stability of the swale and for its proper function.

2. The Vegetated ditch should be mowed at least monthly during the growing season and brush or trees must not be allowed to become established in the channel. Any areas where the vegetation fails will be subject to erosion and should be repaired and revegetated.

3. If stones have become displaced from the rip–rap splash pads they should be replaced immediately and chinked in to assure stability. Add additional riprap as needed. Vegetation growing through riprap should be eliminated at least yearly.

Bio Retention

1. Sediments accumulated in the sediment forebay should be removed when the depth of the sediments reaches 3".
2. The Rain Garden should be mowed on a monthly basis during the growing season and debris and sediments should be cleaned from the pond as needed to maintain the detention volume of the pond.
3. The Pond outlet structure should be inspected at least on a monthly basis and after each major storm event of more than ½" of rainfall. The outlet structure should be repaired immediately if deficiencies are observed.
4. In all cases any debris observed obstructing the outlet structure should be removed immediately.
5. Removal of debris from pond bottom.
6. Removal of accumulated sediment.
7. Inspection and repair of stone lined forebay or oulet protection.
8. Inspection of infiltration basin at least twice annually, and following any rainfall event exceeding 2.5" in a 24 hour period, with maintenance or rehabilitation conducted as warranted by such inspection.
9. If an infiltration system does not drain within 72 hours following a rainfall event, then a qualified professional should assess the condition of the facility to determine measures required to restore infiltration functions, including but not limited to removal of accumulated sediment or reconstruction of the infiltration trench.

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 4:1, 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 ditches, swales and detention pond slopes and bottoms 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 or parking 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.

Note:
The Owner of Record shall record at the registry of deeds documentation sufficient to provide notice to all persons that may acquire the 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 purchases to the requirements for maintenance and reporting.

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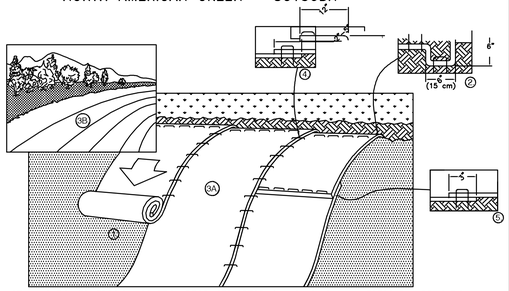
EROSION CONTROL NOTES

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

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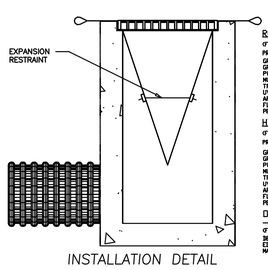
SLOPE INSTALLATION
NORTH AMERICAN GREEN – SC150BN

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.



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 AH 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	100 LBS
MULLEN BURST	ASTM D-3786	300 LBS
TRAPEZOID TEAR	ASTM D-4533	100 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

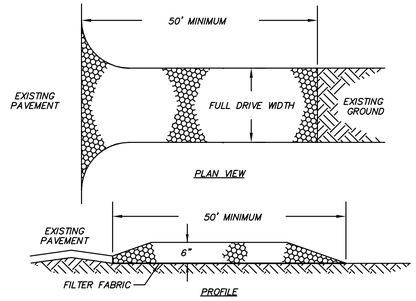
HI-FLOW SILTSACK●
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

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	430 PSI
TRAPEZOID TEAR	ASTM D-4533	90 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●

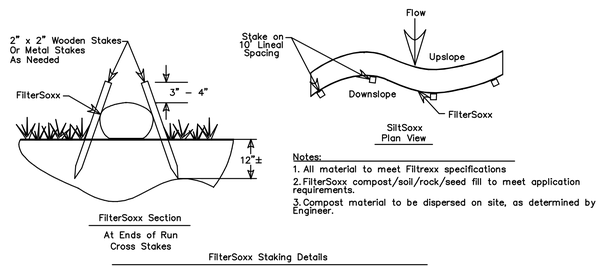
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)
DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK● CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK●, WITH A WOVEN PILLOW INSERT.

DETAIL OF INLET SEDIMENT CONTROL DEVICE
NOT TO SCALE

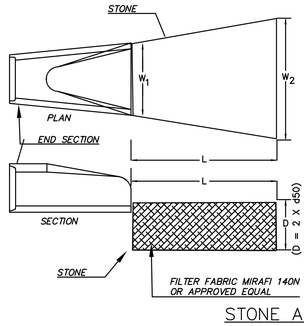


NOTES:
1. SEE EROSION CONTROL NOTES FOR MATERIAL, INSTALLATION AND MAINTENANCE REQUIREMENTS.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



SILTSOXX DETAILS
NOT TO SCALE



NOTES:
1. STONE SIZE AND MAT DIMENSIONS DETAILED ON PLANS.
2. STONE SHALL CONSIST OF SUB-ANGULAR FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. THE STONE SHALL BE HARD AND OF SUCH QUALITY THAT IT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING, BE CHEMICALLY STABLE AND IT SHALL BE SUITABLE IN ALL OTHER RESPECTS FOR THE PURPOSE INTENDED. THE BULK SPECIFIC GRAVITY (SATURATED SURFACE-DRY BASIS) OF THE INDIVIDUAL STONES SHALL BE AT LEAST 2.5.
3. THE STONE SHALL BE COMPOSED OF A WELL-GRADED MIXTURE DOWN TO THE ONE-INCH SIZE PARTICLE SUCH THAT 50 PERCENT OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN THE D50 SIZE SPECIFIED. A WELL-GRADED MIXTURE IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF THE LARGER STONE SIZE BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE PROGRESSIVELY SMALLER VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE SIZE IN SUCH A MIXTURE SHALL BE 1.5 TIMES THE D50 SIZE.

STONE APRON DETAIL
NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21-15

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

NO.	REVISION	APP'D	DATE
2	REV PER STAFF COMMENTS	SLH	5-7-21
1	REV PER STAFF COMMENTS	SLH	4-22-21

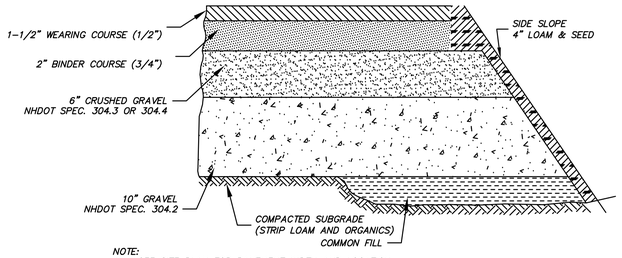
DATE: 3-1-21
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:1677
FILE: SITE.DWG

EROSION CONTROL DETAILS

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

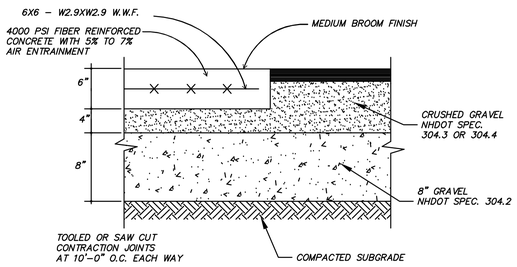
10



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

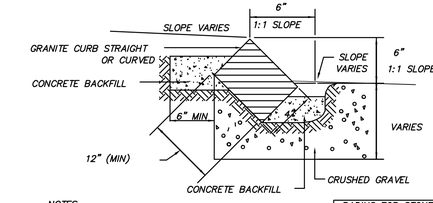
NOT TO SCALE



NOTE: PITCH CONCRETE PAD GRADING PLAN

DUMPSTER & DELIVERY PAD DETAIL

NOT TO SCALE

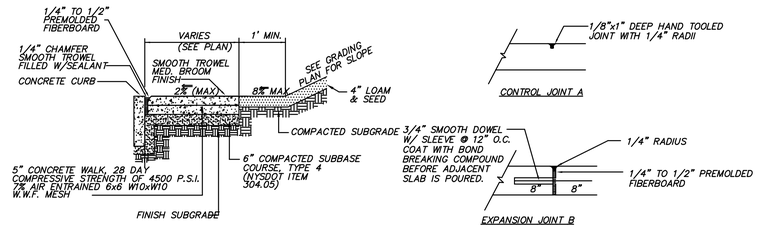


NOTES
1. ADJOINING STONES OF STRAIGHT CURB LAID ON CURVES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH
2. MINIMUM LENGTH OF STRAIGHT CURB STONES = 18"
3. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 8'
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES - SEE CHART

RADIUS FOR STONES WITH SQUARE JOINTS	MAXIMUM LENGTH
16'-28'	1'-6"
29'-41'	2'
42'-55'	3'
56'-68'	4'
69'-82'	5'
83'-96'	6'
97'-110'	7'
OVER 110'	8'

SLOPED GRANITE CURBING

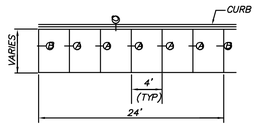
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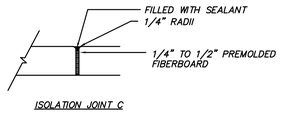
SECTION

CONTROL JOINT A

EXPANSION JOINT B



PLAN

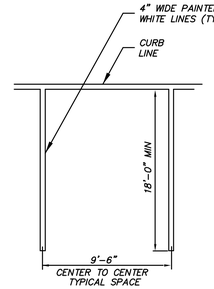


ISOLATION JOINT C

NOTE: USE VERTICAL GRANITE CURB FOR SIDEWALK IN POINTE PLACE R.O.W.

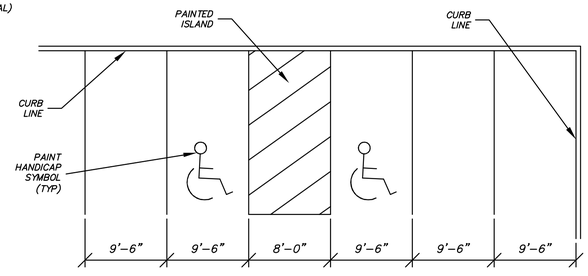
CONCRETE SIDEWALK ON SITE

NOT TO SCALE



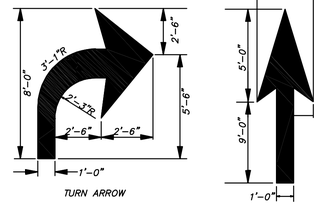
STANDARD PARKING STALL

NOT TO SCALE



HANDICAP PARKING LAYOUT

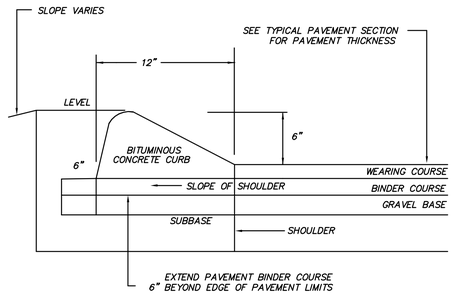
NOT TO SCALE



GENERAL NOTES :
1. ALL WORDS AND SYMBOLS SHALL BE RETROREFLECTIVE WHITE AND SHALL CONFORM TO THE LATEST VERSION OF THE MUTCD.
2. MULTI-WORD MESSAGES SHALL READ "UP"; THAT IS, THE FIRST WORD SHALL BE NEAREST THE APPROACHING DRIVER.
3. THE WORD "ONLY" SHALL NOT BE USED WITH THROUGH OR COMBINATION ARROWS, AND SHALL NOT BE USED ADJACENT TO A BROKEN LANE LINE. A WORD/SYMBOL SHALL PRECEED THE WORD "ONLY".
4. COMBINATION ARROWS MAY BE COMPRISED OF 2 SINGLE ARROWS (e.g. TURN AND THROUGH ARROWS). HOWEVER, THE SHAFTS OF THE ARROWS SHALL COINCIDE AS SHOWN.
5. PREFORMED WORDS AND SYMBOLS SHALL BE PRE-CUT BY THE MANUFACTURER.
6. WRONG-WAY ARROWS SHALL NOT BE SUBSTITUTED FOR THROUGH ARROWS.

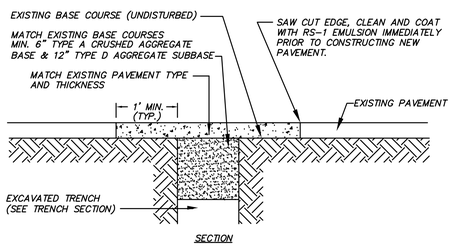
PAINTED ARROWS

NOT TO SCALE

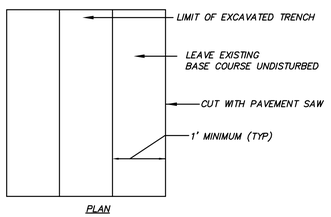


BITUMINOUS SLOPED CURB

NOT TO SCALE



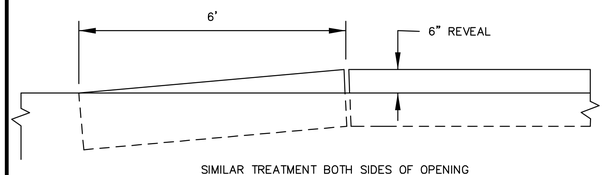
SECTION



PLAN

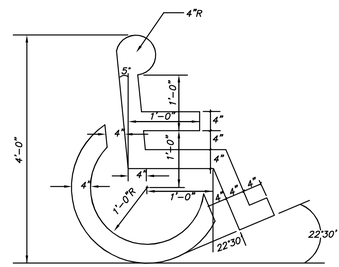
ROADWAY TRENCH PATCH DETAIL

NOT TO SCALE



"TIP-DOWN" CURB DETAIL

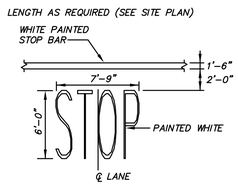
NOT TO SCALE



NOTE: SYMBOL TO BE PAINTED IN ALL HANDICAPPED SPACES

PAINTED HANDICAP SYMBOL

NOT TO SCALE



NOTE: PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS SHOWN ON THE PLANS. APPLY TWO COATS.

STOP BAR & LEGEND

PAVEMENT MARKINGS

NOT TO SCALE

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21-15

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

NO.	REVISION	APP'D	DATE
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SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:1677
FILE: SITE.DWG

DETAIL SHEET

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

11



R1-1
30" x 30"



R7-8
12" x 18"



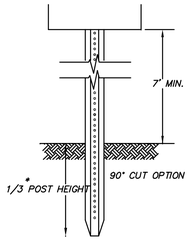
R7-8b
18" X 12"



6" RED LETTERS
WHITE BACK GROUND
FIRE SIGN
12" x 18"



SD-R-53RA5
12" x 18"

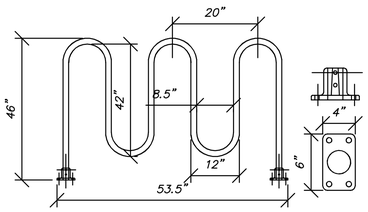


NOTE:
1. ALL SIGNS TO BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

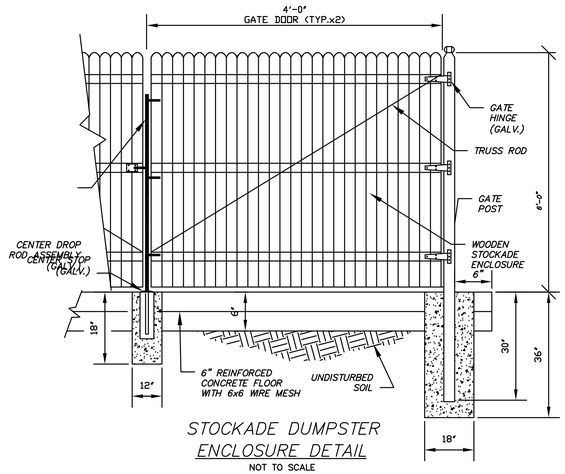
LENGTH: AS REQUIRED
WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)
HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070 - 1080)
FINISH: SHALL BE PAINTED WITH TWO COATS OF AN APPROVED MEDIUM GREEN

BAKED ON OR AIR DRIED, PAINT OF WEATHER RESISTANT QUALITY. ALL FABRICATION SHALL BE COMPLETE BEFORE PAINTING.

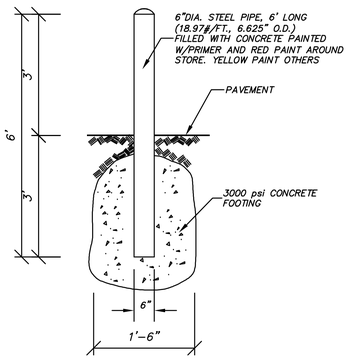
SIGN LEGEND & SIGN POST
NOT TO SCALE



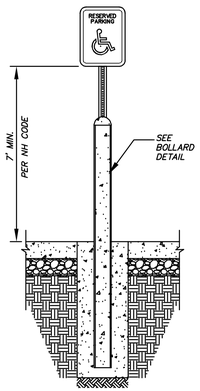
BIKE RACK DETAIL
NOT TO SCALE



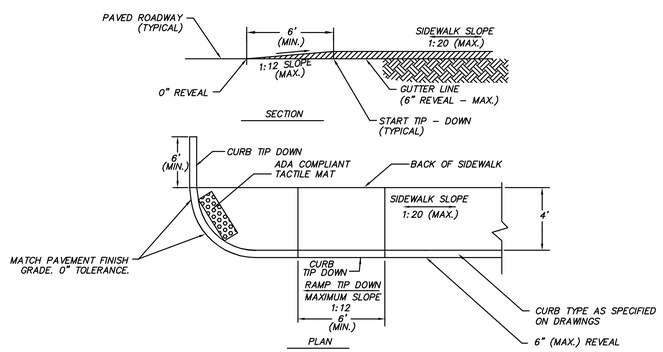
STOCKADE DUMPSTER ENCLOSURE DETAIL
NOT TO SCALE



BOLLARD DETAIL
NOT TO SCALE



SIGN IN BOLLARD
NOT TO SCALE



SIDEWALK TIP DOWN RAMP
NOT TO SCALE

-chargepoint-

CT4000 Family

ChargePoint® Level 2 Commercial Charging Stations

The CT4000 family is the latest generation of ChargePoint commercial charging stations. Refined yet rugged, these stations set the industry standard for functionality and aesthetics.

The CT4000 full motion color LCD display instructs drivers and supports dynamic updates of custom branded videos and advertisements.

Intelligent power management options double the number of parking spaces served by allowing two charging ports to share a single circuit. Sites with single port EV stations can upgrade to dual port stations without requiring additional electrical services.

The CT4000 is the first ENERGY STAR® certified EV charger because it charges efficiently and conserves power when not charging. As an ENERGY STAR certified EV charger, the CT4000 uses significantly less energy than a standard EV charger when in standby mode to help you save money on your utility bill.

All CT4000 models offer one or two standard SAE J1772™ Level 2 charging ports with locking holsters, each port supplying up to 7.2kW. With this standard connector, ChargePoint level 2 stations can charge any EV.

Stations are available in bollard and wall mount configurations for easy installation anywhere. All stations are fully software upgradeable remotely over the air.

Stations come in both 6' and 8' tall models with 18' and 23' cords, respectively. With multiple options for size and cord reach, your station can service up to four parking spaces, reach all car models regardless of parking style or car sizes and increase the usability of your EV spots.

Driver Friendly User Interface

- Instructional video shows how to use the station
- Multi-language: English, French, Spanish
- Touch button interface; works in rain, ice and with gloves
- Backed by ChargePoint's world class 24/7 driver phone support

Easily Communicate with Your Drivers

Whether you're a retail establishment wanting to advertise your latest product, a workplace looking to communicate with employees or a municipality wanting to welcome visitors, ChargePoint's prominent LCD screen makes it easy to reach EV drivers:

- Daylight readable, with auto brightness control
- 640 X 480 resolution active matrix
- Full motion 30fps video support
- Upload up to 60 seconds of high quality video on a color LCD screen to individual stations as often as desired
- Brand your charging stations to communicate with drivers
- Instructional video in English, Spanish or French



The First ENERGY STAR® Certified EV Charger

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21-15

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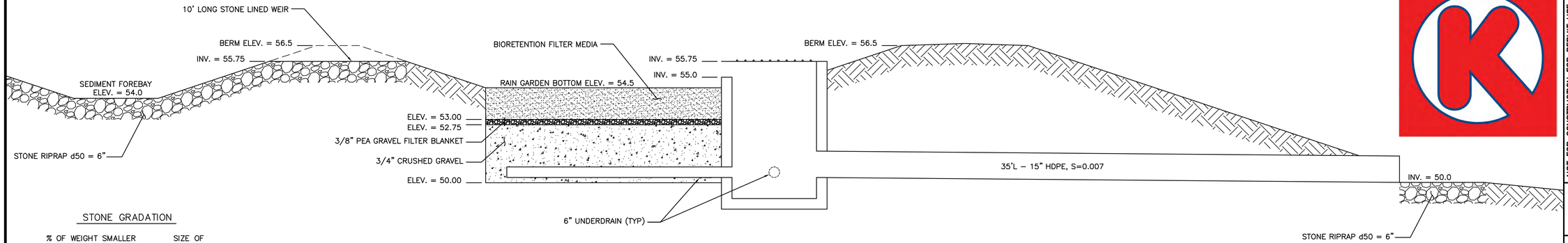
CIVILWORKS NEW ENGLAND
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DETAIL SHEET

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

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

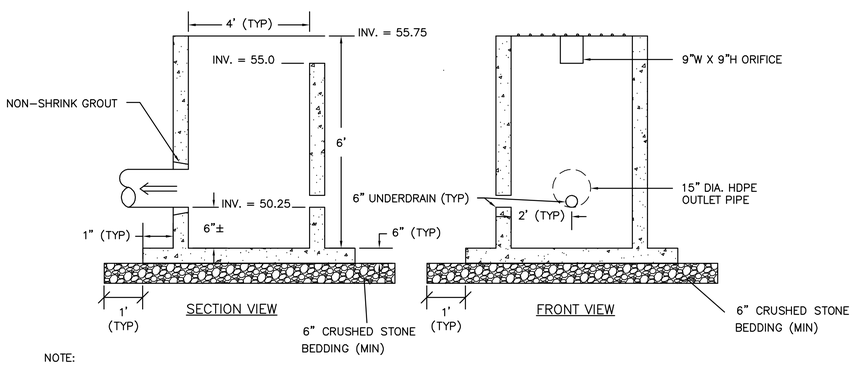
NOTES:

1. *CONSTRUCT GRASSED OVERFLOW SPREADER EARLY DURING INITIAL CONSTRUCTION TO ESTABLISH TURF PRIOR TO CONSTRUCTION OF BIORETENTION SYSTEM.*
2. *DO NOT BEGIN CONSTRUCTION OF THE BIORETENTION AREA UNTIL LAWN AREA ON THE ENTIRE SITE AREA ESTABLISHED WITH AT LEAST 80 PERCENT TURF. FILTER ALL DRAIN INLETS IN THE SEDIMENT FOREBAYS TO PREVENT SILTATION INTO THE BIORETENTION AREA.*
3. *THE RAIN GARDEN SUBGRADE SHALL BE EXCAVATED TO THE DESIGN DEPTH PLUS TWO (2) INCHES. AT THAT DEPTH FOUR (4) INCHES OF COMPOST SHALL BE TILLED INTO THE EXISTING SOILS SUCH THAT THE SOILS ARE WILL MIXED.*
4. *DO NOT DRIVE CONSTRUCTION EQUIPMENT ON FILTER SUBGRADE NOR ON THE FILTER MATERIAL. INSTALL FILTER MATERIAL BY MEANS OF AN EXCAVATOR LOCATED ADJACENT TO THE FILTER AREA.*
5. *MATERIALS: CRUSHED STONE LAYER SHALL MEET NHDOT 304.4. STONE SHALL CONTAIN NO MORE THAN 5% FINES PASSING THE #200 SIEVE. TOPSOIL SHALL CONTAIN 15 TO 25% FINES PASSING THE #200 SIEVE. MULCH SHALL BE SHREDDED HARDWOOD, AGES IN A STOCKPILE OR STORED FOR AT LEAST 12 MONTH. NON–WOVEN GEOTEXTILE BE 4 TO 6 OZ. PER SQUARE YARD WITH A.O.S. OF #70 SIEVE OR LOWER, AND A MINIMUM FLOW RATE OF 125 GAL PER SQUARE FEET.*
6. *REFER TO LANDSCAPING DRAWINGS FOR GRASS SEED MIXES AND PLANTINGS. FERTILIZATION OF THE FILTER AREA SHALL BE AVOIDED UNLESS ABSOLUTELY NECESSARY TO ESTABLISH VEGETATION.*
7. *INITIAL ESTABLISHMENT: DURING THE FIRST 2–3 MONTHS OF ESTABLISHMENT WATER THE GARDEN ON A WEEKLY BASIS (TO SUPPLEMENT RAINFALL FOR TOTAL OF 1 INCH PER WEEK).*
8. *ANNUAL MAINTENANCE: IN THE SPRING OF EACH YEAR, ANY DEAD VEGETATION SHALL BE REMOVED TO ALLOW FOR NEW GROWTH, AND ANY ACCUMULATED SEDIMENT (NORMALLY AT THE ENTRANCE TO THE GARDEN) SHALL ALSO BE REMOVED. DURING THE GROWING SEASON THE RAIN GARDEN SHALL BE WEEDED TWO (2) TIMES AND ADDITIONAL HARDWOOD MULCH SHALL BE ADDED AS NEEDED TO ASSIST IN WEED SUPPRESSION. TURF AT FILTER SHALL BE MOWED NO MORE THAN 3 TIMES PER GROWING SEASON. IF WATER PONDS ON THE SURFACE FOR MORE THAN 24 HOURS DURING THE FIRST YEAR OR 72 HOURS THEREAFTER, THE FILTER SURFACE SHALL BE AERATED WITH DEEP TINES OR THE SURFACE REPLACED.*
9. *PLANTINGS SHALL BE NATIVE NON–INVASIVE SPECIES, SEE LANDSCAPE ARCHITECT DRAWINGS.*

BIORETENTION FILTER MEDIA SPECIFICATIONS			
COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL	
		SIEVE NO.	PERCENT BY WEIGHT PASSING STANDARD SIEVE
FILTER MEDIA OPTION A			
ASTM C–33 CONCRETE SAND	50 TO 55		
LOAMY SAND TOPSOIL, WITH FINES AS INDICATED	20 TO 30	200	15 TO 25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
FILTER MEDIA OPTION B			
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
LOAMY COARSE SAND	70 TO 80	10	85 TO 100
		20	70 TO 100
		60	15 TO 40
		200	8 TO 15

BIORETENTION SYSTEM DETAIL (RAIN GARDEN 1)

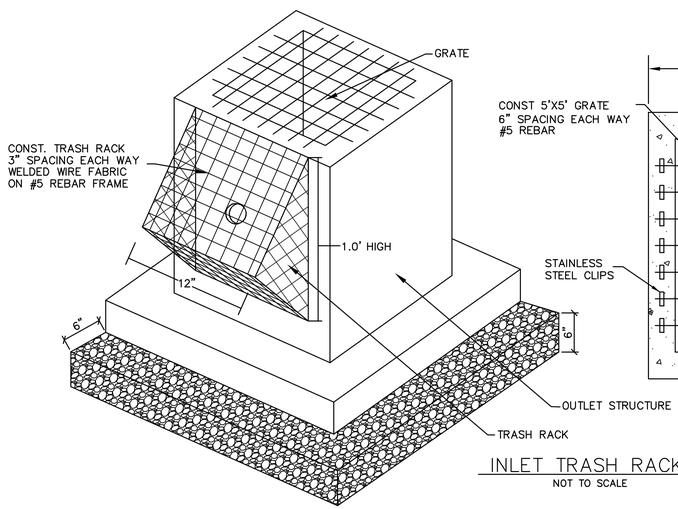
NOT TO SCALE



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 CITY.

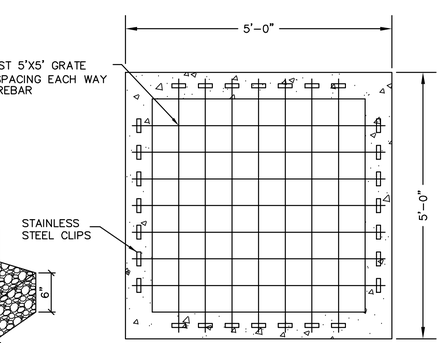
OUTLET STRUCTURE RAIN GARDEN 1 DETAIL

NOT TO SCALE



INLET TRASH RACKS

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 CITY.

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21–15

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

NO.	REVISION	DATE	APP'D
2	REV PER STAFF COMMENTS	5–7–21	SLH
1	REV PER STAFF COMMENTS	4–22–21	SLH

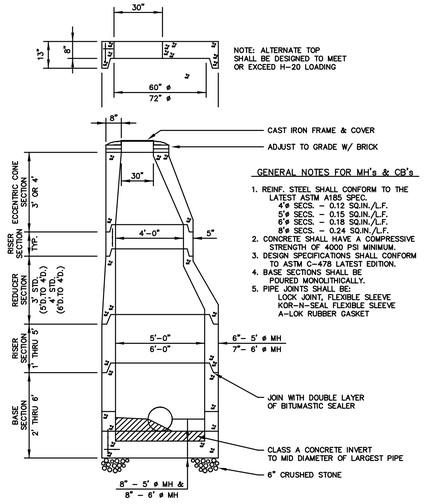
DATE: 3–1–21
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:JH
PROJECT NO:1677
FILE: SITE.DWG

DETAIL SHEET

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

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GENERAL NOTES FOR MH's & CB's

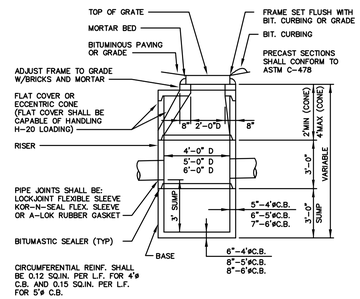
1. REINF. STEEL SHALL CONFORM TO THE LATEST ASTM A185 SPEC.
   4'ø SECS. - 0.12 SQ.IN./L.F.
   5'ø SECS. - 0.15 SQ.IN./L.F.
   6'ø SECS. - 0.18 SQ.IN./L.F.
   8'ø SECS. - 0.24 SQ.IN./L.F.
2. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4000 PSI MINIMUM.
3. DESIGN SPECIFICATIONS SHALL CONFORM TO ASTM C-478 LATEST EDITION.
4. BASE SECTIONS SHALL BE POURED MONOLITHICALLY.
5. PIPE JOINTS SHALL BE:
   LOCK JOINT, FLEXIBLE SLEEVE
   KOR-N-SEAL FLEXIBLE SLEEVE
   A-LOK RUBBER GASKET

STANDARD 5 FT. & 6 FT. DIA. MANHOLES

NOT TO SCALE

GRATE DETAIL

NOT TO SCALE

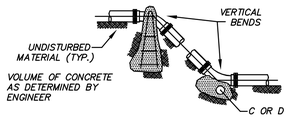


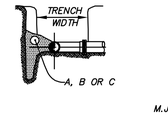
PRE-CAST REINFORCED CATCH BASIN

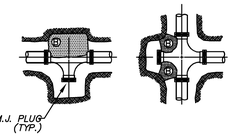
NOT TO SCALE

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.

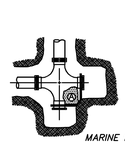


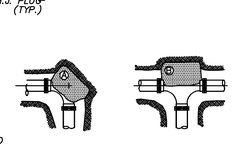


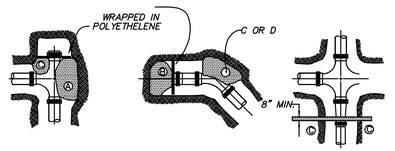


TEST PRESSURE = 200psi	SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL					
	REACTION TYPE	PIPE SIZE				
		4"	6"	8"	10"	12"
	A 90°	0.89	2.19	3.82	11.14	17.24
	B 180°	0.65	1.55	2.78	8.38	12.00
	C 45°	0.48	1.19	2.12	6.02	9.32
	D 22-1/2°	0.25	0.60	1.06	3.08	4.74
	E 11-1/4°	0.13	0.30	0.54	1.54	2.38

NOTES:
1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
3. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS.
4. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.

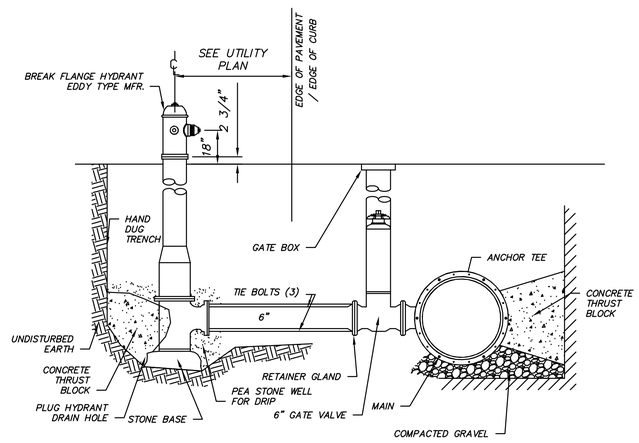






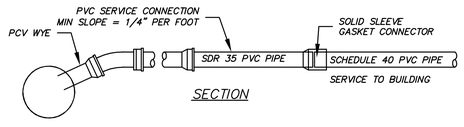
THRUST BLOCKING DETAIL

NOT TO SCALE

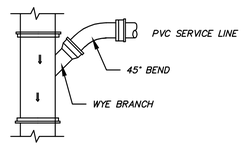


TYPICAL HYDRANT INSTALLATION

NOT TO SCALE



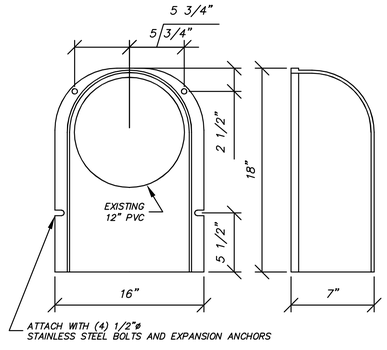
SECTION



PLAN

CITY OF DOVER
SEWER SERVICE

NOT TO SCALE



CATCH BASIN HOOD DETAIL

(NOT TO SCALE)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21-15

NO.	REVISION	APP'D	DATE
2	REV PER STAFF COMMENTS	SLH	5-7-21
1	REV PER STAFF COMMENTS	SLH	4-22-21

DATE: 3-1-21
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:JH
PROJECT NO:1677
FILE: SITE.DWG

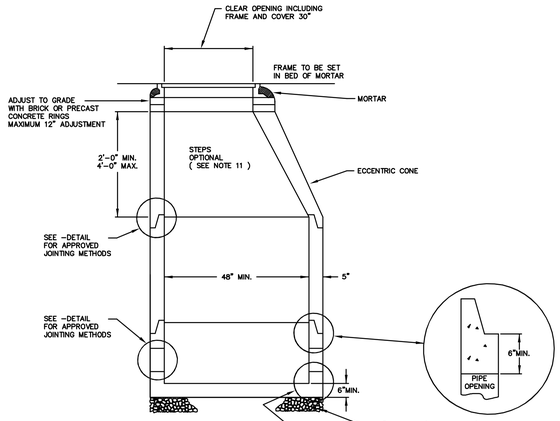
CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

DETAIL SHEET

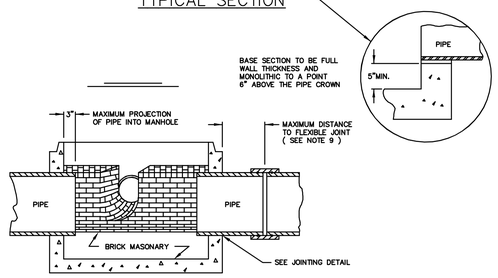
MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD &
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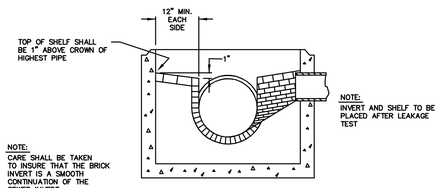
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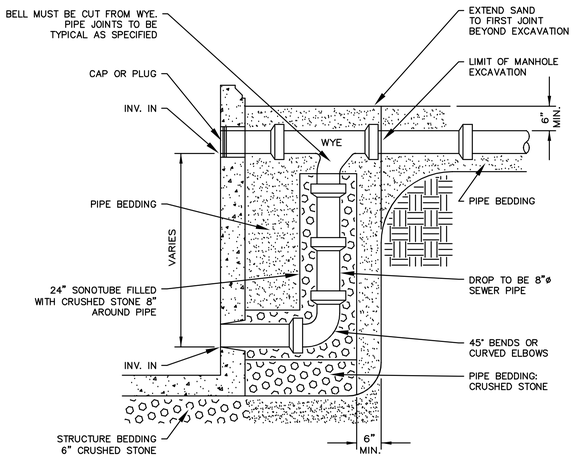
TYPICAL SECTION



SECTION A–A



SECTION B–B

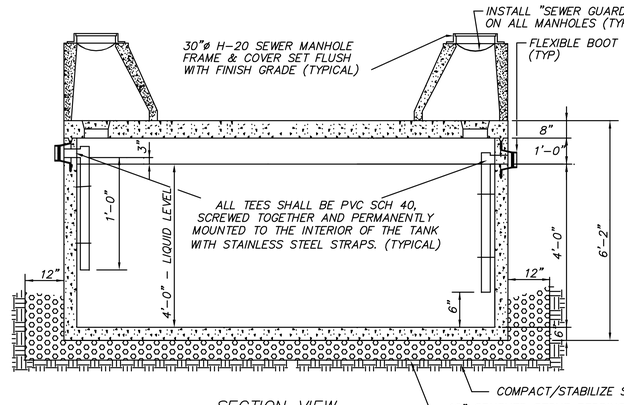


EXTERNAL DROP

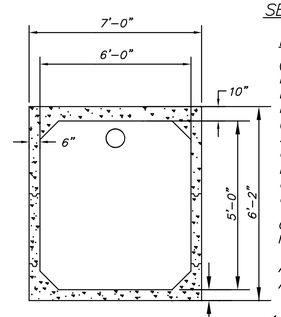
NOTE:
DIMENSIONS AND CONSTRUCTION OF DROP MANHOLE TO BE SIMILAR TO TYPICAL MANHOLE EXCEPT AS SHOWN

NOTES:

1.) IT IS THE INTENTION OF THE COMMISSION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY BY THE COMMISSION FOR THE INTENDED SERVICE SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES MAY BE AN ASSEMBLY OF PRECAST SECTIONS, WITH OR WITHOUT STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH OR WITHOUT REINFORCEMENT, IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H–20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
2.) BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED.
3.) PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478.
4.) LEAKAGE TEST SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATIONS.
5.) INVERTS AND SHELVES MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.
6.) FRAMES AND COVERS MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30–INCH CLEAR OPENING A 3–INCH (MINIMUM HEIGHT) LETTER "S" FOR SEWER OR "D" FOR DRAINS SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
7.) BEDDING SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33
100% PASSING 1 INCH SCREEN 0–10% PASSING # 4 SIEVE
90–100% PASSING 3/4 INCH SCREEN 0– 5% PASSING # 8 SIEVE
20–55% PASSING 3/8 INCH SCREEN
WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1 1/2 INCH TO 1/2 INCH SHALL BE USED.
8.) CONCRETE FOR DROP SUPPORT SHALL CONFORM TO THE REQUIREMENT FOR CLASS A (3000#) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATIONS AS FOLLOWS:
CEMENT: 6.0 BAGS PER CUBIC YARD
WATER: 5.75 GALLONS PER BAG CEMENT
MAXIMUM SIZE OF AGGREGATE: 1 INCH
9.) FLEXIBLE JOINT A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:
RCP & CI PIPE – ALL SIZES – 48"
AC & VC PIPE – UP THROUGH 12' DIA –18"
AC & VC PIPE – LARGER THAN 12" DIA – 36"
DI PIPE – NONE REQUIRED
PVC (ASTM 3034) – UP THROUGH 15" DIA. – NONE REQUIRED
PVC (ASTM F 679) – LARGER THAN 15" DIA. – 48" – 60"
PVC (ASTM F 789) – ALL SIZES – 48" – 60"
ABS (ASTM D 2680) – ALL SIZES – SAME AS VC ABOVE
– UNDER SEVERE CONDITIONS WHEN DIFFERENTIAL SETTING CANNOT BE CONTROLLED WITHIN NORMAL LIMITS, VARIATIONS IN THE STUB LENGTH MAY BE NECESSARY. OTHER PLASTIC PIPES SHALL BE REVIEWED ON A CASE BY CASE BASIS.
10.) SHALLOW MANHOLE IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H–20 LOADS.
11.) MANHOLE STEPS MAY BE PERMITTED UPON REQUEST BY THE OWNER AS SECONDARY ADDITIONAL SAFETY FEATURE SUPPLEMENTARY TO THE PRIMARY PORTABLE LADDER ENTRY AND WHEN INSTALLED UNDER THE FOLLOWING CONDITIONS:
1. THE STEPS SHALL BE MANUFACTURED OF 5/8 INCH ROUND STAINLESS STEEL OR FORGED ALUMINUM ALLOY. THEY SHALL BE SHAPED SO THAT THEY CANNOT BE PULLED OUT OF THE CONCRETE WALL IN WHICH THEY ARE EMBEDDED.
2 THE STEPS SHALL BE EMBEDDED IN THE CONCRETE BY THE MANUFACTURER DURING MANUFACTURE OR IMMEDIATELY FOLLOWING REMOVAL OF THE FORMS. SECURING THE STEPS WITH MORTAR IN DRILLED OR CAST HOLES, WILL NOT BE ACCEPTABLE.
3 THE STEPS SHALL BE OF THE DROP TYPE WITH A DEPRESSED SECTION FOR HANDHOLD, APPROXIMATELY 14" X 10" IN DIMENSION.



SECTION VIEW



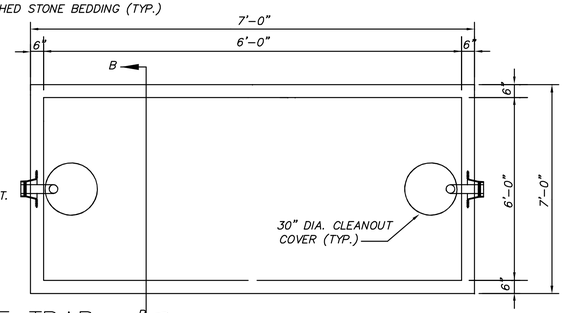
SECTION B–B

FRAMES AND COVERS

(INCLUDING RAISED INSPECTION COVERS) MANHOLE FRAME AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30" CLEAR OPENING. A 3" (MINIMUM HEIGHT) WORD "SEWER" FOR SEWERS SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER (LEBARON FOUNDRY, INC., CATALOG NO. LA 326. ADJUST COVER TO GRADE WITH BRICKS OR PRECAST CONCRETE RINGS – MAXIMUM 12" ADJUSTMENT.

GREASE TRAP TO BE MODEL GT6x6–1 AS MANUFACTURED BY ROTONDO & SONS, INC.

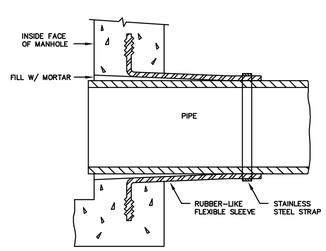
ALL COMPONENTS TO BE DESIGNED FOR AASHTO HS20–44 LOADING.



PLAN VIEW

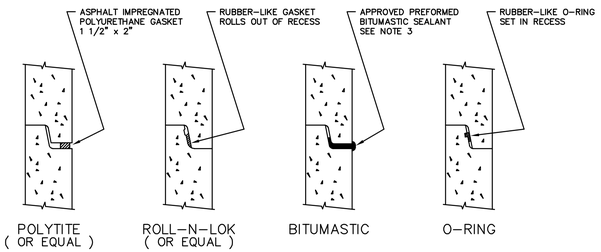
1000 GALLON GREASE TRAP

NOT TO SCALE



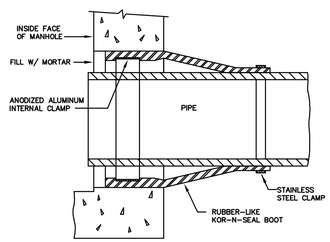
LOCK–JOINT FLEXIBLE MANHOLE SLEEVE

(OR EQUAL)



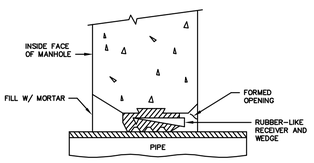
NOTE: ALL GASKETS AND SEALANTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

DETAIL – B



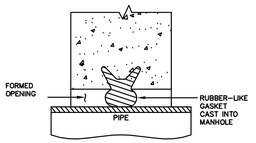
KOR – N – SEAL JOINT SLEEVE

(OR EQUAL)



PRESS–WEDGE II

(OR EQUAL)

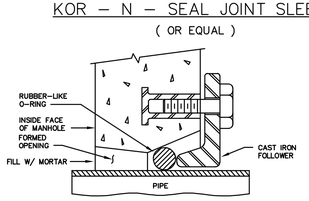


A – LOK

(OR EQUAL)

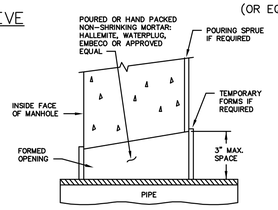
NOTE: ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS

DETAIL – A



RES–SEAL

(OR EQUAL)



NON–SHRINKING MORTAR

NOTES:

1.) HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE COMMISSION, WHICH TYPE SHALL, IN GENERAL, DEPEND FOR WATERTIGHTNESS UPON AN ELASTOMERIC OR MASTIC–LIKE GASKET.

2.) PIPE TO MANHOLE JOINTS SHALL BE ONLY AS APPROVED BY THE COMMISSION AND IN GENERAL, WILL DEPEND FOR WATERTIGHTNESS UPON EITHER AN APPROVED NON–SHRINKING MORTAR OR ELASTOMERIC SEALANT.

3.) FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY. APPROVED BITUMASTIC SEALANTS:
RAM–NEK
KENT SEAL NO. 2
EZ

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NO.	REVISION	APP'D	DATE
2	REV PER STAFF COMMENTS	SLH	5–7–21
1	REV PER STAFF COMMENTS	SLH	4–22–21

DATE: 3–1–21
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:1677
FILE: SITE.DWG

PLANNING FILE NO.: P21–15

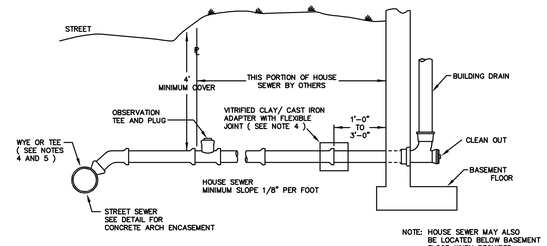
CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, PO Box 1166
Dover, New Hampshire 03821
603.749.0443

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD & POINTE PLACE
DOVER, NH

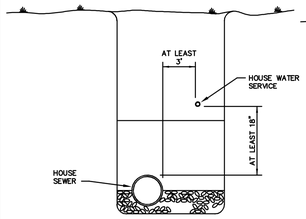
DETAIL SHEET

15



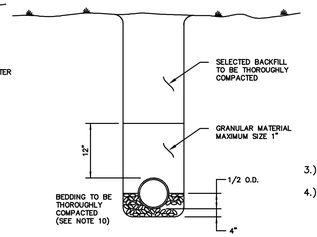
VITRIFIED CLAY SEWER AND HOUSE SEWER

(NO SCALE)



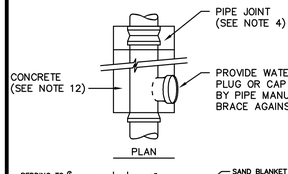
WATER AND SEWER IN SAME TRENCH

(NO SCALE) – (SEE NOTE 9)

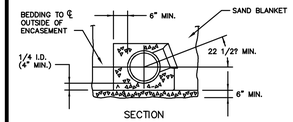


TRENCH CROSS-SECTION

(NO SCALE)



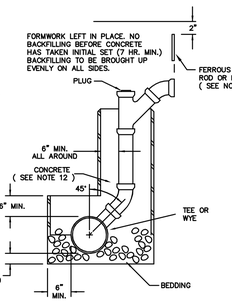
PLAN



SECTION

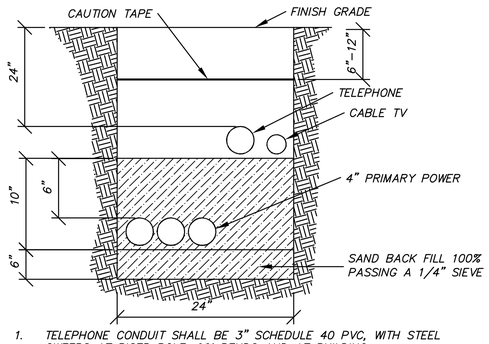
CONCRETE FULL ENCASEMENT

(NO SCALE)



CHIMNEY

(SEE NOTE 13)
(NO SCALE)



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

NOTES:

1.) MINIMUM SIZE PIPE FOR HOUSE SERVICE SHALL BE FOUR INCHES.

2.) PIPE AND JOINT MATERIALS:
- A) VITRIFIED CLAY PIPE
  - 1 – PIPE AND FITTINGS SHALL BE EXTRA STRENGTH CLAY PIPE CONFORMING TO THE REQUIREMENTS OF ASTM C–700
  - 2 – JOINTS SHALL BE MADE WITH OIL RESISTANT GASKET IN ACCORDANCE WITH ASTM C–425 TYPE III. MANUFACTURERS INSTRUCTIONS FOR INSTALLATION SHALL BE FOLLOWED.
- B) ASBESTOS–CEMENT–NON–PRESSURE SEWER PIPE
  - 1 – PIPE AND FITTINGS SHALL CONFORM TO ASTM TENTATIVE SPECIFICATIONS C 644 TYPE II.
  - 2 – JOINTS SHALL BE OF THE SLEEVE – COUPLING TYPE CONFORMING TO ASTM SPECIFICATIONS C 644 TYPE II. COMPRESSION RINGS SHALL BE OF OIL RESISTANT RUBBER TYPE OR ELASTOMERIC MATERIAL AND SHALL CONFORM TO ASTM SPECIFICATION D 1869. MANUFACTURERS INSTRUCTIONS FOR INSTALLATION SHALL BE FOLLOWED.
- C) CAST – IRON PIPE FITTINGS AND JOINTS
  - 1 – CAST IRON PIPE ⅝u AND FITTINGS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE AMERICAN NATIONAL STANDARDS INSTITUTE
    - A21 1 THICKNESS DESIGN OF CAST IRON PIPE.
    - A21 4 CEMENT MORTAR LINING FOR CAST IRON PIPE AND FITTINGS
    - A21 6 CAST IRON PIPE CENTRIFUGALLY CAST IN METAL MOLDS FOR WATER OR OTHER LIQUIDS.
    - A21 8 CAST IRON PIPE CENTRIFUGALLY CAST IN SAND LINED MOLDS FOR WATER OR OTHER LIQUIDS.
    - A21 10 CAST IRON FITTINGS, 2 INCHES THROUGH 48 INCHES FOR WATER AND OTHER LIQUIDS.
  - 2 – JOINTS SHALL BE OF THE MECHANICAL OR PUSH–ON TYPE JOINTS AND GASKETS SHALL CONFORM TO
    - A21 11 RUBBER GASKET JOINTS FOR CAST IRON PRESSURE PIPE AND FITTINGS.
- D) DUCTILE – IRON PIPE, FITTINGS AND JOINTS
  - 1 – DUCTILE IRON PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE UNITED STATES OF AMERICA STANDARDS INSTITUTE
    - A21 50 THICKNESS DESIGN OF DUCTILE IRON PIPE AND WITH ASTM A–536 DUCTILE IRON CASTINGS.
    - A21 51 DUCTILE IRON PIPE, CENTRIFUGALLY CAST IN METAL MOLDS OR SAND–LINED MOLDS FOR WATER OR OTHER LIQUIDS.
  - 2 – JOINTS SHALL BE AS SPECIFIED IN C2 ABOVE, CAST IRON PIPE JOINTS.

3.) DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.

4.) JOINTS SHALL BE DEPENDENT UPON A NEOPRENE OR ELASTOMERIC GASKET FOR WATER–TIGHTNESS. ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIALS USED. WHERE DIFFERING MATERIALS ARE TO BE CONNECTED, AS AT THE STREET SEWER WYE OR AT THE FOUNDATION WALL, APPROPRIATE MANUFACTURED ADAPTORS SHALL BE USED.

5.) TEES OR WYES. WHERE A TEE OR WYE IS NOT AVAILABLE IN THE EXISTING STREET SEWER, AN APPROPRIATE CONNECTION SHALL BE MADE FOLLOWING MANUFACTURERS INSTRUCTIONS USING A BOLTED, CLAMPED, OR EPOXY – CEMENTED SADDLE TAPPED INTO A SMOOTHLY DRILLED OR SAWN OPENING IN THE SEWER. THE PRACTICE OF BREAKING AN OPENING WITH A SLEDGE HAMMER, STUFFING CLOTH OR OTHER SUCH MATERIAL AROUND THE JOINT, OR APPLYING MORTAR TO HOLD THE CONNECTION, AND ANY OTHER SIMILAR CRUDE PRACTICES OR INEPT OR HASTY IMPROVISATIONS WILL NOT BE PERMITTED. THE CONNECTION SHALL BE CONCRETE ENCASED AS SHOWN IN THE DETAIL UP TO AND INCLUDING 15" DIAMETER. (DOES NOT APPLY TO INSTALLATIONS WHERE 'Ts' & 'Ys' ARE USED).

6.) PIPE INSTALLATION. THE PIPE SHALL BE HANDLED, PLACED, AND JOINTED IN ACCORDANCE WITH THE INSTALLATION GUIDES OF THE APPROPRIATE MANUFACTURER. IT SHALL BE CAREFULLY BEDDED ON A 4 INCH LAYER OF CRUSHED STONE AND/OR GRAVEL AS SPECIFIED IN NOTE 10. BEDDING AND RE–FILL FOR A DEPTH OF 12 INCHES ABOVE THE TOP OF THE PIPE SHALL BE CAREFULLY AND THOROUGHLY TAMPED BY HAND OR WITH APPROPRIATE MECHANICAL DEVICES.

THE PIPE SHALL BE LAID AT A CONTINUOUS AND CONSTANT GRADE FROM THE STREET SEWER CONNECTION TO THE HOUSE FOUNDATION AT A GRADE OF NOT LESS THAN 1/8 INCH PER FOOT. PIPE JOINTS MUST BE MADE UNDER DRY CONDITIONS. IF WATER IS PRESENT, ALL NECESSARY STEPS SHALL BE TAKEN TO DEWATER THE TRENCH.

7.) TESTING. THE COMPLETED HOUSE SEWER SHALL BE SUBJECTED TO A LEAKAGE TEST IN ANY OF THE FOLLOWING MANNERS (PRIOR TO BACKFILLING):
- A) AN OBSERVATION TEE SHALL BE INSTALLED AS SHOWN AND, WHEN READY FOR TESTING, AN INFLATABLE BLADDER OR PLUG SHALL BE INSERTED JUST UPSTREAM FROM THE OPENING IN THE TEE. AFTER INFLATION, WATER SHALL BE INTRODUCED INTO THE SYSTEM ABOVE THE PLUG TO A HEIGHT OF 5 FEET ABOVE THE LEVEL OF THE PLUG.
- B) THE PIPE SHALL BE LEFT EXPOSED AND LIBERALLY HOSED WITH WATER, TO SIMULATE, AS NEARLY AS POSSIBLE, WET TRENCH CONDITIONS OR, IF THE TRENCH IS WET, THE GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. INSPECTIONS FOR LEAKS SHALL BE MADE THROUGH THE CLEANOUT WITH A FLASHLIGHT.
- C) DRY FLUORESCENE DYE SHALL BE SPRINKLED INTO THE TRENCH OVER THE PIPE. IF THE TRENCH IS DRY, THE PIPE SHALL BE LIBERALLY HOSED WITH WATER, OR IF THE TRENCH IS WET, GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. OBSERVATION FOR LEAKS SHALL BE MADE IN THE FIRST DOWNSTREAM MANHOLE.

LEAKAGE OBSERVED IN ANY OF THE ABOVE ALTERNATE TESTS SHALL BE CAUSE FOR NON–ACCEPTANCE AND THE PIPE SHALL BE DUG–UP IF NECESSARY AND RE–LAID SO AS TO ASSURE WATER TIGHTNESS.

8.) ILLEGAL CONNECTION. NOTHING BUT SANITARY WASTE FLOW FROM HOUSE TOILETS, SINKS, LAUNDRY ETC. SHALL BE PERMITTED. ROOF LEADERS, FOOTING DRAINS OR SUMP PUMPS OR ANY OTHER SIMILAR CONNECTION CARRYING RAIN WATER, DRAINAGE OR GROUND WATER, SHALL NOT BE PERMITTED.

9.) HOUSE WATER SERVICE. SHOULD NOT BE LAID IN THE SAME TRENCH AS SEWER SERVICE, BUT WHEN NECESSARY, SHALL BE PLACED ABOVE AND TO ONE SIDE OF THE HOUSE SEWER AS SHOWN.

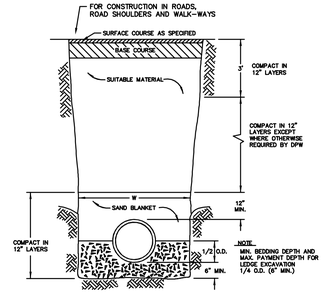
10.) BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATERIAL AND MEETING ASTM C33–67.
100% PASSING 1 INCH SCREEN; 90–100% PASSING 3/4 INCH SCREEN
20–55% PASSING 3/8 INCH SCREEN; 0– 10% PASSING #4 SIEVE
0– 5% PASSING #8 SIEVE
WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, SCREENED GRAVEL OR CRUSHED STONE 1 1/2 INCH TO 1/2 INCH SHALL BE USED.

11.) LOCATION. THE LOCATION OF THE TEE OR WYE SHALL BE RECORDED AND FILED IN THE MUNICIPAL RECORDS. IN ADDITION, A FERROUS METAL ROD OR PIPE SHALL BE PLACED OVER THE TEE OR WYE AS DESCRIBED IN THE TYPICAL "CHIMNEY" DETAIL TO AID IN LOCATING THE BURIED PIPE WITH A DIP NEEDLE OR PIPEFINDER.

12.) CONCRETE. CONCRETE SHALL CONFORM TO THE REQUIREMENTS FOR CLASS A (3000 PSI) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATIONS AS FOLLOWS:
CEMENT – 6.0 BAGS / C.Y. WATER – 5.75 GALS. / BAG CEMENT
AGGREGATE – 1 1/2" MAX.

13.) CHIMNEYS: IF VERTICAL DROP INTO SEWER IS GREATER THAN 4', A CHIMNEY SHALL BE CONSTRUCTED FOR THE HOUSE CONNECTION.

STANDARD TRENCH SECTION



LEDGE CONSTRUCTION

NOTES:

1.) ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE. REFILL WITH BEDDING MATERIAL. SEE ALSO NOTE 7.

2.) BEDDING : SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33 STONE SIZE NO. 67.

100% PASSING	1 INCH SCREEN
90 – 100% PASSING	3/4 INCH SCREEN
20 – 55% PASSING	3/8 INCH SCREEN
0 – 10% PASSING	#4 SIEVE
0 – 5% PASSING	#8 SIEVE

– CRUSHED STONE 1/2 INCH – 1 1/2 INCH MAY BE USED INSTEAD OF SCREENED GRAVEL WHERE ALLOWED BY THE ENGINEER.

3.) SAND BLANKET : CLEAN SAND FREE FROM ORGANIC MATTER SO GRADED THAT 90–100% PASSES A 1/2 INCH SIEVE AND NOT MORE THAN 15% WILL PASS A #200 SIEVE.

4.) SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALK–WAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX 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.

IN CROSS–COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK OR PEAT, IF HE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE SEWER FOR MAINTENANCE AND POSSIBLY RECONSTRUCTION, WHEN NECESSARY, WILL BE PRESERVED.

5.) BASE COURSE . IF ORDERED BY THE ENGINEER, SHALL MEET THE REQUIREMENTS OF DIVISION 300 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF NEW HAMPSHIRE, DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS, (D.O.T.).

6.) WOOD SHEETING . IF REQUIRED. WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID–DIAMETER, IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE. WHERE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE.

7.) W = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE O.D. W SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.

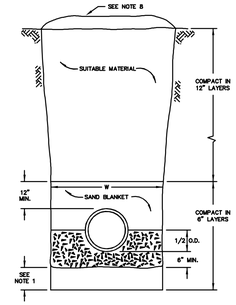
8.) FOR CROSS COUNTRY CONSTRUCTION , BACKFILL OR FILL SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

9.) CONCRETE FOR ENCASEMENT SHALL CONFORM TO THE REQUIREMENTS FOR CLASS A (3000#) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATIONS AS FOLLOWS:
CEMENT: 6.0 BAGS PER CUBIC YARD
WATER : 5.75 GALLONS PER BAG CEMENT
MAXIMUM SIZE OF AGGREGATE: 1 INCH

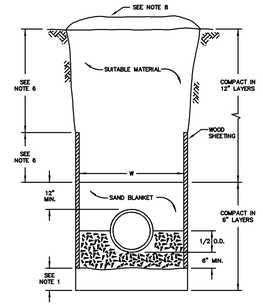
10.) NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL COMMISSION (NH DES) DESIGN STANDARDS REQUIRE 10 FT. SEPARATION. HOWEVER, SHOULD CONSTRUCTION OPERATIONS REVEAL OR EXPOSE A WATERLINE (MAIN OR SERVICE) RUNNING APPROXIMATELY PARALLEL AND LESS THAN 10 FT. HORIZONTAL FROM THE PROPOSED SEWER INSTALLATION AND WHERE IT IS NOT PRACTICABLE TO RELOCATE THE SEWER, THE FOLLOWING METHODS OF PROTECTION MUST BE EMPLOYED.

A. IF THE WATERLINE CAN BE KEPT AT LEAST 18 INCHES ABOVE AND 3 FEET TO ONE SIDE OF THE SEWER, AS SHOWN AND SUPPORTED ON A BENCH OF ORIGINAL SOIL, NO OTHER PROTECTION IS REQUIRED.

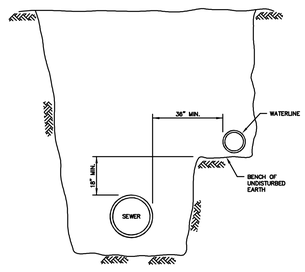
11.) IF FULL CASEMENT IS UTILIZED, DEPTH OF CONCRETE BELOW PIPE SHALL BE 1/4 I.D. (4" MIN.) BLOCK SUPPORT SHALL BE SOLID CONCRETE BLOCKS.



EARTH CONSTRUCTION

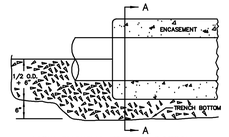


EARTH CONSTRUCTION WITH SHEETING

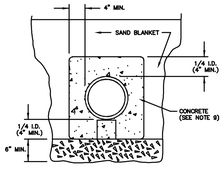


WATER AND SEWER IN SAME TRENCH

(SPECIAL CONDITIONS SEE NOTE 10)



VIEW SHOWING TRENCH BOTTOM CHANGE AT ENCASEMENT



SECTION A–A

CONCRETE FULL ENCASEMENT

(SEE NOTE 11)

NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21–15

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

NO.	REVISION	APP'D	DATE
2	REV PER STAFF COMMENTS	SLH	5–7–21
1	REV PER STAFF COMMENTS	SLH	4–22–21

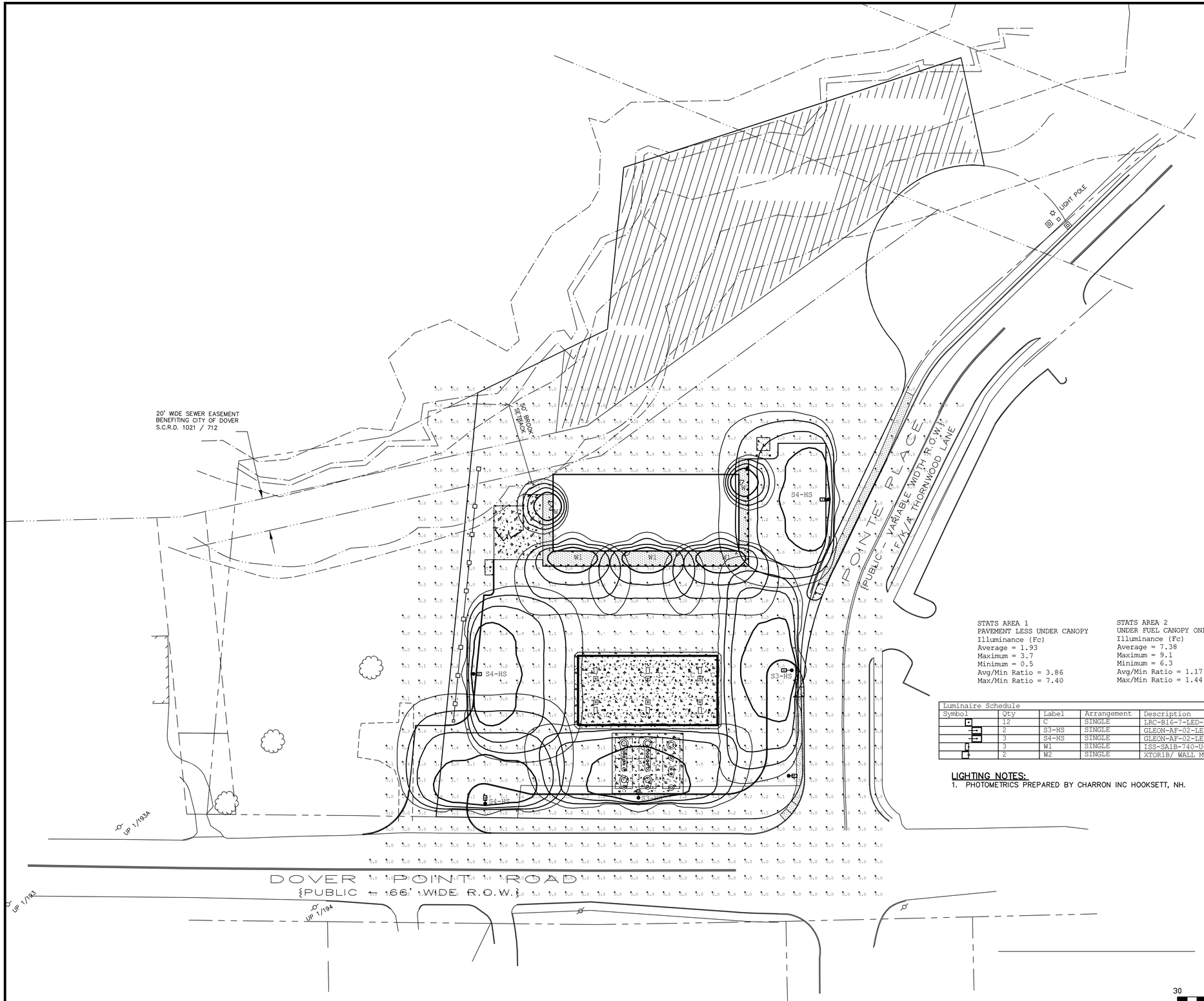
DATE: 3–1–21
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:1677
FILE: SITE.DWG

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

DETAIL SHEET

16



STATS AREA 1
PAVEMENT LESS UNDER CANOPY
Illuminance (Fc)
Average = 1.93
Maximum = 3.7
Minimum = 0.5
Avg/Min Ratio = 3.86
Max/Min Ratio = 7.40

STATS AREA 2
UNDER FUEL CANOPY ONLY
Illuminance (Fc)
Average = 7.38
Maximum = 9.1
Minimum = 6.3
Avg/Min Ratio = 1.17
Max/Min Ratio = 1.44

Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
	12	C	SINGLE	LRC-B16-7-LED-E1-WST / CANOPY MOUNTED
	2	S3-HS	SINGLE	GLEON-AF-02-LED-E1-SL3-HSS/ SSS4A20SFN1 (20' AFG)
	3	S4-HS	SINGLE	GLEON-AF-02-LED-E1-SL4-HSS/ SSS4A20SFN1 (20' AFG)
	3	W1	SINGLE	ISS-SA1B-740-U-SL4/ WALL MTD 12' AFG
	2	W2	SINGLE	XTOR1B/ WALL MTD 10' AFG

LIGHTING NOTES:
1. PHOTOMETRICS PREPARED BY CHARRON INC HOOKSETT, NH.

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

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PLANNING FILE
NO.: P21-15

NO.	REVISION	APP'D	DATE
2	REV PER STAFF COMMENTS	SLH	5-7-21
1	REV PER STAFF COMMENTS	SLH	4-22-21

DATE: 3-1-21
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:1677
FILE: SITE.DWG

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

LIGHTING PLAN

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

17

McGraw-Edison

DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested and rated. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics
Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 3000K, 5000K and 6000K CCT.

Electrical
LED drivers are mounted to removable tray assembly for ease of maintenance, 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480Y Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 600mA, 800mA and 1200mA drive currents (nominal).

Mounting
STANDARD ARM MOUNT: Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during mounting. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the arm mounting requirement table. Round pole adapter included. For wall mounting, specify wall mount bracket option. QUICK MOUNT ARM: Adapter is bolted directly to the pole. Quick mount arm slide into place on the adapter and is secured via two screws, facilitating quick and easy installation.The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

Finish
Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard housing colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

Warranty
Five-year warranty.



GLEON
GALLEON LED

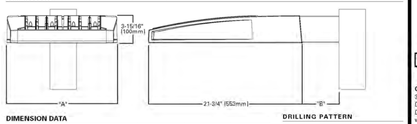
1-10 Light Squares
Solid State LED

AREA/SITE LUMINAIRE

LuminaireSafe Technology HIGH HEM

WaveLinx

DIMENSIONS



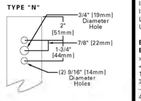
DIMENSION DATA

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length [1]	Weight with Arm (lbs.)	EPA with Arm [2] (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. **2.** EPA calculated with optional arm length.

DRILLING PATTERN

TYPE "N"



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*www.designlights.org

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CERTIFICATION DATA
ISO Vibration Rated
DesignLights Consortium® Qualified* Dark Sky Approved (3000K CCT and warmer only)
IP66 Rated
ISO 9001
LM79 / LM80 Compliant
UL/cUL Wet Location Listed

ENERGY DATA
Electronic LED Driver
≥0.9 Power Factor
<20% Total Harmonic Distortion
120V-277V 50/60Hz
347V, 480V 60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

Impact Elite LED

Wall Mount Luminaire

Typical Applications
Outdoor • Wall Mount • Walkways

Interactive Menu

- Ordering Information page 2
- Product Specifications page 2
- Energy and Performance Data page 3
- Control Options page 4

Product Certifications

DLC PREMIUM · IP66 · UL LISTED · ida · 5 YEAR

Quick Facts

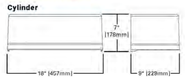
- 10 Optical Distributions
- Lumen packages range from 2,459 to 8,123 (20W - 66W)
- Efficacy up to 143 lumens per watt

Connected Systems

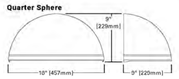
- Enlighted
- WaveLinx

Dimensional Details

Cylinder



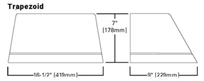
Quarter Sphere



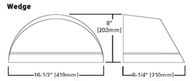
Hook -n- Lock



Trapezoid



Wedge



COOPER Lighting Solutions

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Steel Poles



RSS ROUND
STRAIGHT STEEL

Catalog #		Type
Project		
Comments		Date
Prepared by		

FEATURES
- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" poles, 2" x 4" on 4" poles
- 10'-30' 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.

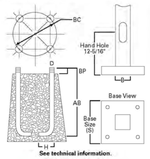
ORDERING INFORMATION

SAMPLE NUMBER: RSS4A20SF2XG

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)
RSS=Round Straight Steel	**4**=4" **5**=5" **6**=6"	**A**=0.120" * **M**=0.188"	**10**=10' **15**=15' **20**=20' **25**=25' **30**=30'	**S**=Square Base	**F**=Dark Bronze **G**=Galvanized Steel **J**=Summit White **K**=Carbon Bronze **L**=Dark Platinum **N**=Natural Aluminum **R**=Black **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 (5" Long) **4**=4" O.D. Tenon (6" Long) **5**=3" O.D. Tenon (4" Long) **6**=4" 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 **S**=Standard Upsweep Arm **Z**=Type Z Drilling	**1**=Single **2**=2 at 180° **3**=Trunnion **4**=4 at 90° **5**=5 at 90° **6**=3 at 90° **7**=2 at 120° **X**=None	**X**=None **2**=2' **2=2.5'** **4**=4' **6**=6' **8**=8'	**A**=1/2" Tapped Hub[3] **B**=3/4" Tapped Hub[3] **C**=Convenience Outlet[4] **E**=Double Convenience Outlet[4] **G**=Ground Lug **H**=Additional Hand Hole[4] **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. **6.** Available in 4" shaft size only.

ANCHORAGE DATA



See technical information.

Pole	Template Number	Bolt Number	Bolt Circle (inches)	Number of Bolts	Bolt Size (inches)
RSS4	TMP4	AB1	11	4	3/4 x 25 x 3
RSS5	TMP4	AB1	11	4	3/4 x 25 x 3
RSS6	TMP5	AB3	12.5	4	1 x 36 x 4

EATON
Powering Business Worldwide

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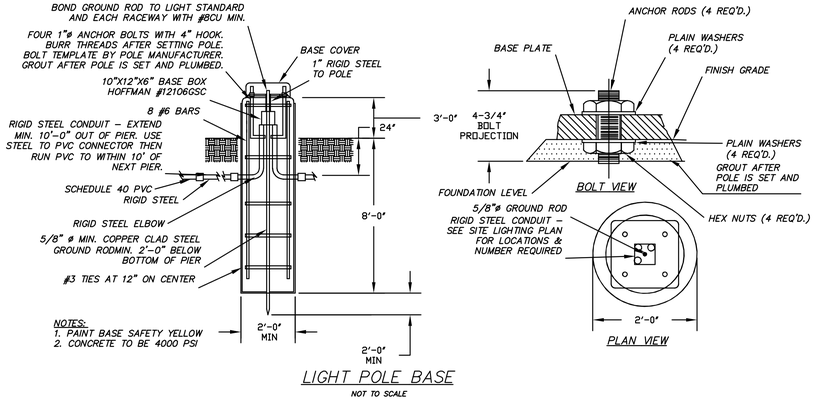
PLANNING FILE NO.: P21-15

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

NO.	REVISION	APP'D	DATE
2	REV PER STAFF COMMENTS	SLH	5-7-21
1	REV PER STAFF COMMENTS	SLH	4-22-21

DESIGN BY: SRD
DRAWN BY: SRD
SCALE: AS SHOWN
DATE: 3-1-21
APPROVED BY:SJH
PROJECT NO:1677
FILE: SITE.DWG

BOND GROUND ROD TO LIGHT STANDARD AND EACH RACEWAY WITH #8CU MIN.



LIGHT POLE BASE
NOT TO SCALE

McGraw-Edison

DESCRIPTION

The LRC LED Recessed Canopy Luminaire is specifically designed for recessed applications in single or double skin canopies. Three specialized optics are optimized for efficiency and uniformity, delivering high light levels on task. Typical applications include retail gas stations, convenience stores, banks and pharmacy drive thru canopies. UL/cUL listed for wet locations.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Heavy-duty cast aluminum housing with aluminum mounting frame. Wet location driver enclosure is elevated to prevent water ingress. 1/2" knockouts provided for wiring connections. IP66 Rated.

Optics
Dedicated optical cavities for the array of 16 individual LEDs to maximize the efficiency and control of the distribution out of each module. To enhance visual comfort, a glare-reducing optical system is utilized to maximize delivered lumens while minimizing glare. Scalable in 1, 2 or 4 Light Square LED modules to optimize cost and lumen output. Each reflector is precision manufactured via injection molding and coated with a highly reflective optical coating via vacuum metallization. Two symmetric optics and one asymmetric optic are specifically designed for efficiency and uniformity. Offered standard in 4000K (+/- 275K) CCT and nominal 70 CRI. Optional 6000K CCT with nominal 70 CRI, and 3000K with nominal 80 CRI.

Electrical
LED driver is enclosed in a wet location box, designed to manage thermals for longevity. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480Y Wye systems only. Optional proprietary circuit module designed to withstand 10kV of transient line surge. 90% lumen maintenance expected at 60,000 hours. The LRC LED Recessed Canopy Luminaire is suitable for operation in -40°C to 40°C ambient operations.

Mounting
Designed to recess in single or double skin canopies. Luminaire can be installed from above or below canopy, through 14" square cutout in the canopy.

Finish
Housing and lens frame are finished in super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard housing and lens frame trim finished in true white color. Optional lens frame trim colors include white, grey, black, bronze, dark platinum, and graphite metallic. RAL and color matches available.

Warranty
Five-year warranty.

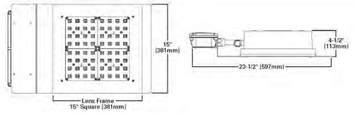


LRC
LED RECESSED CANOPY

1, 2 or 4 Light Squares
Solid State LED

CANOPY LUMINAIRE

DIMENSIONS



CERTIFICATION DATA
UL/cUL Listed
LM79 / LM80 Compliant
ISO 9001

ENERGY DATA
Electronic LED Driver
≥0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50 & 60Hz, 347V/60Hz, 480V/60Hz
-40°C Minimum Temperature
40°C Maximum Ambient Temperature

SHIPPING DATA
Approximate Net Weight:
20-29 lbs. (9.07-13.15 kgs.)

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Powering Business Worldwide

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DATE: 3-1-21							
SCALE: AS SHOWN							
DRAWN BY: SRD							
DESIGN BY: SRD							
APPROVED BY:SJH	2	REV PER STAFF COMMENTS	SLH	5-7-21			
PROJECT NO:1677	1	REV PER STAFF COMMENTS	SLH	4-22-21			
FILE: SITE.DWG	NO.	REVISION	APP'D	DATE			

LIGHTING DETAILS

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD & POINTE PLACE
DOVER, NH

Plant List

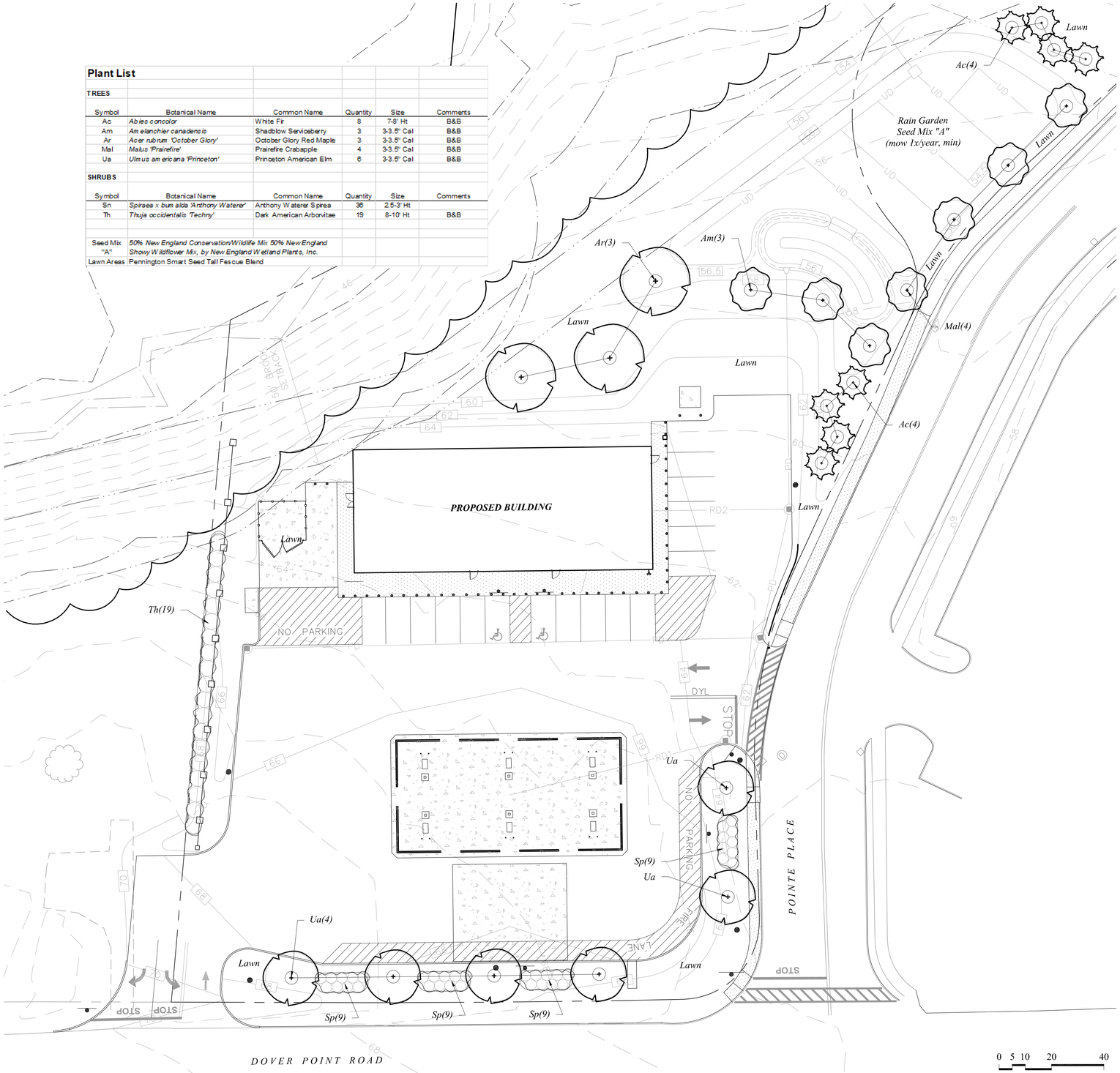
TREES

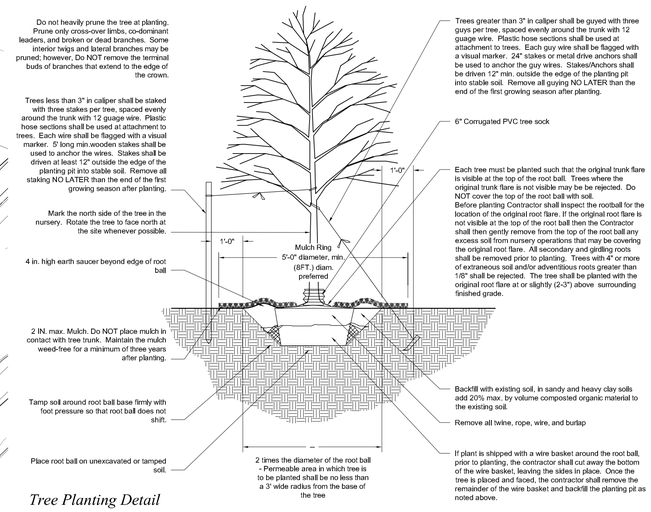
Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Ac	*Abies concolor*	White Fir	8	7-8' Ht	B&B
Amh	*Amelanchier canadensis*	Shadblow Serviceberry	3	3-3.5" Cal	B&B
Ar	*Acer rubrum 'October Glory'*	October Glory Red Maple	3	3-3.5" Cal	B&B
Mal	*Malus 'Prairefire'*	Prairefire Crabapple	4	3-3.5" Cal	B&B
Ua	*Ulmus americana 'Princeton'*	Princeton American Elm	6	3-3.5" Cal	B&B

SHRUBS

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Sn	*Spiraea x bumalda 'Anthony Waterer'*	Anthony Waterer Spirea	36	2.5-3' Ht	
Th	*Thuja occidentalis 'Techny'*	Dark American Arborvitae	19	8-10' Ht	B&B

Seed Mix "A"	*50% New England Conservation/Wildlife Mix 50% New England Showy Wildflower Mix, by New England Wetland Plants, Inc.*	
Lawn Areas	Pennington Smart Seed Tall Fescue Blend	





Tree Planting Detail

Landscape Notes

1. Design is based on drawings by Civilworks New England and may require adjustment due to actual field conditions.
2. The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
3. Erosion Control shall be in place prior to construction.
4. Erosion Control to consist of Hay Bales and Erosion Control Fabric shall be staked in place between the work and Water bodies, Wetlands and/or drainage ways prior to any construction.
5. The Contractor shall verify layout and grades and inform the Landscape Architect or Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
6. It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
7. Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portalets within the tree protection area.
8. Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
9. The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
10. The Contractor shall procure any required permits prior to construction.
11. Prior to any landscape construction activities Contractor shall test all existing loam and loam from off-site intended to be used for lawns and plant beds using a thorough sampling throughout the supply. Soil testing shall indicate levels of pH, nitrates, macro and micro nutrients, texture, soluble salts, and organic matter. Contractor shall provide Landscape Architect with test results and recommendations from the testing facility along with soil amendment plans as necessary for the proposed plantings to thrive. All loam to be used on site shall be amended as approved by the Landscape Architect prior to placement.
12. Contractor shall notify landscape architect or owner's representative immediately if at any point during demolition or construction a site condition is discovered which may negatively impact the completed project. This includes, but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the plan and the site. If a contractor is aware of a potential issue, and does not bring it to the attention of the landscape architect or owner's representative immediately, they may be responsible for the labor and materials associated with correcting the problem.
13. The Contractor shall furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery-grown under climatic conditions similar to those in the locality of the project. Plants shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. in the American Standard of Nursery Stock, American Standards Institute, Inc. 230 Southern Building, Washington, D.C. 20005.
14. A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.
15. All plants shall be legibly tagged with proper botanical name.
16. The Contractor shall guarantee all plants for not less than one year from time of acceptance.
17. Owner or Owner's Representative will inspect plants upon delivery for conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during or after the progress of the work. The Owner reserves the right to inspect and/or select all trees at the place of growth and reserves the right to approve a representative sample of each type of shrub, herbaceous perennial, annual, and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work.
18. No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason.
19. All landscaping shall be provided with either of the following
    a. An underground sprinkling system
    b. An outside hose attachment within 150 feet
20. If an automatic irrigation system is installed, all irrigation valve boxes shall be located within planting bed areas.
21. All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
22. Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and ½" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black.
23. In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
24. Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 6' to allow clear and safe passage of vehicles and pedestrians under tree canopy.
25. Snow shall be stored a minimum of 5' from shrubs and trunks of trees.
26. Landscape Architect is not responsible for the means and methods of the contractor.

woodburn &company
LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

~PERMIT PLAN~
NOT FOR CONSTRUCTION

CIVILWORKS NEW ENGLAND
CIVIL ENGINEERING
181 Watson Road, P.O. Box 1166
Dover, New Hampshire 03820
(603) 749-0443

NO.	REVISION	APPD	DATE
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2	PER REVISED SITE PLAN	VM	2.16.2021
1	PER REVISED SITE PLAN	VM	3.1.2019

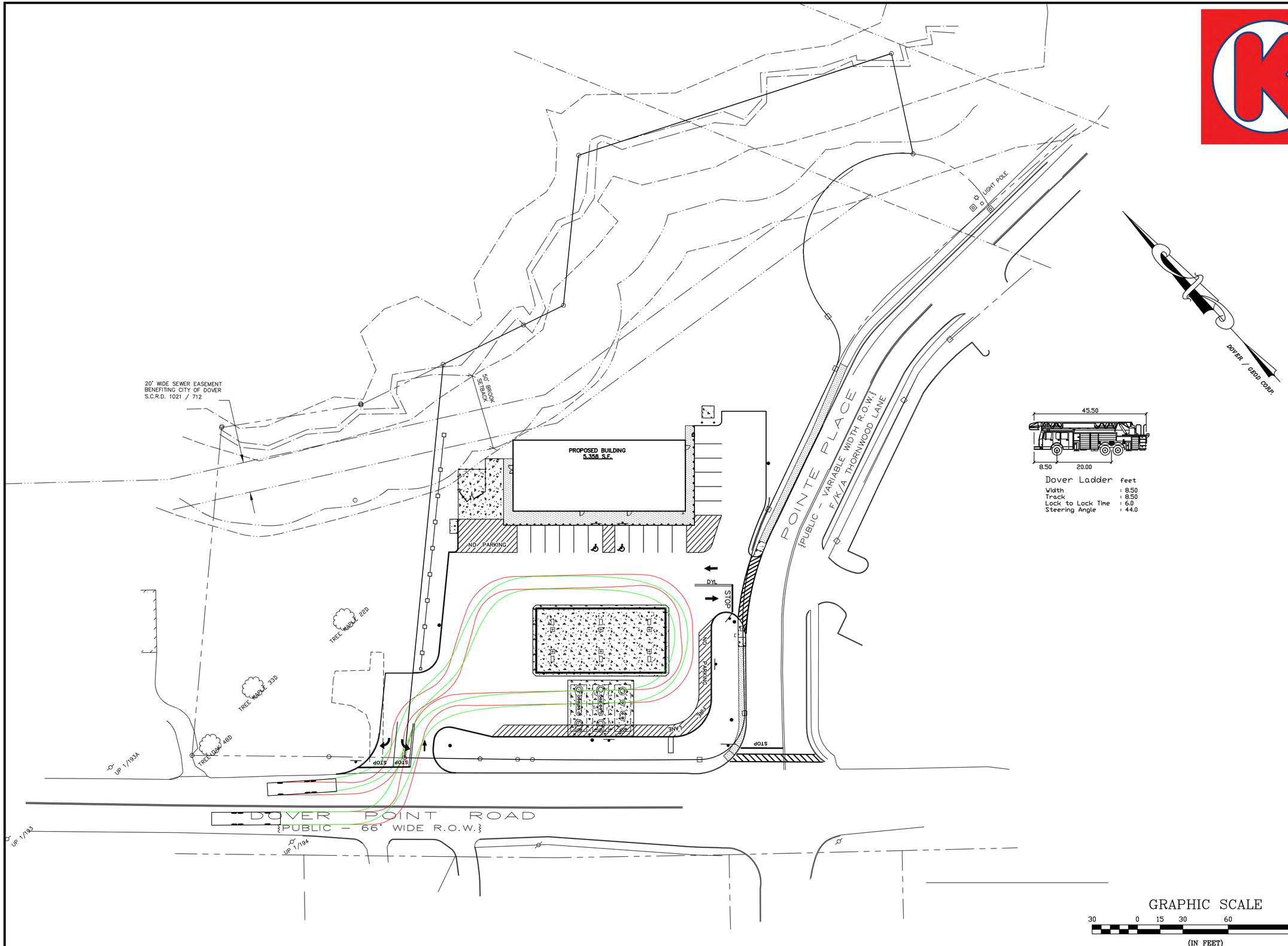
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APPROVED BY:RW
PROJECT NO:1677
FILE: SITE.DWG

APPLICANT/OWNER OF RECORD:
MAC'S CONVENIENCE STORES, LLC
935 E TALLMADGE AVE
AKRON, OH 44310

PROJECT:
CIRCLE K
MAP K, LOT 19
30 DOVER POINT ROAD
DOVER, NH 03820

PLANNING FILE:

LANDSCAPE PLAN



NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21-15

CIVILWORKS NEW ENGLAND
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Dover, New Hampshire 03821
603.749.0443

NO.	REVISION	APP'D	DATE
2	REV PER STAFF COMMENTS	SLH	5-7-21
1	REV PER STAFF COMMENTS	SLH	4-22-21

DATE: 3-1-21
SCALE: AS SHOWN
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:JH
PROJECT NO:1677
FILE: SITE.DWG

DOVER LADDER TRUCK MOVEMENT PLAN

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

20

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NO.	REVISION	APP'D	DATE
2	REV PER STAFF COMMENTS	SLH	5-7-21
1	REV PER STAFF COMMENTS	SLH	4-22-21

DATE: 3-1-21
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:SJH
PROJECT NO:1677
FILE: SITE.DWG

CIVILWORKS NEW ENGLAND
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Dover, New Hampshire 03821
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20' WIDE SEWER EASEMENT
BENEFITING CITY OF DOVER
S.C.R.D. 1021 / 712

50' BROOK SETBACK

PROPOSED BUILDING
5,358 S.F.

NO PARKING

DYL

STOP

LIGHT POLE

TREE MAPLE 22D

TREE MAPLE 33D

TREE MAPLE 48D

UP 1/193A

UP 1/193

UP 1/194

DOVER POINT ROAD
{PUBLIC - 66' WIDE R.O.W.}

POINTE PLACE
{PUBLIC - VARIABLE WIDTH R.O.W.}
F/K/A THORNWOOD LANE

DOVER / GRID CORR.

CNE WB-65 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 42.0
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

15.00 53.00 3.00 43.50 0.00 4.00 19.50

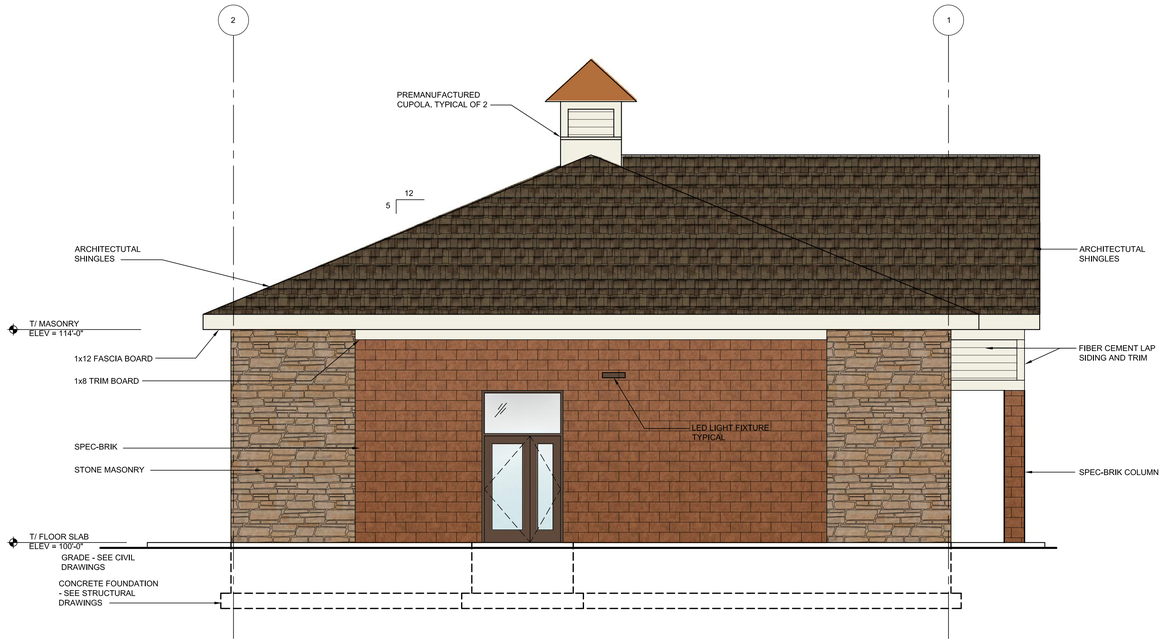
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(IN FEET)

TRUCK MOVEMENT

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

1 OF 1



B / A4-01 WEST ELEVATION
1/4" = 1'-0"



A / A4-01 SOUTH ELEVATION
1/4" = 1'-0"

EXTERIOR FINISHES:

1. MASONRY & MORTAR

   MANUFACTURER: OBERFEILDS
   PRODUCT: SPEC-BRIK
   COLOR: DIXON BLEND

   MORTAR: CEMEX RICH COLOR BASF RHEOPEL MORTAR
   ADMIXTURE W/ INTEGRAL WATER REPELLANT.
   COLOR: 55-C KEYSTONE

2. STONE MASONRY

   MANUFACTURER: DUTCH QUALITY STONE
   PRODUCT: WEATHER LEDGE
   COLOR: NATURAL BLEND
   PATTERN: ASHLAR
   PROVIDE CORNER RETURNS, STONE MASONRY BULLNOSE TRIM AND SILLS

   MORTAR: CEMEX RICH COLOR BASF RHEOPEL MORTAR
   ADMIXTURE W/ INTEGRAL WATER REPELLANT.
   COLOR: 10-C IVORY

3. PAINTED HOLLOW METAL DOORS AND FRAMES

   MANUFACTURER: SHERWIN WILLIAMS
   PAINT: (1) COAT SHERWIN-WILLIAMS PROCRYL UNIVERSAL ACRYLIC PRIMER AND TWO (2) COATS SHERWIN-WILLIAMS A-100 EXTERIOR ACRYLIC LATEX-SATIN
   COLOR: SHERWIN-WILLIAMS SW7103 WHITETAIL

6. GLAZING

   MANUFACTURER: OLDCASTLE BUILDING ENVELOPE
   PRODUCT: PPG 1" INSULATING GLASS
   SOLARBAN60 (2) CLEAR + CLEAR
   CAVITY: 1/2" AIR FILL

7. STOREFRONT

   MANUFACTURER: KAWNEER
   PRODUCT: VG 451T/CENTER GLASS, THERMALLY BROKEN FRAMING SYSTEMS WITH 1" INSULATED, TEMPERED SAFETY GLASS.
   COLOR: #40 DARK BRONZE ANODIZED, ARCHITECTURAL CLASS 1

8. STOREFRONT DOORS

   MANUFACTURER: KAWNEER OR APPROVED EQUAL
   PRODUCT: 350 MEDIUM STILE ENTRANCE WITH 1" INSULATED, TEMPERED SAFETY GLASS AND 10" BOTTOM RAIL.
   COLOR: #40 DARK BRONZE ANODIZED, ARCHITECTURAL CLASS 1

9. FASCIA BOARD AND TRIM

   MANUFACTURER: JAMES HARDIE
   PRODUCT: HARDIETRIM BOARDS.
   COLOR: SHERWIN-WILLIAMS SW7103 WHITETAIL

10. LAP SIDING

    MANUFACTURER: JAMES HARDIE
    PRODUCT: HARDIEPLANK LAP SIDING SMOOTH.
    COLOR: SHERWIN-WILLIAMS SW7103 WHITETAIL

11. ROOF SHINGLES

    MANUFACTURER: GAF
    PRODUCT: TIMBERLINE NATURAL SHADOW ROOFING SHINGLES
    COLOR: BARKWOOD

GENERAL NOTES:

1. TOP OF FLOOR SLAB ELEVATION 100'-0" = ACTUAL ELEVATION xxx.xx' ABOVE SEA LEVEL, SEE CIVIL DRAWINGS.
2. CJ = CONTROL JOINT; REFER TO DETAIL 9/A9-05.

BUILDING MATERIAL CALCULATIONS:

FRONT ELEVATION (SOUTH)

TOTAL	1,837 S.F.	
STOREFRONT	433 S.F.	24%
STONE MASONRY	509 S.F.	28%
BRICK MASONRY	356 S.F.	19%
LAP SIDING	432 S.F.	24%
TRIM BOARD	107 S.F.	5%

SIDE ELEVATION (WEST)

TOTAL	682 S.F.	
STOREFRONT	53 S.F.	8%
STONE MASONRY	228 S.F.	33%
BRICK MASONRY	360 S.F.	53%
LAP SIDING	12 S.F.	2%
TRIM BOARD	29 S.F.	4%

REAR ELEVATION (NORTH)

TOTAL	1307 S.F.	
STONE MASONRY	228 S.F.	14%
BRICK MASONRY	1307 S.F.	82%
TRIM BOARD	65 S.F.	4%

SIDE ELEVATION (EAST)

TOTAL	682 S.F.	
DOOR	24 S.F.	4%
STONE MASONRY	204 S.F.	30%
BRICK MASONRY	421 S.F.	61%
LAP SIDING	12 S.F.	2%
TRIM BOARD	21 S.F.	3%

PROJECT
Circle K #7264 Dover
30 Dover Point Road
Dover, New Hampshire 03820

CLIENT
Circle K Great Lakes
935 East Tallmadge Ave
Akron, OH 44310

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Cleveland, Ohio 44131 | 216.524.8401 fax | info@cuparc.com

NUMBER	DESCRIPTION	DATE
	CLIENT REVIEW - OPTION H	04-01-2019
	CLIENT REVIEW - OPTION J	01-22-2021
	CLIENT REVIEW - OPTION K	05-07-2021

NUMBER	DESCRIPTION	DATE
	CLIENT REVIEW	04-10-2017
	CLIENT REVIEW	05-10-2017
	CLIENT REVIEW	05-22-2017
	CLIENT REVIEW	05-24-2017
	CLIENT REVIEW	06-27-2017
	CLIENT REVIEW - OPTION E	11-19-2018
	CLIENT REVIEW - OPTION F	12-13-2018

DRAWING TITLE
CIRCLE K #7264 DOVER
EXTERIOR ELEVATIONS
OPTION J

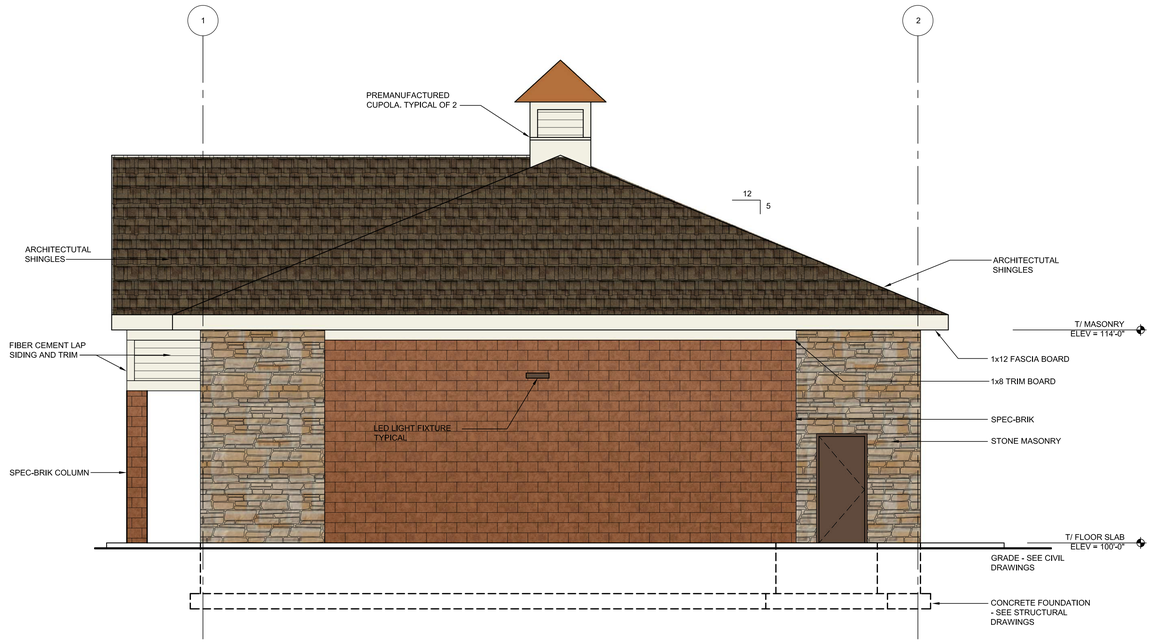
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1/4" = 1'-0"

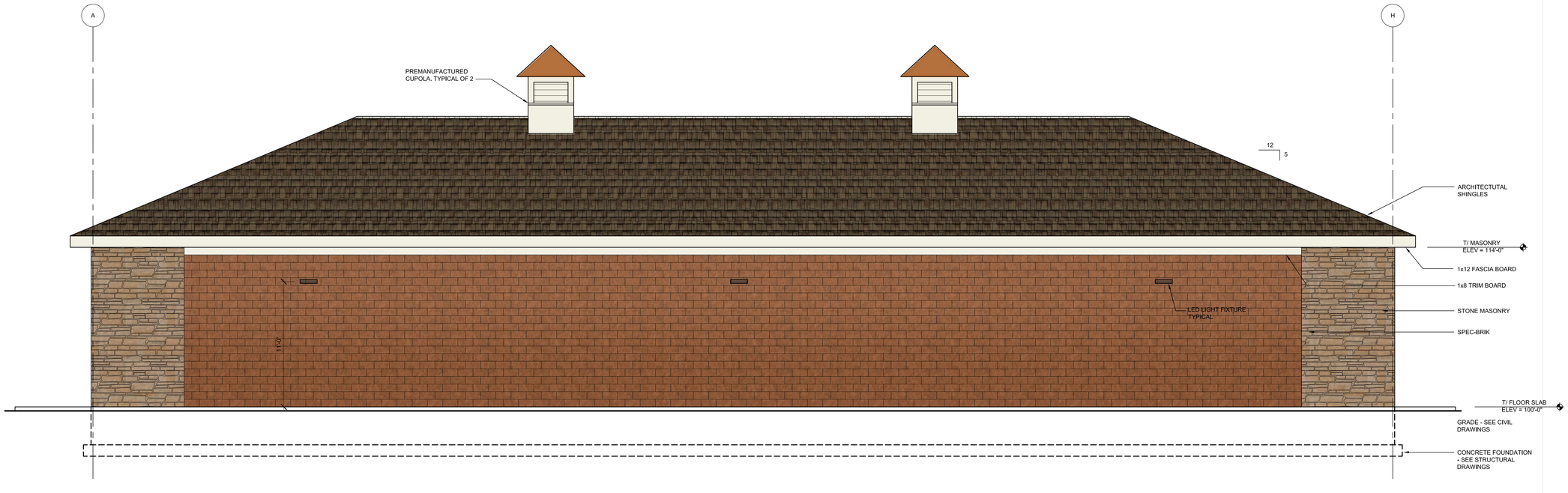
ISSUE DATE
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JOB NUMBER
79-101

DRAWING NUMBER
A4-01



D / A4-02 EAST ELEVATION
1/4" = 1'-0"



C / A4-02 NORTH ELEVATION
1/4" = 1'-0"

EXTERIOR FINISHES:

1. MASONRY & MORTAR

   MANUFACTURER: OBERFEILDS
   PRODUCT: SPEC-BRIK
   COLOR: DIXON BLEND

   MORTAR: CEMEX RICH COLOR BASF RHEOPEL MORTAR ADMIXTURE W/ INTEGRAL WATER REPELLANT.
   COLOR: 55-C KEYSTONE

2. STONE MASONRY

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   COLOR: 10-C IVORY

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   MANUFACTURER: SHERWIN WILLIAMS
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   COLOR: SHERWIN-WILLIAMS SW7103 WHITETAIL

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   MANUFACTURER: KAWNEER OR APPROVED EQUAL
   PRODUCT: 350 MEDIUM STILE ENTRANCE WITH 1" INSULATED, TEMPERED SAFETY GLASS AND 10" BOTTOM RAIL.
   COLOR: #40 DARK BRONZE ANODIZED, ARCHITECTURAL CLASS 1

9. FASCIA BOARD AND TRIM

   MANUFACTURER: JAMES HARDIE
   PRODUCT: HARDIETRIM BOARDS.
   COLOR: SHERWIN-WILLIAMS SW7103 WHITETAIL

10. LAP SIDING

    MANUFACTURER: JAMES HARDIE
    PRODUCT: HARDIEPLANK LAP SIDING SMOOTH.
    COLOR: SHERWIN-WILLIAMS SW7103 WHITETAIL

11. ROOF SHINGLES

    MANUFACTURER: GAF
    PRODUCT: TIMBERLINE NATURAL SHADOW ROOFING SHINGLES
    COLOR: BARKWOOD

GENERAL NOTES:

1. TOP OF FLOOR SLAB ELEVATION 100'-0" = ACTUAL ELEVATION xxx.xx' ABOVE SEA LEVEL. SEE CIVIL DRAWINGS.
2. CJ = CONTROL JOINT; REFER TO DETAIL 9/A9-05.

BUILDING MATERIAL CALCULATIONS:

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PROJECT
Circle K #7264 Dover
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Dover, New Hampshire 03820

CLIENT
Circle K Great Lakes
935 East Tallmadge Ave
Akron, OH 44310

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Cleveland, Ohio 44131 | 216.524.8401 fax | info@cupkovic.com

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NUMBER	DESCRIPTION	DATE
	CLIENT REVIEW - OPTION H	04-01-2019
	CLIENT REVIEW - OPTION J	01/20/2021
	CLIENT REVIEW - OPTION K	05/06/2021

NUMBER	DESCRIPTION	DATE
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	CLIENT REVIEW	05-22-2017
	CLIENT REVIEW	05-24-2017
	CLIENT REVIEW	06-27-2017
	CLIENT REVIEW - OPTION E	11-19-2018
	CLIENT REVIEW - OPTION F	12-13-2018

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CIRCLE K #7264 DOVER
EXTERIOR ELEVATIONS
OPTION H

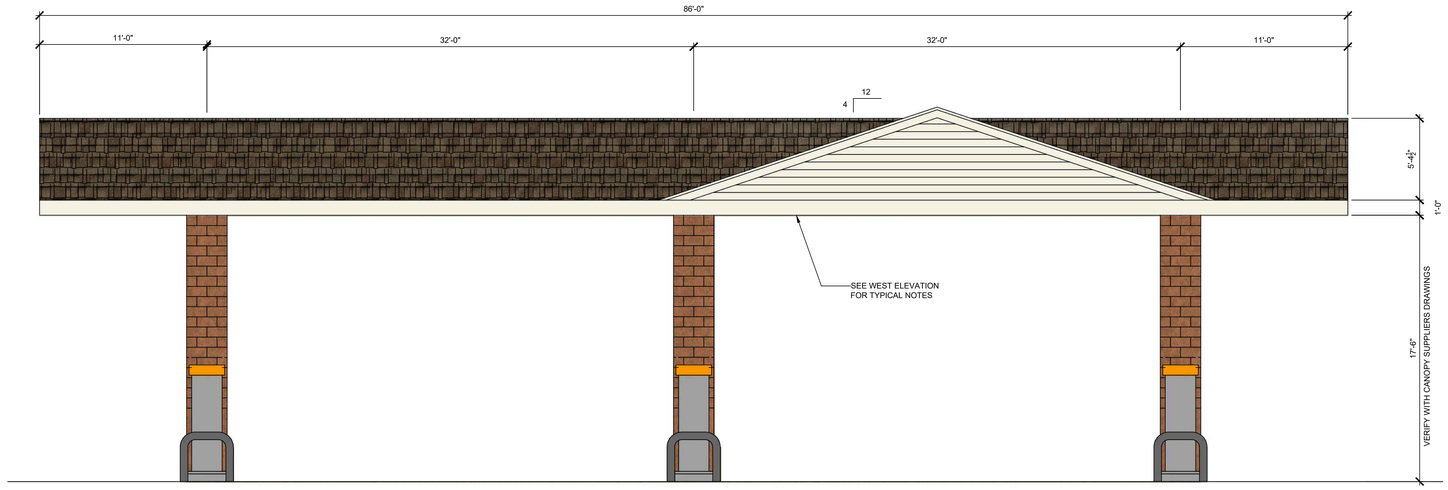
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1/4" = 1'-0"

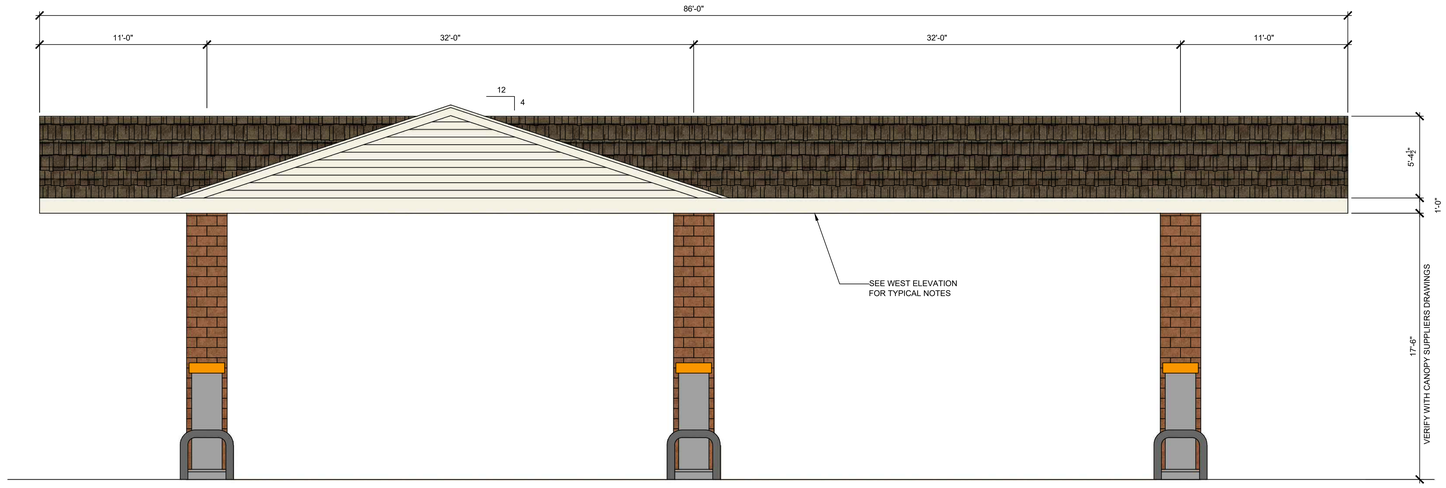
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JOB NUMBER
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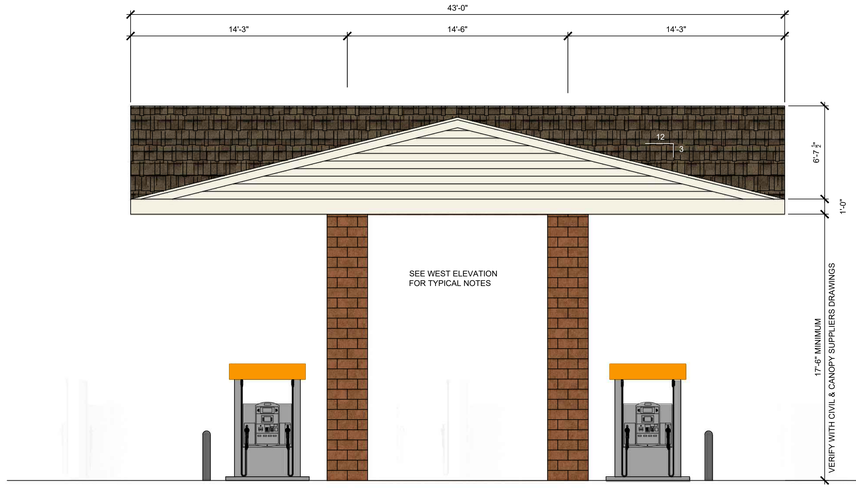
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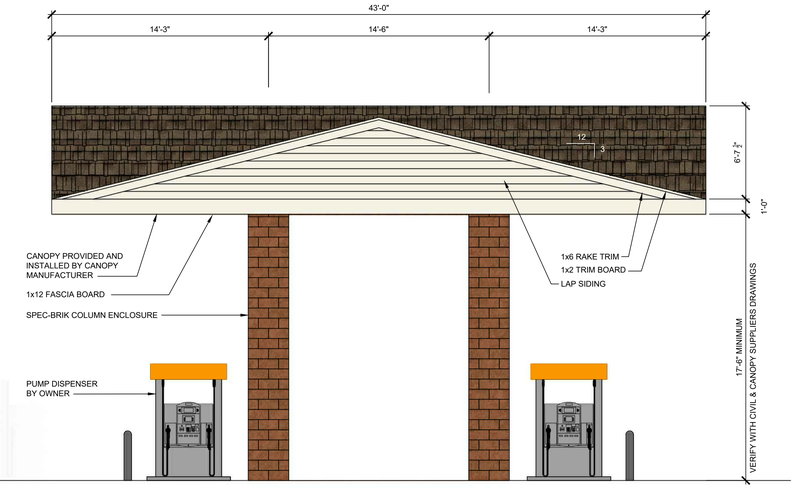
NORTH ELEVATION
1/4" = 1'-0"



SOUTH ELEVATION
1/4" = 1'-0"



EAST ELEVATION
1/4" = 1'-0"



WEST ELEVATION
1/4" = 1'-0"

GENERAL NOTES:

1. GAS CANOPY ELEVATIONS ISSUED FOR SIGN LOCATIONS AND FINISHES ONLY. SEE GAS CANOPY DRAWINGS FROM SUPPLIER FOR CONSTRUCTION INFORMATION.
2. SEE SHEET A9-04 FOR COLUMN ENCLOSURE DETAIL

EXTERIOR FINISHES:

1. MASONRY & MORTAR

   MANUFACTURER: OBERFEILDS
   PRODUCT: SPEC-BRIK
   COLOR: CONCORD BLEND

   MORTAR: CEMEX RICH COLOR BASF RHEOPEL MORTAR ADMIXTURE W/ INTEGRAL WATER REPELLANT.
   COLOR: 55-C KEYSTONE

9. FASCIA BOARD AND TRIM

   MANUFACTURER: JAMES HARDIE
   PRODUCT: HARDIETRIM BOARDS.
   COLOR: COLOR: SHERWIN-WILLIAMS SW7103 WHITETAIL

10. LAP SIDING

    MANUFACTURER: JAMES HARDIE
    PRODUCT: HARDIEPLAN LAP SIDING SMOOTH.
    COLOR: SHERWIN-WILLIAMS SW7103 WHITETAIL

11. ROOF SHINGLES

    MANUFACTURER: GAF
    PRODUCT: TIMBERLINE NATURAL SHADOW ROOFING SHINGLES
    COLOR: BARKWOOD

    PAINTED BOLLARDS AND MISCELLANEOUS

    MANUFACTURER: SHERWIN WILLIAMS
    PRODUCT: PRO-INDUSTRIAL DTM ACRYLIC
    PAINT: ONE (1) COAT SHERWIN-WILLIAMS PRIMER AS RECOMMENDED
    TWO (2) COATS SHERWIM-WILLIAMS PRO-INDUSTRIAL DTM ACRYLIC
    COLOR: B66W311KG CK GRAY

PROJECT
Circle K #7264 Dover
30 Dover Point Road
Dover, New Hampshire 03820

CLIENT
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935 East Tallmadge Ave
Akron, OH 44310

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Cleveland, Ohio 44131 | 216.524.8401 fax | info@cuparc.com

SEAL

NUMBER	DESCRIPTION	DATE
	CLIENT REVIEW - OPTION J	01-22-2021
	CLIENT REVIEW - OPTION K	05-07-2021

NUMBER	DESCRIPTION	DATE
	CLIENT REVIEW	04-10-2017
	CLIENT REVIEW	05-24-2017
	CLIENT REVIEW	06-27-2017
	CLIENT REVIEW - OPTION E	11-19-2018
	CLIENT REVIEW - OPTION F	12-14-2018
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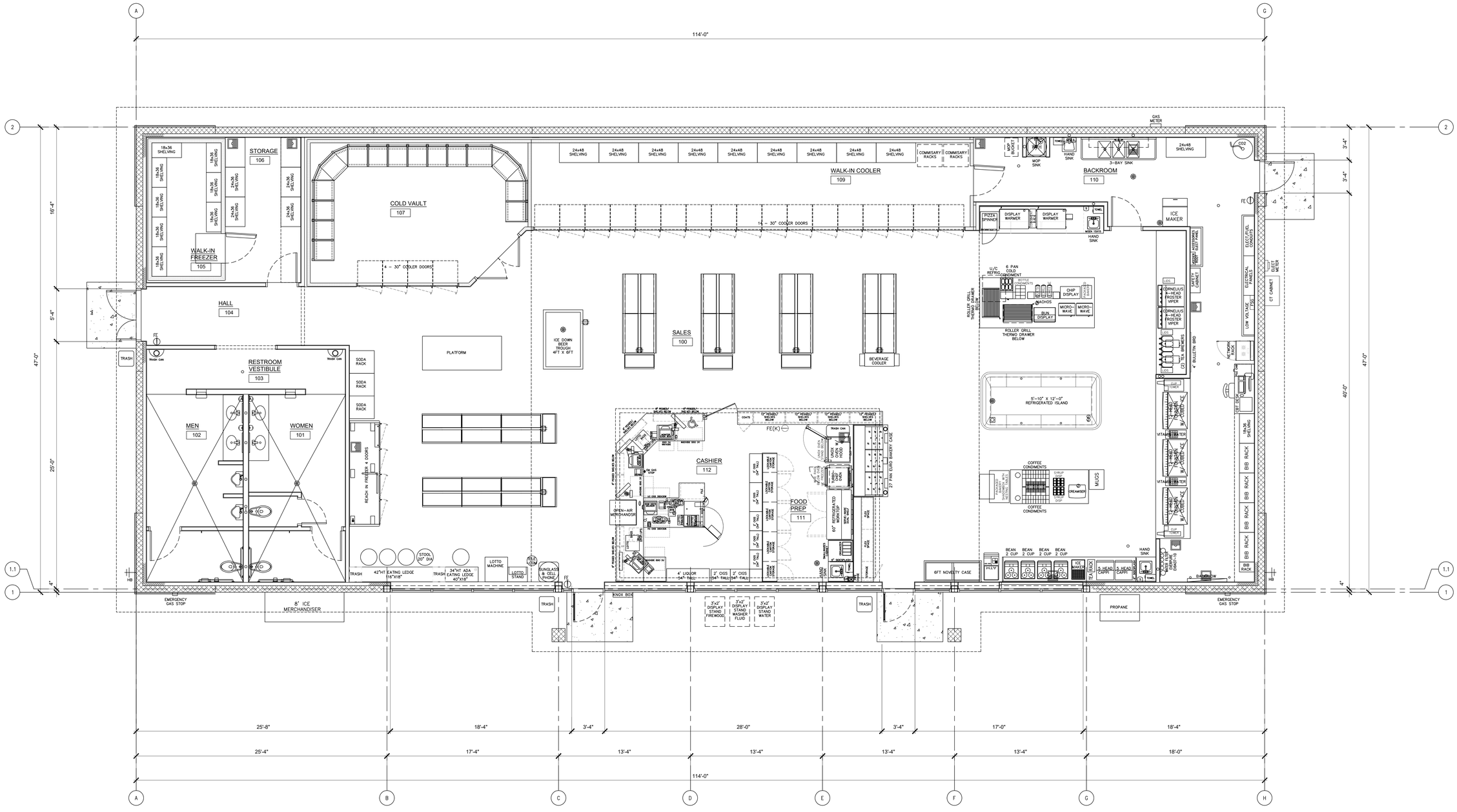
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SDM	SDM

SCALE
1/4" = 1'-0"

ISSUE DATE
-

JOB NUMBER
79-101

DRAWING NUMBER
A4-03



1 A1-01 FLOOR PLAN
SCALE: 1/4"= 1'-0"

N

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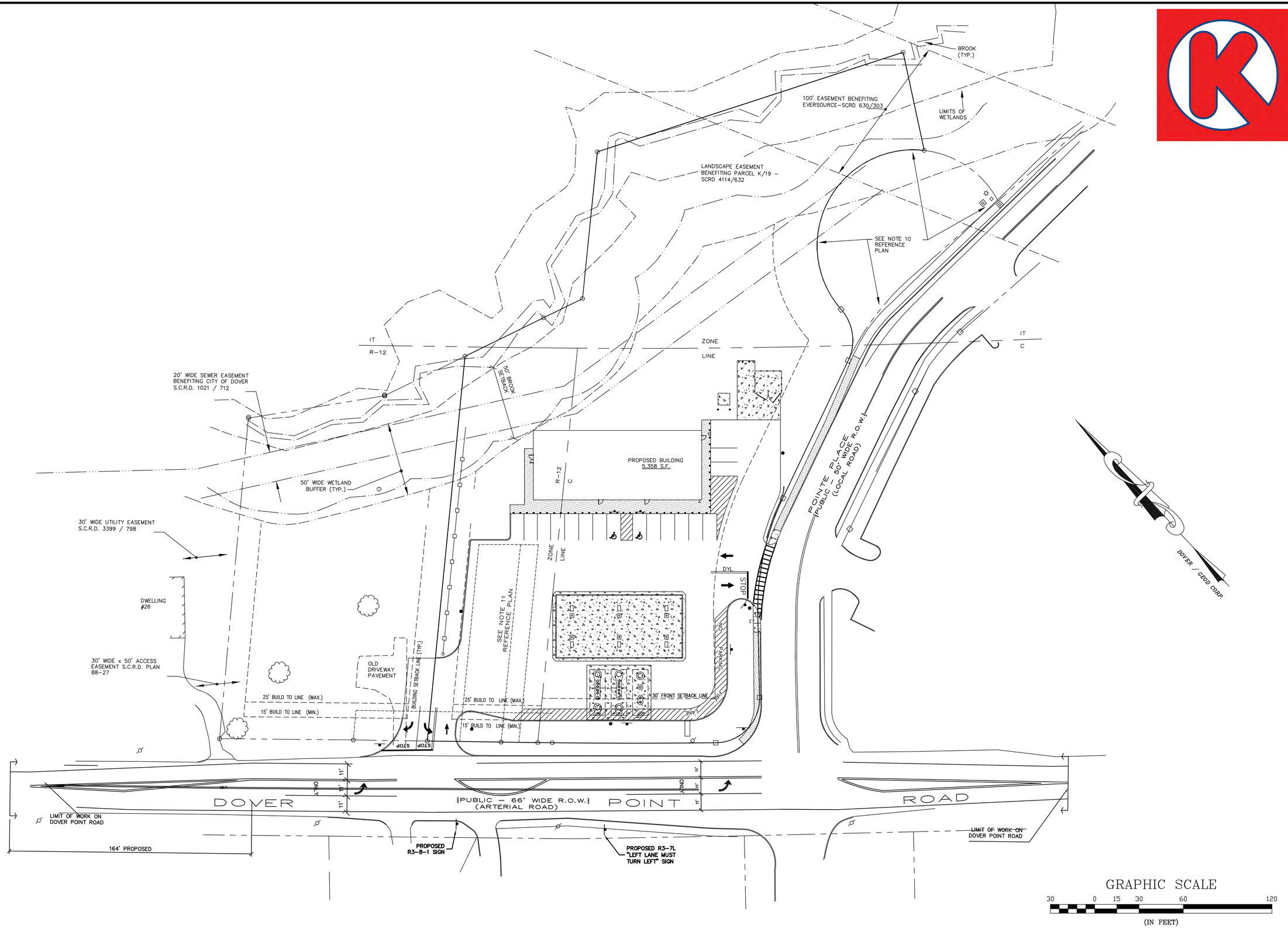
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	CLIENT REVIEW - OPTION J	01-18-2021

DRAWING TITLE
CIRCLE K #7264 DOVER
FLOOR PLAN J

DRAWN BY	CHECKED BY
SDM	SDM

SCALE: 1/4" = 1'-0"
ISSUE DATE: -
JOB NUMBER: 79-101
DRAWING NUMBER: **A1-01**



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PLANNING FILE NO.: P21_

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

NO.	REVISION	APP'D	DATE

DATE: 3-1-21
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:JH
PROJECT NO:1677
FILE: SITE.DWG

DOVER POINT ROAD STRIPING PLAN

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

1 OF 1

DRAINAGE ANALYSIS

for

Circle K, Map K - Lot 19

APRIL 2019

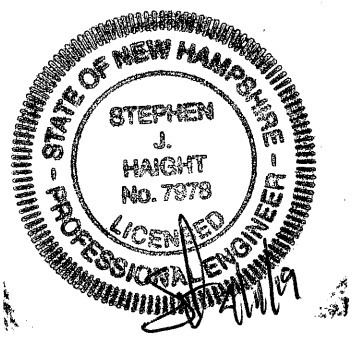
Prepared For:

MAC'S CONVENIENCE STORES, LLC
935 E Talmadge Ave
Akron, OH 44310

Prepared By:

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

Stephen J. Haight, PE



CONTENTS

1.0 INTRODUCTION

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

2.2 EXISTING CONDITIONS

2.2.1 Table A – Existing Conditions Hydrology

2.3 DEVELOPED CONDITIONS

2.3.1 Table B – Developed Conditions Hydrology

3.0 APPENDIX A – HYDROLOGIC CALCULATIONS

A-1 Existing Watersheds

- 2-yr Summaries
- 10-yr Storm Analysis
- 25-yr Summaries
- 50-yr Summaries

A-2 Developed Watersheds

- 2-yr Summaries
- 10-yr Storm Analysis
- 25-yr Summaries
- 50-yr Summaries

4.0 APPENDIX B – MAPS

B-1 Pre-Developed Conditions

B-2 Post-Developed Conditions

1.0 INTRODUCTION

This is a hydrologic analysis of the subject parcel, Tax Map K – Lot 19. The parcel is located at 30 Dover Point Road, Dover, NH. The site contains approximately 2.09 acres and is bounded on the west by Dover Point Road, the east by commercial development, and residential and mixed use properties to the north. The watershed of the parcel includes the project site. The project site consists of undeveloped land adjacent to Thornwood Lane. On site soils are a mix of Windsor Loamy Fine Sand, Windsor Loamy Sand, Suffield Silt Loam, and Buxton Silt Loam. The Windsor series soils are HSG A with the Suffield and Buxton series soils are classified as HSG C.

The existing conditions within the property and its watershed have been analyzed using analysis points to compare the pre-development runoff to post-development. The subject parcel is located along Dover Point Road and Thornwood Lane. The majority of the site slopes from south to north and into a wetland area. The site is broken down into 4 major sub-catchments in order to model the pre-development condition. The largest sub-catchment includes the majority of the central portion of the parcel, and includes mostly HSG A soils. This sub-catchment drains overland, directly into the wetland area. The other three sub-catchments are made up of the northern and roadside portions of the site. One sub-catchment is made up of the existing wetland and immediately surrounding areas. The other two small roadside areas which flow overland into the ROW and into existing catchbasins within Thornwood Lane.

The proposed development of the site includes the construction of a proposed gas station, fueling area, convenience store, entrances, and sidewalks along Thornwood Lane. The development also includes utility connections, and drainage improvements including the stormwater quality treatment structures of rain gardens and a supplementary detention pond.

The post development watershed is modeled utilizing the same point of analysis incorporated in the pre development conditions to allow direct comparison of the peak runoff between the pre and post developed conditions. The post development condition has been divided into twelve sub-catchments to accurately model the proposed development with the inclusion of a rain garden and a detention pond as well as the closed drainage system. Analysis point 1 discharges to the wetlands north of the site. Analysis point 2 is located at the existing CB "C" inlet, and analysis point 3 is located where existing CB "B" is before it is removed in construction.

The analysis indicates that the proposed development of the site will have negligible impact on the watershed. The Raingarden and Detention Pond mitigate the stormwater from the majority of the site. Negligible increases of a couple hundredths of a CFS for AP 1 & 3 can be discarded. There is minor increase along the road at analysis point 2. This is due in part to the improvements to the ROW including the sidewalk and commercial entrances. These increases should have minimal effect on the drainage system. It should be noted that the paved circle adjacent to the site to the north will be removed and the resulting decrease in impervious area has not been included in this analysis.

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. 10.0

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, Inc of Dover, NH.

2.1.2 Soils

Onsite soil information used to estimate the runoff curve numbers was provided: by NRCC.
Hydrologic Drainage Class A: Windsor Loamy Fine Sand
Windsor Loamy Sand

Hydrologic Drainage Class C: Suffield Silt Loam
Buxton Silt Loam

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 3.16", 4.77", 6.03", and 7.21" rainfall depths respectively. The raingarden and detention pond have 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	0.006	0.02	0.24	0.53	0.93
2	0.000	0.00	0.00	0.01	0.02
3	0.000	0.00	0.00	0.02	0.06

2.3 DEVELOPED CONDITIONS

The post development watershed was analyzed with 12 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	0.007	0.02	0.27	0.55	0.84
2	0.015	0.17	0.28	0.36	0.44
3	0.000	0.00	0.01	0.05	0.09

Comparison Chart

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	0.006/**0.007**	0.02/**0.02**	0.24/**0.27**	0.53/**0.55**	0.93/**0.84**
2	0.000/**0.015**	0.00/**0.17**	0.00/**0.28**	0.01/**0.36**	0.02/**0.44**
3	0.000/**0.000**	0.00/**0.00**	0.00/**0.01**	0.02/**0.05**	0.06/**0.09**

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	70.861 degrees West
Latitude	43.174 degrees North
Elevation	0 feet
Date/Time	Mon, 08 Apr 2019 11:12:07 -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	1.55	2.00	2.61	2.87	**1yr**	2.31	2.76	3.16	3.88	4.46	**1yr**
2yr	0.32	0.49	0.61	0.81	1.02	1.29	**2yr**	0.88	1.17	1.50	1.92	2.45	3.16	3.51	**2yr**	2.79	3.37	3.87	4.60	5.24	**2yr**
5yr	0.37	0.57	0.72	0.96	1.23	1.58	**5yr**	1.06	1.45	1.85	2.39	3.08	3.99	4.50	**5yr**	3.53	4.32	4.94	5.82	6.58	**5yr**
10yr	0.40	0.63	0.80	1.09	1.42	1.85	**10yr**	1.23	1.70	2.18	2.83	3.67	4.77	5.43	**10yr**	4.22	5.22	5.96	6.95	7.82	**10yr**
25yr	0.46	0.74	0.94	1.30	1.72	2.27	**25yr**	1.49	2.10	2.70	3.54	4.62	6.03	6.96	**25yr**	5.34	6.70	7.62	8.80	9.83	**25yr**
50yr	0.52	0.83	1.06	1.49	2.00	2.67	**50yr**	1.73	2.46	3.19	4.20	5.51	7.21	8.41	**50yr**	6.38	8.09	9.19	10.52	11.70	**50yr**
100yr	0.58	0.94	1.21	1.71	2.32	3.13	**100yr**	2.01	2.90	3.75	4.97	6.56	8.62	10.17	**100yr**	7.63	9.78	11.08	12.58	13.92	**100yr**
200yr	0.64	1.05	1.36	1.96	2.70	3.68	**200yr**	2.33	3.41	4.44	5.91	7.82	10.32	12.29	**200yr**	9.13	11.82	13.36	15.05	16.58	**200yr**
500yr	0.76	1.24	1.62	2.36	3.31	4.55	**500yr**	2.85	4.23	5.51	7.40	9.86	13.08	15.80	**500yr**	11.58	15.20	17.12	19.09	20.89	**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	0.89	**1yr**	0.64	0.87	0.92	1.27	1.60	2.16	2.46	**1yr**	1.91	2.37	2.86	3.31	3.99	**1yr**
2yr	0.31	0.49	0.60	0.81	1.00	1.18	**2yr**	0.86	1.16	1.36	1.83	2.36	3.04	3.40	**2yr**	2.69	3.27	3.75	4.47	5.04	**2yr**
5yr	0.35	0.54	0.67	0.91	1.16	1.40	**5yr**	1.00	1.37	1.61	2.15	2.77	3.72	4.13	**5yr**	3.29	3.97	4.62	5.42	6.12	**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	4.28	4.79	**10yr**	3.79	4.60	5.33	6.26	7.04	**10yr**
25yr	0.43	0.66	0.82	1.18	1.55	1.90	**25yr**	1.33	1.86	2.11	2.83	3.64	4.87	5.80	**25yr**	4.31	5.58	6.49	7.58	8.46	**25yr**
50yr	0.48	0.73	0.91	1.30	1.75	2.18	**50yr**	1.51	2.13	2.35	3.18	4.08	5.54	6.69	**50yr**	4.90	6.43	7.53	8.75	9.71	**50yr**
100yr	0.53	0.81	1.01	1.46	2.00	2.49	**100yr**	1.73	2.44	2.63	3.56	4.55	6.29	7.71	**100yr**	5.57	7.41	8.74	10.11	11.14	**100yr**
200yr	0.59	0.89	1.13	1.63	2.27	2.85	**200yr**	1.96	2.79	2.93	3.98	5.06	7.13	8.89	**200yr**	6.31	8.55	10.14	11.69	12.81	**200yr**
500yr	0.69	1.02	1.31	1.91	2.72	3.42	**500yr**	2.34	3.35	3.40	4.60	5.86	8.40	10.72	**500yr**	7.43	10.30	12.33	14.18	15.35	**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	1.06	1.24	1.74	2.22	2.90	3.09	**1yr**	2.57	2.97	3.46	4.25	4.85	**1yr**
2yr	0.33	0.51	0.63	0.85	1.05	1.25	**2yr**	0.90	1.22	1.48	1.96	2.51	3.31	3.63	**2yr**	2.93	3.49	4.01	4.76	5.48	**2yr**
5yr	0.39	0.61	0.75	1.03	1.31	1.59	**5yr**	1.13	1.55	1.86	2.51	3.21	4.25	4.86	**5yr**	3.77	4.68	5.28	6.24	7.01	**5yr**
10yr	0.46	0.70	0.87	1.22	1.57	1.93	**10yr**	1.36	1.88	2.24	3.06	3.88	5.23	6.07	**10yr**	4.63	5.84	6.67	7.67	8.56	**10yr**
25yr	0.56	0.85	1.05	1.50	1.98	2.49	**25yr**	1.71	2.43	2.89	3.99	4.99	7.21	8.16	**25yr**	6.38	7.85	8.92	10.10	11.16	**25yr**
50yr	0.64	0.98	1.22	1.75	2.36	3.01	**50yr**	2.04	2.94	3.51	4.87	6.07	8.93	10.23	**50yr**	7.90	9.83	11.15	12.42	13.65	**50yr**
100yr	0.75	1.13	1.42	2.05	2.82	3.64	**100yr**	2.43	3.56	4.26	5.96	7.40	11.06	12.82	**100yr**	9.79	12.32	13.91	15.31	16.70	**100yr**
200yr	0.87	1.31	1.66	2.41	3.36	4.42	**200yr**	2.90	4.32	5.18	7.30	9.00	13.74	16.08	**200yr**	12.16	15.46	17.39	18.85	20.47	**200yr**
500yr	1.07	1.59	2.04	2.97	4.22	5.68	**500yr**	3.65	5.56	6.70	9.57	11.69	18.32	21.71	**500yr**	16.22	20.87	23.37	24.85	26.79	**500yr**

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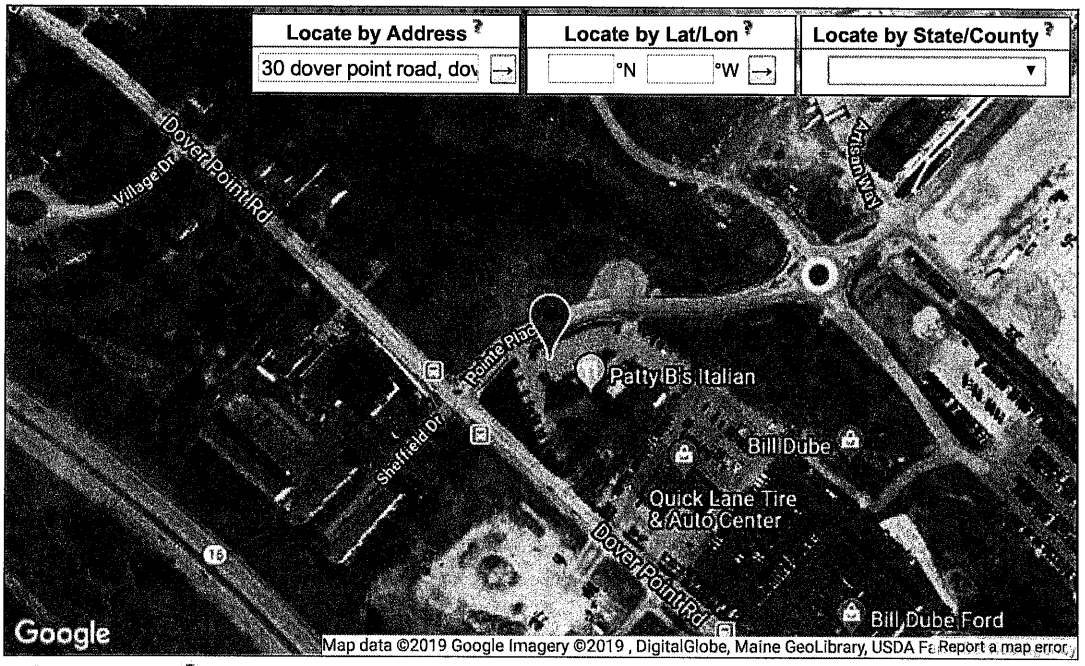
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Select Product

- Extreme Precipitation Tables - HTML
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- Partial Duration Series - by Point
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- Distribution Curves - Graphical
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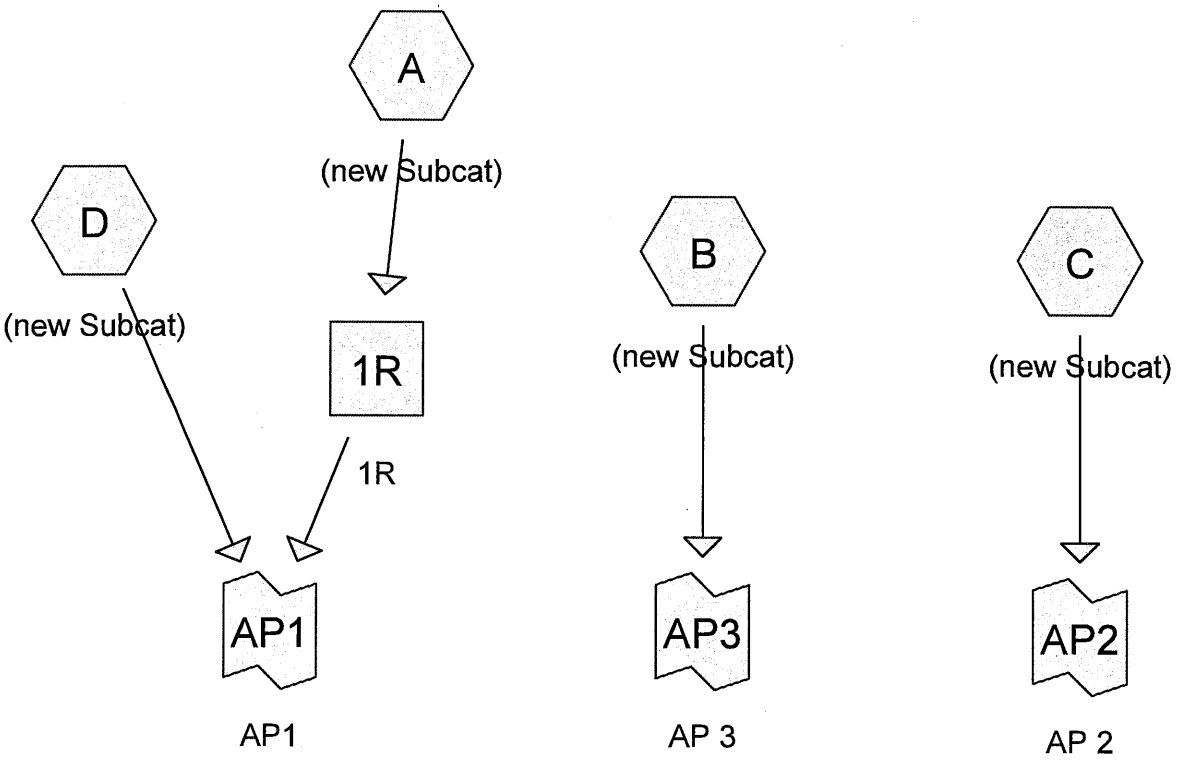
Northeast Regional Climate Center (NRCC) Cornell University

Natural Resources Conservation Service (NRCS) USDA NRCS

Contact: precip@cornell.edu

A-1

EXISTING WATERSHEDS



Subcat Reach Pond Link

Routing Diagram for 1677-Pre

Prepared by {enter your company name here}, Printed 4/10/2019

HydroCAD® 10.00 s/n 03240 © 2011 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.702	39	>75% Grass cover, Good, HSG A (A, B, C, D)
0.206	74	>75% Grass cover, Good, HSG C (A, D)
1.908	**43**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
1.702	HSG A	A, B, C, D
0.000	HSG B	
0.206	HSG C	A, D
0.000	HSG D	
0.000	Other	
1.908		**TOTAL AREA**

A – 1

NODE LISTING – 2-YR

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentA: (new Subcat) Runoff Area=49,077 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=410' Tc=11.9 min CN=39 Runoff=0.00 cfs 0.000 af

SubcatchmentB: (new Subcat) Runoff Area=8,695 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=262' Slope=0.0300 '/' Tc=7.7 min CN=39 Runoff=0.00 cfs 0.000 af

SubcatchmentC: (new Subcat) Runoff Area=3,024 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=212' Tc=4.0 min CN=39 Runoff=0.00 cfs 0.000 af

SubcatchmentD: (new Subcat) Runoff Area=22,313 sf 0.00% Impervious Runoff Depth>0.14"
Flow Length=138' Tc=5.0 min CN=53 Runoff=0.02 cfs 0.006 af

Reach 1R: 1R Inflow=0.00 cfs 0.000 af
Outflow=0.00 cfs 0.000 af

Link AP1: AP1 Inflow=0.02 cfs 0.006 af
Primary=0.02 cfs 0.006 af

Link AP2: AP 2 Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link AP3: AP 3 Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 1.908 ac Runoff Volume = 0.006 af Average Runoff Depth = 0.04"
100.00% Pervious = 1.908 ac 0.00% Impervious = 0.000 ac

A – 1

NODE LISTING – 10-YR

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A: (new Subcat) Runoff Area=49,077 sf 0.00% Impervious Runoff Depth>0.10"
Flow Length=410' Tc=11.9 min CN=39 Runoff=0.02 cfs 0.009 af

Subcatchment B: (new Subcat) Runoff Area=8,695 sf 0.00% Impervious Runoff Depth>0.10"
Flow Length=262' Slope=0.0300 '/' Tc=7.7 min CN=39 Runoff=0.00 cfs 0.002 af

Subcatchment C: (new Subcat) Runoff Area=3,024 sf 0.00% Impervious Runoff Depth>0.10"
Flow Length=212' Tc=4.0 min CN=39 Runoff=0.00 cfs 0.001 af

Subcatchment D: (new Subcat) Runoff Area=22,313 sf 0.00% Impervious Runoff Depth>0.61"
Flow Length=138' Tc=5.0 min CN=53 Runoff=0.24 cfs 0.026 af

Reach 1R: 1R Inflow=0.02 cfs 0.009 af
Outflow=0.02 cfs 0.009 af

Link AP1: AP1 Inflow=0.24 cfs 0.035 af
Primary=0.24 cfs 0.035 af

Link AP2: AP 2 Inflow=0.00 cfs 0.001 af
Primary=0.00 cfs 0.001 af

Link AP3: AP 3 Inflow=0.00 cfs 0.002 af
Primary=0.00 cfs 0.002 af

Total Runoff Area = 1.908 ac Runoff Volume = 0.037 af Average Runoff Depth = 0.24"
100.00% Pervious = 1.908 ac 0.00% Impervious = 0.000 ac

A – 1

10-YR STORM SUMMARY

Summary for Subcatchment A: (new Subcat)

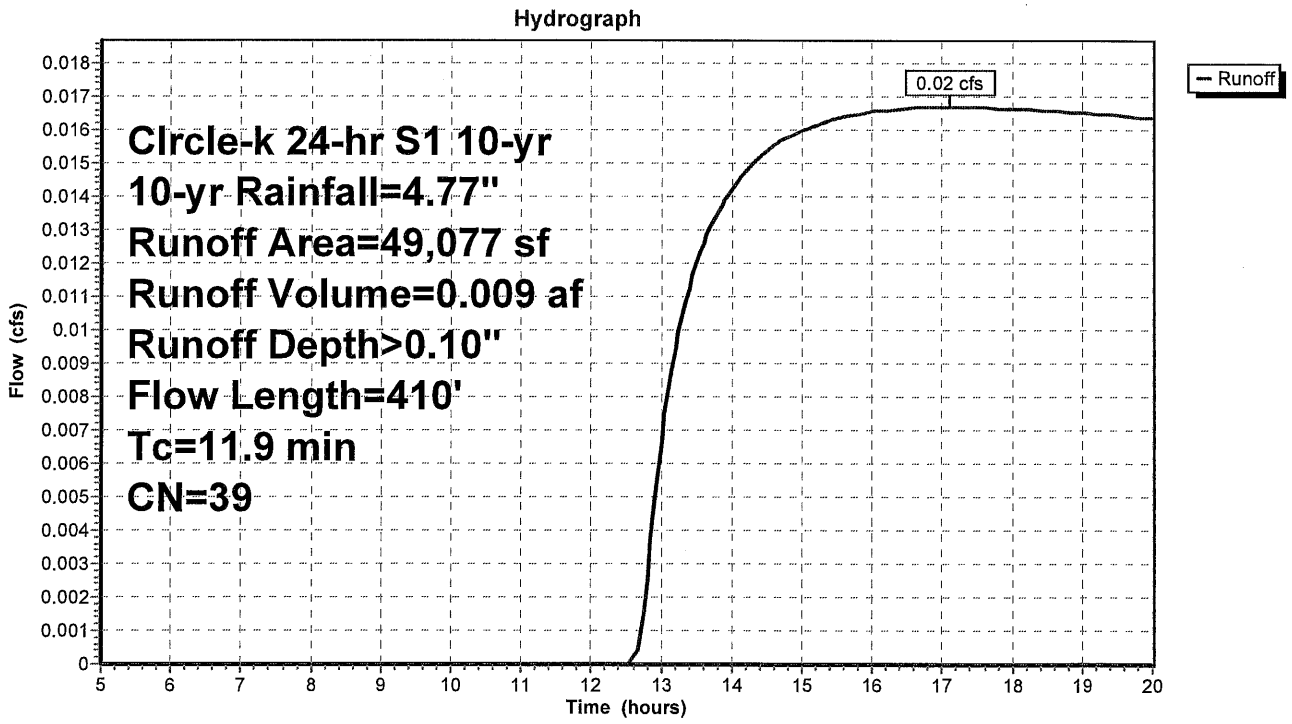
Runoff = 0.02 cfs @ 17.09 hrs, Volume= 0.009 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
49,008	39	>75% Grass cover, Good, HSG A
69	74	>75% Grass cover, Good, HSG C
49,077	39	Weighted Average
49,077		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	50	0.0100	0.11		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.16"
4.4	360	0.0380	1.36		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.9	410	Total			

Subcatchment A: (new Subcat)



Summary for Subcatchment B: (new Subcat)

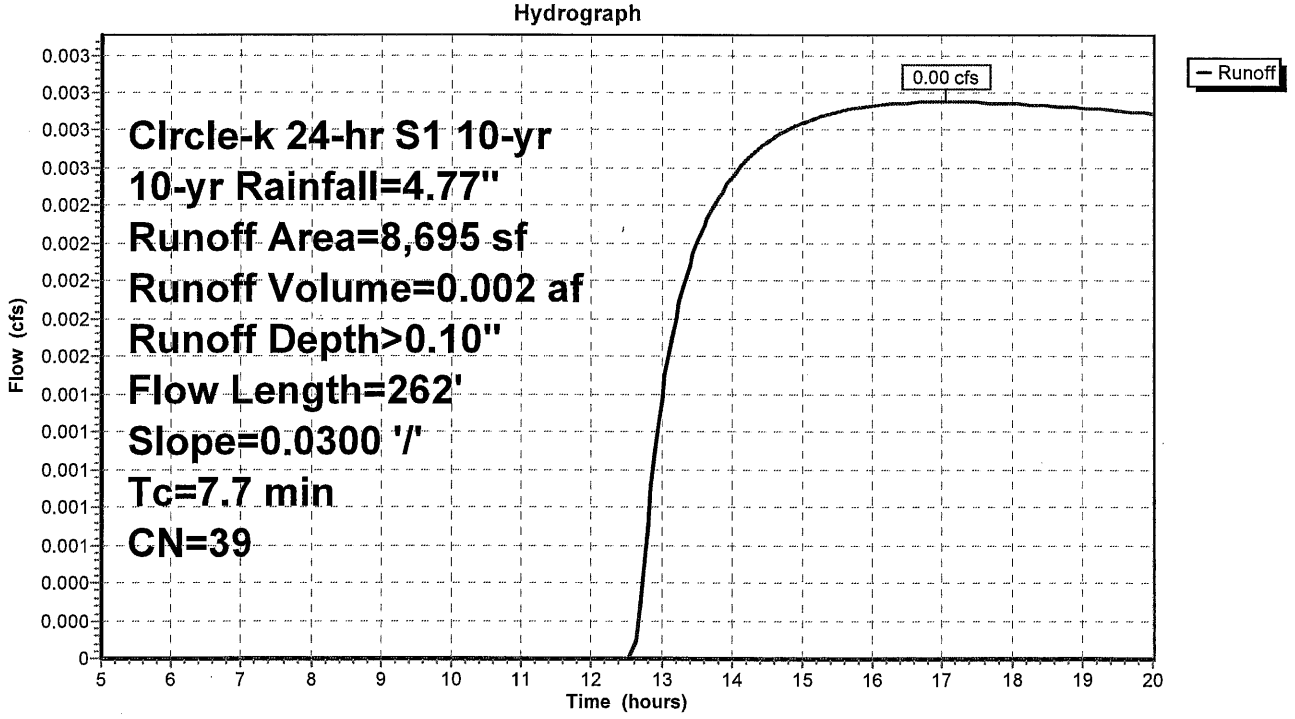
Runoff = 0.00 cfs @ 17.05 hrs, Volume= 0.002 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
8,695	39	>75% Grass cover, Good, HSG A
8,695		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	50	0.0300	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.16"
2.9	212	0.0300	1.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
7.7	262	Total			

Subcatchment B: (new Subcat)



Summary for Subcatchment C: (new Subcat)

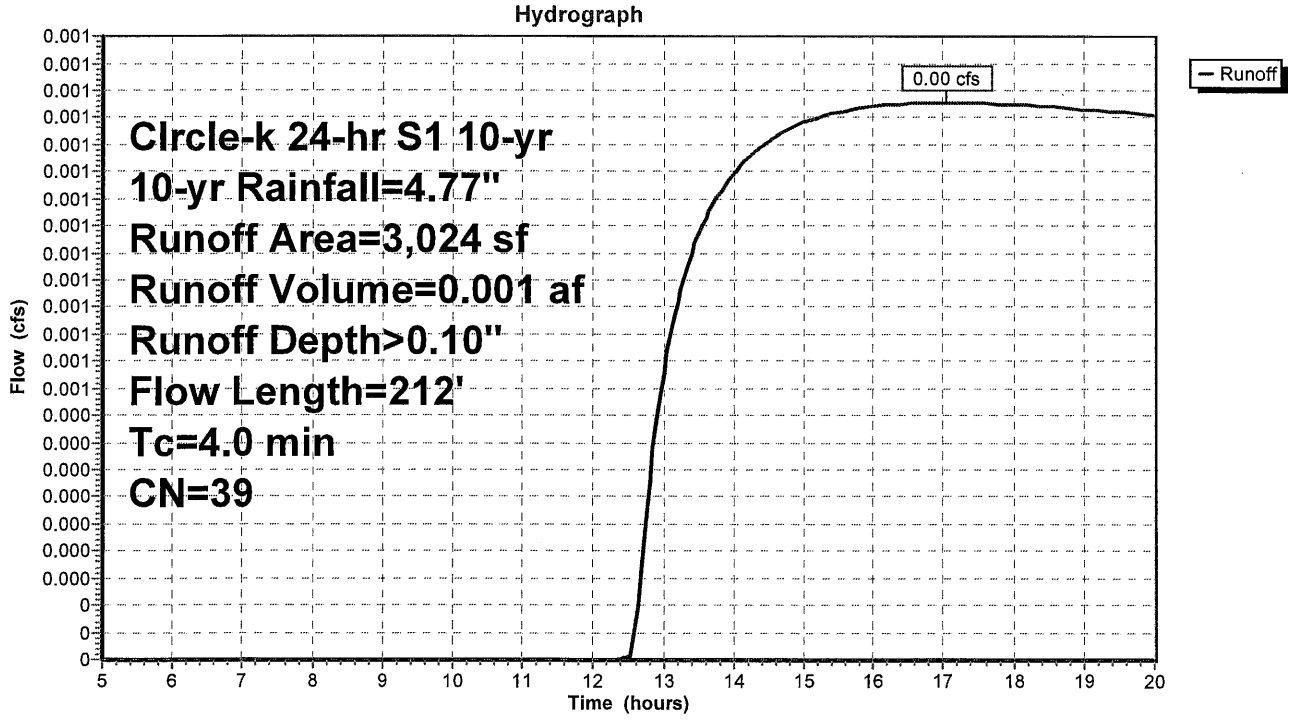
Runoff = 0.00 cfs @ 17.05 hrs, Volume= 0.001 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
3,024	39	>75% Grass cover, Good, HSG A
3,024		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.0	50	0.1000	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.16"
1.0	162	0.0185	2.76		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.0	212	Total			

Subcatchment C: (new Subcat)



Summary for Subcatchment D: (new Subcat)

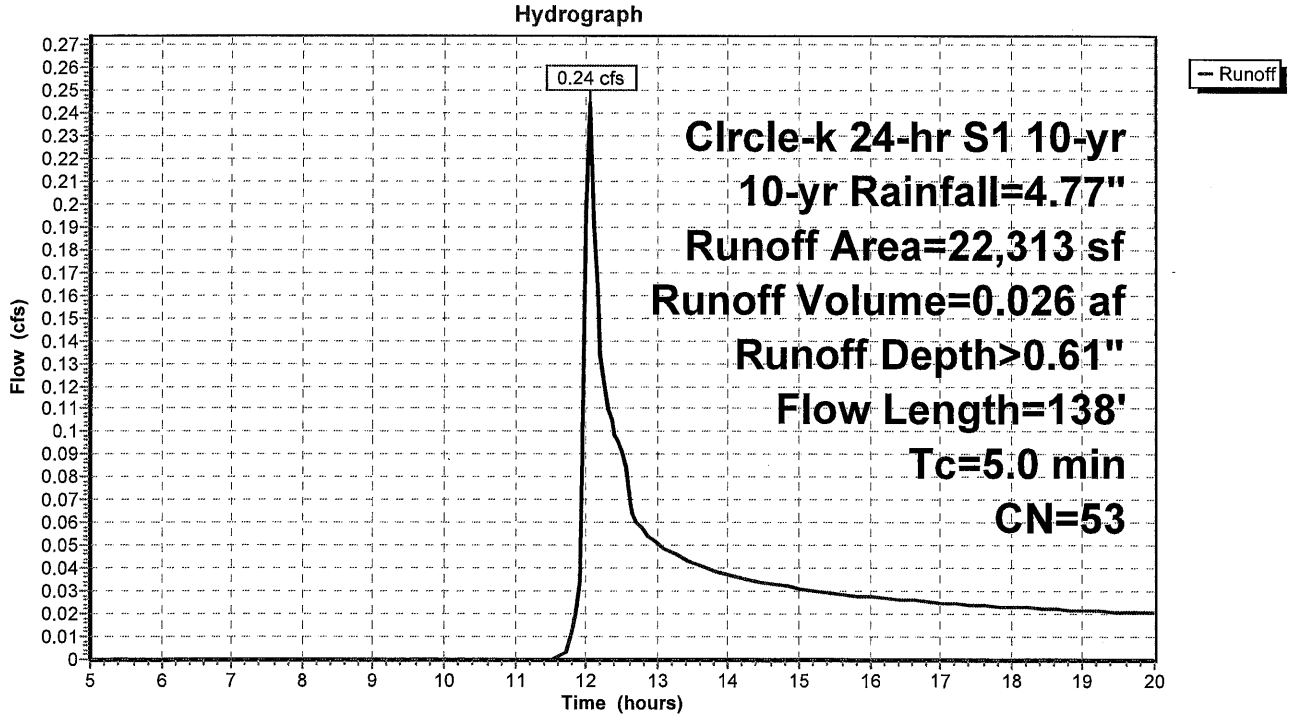
Runoff = 0.24 cfs @ 12.05 hrs, Volume= 0.026 af, Depth> 0.61"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
8,899	74	>75% Grass cover, Good, HSG C
13,414	39	>75% Grass cover, Good, HSG A
22,313	53	Weighted Average
22,313		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0400	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.16"
0.7	88	0.1000	2.21		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.0	138	Total			

Subcatchment D: (new Subcat)

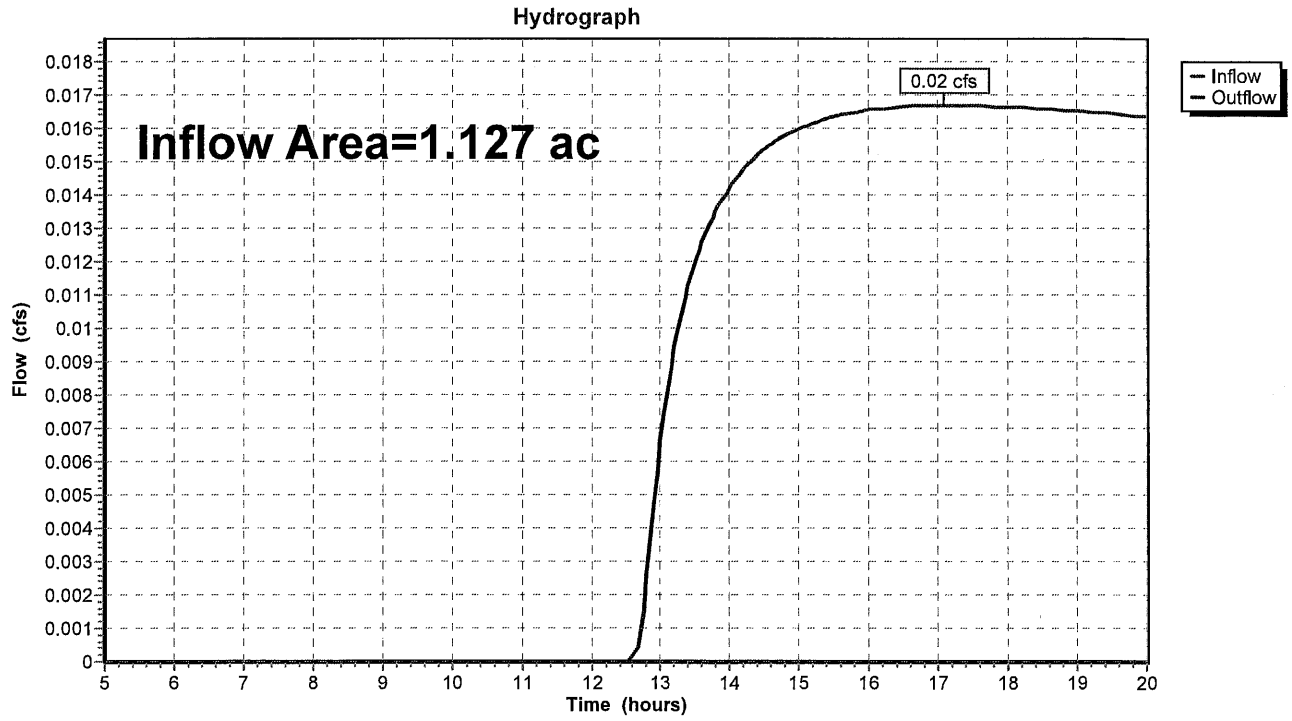


Summary for Reach 1R: 1R

Inflow Area = 1.127 ac, 0.00% Impervious, Inflow Depth > 0.10" for 10-yr event
Inflow = 0.02 cfs @ 17.09 hrs, Volume= 0.009 af
Outflow = 0.02 cfs @ 17.09 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 1R: 1R

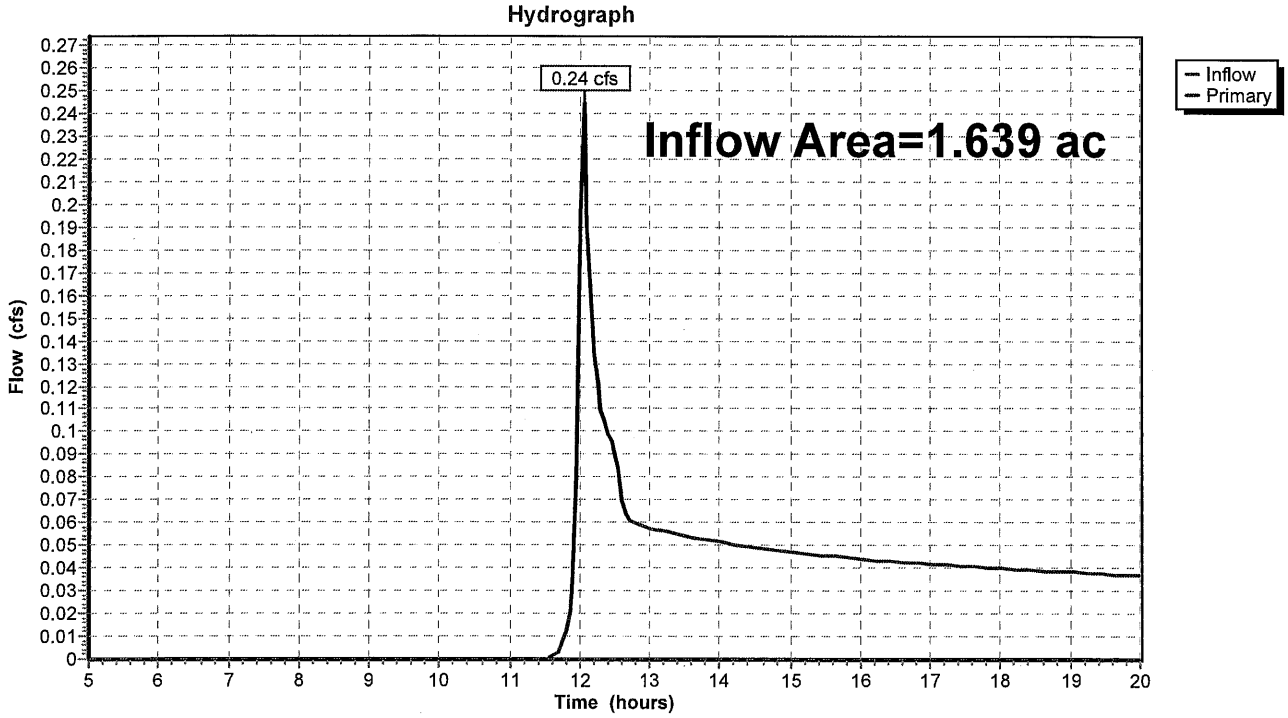


Summary for Link AP1: AP1

Inflow Area = 1.639 ac, 0.00% Impervious, Inflow Depth > 0.26" for 10-yr event
Inflow = 0.24 cfs @ 12.05 hrs, Volume= 0.035 af
Primary = 0.24 cfs @ 12.05 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link AP1: AP1

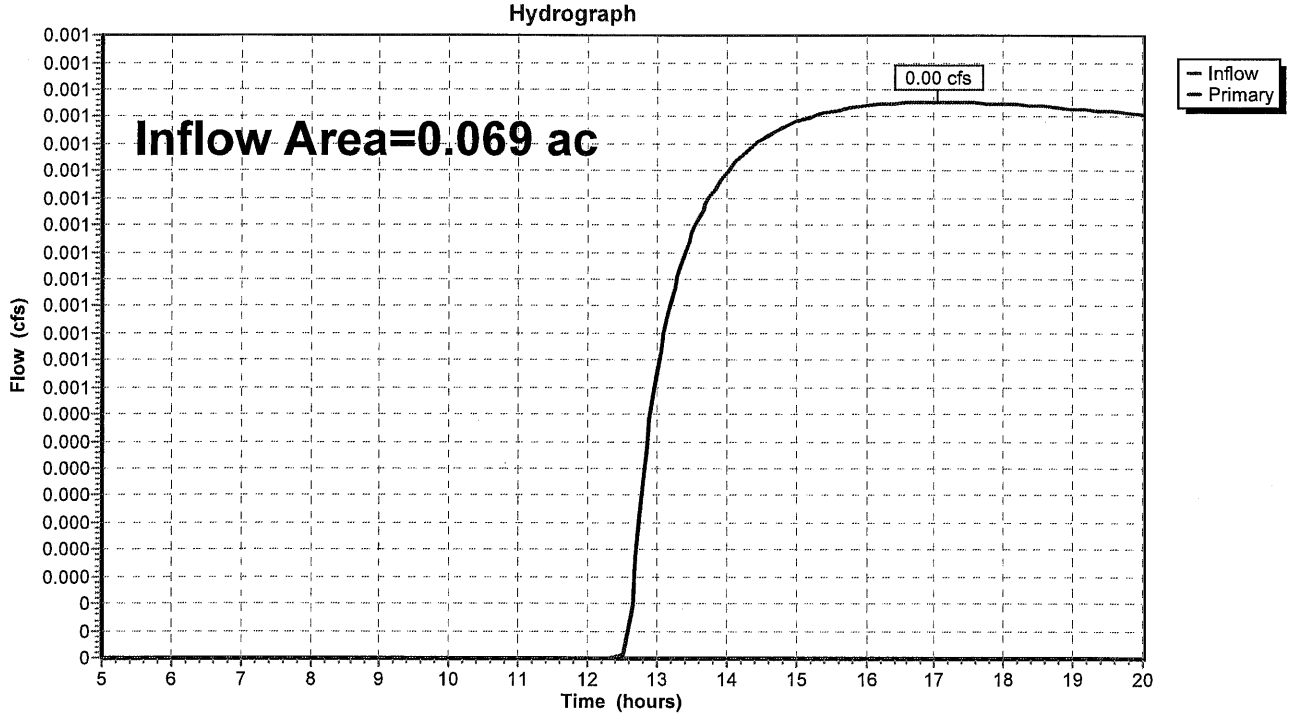


Summary for Link AP2: AP 2

Inflow Area = 0.069 ac, 0.00% Impervious, Inflow Depth > 0.10" for 10-yr event
Inflow = 0.00 cfs @ 17.05 hrs, Volume= 0.001 af
Primary = 0.00 cfs @ 17.05 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link AP2: AP 2

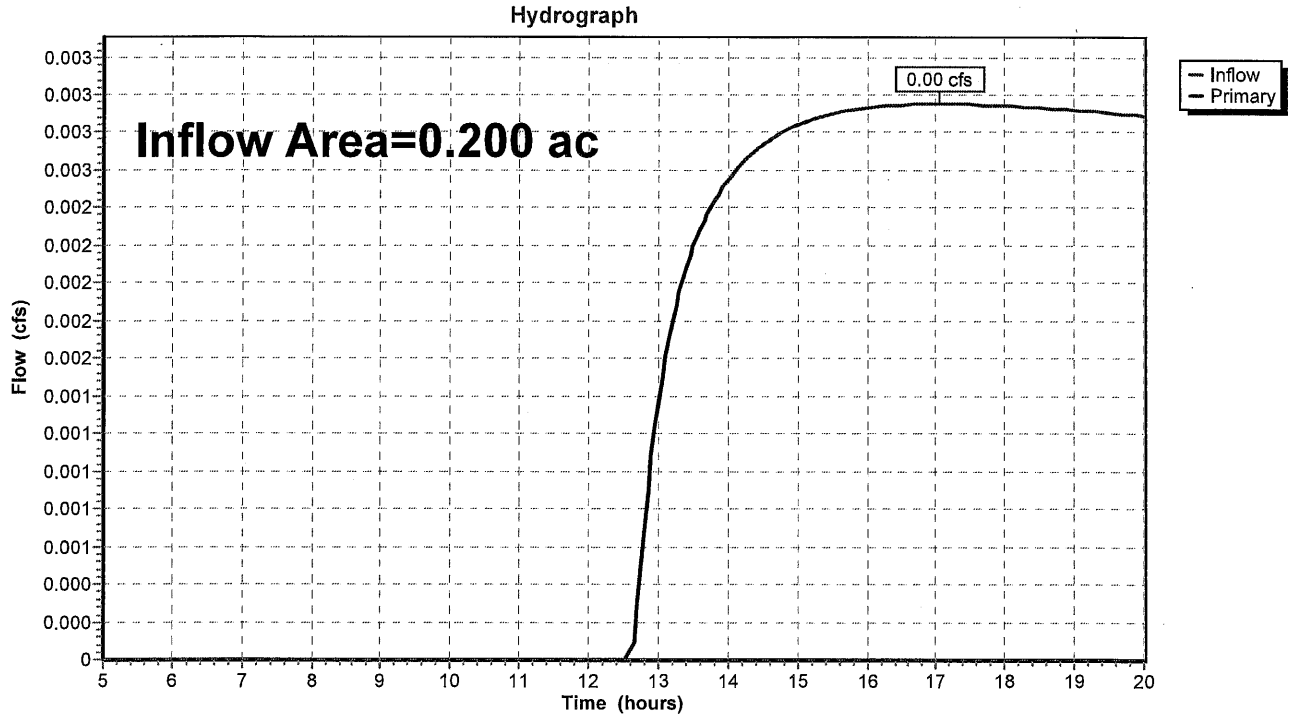


Summary for Link AP3: AP 3

Inflow Area = 0.200 ac, 0.00% Impervious, Inflow Depth > 0.10" for 10-yr event
Inflow = 0.00 cfs @ 17.05 hrs, Volume= 0.002 af
Primary = 0.00 cfs @ 17.05 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link AP3: AP 3



A – 1

NODE LISTING – 25-YR

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A: (new Subcat) Runoff Area=49,077 sf 0.00% Impervious Runoff Depth>0.33"
Flow Length=410' Tc=11.9 min CN=39 Runoff=0.09 cfs 0.031 af

Subcatchment B: (new Subcat) Runoff Area=8,695 sf 0.00% Impervious Runoff Depth>0.33"
Flow Length=262' Slope=0.0300 '/' Tc=7.7 min CN=39 Runoff=0.02 cfs 0.005 af

Subcatchment C: (new Subcat) Runoff Area=3,024 sf 0.00% Impervious Runoff Depth>0.33"
Flow Length=212' Tc=4.0 min CN=39 Runoff=0.01 cfs 0.002 af

Subcatchment D: (new Subcat) Runoff Area=22,313 sf 0.00% Impervious Runoff Depth>1.14"
Flow Length=138' Tc=5.0 min CN=53 Runoff=0.53 cfs 0.049 af

Reach 1R: 1R Inflow=0.09 cfs 0.031 af
Outflow=0.09 cfs 0.031 af

Link AP1: AP1 Inflow=0.53 cfs 0.080 af
Primary=0.53 cfs 0.080 af

Link AP2: AP 2 Inflow=0.01 cfs 0.002 af
Primary=0.01 cfs 0.002 af

Link AP3: AP 3 Inflow=0.02 cfs 0.005 af
Primary=0.02 cfs 0.005 af

Total Runoff Area = 1.908 ac Runoff Volume = 0.087 af Average Runoff Depth = 0.55"
100.00% Pervious = 1.908 ac 0.00% Impervious = 0.000 ac

A – 1

NODE LISTING – 50-YR

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A: (new Subcat) Runoff Area=49,077 sf 0.00% Impervious Runoff Depth>0.64"
Flow Length=410' Tc=11.9 min CN=39 Runoff=0.28 cfs 0.061 af

Subcatchment B: (new Subcat) Runoff Area=8,695 sf 0.00% Impervious Runoff Depth>0.65"
Flow Length=262' Slope=0.0300 '/' Tc=7.7 min CN=39 Runoff=0.06 cfs 0.011 af

Subcatchment C: (new Subcat) Runoff Area=3,024 sf 0.00% Impervious Runoff Depth>0.65"
Flow Length=212' Tc=4.0 min CN=39 Runoff=0.02 cfs 0.004 af

Subcatchment D: (new Subcat) Runoff Area=22,313 sf 0.00% Impervious Runoff Depth>1.74"
Flow Length=138' Tc=5.0 min CN=53 Runoff=0.83 cfs 0.074 af

Reach 1R: 1R Inflow=0.28 cfs 0.061 af
Outflow=0.28 cfs 0.061 af

Link AP1: AP1 Inflow=0.93 cfs 0.135 af
Primary=0.93 cfs 0.135 af

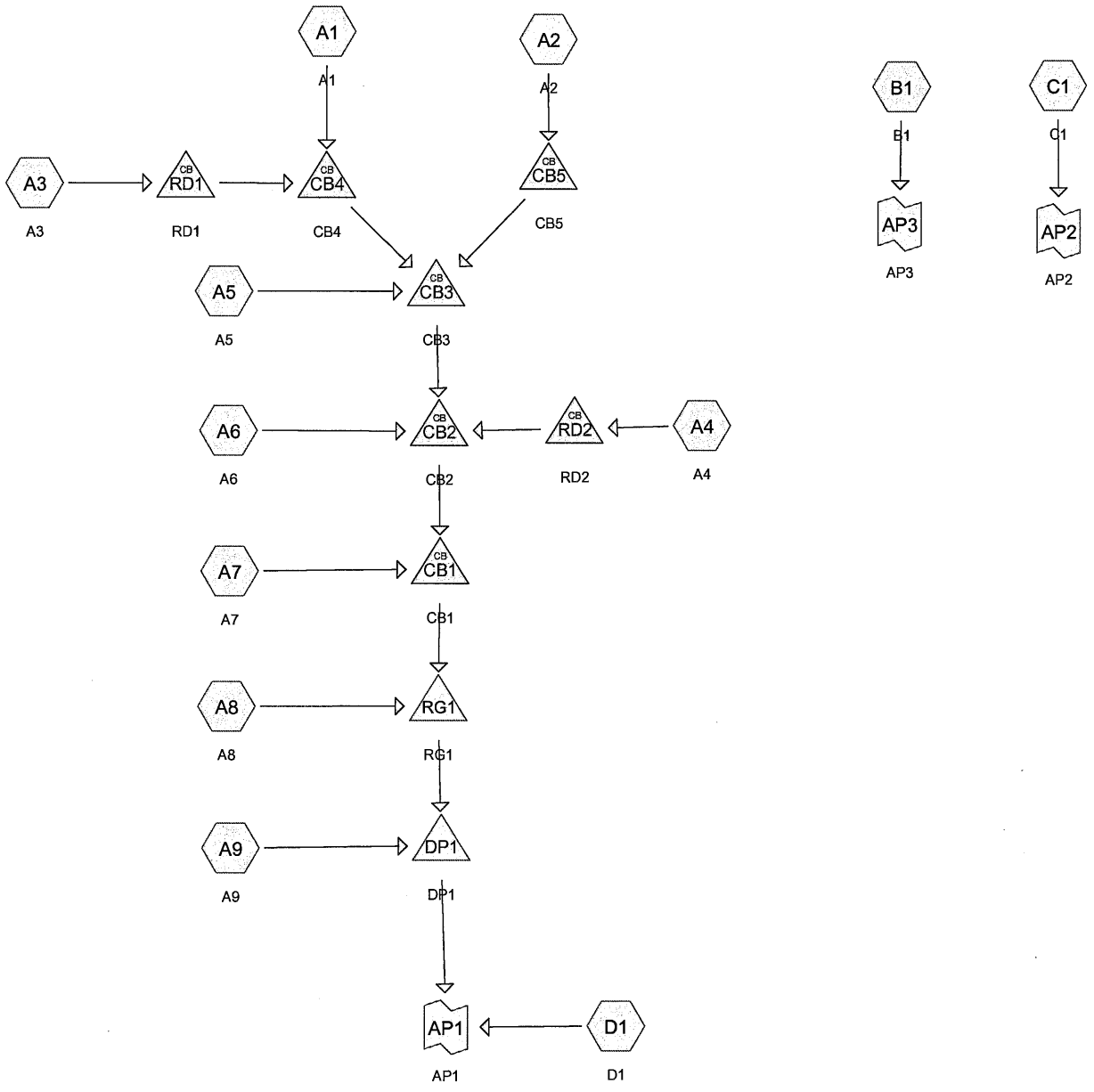
Link AP2: AP 2 Inflow=0.02 cfs 0.004 af
Primary=0.02 cfs 0.004 af

Link AP3: AP 3 Inflow=0.06 cfs 0.011 af
Primary=0.06 cfs 0.011 af

Total Runoff Area = 1.908 ac Runoff Volume = 0.149 af Average Runoff Depth = 0.94"
100.00% Pervious = 1.908 ac 0.00% Impervious = 0.000 ac

A-2

DEVELOPED WATERSHEDS



Subcat Reach Pond Link

Routing Diagram for 1677-Post

Prepared by {enter your company name here}, Printed 4/10/2019

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.722	39	>75% Grass cover, Good, HSG A (A1, A2, A7, A8, A9, B1, C1, D1)
0.204	74	>75% Grass cover, Good, HSG C (D1)
0.775	98	Paved parking, HSG A (A1, A2, A5, A6, A7, B1, C1, D1)
0.122	98	Roofs, HSG A (A4)
0.085	98	Unconnected roofs, HSG A (A3)
1.908	**73**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
1.704	HSG A	A1, A2, A3, A4, A5, A6, A7, A8, A9, B1, C1, D1
0.000	HSG B	
0.204	HSG C	D1
0.000	HSG D	
0.000	Other	
1.908		**TOTAL AREA**

A – 2

NODE LISTING – 2-YR

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points x 3
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A1: A1 Runoff Area=14,305 sf 82.00% Impervious Runoff Depth>1.69"
Flow Length=158' Tc=2.4 min CN=87 Runoff=0.80 cfs 0.046 af

Subcatchment A2: A2 Runoff Area=7,881 sf 69.17% Impervious Runoff Depth>1.21"
Flow Length=226' Tc=7.0 min CN=80 Runoff=0.26 cfs 0.018 af

Subcatchment A3: A3 Runoff Area=3,695 sf 100.00% Impervious Runoff Depth>2.72"
Flow Length=75' Slope=0.0050 '/' Tc=1.7 min CN=98 Runoff=0.29 cfs 0.019 af

Subcatchment A4: A4 Runoff Area=5,328 sf 100.00% Impervious Runoff Depth>2.72"
Flow Length=114' Slope=0.0050 '/' Tc=2.4 min CN=98 Runoff=0.42 cfs 0.028 af

Subcatchment A5: A5 Runoff Area=6,121 sf 100.00% Impervious Runoff Depth>2.72"
Flow Length=101' Tc=1.1 min CN=98 Runoff=0.50 cfs 0.032 af

Subcatchment A6: A6 Runoff Area=1,550 sf 100.00% Impervious Runoff Depth>2.72"
Flow Length=89' Tc=0.8 min CN=98 Runoff=0.13 cfs 0.008 af

Subcatchment A7: A7 Runoff Area=6,295 sf 85.50% Impervious Runoff Depth>1.85"
Flow Length=103' Tc=0.6 min CN=89 Runoff=0.39 cfs 0.022 af

Subcatchment A8: A8 Runoff Area=4,003 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=29' Slope=0.2000 '/' Tc=1.5 min CN=39 Runoff=0.00 cfs 0.000 af

Subcatchment A9: A9 Runoff Area=4,394 sf 0.00% Impervious Runoff Depth=0.00"
Flow Length=55' Slope=0.2000 '/' Tc=2.4 min CN=39 Runoff=0.00 cfs 0.000 af

Subcatchment B1: B1 Runoff Area=4,270 sf 12.04% Impervious Runoff Depth>0.03"
Flow Length=153' Tc=4.9 min CN=46 Runoff=0.00 cfs 0.000 af

Subcatchment C1: C1 Runoff Area=3,696 sf 73.27% Impervious Runoff Depth>1.34"
Flow Length=200' Tc=1.3 min CN=82 Runoff=0.17 cfs 0.009 af

Subcatchment D1: D1 Runoff Area=21,569 sf 1.31% Impervious Runoff Depth>0.16"
Flow Length=154' Tc=5.2 min CN=54 Runoff=0.02 cfs 0.007 af

Pond CB1: CB1 Peak Elev=57.49' Inflow=2.61 cfs 0.174 af
18.0" Round Culvert n=0.013 L=14.0' S=0.0071 '/' Outflow=2.61 cfs 0.174 af

Pond CB2: CB2 Peak Elev=57.91' Inflow=2.26 cfs 0.151 af
15.0" Round Culvert n=0.013 L=53.6' S=0.0138 '/' Outflow=2.26 cfs 0.151 af

Pond CB3: CB3 Peak Elev=59.37' Inflow=1.73 cfs 0.116 af
15.0" Round Culvert n=0.013 L=74.9' S=0.0051 '/' Outflow=1.73 cfs 0.116 af

Pond CB4: CB4 Peak Elev=60.27' Inflow=1.09 cfs 0.066 af
12.0" Round Culvert n=0.013 L=193.0' S=0.0046 '/' Outflow=1.09 cfs 0.066 af

Pond CB5: CB5 Peak Elev=59.44' Inflow=0.26 cfs 0.018 af
12.0" Round Culvert n=0.013 L=40.0' S=0.0065 '/' Outflow=0.26 cfs 0.018 af

Pond DP1: DP1 Peak Elev=54.00' Storage=0 cf Inflow=0.00 cfs 0.000 af
Discarded=0.00 cfs 0.000 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af

Pond RD1: RD1 Peak Elev=60.94' Inflow=0.29 cfs 0.019 af
8.0" Round Culvert n=0.013 L=82.0' S=0.0110 '/' Outflow=0.29 cfs 0.019 af

Pond RD2: RD2 Peak Elev=59.61' Inflow=0.42 cfs 0.028 af
8.0" Round Culvert n=0.013 L=57.4' S=0.0174 '/' Outflow=0.42 cfs 0.028 af

Pond RG1: RG1 Peak Elev=57.49' Storage=3,127 cf Inflow=2.61 cfs 0.174 af
Discarded=0.15 cfs 0.130 af Primary=0.00 cfs 0.000 af Outflow=0.15 cfs 0.130 af

Link AP1: AP1 Inflow=0.02 cfs 0.007 af
Primary=0.02 cfs 0.007 af

Link AP2: AP2 Inflow=0.17 cfs 0.009 af
Primary=0.17 cfs 0.009 af

Link AP3: AP3 Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 1.908 ac Runoff Volume = 0.190 af Average Runoff Depth = 1.19"
48.55% Pervious = 0.926 ac 51.45% Impervious = 0.982 ac

A – 2

NODE LISTING – 10-YR

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points x 3
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A1: A1 Runoff Area=14,305 sf 82.00% Impervious Runoff Depth>3.03"
Flow Length=158' Tc=2.4 min CN=87 Runoff=1.21 cfs 0.083 af

Subcatchment A2: A2 Runoff Area=7,881 sf 69.17% Impervious Runoff Depth>2.39"
Flow Length=226' Tc=7.0 min CN=80 Runoff=0.44 cfs 0.036 af

Subcatchment A3: A3 Runoff Area=3,695 sf 100.00% Impervious Runoff Depth>4.19"
Flow Length=75' Slope=0.0050 '/' Tc=1.7 min CN=98 Runoff=0.38 cfs 0.030 af

Subcatchment A4: A4 Runoff Area=5,328 sf 100.00% Impervious Runoff Depth>4.19"
Flow Length=114' Slope=0.0050 '/' Tc=2.4 min CN=98 Runoff=0.54 cfs 0.043 af

Subcatchment A5: A5 Runoff Area=6,121 sf 100.00% Impervious Runoff Depth>4.19"
Flow Length=101' Tc=1.1 min CN=98 Runoff=0.65 cfs 0.049 af

Subcatchment A6: A6 Runoff Area=1,550 sf 100.00% Impervious Runoff Depth>4.19"
Flow Length=89' Tc=0.8 min CN=98 Runoff=0.16 cfs 0.012 af

Subcatchment A7: A7 Runoff Area=6,295 sf 85.50% Impervious Runoff Depth>3.23"
Flow Length=103' Tc=0.6 min CN=89 Runoff=0.57 cfs 0.039 af

Subcatchment A8: A8 Runoff Area=4,003 sf 0.00% Impervious Runoff Depth>0.10"
Flow Length=29' Slope=0.2000 '/' Tc=1.5 min CN=39 Runoff=0.00 cfs 0.001 af

Subcatchment A9: A9 Runoff Area=4,394 sf 0.00% Impervious Runoff Depth>0.10"
Flow Length=55' Slope=0.2000 '/' Tc=2.4 min CN=39 Runoff=0.00 cfs 0.001 af

Subcatchment B1: B1 Runoff Area=4,270 sf 12.04% Impervious Runoff Depth>0.31"
Flow Length=153' Tc=4.9 min CN=46 Runoff=0.01 cfs 0.003 af

Subcatchment C1: C1 Runoff Area=3,696 sf 73.27% Impervious Runoff Depth>2.57"
Flow Length=200' Tc=1.3 min CN=82 Runoff=0.28 cfs 0.018 af

Subcatchment D1: D1 Runoff Area=21,569 sf 1.31% Impervious Runoff Depth>0.66"
Flow Length=154' Tc=5.2 min CN=54 Runoff=0.27 cfs 0.027 af

Pond CB1: CB1 Peak Elev=58.52' Inflow=3.70 cfs 0.292 af
18.0" Round Culvert n=0.013 L=14.0' S=0.0071 '/' Outflow=3.70 cfs 0.292 af

Pond CB2: CB2 Peak Elev=58.52' Inflow=3.19 cfs 0.253 af
15.0" Round Culvert n=0.013 L=53.6' S=0.0138 '/' Outflow=3.19 cfs 0.253 af

Pond CB3: CB3 Peak Elev=59.55' Inflow=2.50 cfs 0.198 af
15.0" Round Culvert n=0.013 L=74.9' S=0.0051 '/' Outflow=2.50 cfs 0.198 af

Pond CB4: CB4 Peak Elev=60.45' Inflow=1.59 cfs 0.113 af
12.0" Round Culvert n=0.013 L=193.0' S=0.0046 '/' Outflow=1.59 cfs 0.113 af

Pond CB5: CB5 Peak Elev=59.61' Inflow=0.44 cfs 0.036 af
12.0" Round Culvert n=0.013 L=40.0' S=0.0065 '/' Outflow=0.44 cfs 0.036 af

Pond DP1: DP1 Peak Elev=54.18' Storage=80 cf Inflow=0.08 cfs 0.006 af
Discarded=0.03 cfs 0.006 af Primary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.006 af

Pond RD1: RD1 Peak Elev=61.01' Inflow=0.38 cfs 0.030 af
8.0" Round Culvert n=0.013 L=82.0' S=0.0110 '/' Outflow=0.38 cfs 0.030 af

Pond RD2: RD2 Peak Elev=59.68' Inflow=0.54 cfs 0.043 af
8.0" Round Culvert n=0.013 L=57.4' S=0.0174 '/' Outflow=0.54 cfs 0.043 af

Pond RG1: RG1 Peak Elev=58.52' Storage=5,732 cf Inflow=3.70 cfs 0.293 af
Discarded=0.20 cfs 0.185 af Primary=0.08 cfs 0.005 af Outflow=0.28 cfs 0.190 af

Link AP1: AP1 Inflow=0.27 cfs 0.027 af
Primary=0.27 cfs 0.027 af

Link AP2: AP2 Inflow=0.28 cfs 0.018 af
Primary=0.28 cfs 0.018 af

Link AP3: AP3 Inflow=0.01 cfs 0.003 af
Primary=0.01 cfs 0.003 af

Total Runoff Area = 1.908 ac Runoff Volume = 0.341 af Average Runoff Depth = 2.15"
48.55% Pervious = 0.926 ac 51.45% Impervious = 0.982 ac

A – 2

10-YR STORM SUMMARY

Summary for Subcatchment A1: A1

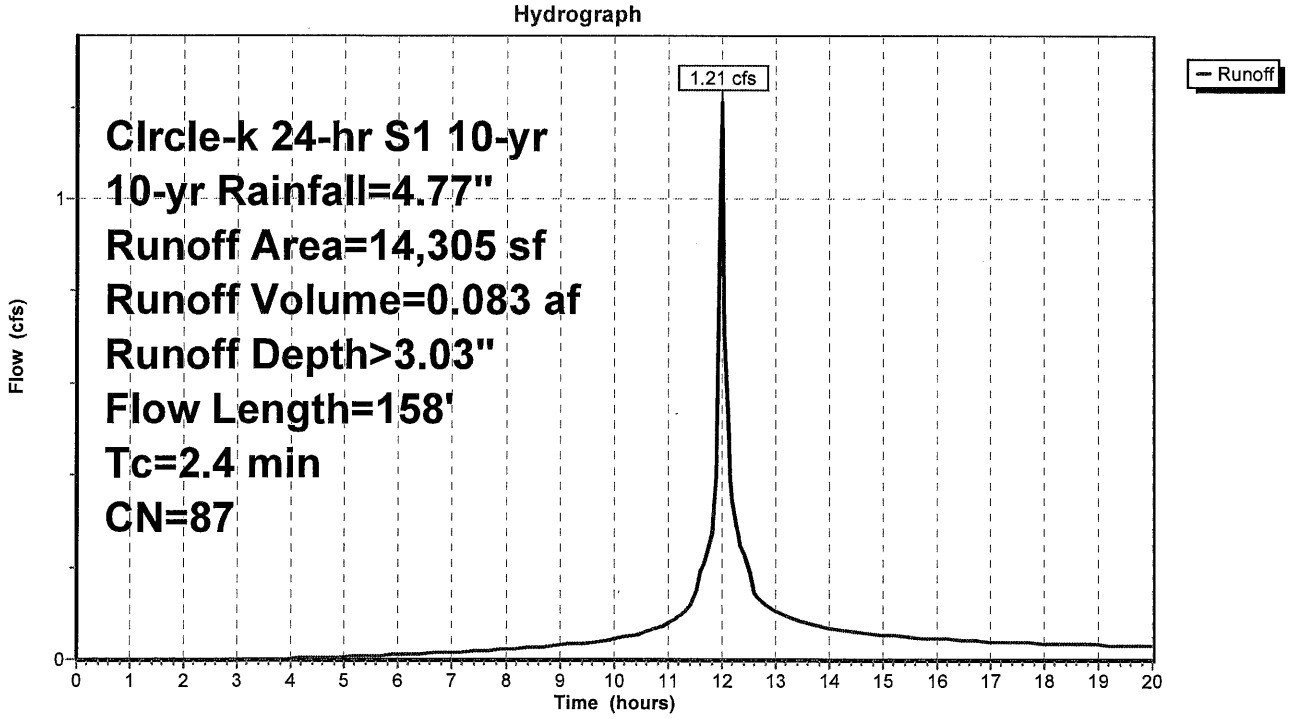
Runoff = 1.21 cfs @ 11.99 hrs, Volume= 0.083 af, Depth> 3.03"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
11,730	98	Paved parking, HSG A
2,575	39	>75% Grass cover, Good, HSG A
14,305	87	Weighted Average
2,575		18.00% Pervious Area
11,730		82.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	18	0.0550	0.18		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.16"
0.7	140	0.0280	3.40		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.4	158	Total			

Subcatchment A1: A1



Summary for Subcatchment A2: A2

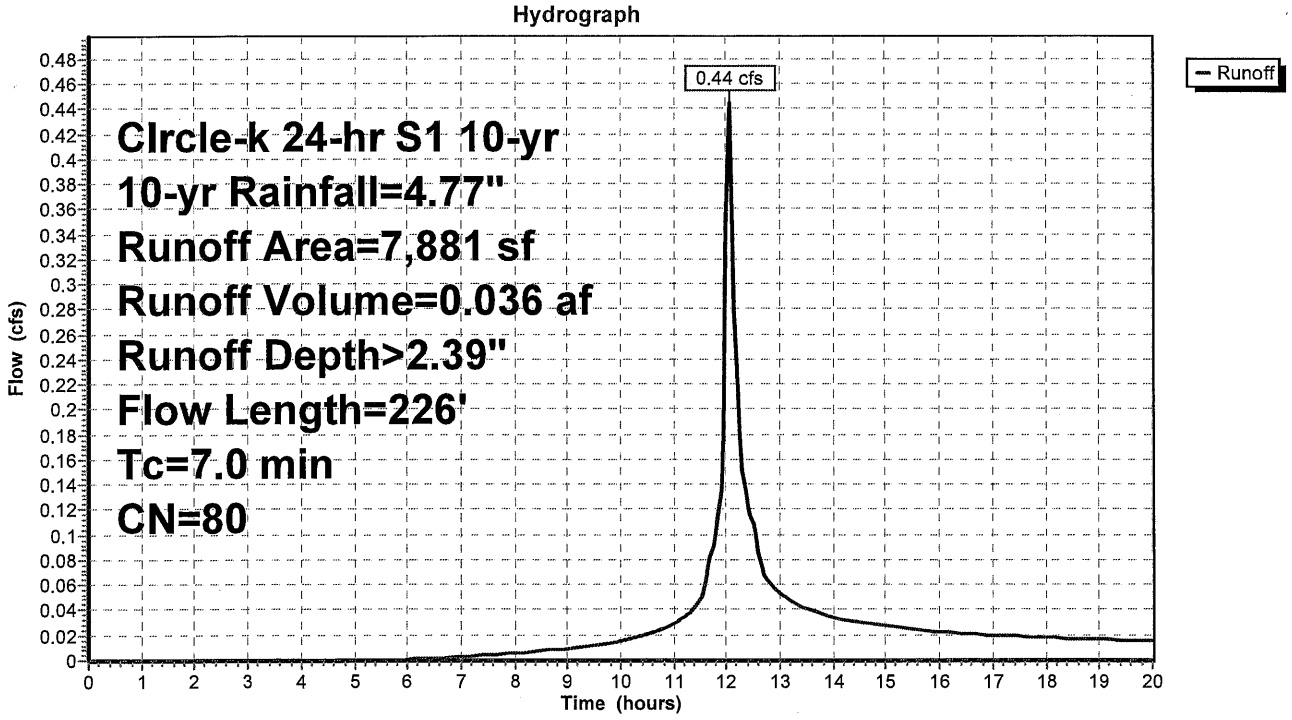
Runoff = 0.44 cfs @ 12.05 hrs, Volume= 0.036 af, Depth> 2.39"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
5,451	98	Paved parking, HSG A
2,430	39	>75% Grass cover, Good, HSG A
7,881	80	Weighted Average
2,430		30.83% Pervious Area
5,451		69.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.7	50	0.0200	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.16"
0.7	40	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.6	136	0.0330	3.69		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
7.0	226	Total			

Subcatchment A2: A2



Summary for Subcatchment A3: A3

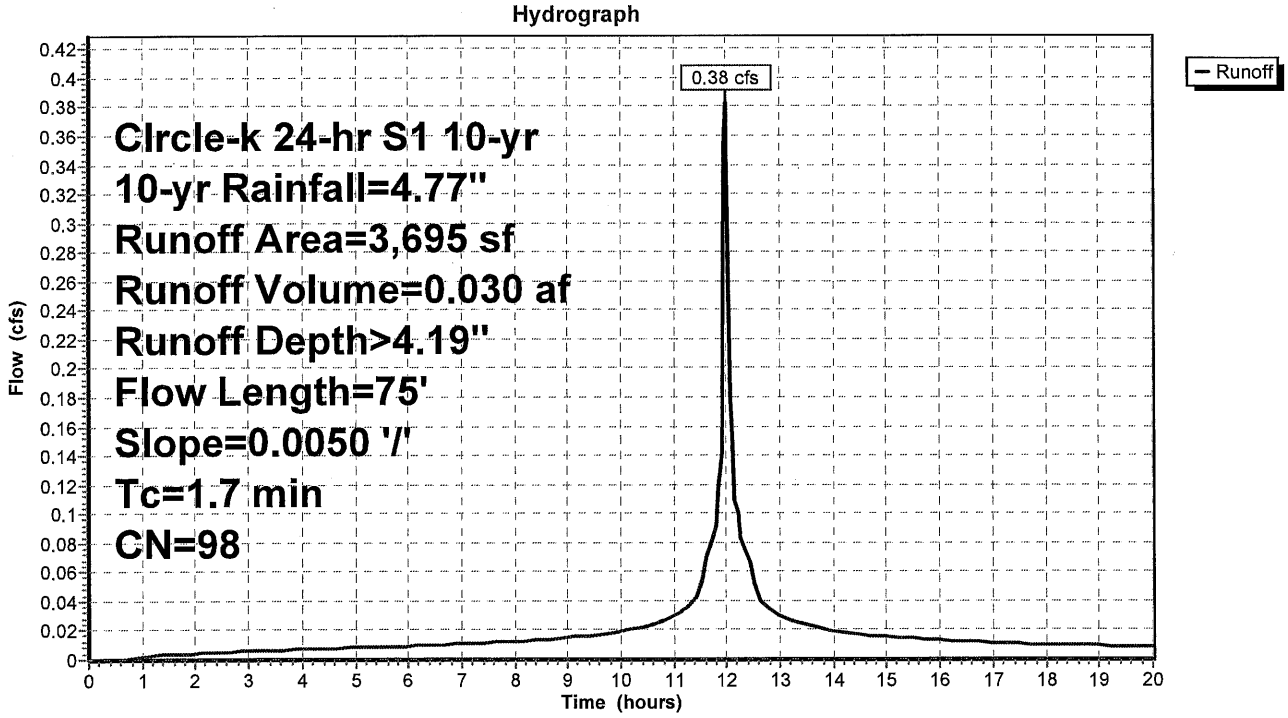
Runoff = 0.38 cfs @ 11.98 hrs, Volume= 0.030 af, Depth> 4.19"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
3,695	98	Unconnected roofs, HSG A
3,695		100.00% Impervious Area
3,695		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	75	0.0050	0.74		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16"

Subcatchment A3: A3



Summary for Subcatchment A4: A4

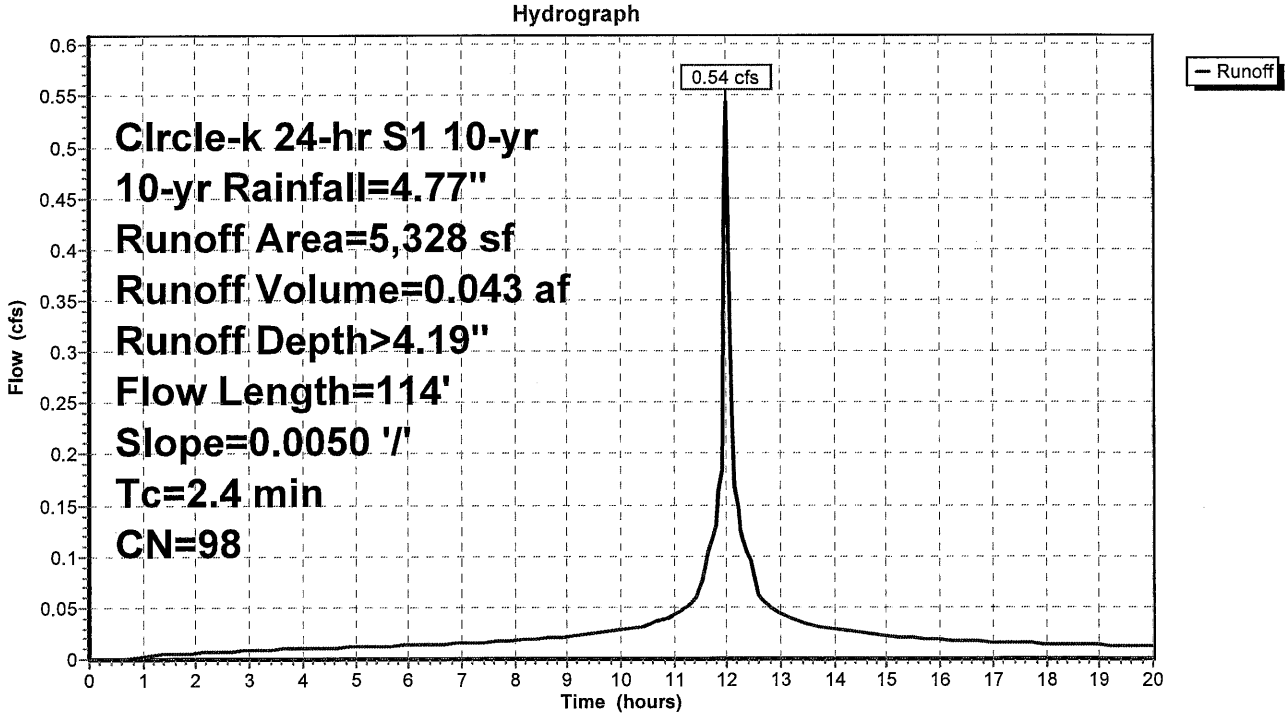
Runoff = 0.54 cfs @ 11.99 hrs, Volume= 0.043 af, Depth> 4.19"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
5,328	98	Roofs, HSG A
5,328		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.4	114	0.0050	0.81		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16"

Subcatchment A4: A4



Summary for Subcatchment A5: A5

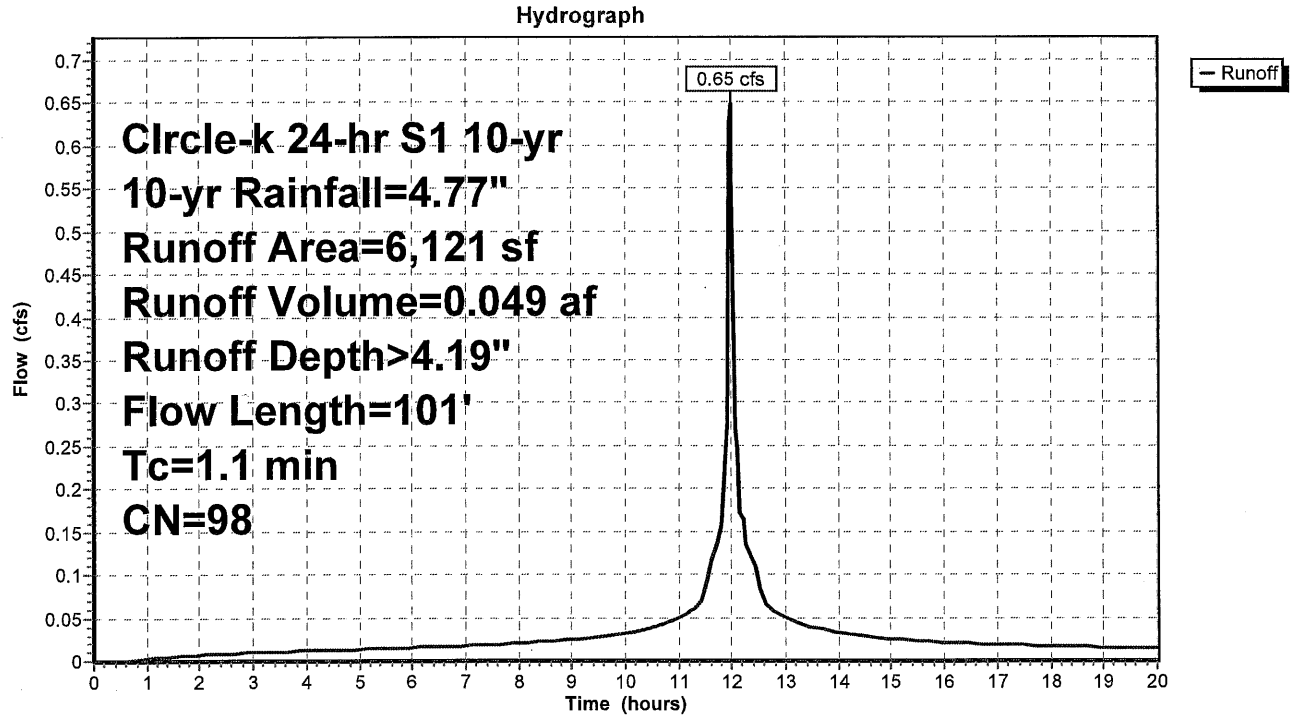
Runoff = 0.65 cfs @ 11.97 hrs, Volume= 0.049 af, Depth> 4.19"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
6,121	98	Paved parking, HSG A
6,121		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.90		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16"
0.2	51	0.0600	4.97		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.1	101	Total			

Subcatchment A5: A5



Summary for Subcatchment A6: A6

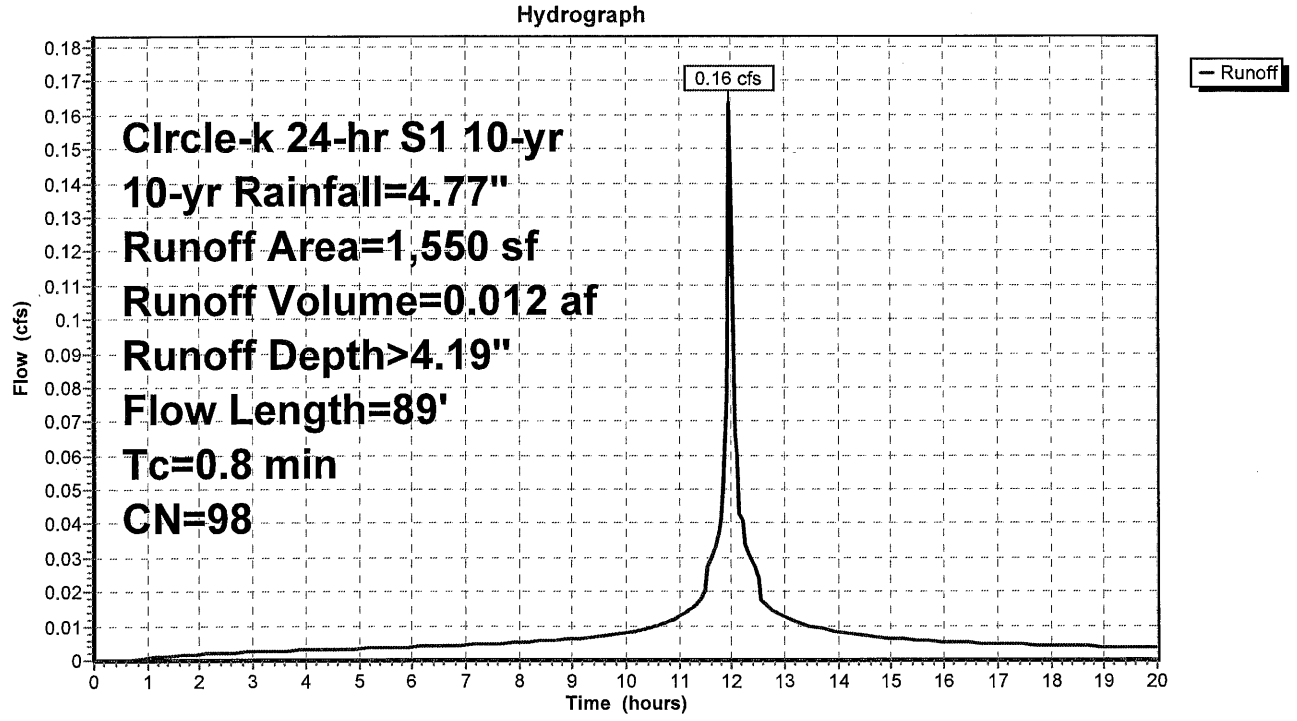
Runoff = 0.16 cfs @ 11.96 hrs, Volume= 0.012 af, Depth> 4.19"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
1,550	98	Paved parking, HSG A
1,550		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.19		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16"
0.1	39	0.0600	4.97		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.8	89	Total			

Subcatchment A6: A6



Summary for Subcatchment A7: A7

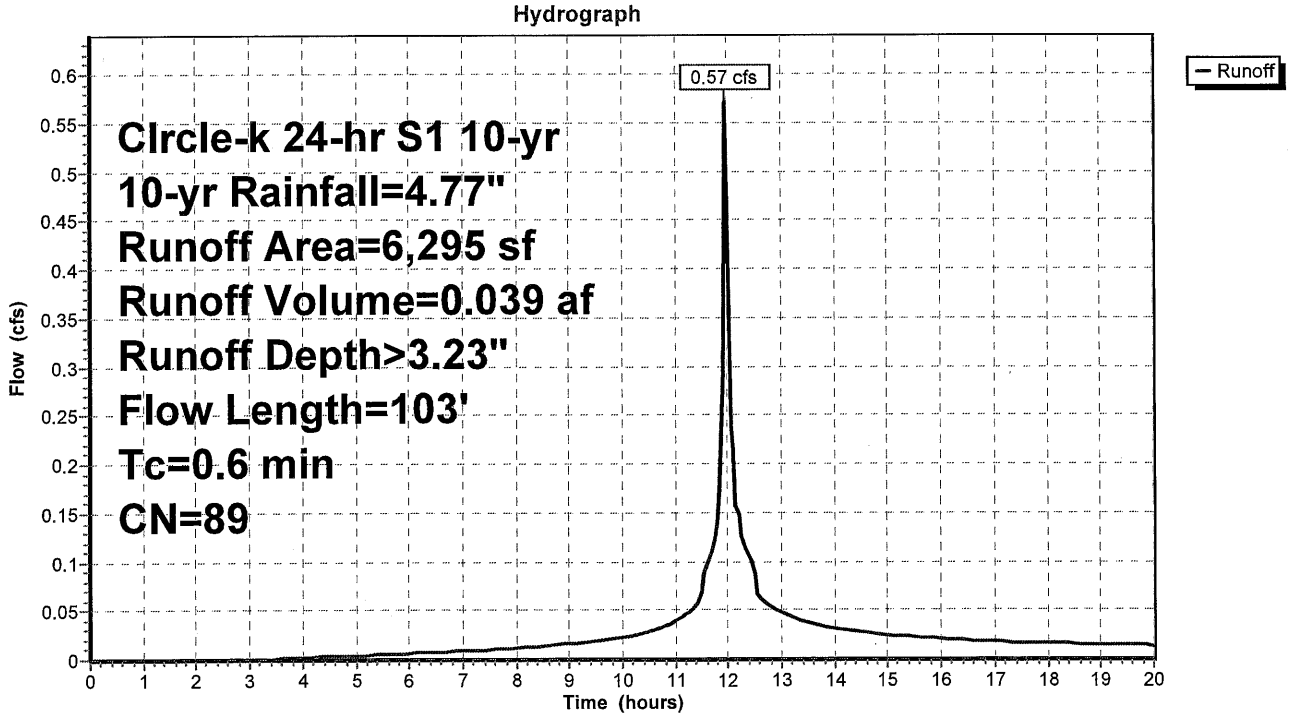
Runoff = 0.57 cfs @ 11.96 hrs, Volume= 0.039 af, Depth> 3.23"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
5,382	98	Paved parking, HSG A
913	39	>75% Grass cover, Good, HSG A
6,295	89	Weighted Average
913		14.50% Pervious Area
5,382		85.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	50	0.0460	1.66		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16"
0.1	53	0.0920	6.16		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.6	103	Total			

Subcatchment A7: A7



Summary for Subcatchment A8: A8

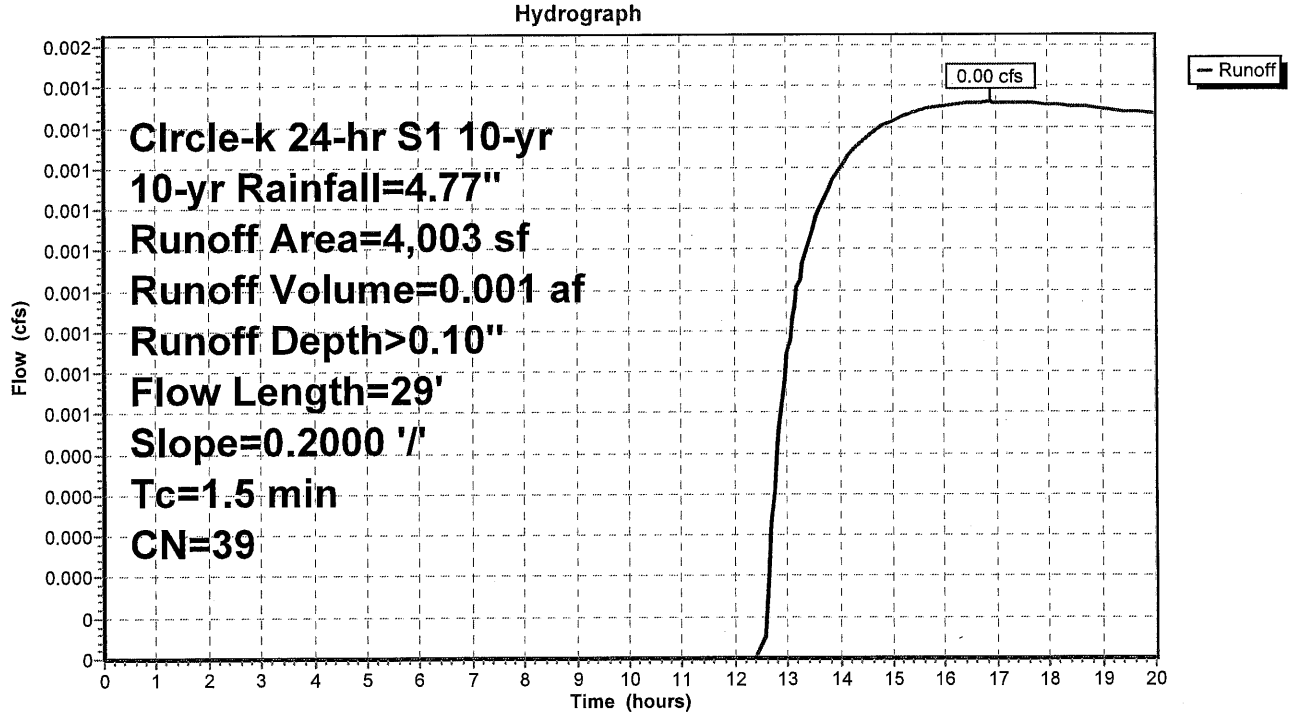
Runoff = 0.00 cfs @ 16.90 hrs, Volume= 0.001 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
4,003	39	>75% Grass cover, Good, HSG A
4,003		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	29	0.2000	0.33		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.16"

Subcatchment A8: A8



Summary for Subcatchment A9: A9

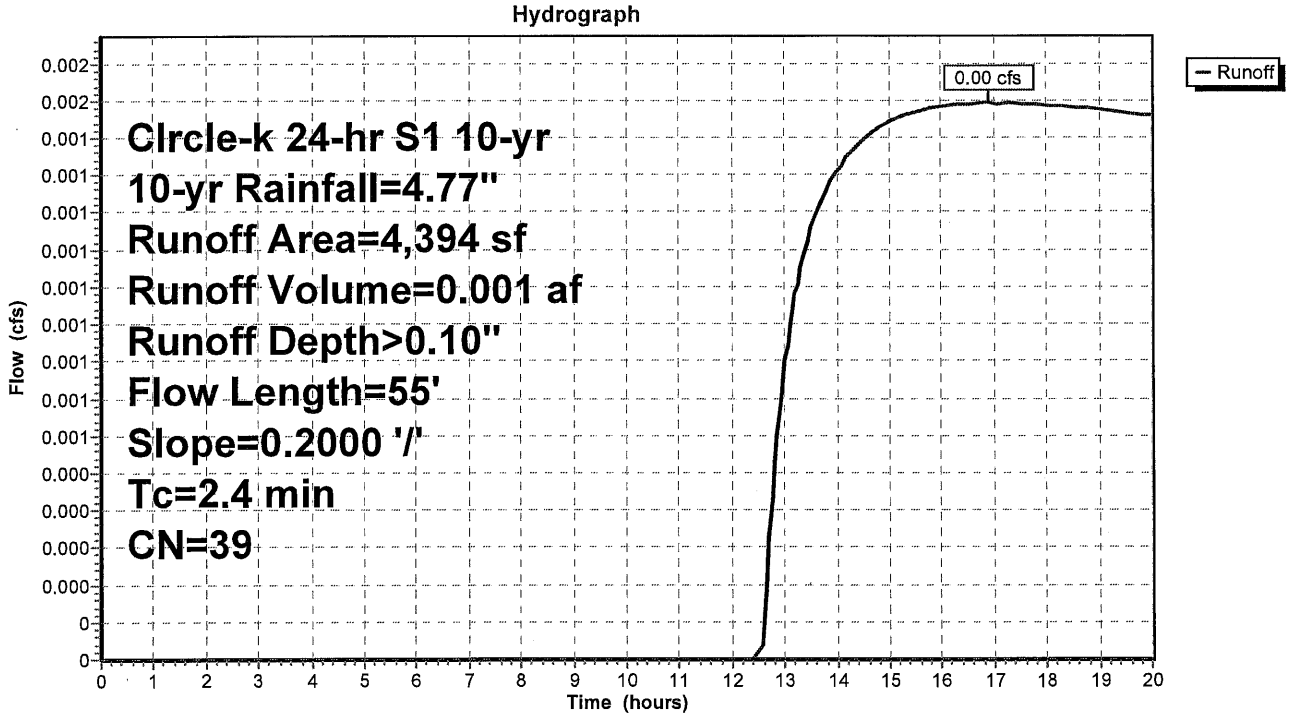
Runoff = 0.00 cfs @ 16.90 hrs, Volume= 0.001 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
4,394	39	>75% Grass cover, Good, HSG A
4,394		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.4	55	0.2000	0.38		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.16"

Subcatchment A9: A9



Summary for Subcatchment B1: B1

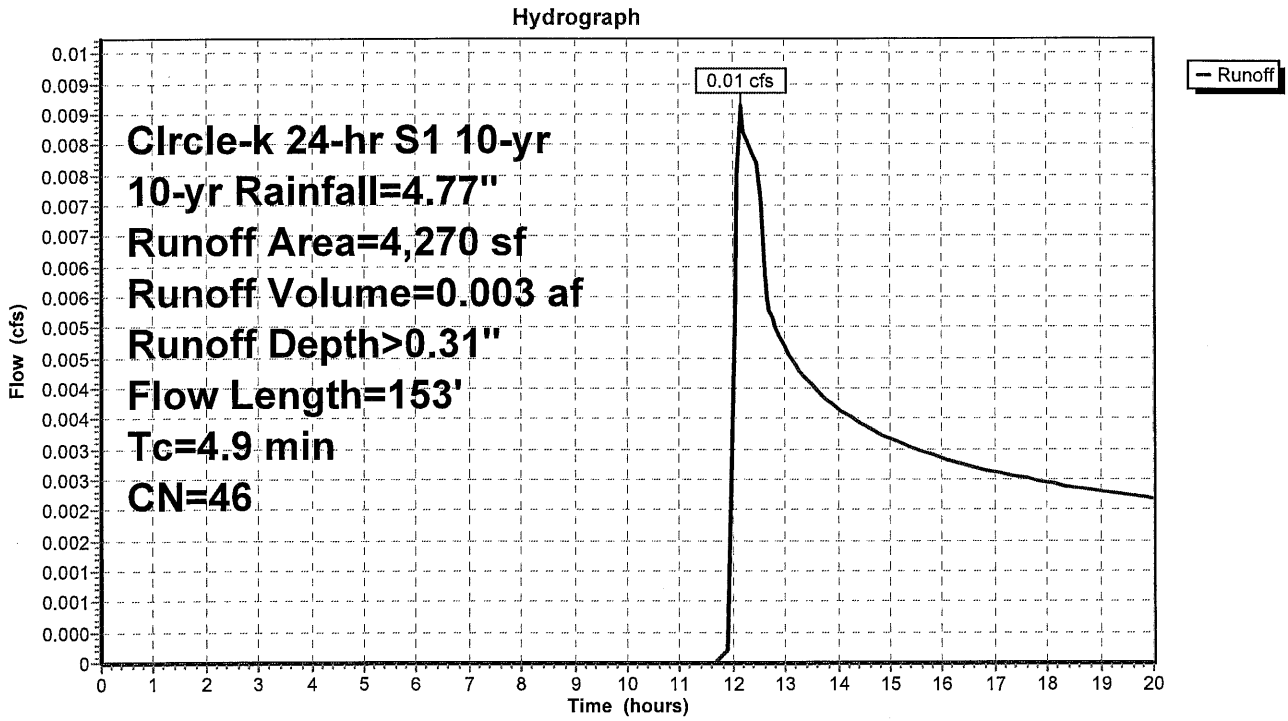
Runoff = 0.01 cfs @ 12.16 hrs, Volume= 0.003 af, Depth> 0.31"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
514	98	Paved parking, HSG A
3,756	39	>75% Grass cover, Good, HSG A
4,270	46	Weighted Average
3,756		87.96% Pervious Area
514		12.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0400	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.16"
0.2	26	0.0800	1.98		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.4	77	0.0260	3.27		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.9	153	Total			

Subcatchment B1: B1



Summary for Subcatchment C1: C1

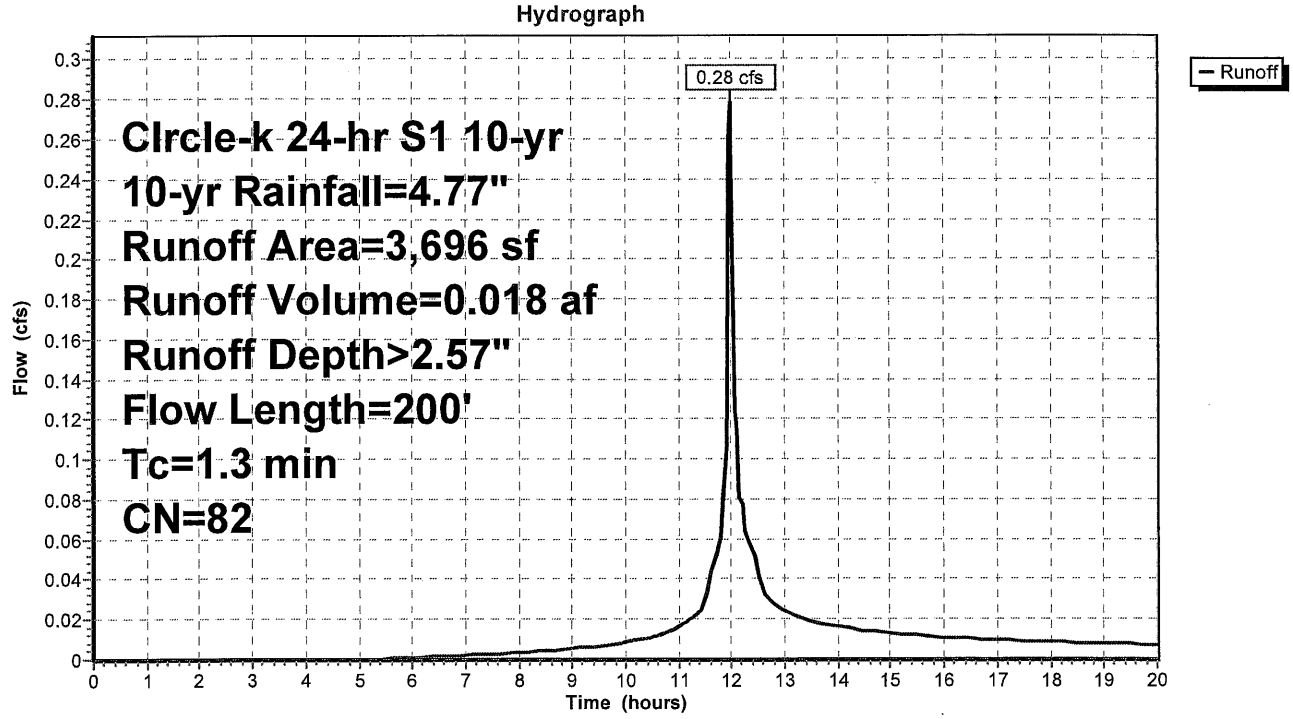
Runoff = 0.28 cfs @ 11.97 hrs, Volume= 0.018 af, Depth> 2.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
2,708	98	Paved parking, HSG A
988	39	>75% Grass cover, Good, HSG A
3,696	82	Weighted Average
988		26.73% Pervious Area
2,708		73.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	65	0.0920	2.31		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.16"
0.8	135	0.0188	2.78		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.3	200	Total			

Subcatchment C1: C1



Summary for Subcatchment D1: D1

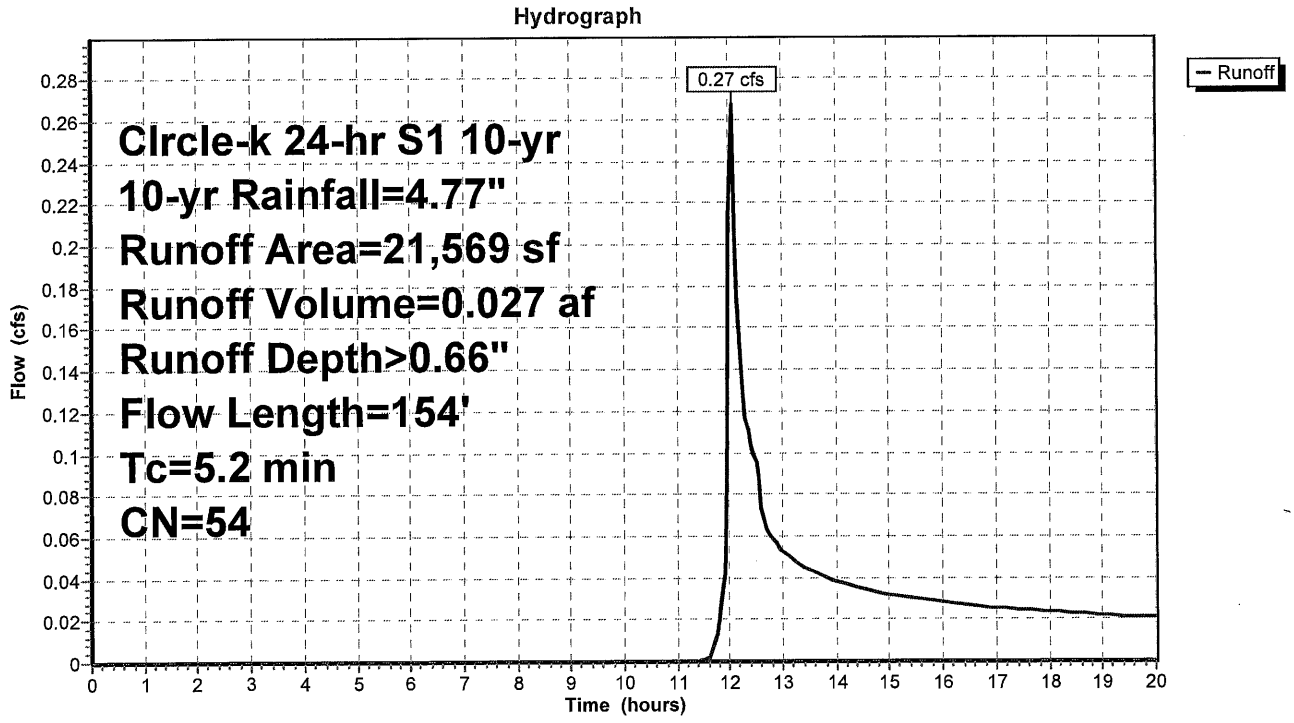
Runoff = 0.27 cfs @ 12.05 hrs, Volume= 0.027 af, Depth> 0.66"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs
Clrcle-k 24-hr S1 10-yr 10-yr Rainfall=4.77"

Area (sf)	CN	Description
8,899	74	>75% Grass cover, Good, HSG C
282	98	Paved parking, HSG A
12,388	39	>75% Grass cover, Good, HSG A
21,569	54	Weighted Average
21,287		98.69% Pervious Area
282		1.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	50	0.0400	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.16"
0.9	104	0.0800	1.98		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
5.2	154	Total			

Subcatchment D1: D1



Summary for Pond CB1: CB1

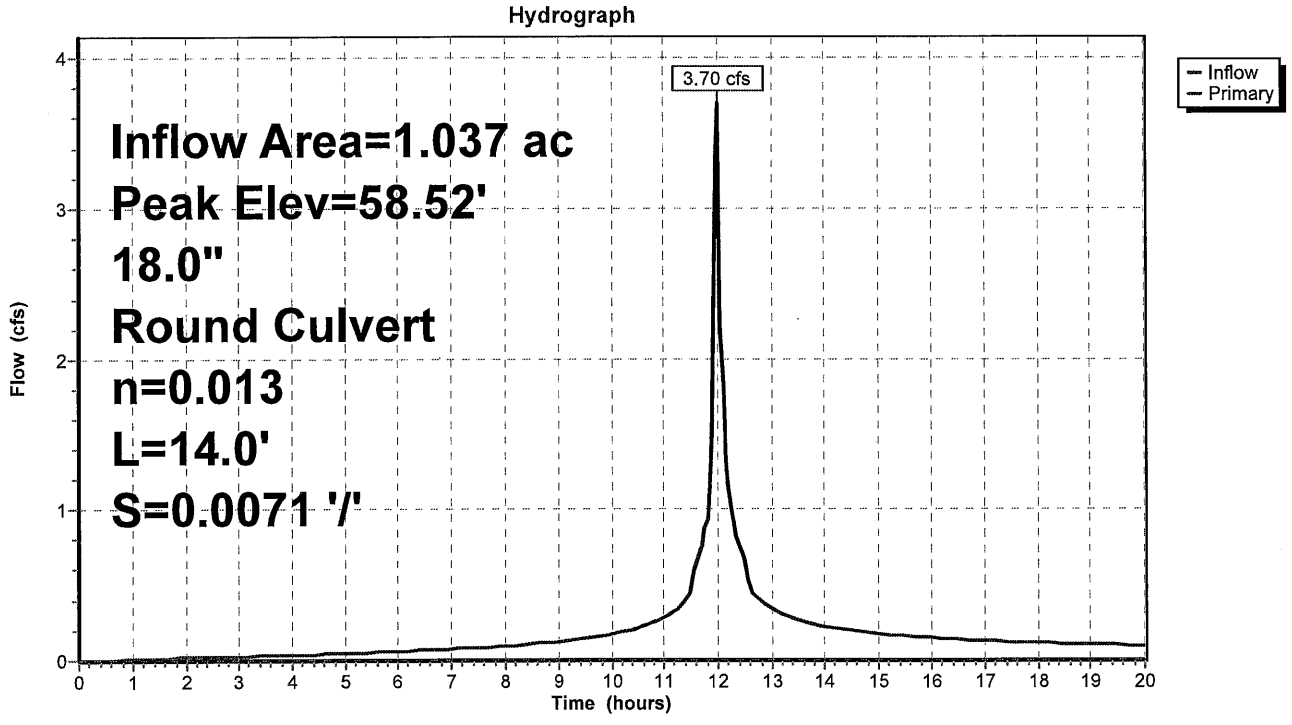
Inflow Area = 1.037 ac, 86.90% Impervious, Inflow Depth > 3.38" for 10-yr event
Inflow = 3.70 cfs @ 11.98 hrs, Volume= 0.292 af
Outflow = 3.70 cfs @ 11.98 hrs, Volume= 0.292 af, Atten= 0%, Lag= 0.0 min
Primary = 3.70 cfs @ 11.98 hrs, Volume= 0.292 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 58.52' @ 13.40 hrs
Flood Elev= 59.30'

Device	Routing	Invert	Outlet Devices
#1	Primary	56.30'	**18.0" Round Culvert** L= 14.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 56.30' / 56.20' S= 0.0071 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 1.77 sf

Primary OutFlow Max=3.55 cfs @ 11.98 hrs HW=57.65' TW=57.44' (Dynamic Tailwater)
1=Culvert (Outlet Controls 3.55 cfs @ 2.80 fps)

Pond CB1: CB1



Summary for Pond CB2: CB2

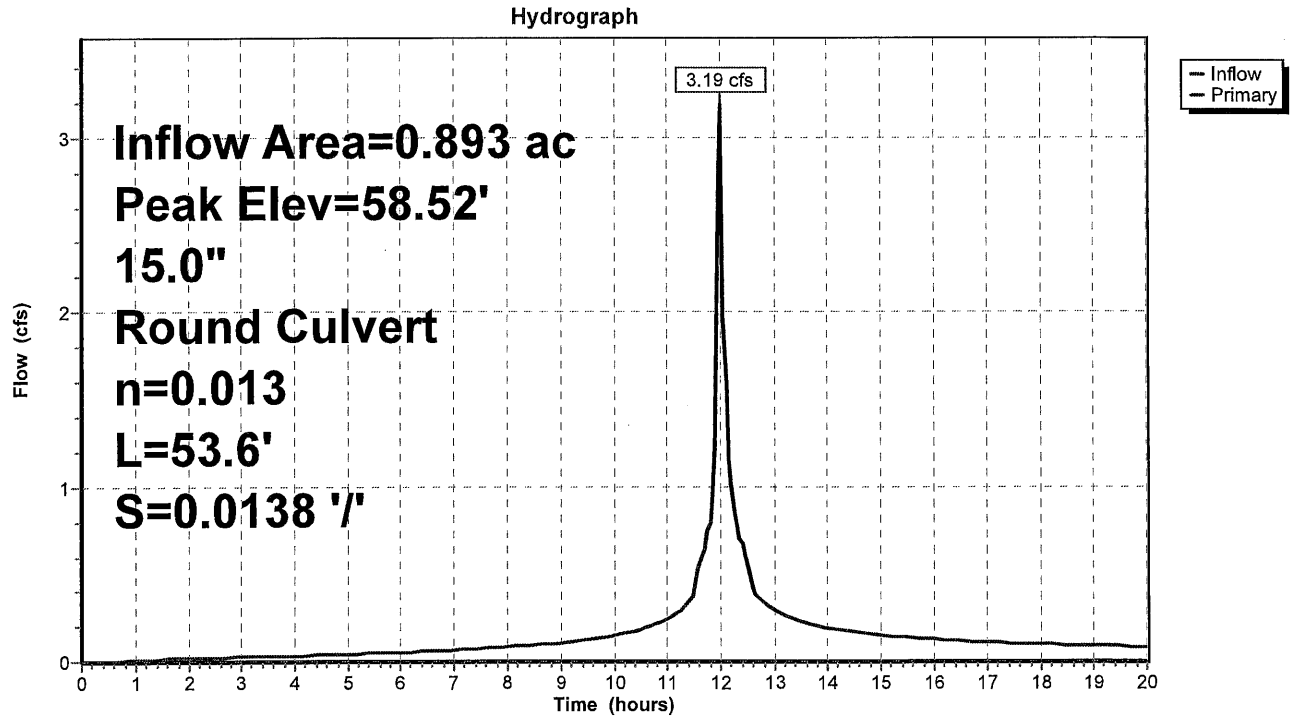
Inflow Area = 0.893 ac, 87.13% Impervious, Inflow Depth > 3.40" for 10-yr event
Inflow = 3.19 cfs @ 11.99 hrs, Volume= 0.253 af
Outflow = 3.19 cfs @ 11.99 hrs, Volume= 0.253 af, Atten= 0%, Lag= 0.0 min
Primary = 3.19 cfs @ 11.99 hrs, Volume= 0.253 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 58.52' @ 13.39 hrs
Flood Elev= 62.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	57.14'	**15.0" Round Culvert** L= 53.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 57.14' / 56.40' S= 0.0138 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=3.06 cfs @ 11.99 hrs HW=58.21' TW=57.67' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 3.06 cfs @ 3.69 fps)

Pond CB2: CB2



Summary for Pond CB3: CB3

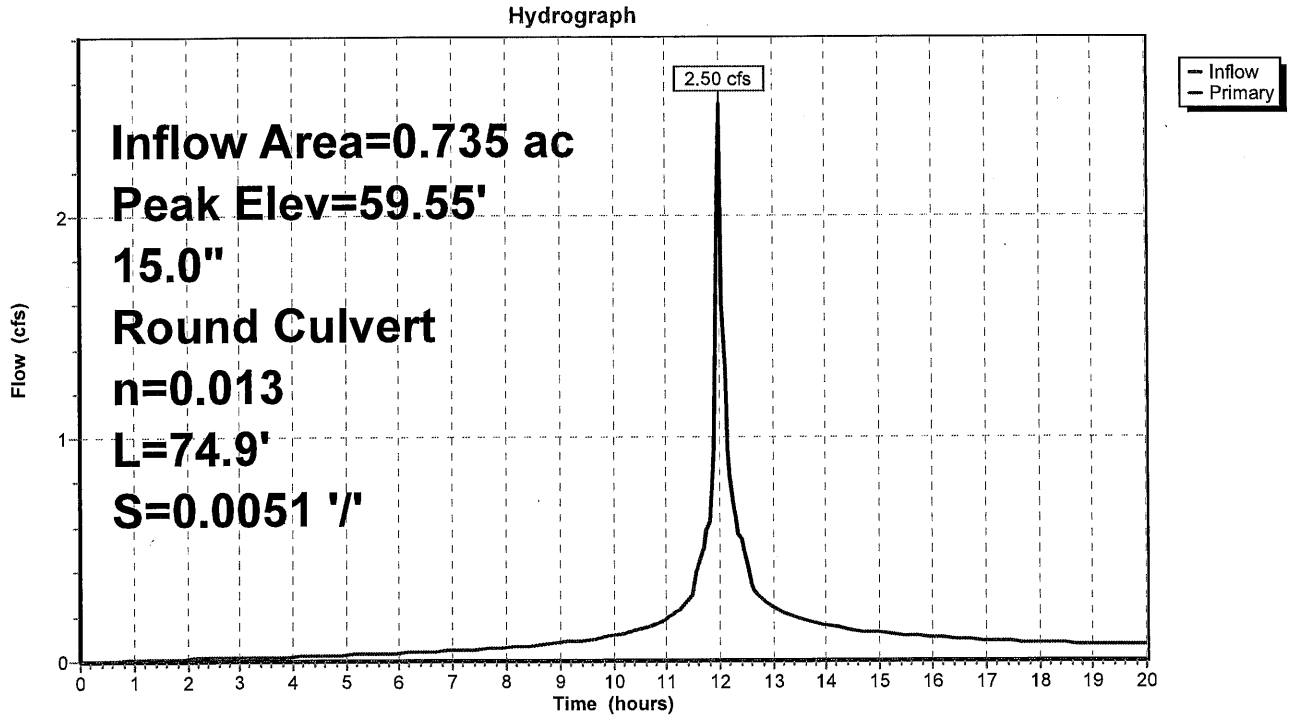
Inflow Area = 0.735 ac, 84.36% Impervious, Inflow Depth > 3.23" for 10-yr event
Inflow = 2.50 cfs @ 11.99 hrs, Volume= 0.198 af
Outflow = 2.50 cfs @ 11.99 hrs, Volume= 0.198 af, Atten= 0%, Lag= 0.0 min
Primary = 2.50 cfs @ 11.99 hrs, Volume= 0.198 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 59.55' @ 11.99 hrs
Flood Elev= 63.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	58.62'	**15.0" Round Culvert** L= 74.9' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 58.62' / 58.24' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.40 cfs @ 11.99 hrs HW=59.52' TW=58.21' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 2.40 cfs @ 3.53 fps)

Pond CB3: CB3



Summary for Pond CB4: CB4

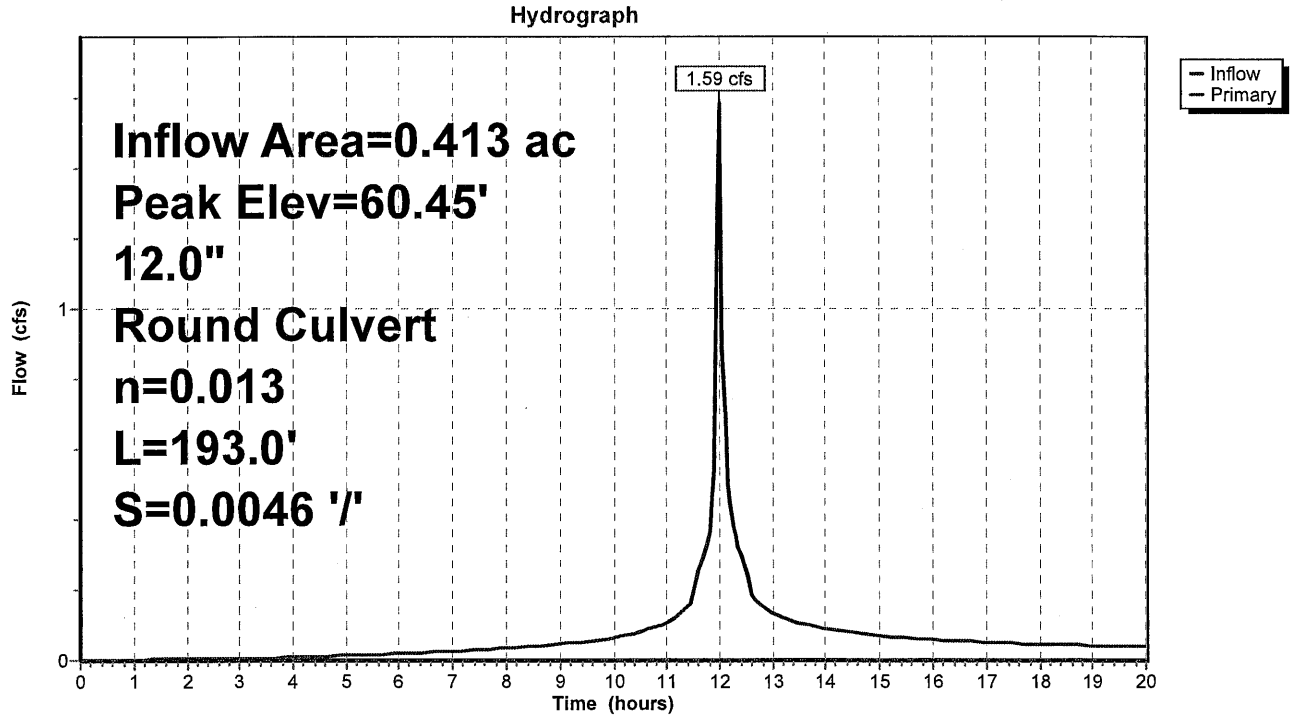
Inflow Area = 0.413 ac, 85.69% Impervious, Inflow Depth > 3.27" for 10-yr event
Inflow = 1.59 cfs @ 11.99 hrs, Volume= 0.113 af
Outflow = 1.59 cfs @ 11.99 hrs, Volume= 0.113 af, Atten= 0%, Lag= 0.0 min
Primary = 1.59 cfs @ 11.99 hrs, Volume= 0.113 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 60.45' @ 11.99 hrs
Flood Elev= 65.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	59.60'	**12.0" Round Culvert** L= 193.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 59.60' / 58.72' S= 0.0046 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.50 cfs @ 11.99 hrs HW=60.42' TW=59.52' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.50 cfs @ 2.95 fps)

Pond CB4: CB4



Summary for Pond CB5: CB5

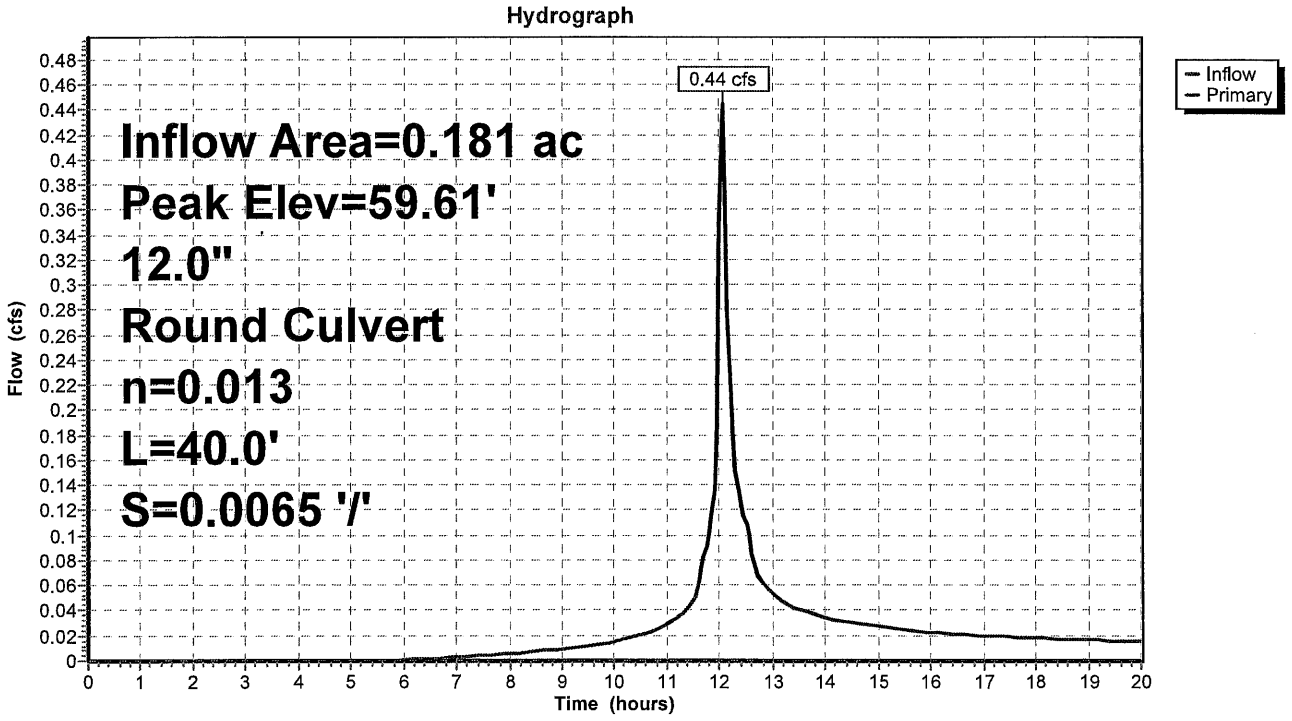
Inflow Area = 0.181 ac, 69.17% Impervious, Inflow Depth > 2.39" for 10-yr event
Inflow = 0.44 cfs @ 12.05 hrs, Volume= 0.036 af
Outflow = 0.44 cfs @ 12.05 hrs, Volume= 0.036 af, Atten= 0%, Lag= 0.0 min
Primary = 0.44 cfs @ 12.05 hrs, Volume= 0.036 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 59.61' @ 12.00 hrs
Flood Elev= 63.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	59.08'	**12.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 59.08' / 58.82' S= 0.0065 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.44 cfs @ 12.05 hrs HW=59.52' TW=59.33' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 0.44 cfs @ 1.93 fps)

Pond CB5: CB5



Summary for Pond DP1: DP1

Inflow Area = 1.230 ac, 73.28% Impervious, Inflow Depth > 0.05" for 10-yr event
Inflow = 0.08 cfs @ 13.41 hrs, Volume= 0.006 af
Outflow = 0.03 cfs @ 14.00 hrs, Volume= 0.006 af, Atten= 56%, Lag= 35.4 min
Discarded = 0.03 cfs @ 14.00 hrs, Volume= 0.006 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 54.18' @ 14.00 hrs Surf.Area= 491 sf Storage= 80 cf
Flood Elev= 59.00' Surf.Area= 3,701 sf Storage= 9,354 cf

Plug-Flow detention time= 22.9 min calculated for 0.006 af (100% of inflow)
Center-of-Mass det. time= 22.5 min (868.6 - 846.1)

Volume	Invert	Avail.Storage	Storage Description
#1	54.00'	9,354 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

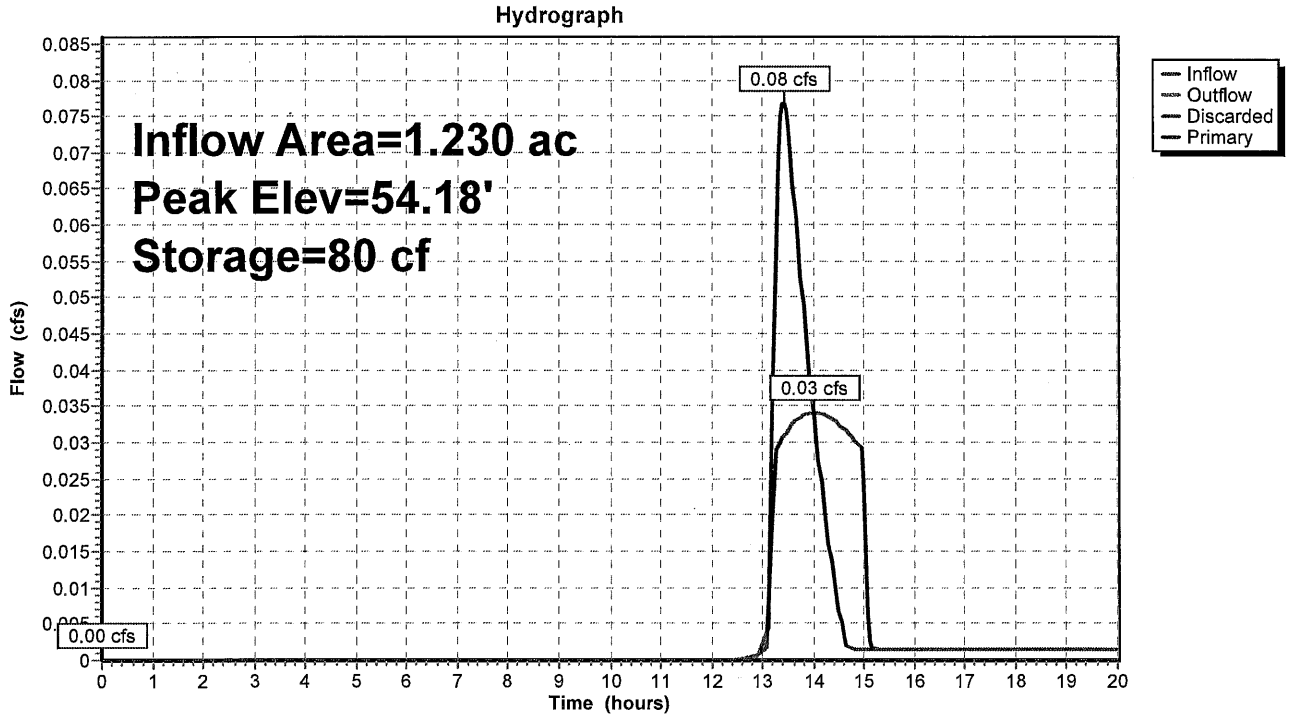
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
54.00	412	0	0
55.00	862	637	637
56.00	1,456	1,159	1,796
57.00	2,125	1,791	3,587
58.00	2,868	2,497	6,083
58.50	3,257	1,531	7,614
59.00	3,701	1,740	9,354

Device	Routing	Invert	Outlet Devices
#1	Primary	54.00'	**12.0" Round Culvert** L= 38.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 54.00' / 48.50' S= 0.1447 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 0.79 sf
#2	Device 1	58.50'	**36.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	54.00'	**3.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.03 cfs @ 14.00 hrs HW=54.18' (Free Discharge)
↑**3=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=54.00' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Controls 0.00 cfs)
↑**2=Orifice/Grate** (Controls 0.00 cfs)

Pond DP1: DP1


Hydrograph
Inflow Area=1.230 ac
Peak Elev=54.18'
Storage=80 cf
0.08 cfs
0.03 cfs
0.00 cfs
Inflow
Outflow
Discarded
Primary
Flow (cfs)
Time (hours)
0.085
0.08
0.075
0.07
0.065
0.06
0.055
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Summary for Pond RD1: RD1

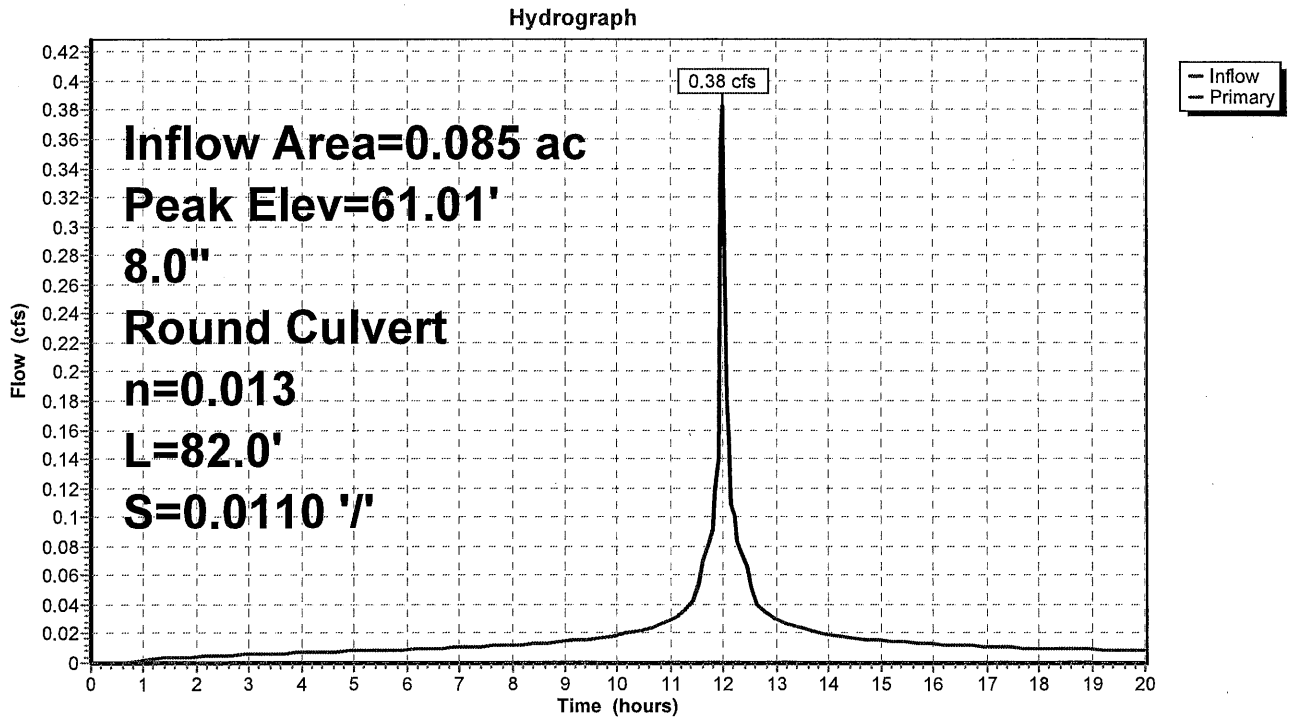
Inflow Area = 0.085 ac,100.00% Impervious, Inflow Depth > 4.19" for 10-yr event
Inflow = 0.38 cfs @ 11.98 hrs, Volume= 0.030 af
Outflow = 0.38 cfs @ 11.98 hrs, Volume= 0.030 af, Atten= 0%, Lag= 0.0 min
Primary = 0.38 cfs @ 11.98 hrs, Volume= 0.030 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 61.01' @ 11.98 hrs
Flood Elev= 65.60'

Device	Routing	Invert	Outlet Devices
#1	Primary	60.60'	**8.0" Round Culvert** L= 82.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 60.60' / 59.70' S= 0.0110 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.36 cfs @ 11.98 hrs HW=60.99' TW=60.41' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 0.36 cfs @ 2.42 fps)

Pond RD1: RD1



Summary for Pond RD2: RD2

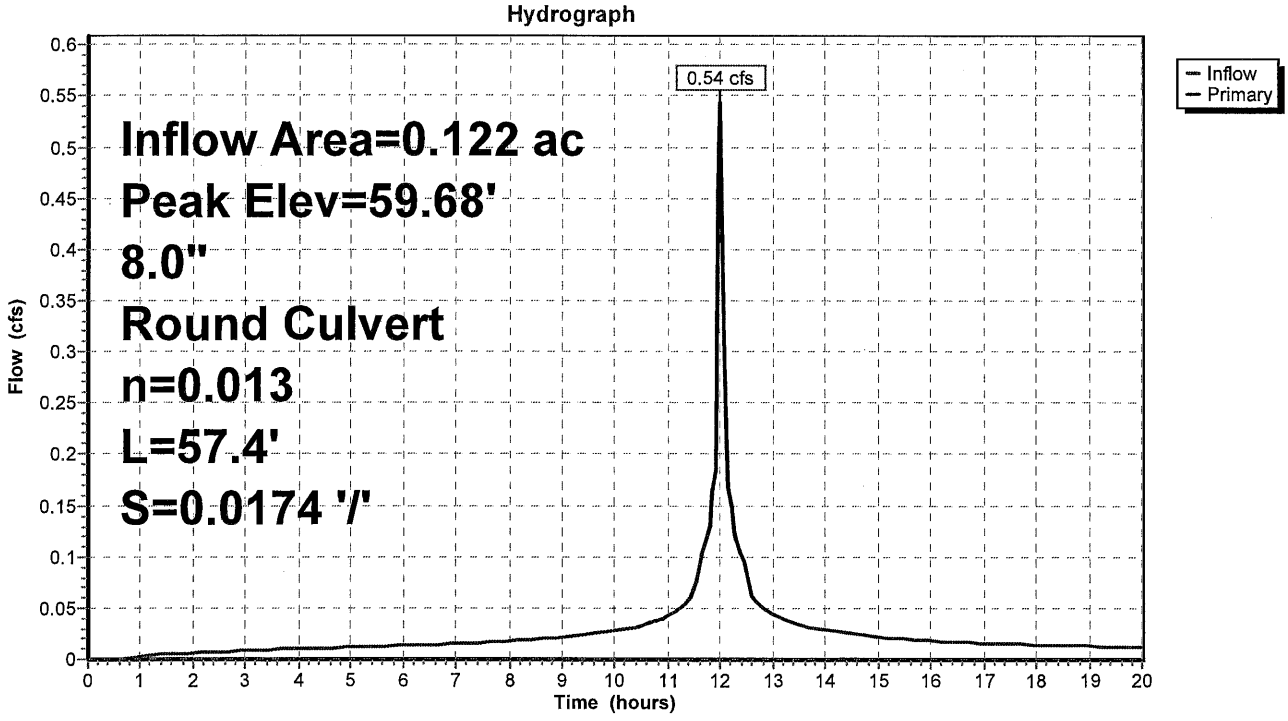
Inflow Area = 0.122 ac,100.00% Impervious, Inflow Depth > 4.19" for 10-yr event
Inflow = 0.54 cfs @ 11.99 hrs, Volume= 0.043 af
Outflow = 0.54 cfs @ 11.99 hrs, Volume= 0.043 af, Atten= 0%, Lag= 0.0 min
Primary = 0.54 cfs @ 11.99 hrs, Volume= 0.043 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 59.68' @ 11.99 hrs
Flood Elev= 62.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	59.24'	**8.0" Round Culvert** L= 57.4' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 59.24' / 58.24' S= 0.0174 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.52 cfs @ 11.99 hrs HW=59.66' TW=58.21' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 0.52 cfs @ 2.21 fps)

Pond RD2: RD2



Summary for Pond RG1: RG1

Inflow Area = 1.129 ac, 79.83% Impervious, Inflow Depth > 3.11" for 10-yr event
Inflow = 3.70 cfs @ 11.98 hrs, Volume= 0.293 af
Outflow = 0.28 cfs @ 13.41 hrs, Volume= 0.190 af, Atten= 92%, Lag= 85.4 min
Discarded = 0.20 cfs @ 13.41 hrs, Volume= 0.185 af
Primary = 0.08 cfs @ 13.41 hrs, Volume= 0.005 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 58.52' @ 13.41 hrs Surf.Area= 2,908 sf Storage= 5,732 cf
Flood Elev= 59.00' Surf.Area= 3,434 sf Storage= 7,267 cf

Plug-Flow detention time= 174.1 min calculated for 0.190 af (65% of inflow)
Center-of-Mass det. time= 71.5 min (811.8 - 740.4)

Volume	Invert	Avail.Storage	Storage Description
#1	53.10'	7,267 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

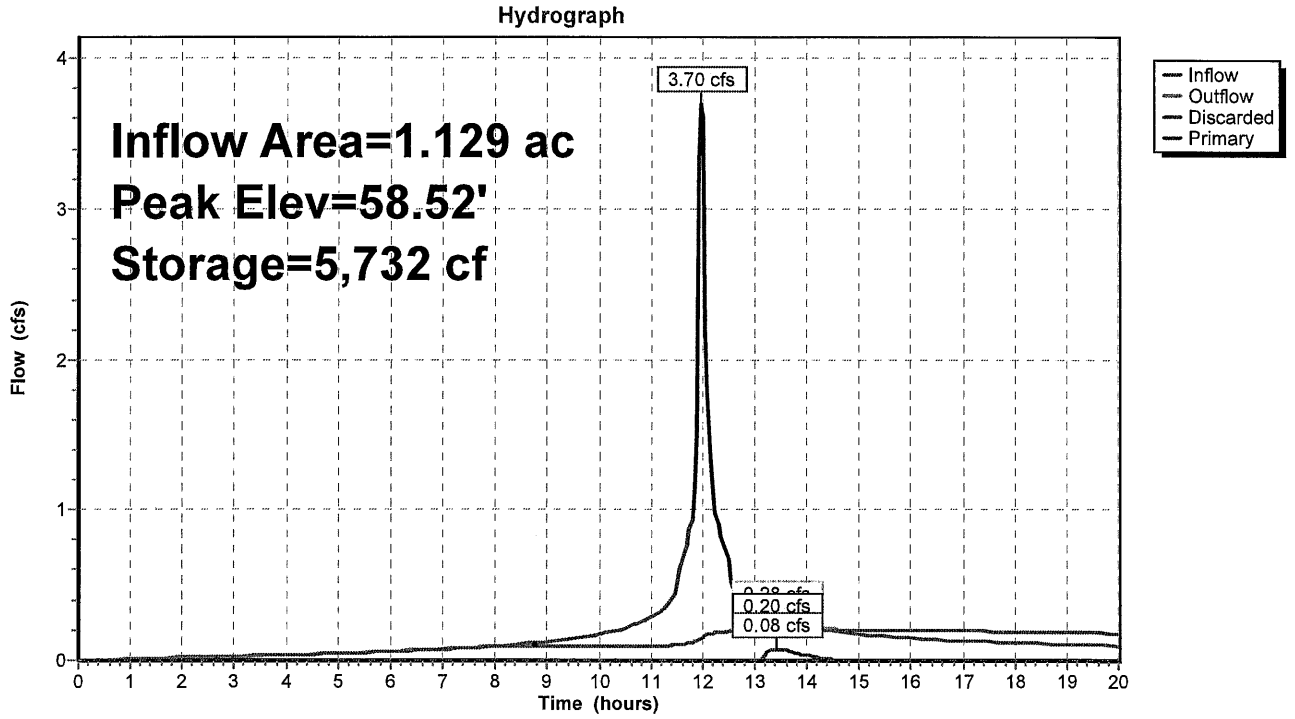
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
53.10	1,286	0.0	0	0
54.10	1,286	35.0	450	450
54.35	1,286	20.0	64	514
55.85	1,286	10.0	193	707
56.10	1,286	10.0	32	739
57.10	1,906	100.0	1,596	2,335
58.00	2,528	100.0	1,995	4,331
58.50	2,891	100.0	1,355	5,685
59.00	3,434	100.0	1,581	7,267

Device	Routing	Invert	Outlet Devices
#1	Primary	58.50'	**16.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
#2	Discarded	53.10'	**3.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=0.20 cfs @ 13.41 hrs HW=58.52' (Free Discharge)
↑**2=Exfiltration** (Exfiltration Controls 0.20 cfs)

Primary OutFlow Max=0.08 cfs @ 13.41 hrs HW=58.52' TW=54.07' (Dynamic Tailwater)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 0.08 cfs @ 0.30 fps)

Pond RG1: RG1

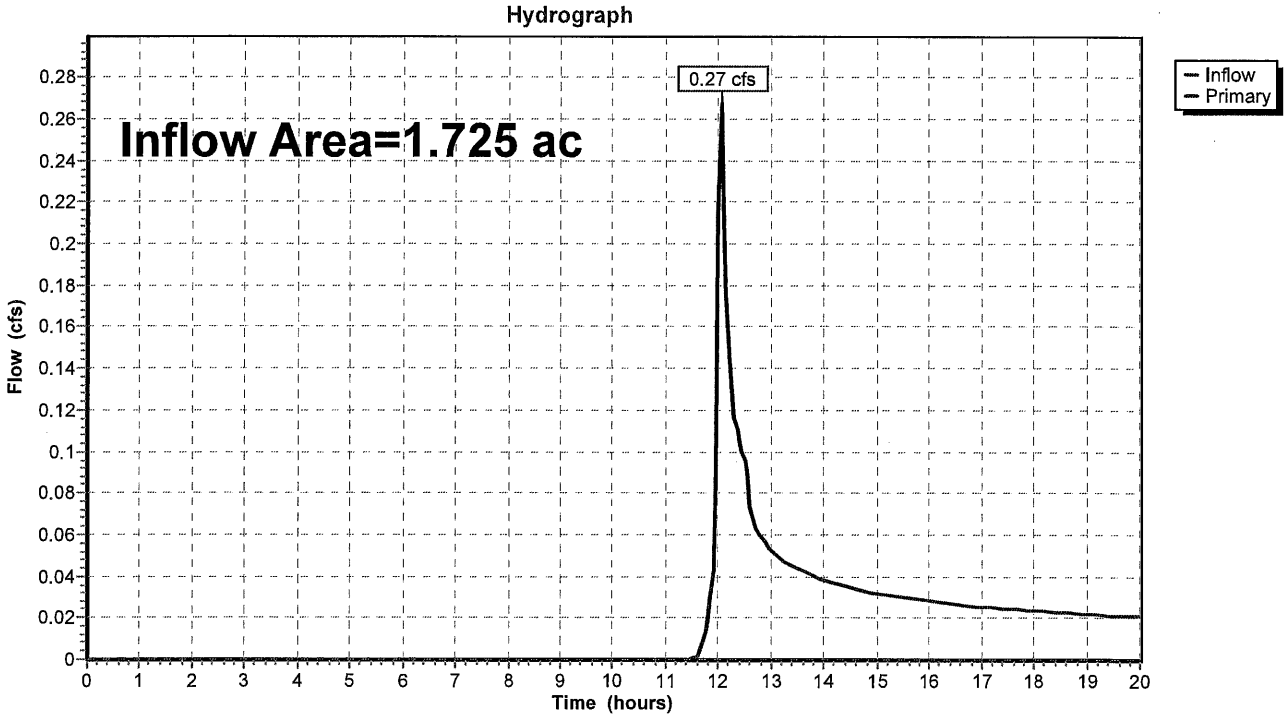

Hydrograph
Inflow Area=1.129 ac
Peak Elev=58.52'
Storage=5,732 cf
3.70 cfs
0.20 cfs
0.08 cfs
Inflow
Outflow
Discarded
Primary
Flow (cfs)
Time (hours)
0
1
2
3
4
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Summary for Link AP1: AP1

Inflow Area = 1.725 ac, 52.62% Impervious, Inflow Depth > 0.19" for 10-yr event
Inflow = 0.27 cfs @ 12.05 hrs, Volume= 0.027 af
Primary = 0.27 cfs @ 12.05 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Link AP1: AP1

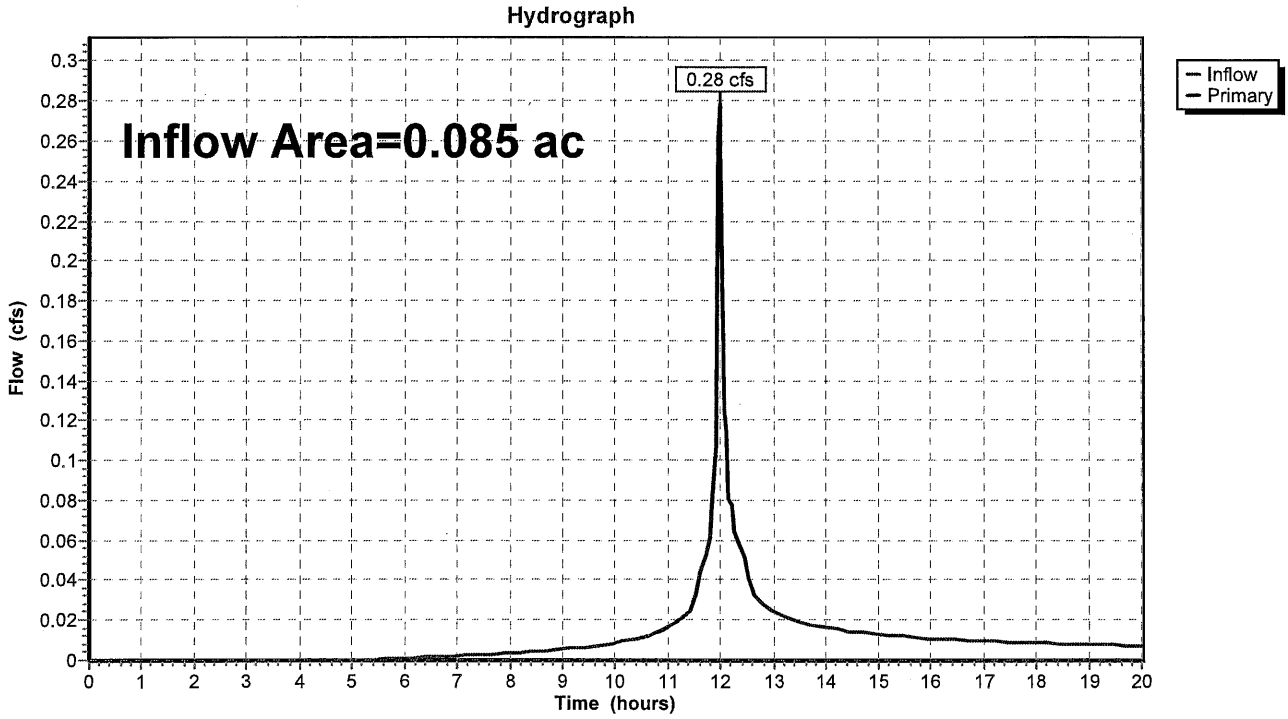


Summary for Link AP2: AP2

Inflow Area = 0.085 ac, 73.27% Impervious, Inflow Depth > 2.57" for 10-yr event
Inflow = 0.28 cfs @ 11.97 hrs, Volume= 0.018 af
Primary = 0.28 cfs @ 11.97 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Link AP2: AP2

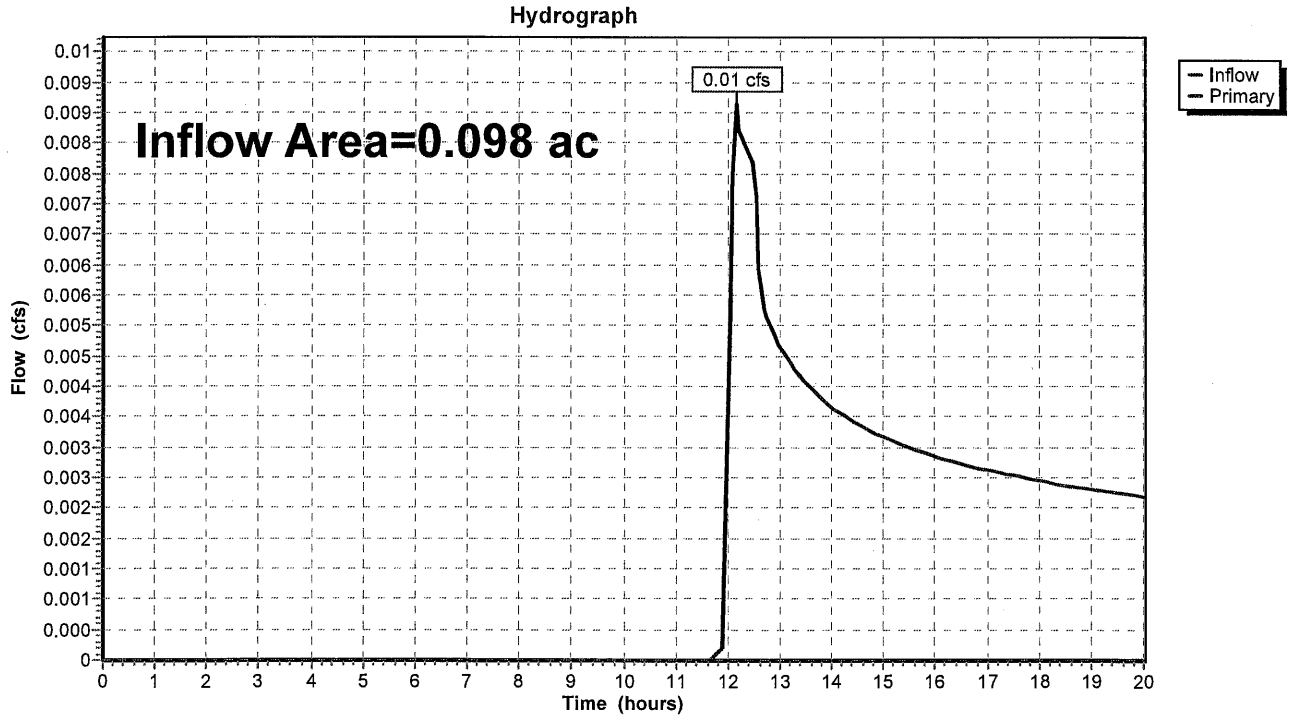


Summary for Link AP3: AP3

Inflow Area = 0.098 ac, 12.04% Impervious, Inflow Depth > 0.31" for 10-yr event
Inflow = 0.01 cfs @ 12.16 hrs, Volume= 0.003 af
Primary = 0.01 cfs @ 12.16 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

Link AP3: AP3



A – 2

NODE LISTING – 25-YR

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points x 3
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A1: A1 Runoff Area=14,305 sf 82.00% Impervious Runoff Depth>4.12"
Flow Length=158' Tc=2.4 min CN=87 Runoff=1.50 cfs 0.113 af

Subcatchment A2: A2 Runoff Area=7,881 sf 69.17% Impervious Runoff Depth>3.40"
Flow Length=226' Tc=7.0 min CN=80 Runoff=0.59 cfs 0.051 af

Subcatchment A3: A3 Runoff Area=3,695 sf 100.00% Impervious Runoff Depth>5.35"
Flow Length=75' Slope=0.0050 '/' Tc=1.7 min CN=98 Runoff=0.45 cfs 0.038 af

Subcatchment A4: A4 Runoff Area=5,328 sf 100.00% Impervious Runoff Depth>5.35"
Flow Length=114' Slope=0.0050 '/' Tc=2.4 min CN=98 Runoff=0.64 cfs 0.054 af

Subcatchment A5: A5 Runoff Area=6,121 sf 100.00% Impervious Runoff Depth>5.35"
Flow Length=101' Tc=1.1 min CN=98 Runoff=0.76 cfs 0.063 af

Subcatchment A6: A6 Runoff Area=1,550 sf 100.00% Impervious Runoff Depth>5.35"
Flow Length=89' Tc=0.8 min CN=98 Runoff=0.19 cfs 0.016 af

Subcatchment A7: A7 Runoff Area=6,295 sf 85.50% Impervious Runoff Depth>4.34"
Flow Length=103' Tc=0.6 min CN=89 Runoff=0.70 cfs 0.052 af

Subcatchment A8: A8 Runoff Area=4,003 sf 0.00% Impervious Runoff Depth>0.33"
Flow Length=29' Slope=0.2000 '/' Tc=1.5 min CN=39 Runoff=0.01 cfs 0.003 af

Subcatchment A9: A9 Runoff Area=4,394 sf 0.00% Impervious Runoff Depth>0.33"
Flow Length=55' Slope=0.2000 '/' Tc=2.4 min CN=39 Runoff=0.01 cfs 0.003 af

Subcatchment B1: B1 Runoff Area=4,270 sf 12.04% Impervious Runoff Depth>0.70"
Flow Length=153' Tc=4.9 min CN=46 Runoff=0.05 cfs 0.006 af

Subcatchment C1: C1 Runoff Area=3,696 sf 73.27% Impervious Runoff Depth>3.61"
Flow Length=200' Tc=1.3 min CN=82 Runoff=0.36 cfs 0.026 af

Subcatchment D1: D1 Runoff Area=21,569 sf 1.31% Impervious Runoff Depth>1.21"
Flow Length=154' Tc=5.2 min CN=54 Runoff=0.55 cfs 0.050 af

Pond CB1: CB1 Peak Elev=58.64' Inflow=4.51 cfs 0.387 af
18.0" Round Culvert n=0.013 L=14.0' S=0.0071 '/' Outflow=4.51 cfs 0.387 af

Pond CB2: CB2 Peak Elev=58.85' Inflow=3.89 cfs 0.335 af
15.0" Round Culvert n=0.013 L=53.6' S=0.0138 '/' Outflow=3.89 cfs 0.335 af

Pond CB3: CB3 Peak Elev=59.68' Inflow=3.08 cfs 0.264 af
15.0" Round Culvert n=0.013 L=74.9' S=0.0051 '/' Outflow=3.08 cfs 0.264 af

Pond CB4: CB4 Peak Elev=60.60' Inflow=1.95 cfs 0.151 af
12.0" Round Culvert n=0.013 L=193.0' S=0.0046 '/' Outflow=1.95 cfs 0.151 af

Pond CB5: CB5 Peak Elev=59.73' Inflow=0.59 cfs 0.051 af
12.0" Round Culvert n=0.013 L=40.0' S=0.0065 '/' Outflow=0.59 cfs 0.051 af

Pond DP1: DP1 Peak Elev=56.21' Storage=2,121 cf Inflow=1.30 cfs 0.073 af
Discarded=0.11 cfs 0.059 af Primary=0.00 cfs 0.000 af Outflow=0.11 cfs 0.059 af

Pond RD1: RD1 Peak Elev=61.08' Inflow=0.45 cfs 0.038 af
8.0" Round Culvert n=0.013 L=82.0' S=0.0110 '/' Outflow=0.45 cfs 0.038 af

Pond RD2: RD2 Peak Elev=59.72' Inflow=0.64 cfs 0.054 af
8.0" Round Culvert n=0.013 L=57.4' S=0.0174 '/' Outflow=0.64 cfs 0.054 af

Pond RG1: RG1 Peak Elev=58.61' Storage=5,998 cf Inflow=4.51 cfs 0.390 af
Discarded=0.21 cfs 0.202 af Primary=1.29 cfs 0.070 af Outflow=1.50 cfs 0.272 af

Link AP1: AP1 Inflow=0.55 cfs 0.050 af
Primary=0.55 cfs 0.050 af

Link AP2: AP2 Inflow=0.36 cfs 0.026 af
Primary=0.36 cfs 0.026 af

Link AP3: AP3 Inflow=0.05 cfs 0.006 af
Primary=0.05 cfs 0.006 af

Total Runoff Area = 1.908 ac Runoff Volume = 0.474 af Average Runoff Depth = 2.98"
48.55% Pervious = 0.926 ac 51.45% Impervious = 0.982 ac

A – 2

NODE LISTING – 50-YR

Time span=0.00-20.00 hrs, dt=0.05 hrs, 401 points x 3
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A1: A1 Runoff Area=14,305 sf 82.00% Impervious Runoff Depth>5.16"
Flow Length=158' Tc=2.4 min CN=87 Runoff=1.78 cfs 0.141 af

Subcatchment A2: A2 Runoff Area=7,881 sf 69.17% Impervious Runoff Depth>4.38"
Flow Length=226' Tc=7.0 min CN=80 Runoff=0.72 cfs 0.066 af

Subcatchment A3: A3 Runoff Area=3,695 sf 100.00% Impervious Runoff Depth>6.43"
Flow Length=75' Slope=0.0050 '/' Tc=1.7 min CN=98 Runoff=0.52 cfs 0.045 af

Subcatchment A4: A4 Runoff Area=5,328 sf 100.00% Impervious Runoff Depth>6.43"
Flow Length=114' Slope=0.0050 '/' Tc=2.4 min CN=98 Runoff=0.73 cfs 0.066 af

Subcatchment A5: A5 Runoff Area=6,121 sf 100.00% Impervious Runoff Depth>6.43"
Flow Length=101' Tc=1.1 min CN=98 Runoff=0.88 cfs 0.075 af

Subcatchment A6: A6 Runoff Area=1,550 sf 100.00% Impervious Runoff Depth>6.43"
Flow Length=89' Tc=0.8 min CN=98 Runoff=0.22 cfs 0.019 af

Subcatchment A7: A7 Runoff Area=6,295 sf 85.50% Impervious Runoff Depth>5.39"
Flow Length=103' Tc=0.6 min CN=89 Runoff=0.83 cfs 0.065 af

Subcatchment A8: A8 Runoff Area=4,003 sf 0.00% Impervious Runoff Depth>0.65"
Flow Length=29' Slope=0.2000 '/' Tc=1.5 min CN=39 Runoff=0.03 cfs 0.005 af

Subcatchment A9: A9 Runoff Area=4,394 sf 0.00% Impervious Runoff Depth>0.65"
Flow Length=55' Slope=0.2000 '/' Tc=2.4 min CN=39 Runoff=0.04 cfs 0.005 af

Subcatchment B1: B1 Runoff Area=4,270 sf 12.04% Impervious Runoff Depth>1.16"
Flow Length=153' Tc=4.9 min CN=46 Runoff=0.09 cfs 0.009 af

Subcatchment C1: C1 Runoff Area=3,696 sf 73.27% Impervious Runoff Depth>4.61"
Flow Length=200' Tc=1.3 min CN=82 Runoff=0.44 cfs 0.033 af

Subcatchment D1: D1 Runoff Area=21,569 sf 1.31% Impervious Runoff Depth>1.82"
Flow Length=154' Tc=5.2 min CN=54 Runoff=0.84 cfs 0.075 af

Pond CB1: CB1 Peak Elev=59.01' Inflow=5.29 cfs 0.477 af
18.0" Round Culvert n=0.013 L=14.0' S=0.0071 '/' Outflow=5.29 cfs 0.477 af

Pond CB2: CB2 Peak Elev=59.59' Inflow=4.56 cfs 0.412 af
15.0" Round Culvert n=0.013 L=53.6' S=0.0138 '/' Outflow=4.56 cfs 0.412 af

Pond CB3: CB3 Peak Elev=59.91' Inflow=3.63 cfs 0.328 af
15.0" Round Culvert n=0.013 L=74.9' S=0.0051 '/' Outflow=3.63 cfs 0.328 af

Pond CB4: CB4 Peak Elev=60.79' Inflow=2.29 cfs 0.187 af
12.0" Round Culvert n=0.013 L=193.0' S=0.0046 '/' Outflow=2.29 cfs 0.187 af

Pond CB5: CB5 Peak Elev=59.93' Inflow=0.72 cfs 0.066 af
12.0" Round Culvert n=0.013 L=40.0' S=0.0065 '/' Outflow=0.72 cfs 0.066 af

Pond DP1: DP1 Peak Elev=57.35' Storage=4,367 cf Inflow=3.74 cfs 0.146 af
Discarded=0.17 cfs 0.096 af Primary=0.00 cfs 0.000 af Outflow=0.17 cfs 0.096 af

Pond RD1: RD1 Peak Elev=61.16' Inflow=0.52 cfs 0.045 af
8.0" Round Culvert n=0.013 L=82.0' S=0.0110 '/' Outflow=0.52 cfs 0.045 af

Pond RD2: RD2 Peak Elev=59.85' Inflow=0.73 cfs 0.066 af
8.0" Round Culvert n=0.013 L=57.4' S=0.0174 '/' Outflow=0.73 cfs 0.066 af

Pond RG1: RG1 Peak Elev=58.71' Storage=6,330 cf Inflow=5.33 cfs 0.482 af
Discarded=0.22 cfs 0.215 af Primary=3.72 cfs 0.141 af Outflow=3.93 cfs 0.356 af

Link AP1: AP1 Inflow=0.84 cfs 0.075 af
Primary=0.84 cfs 0.075 af

Link AP2: AP2 Inflow=0.44 cfs 0.033 af
Primary=0.44 cfs 0.033 af

Link AP3: AP3 Inflow=0.09 cfs 0.009 af
Primary=0.09 cfs 0.009 af

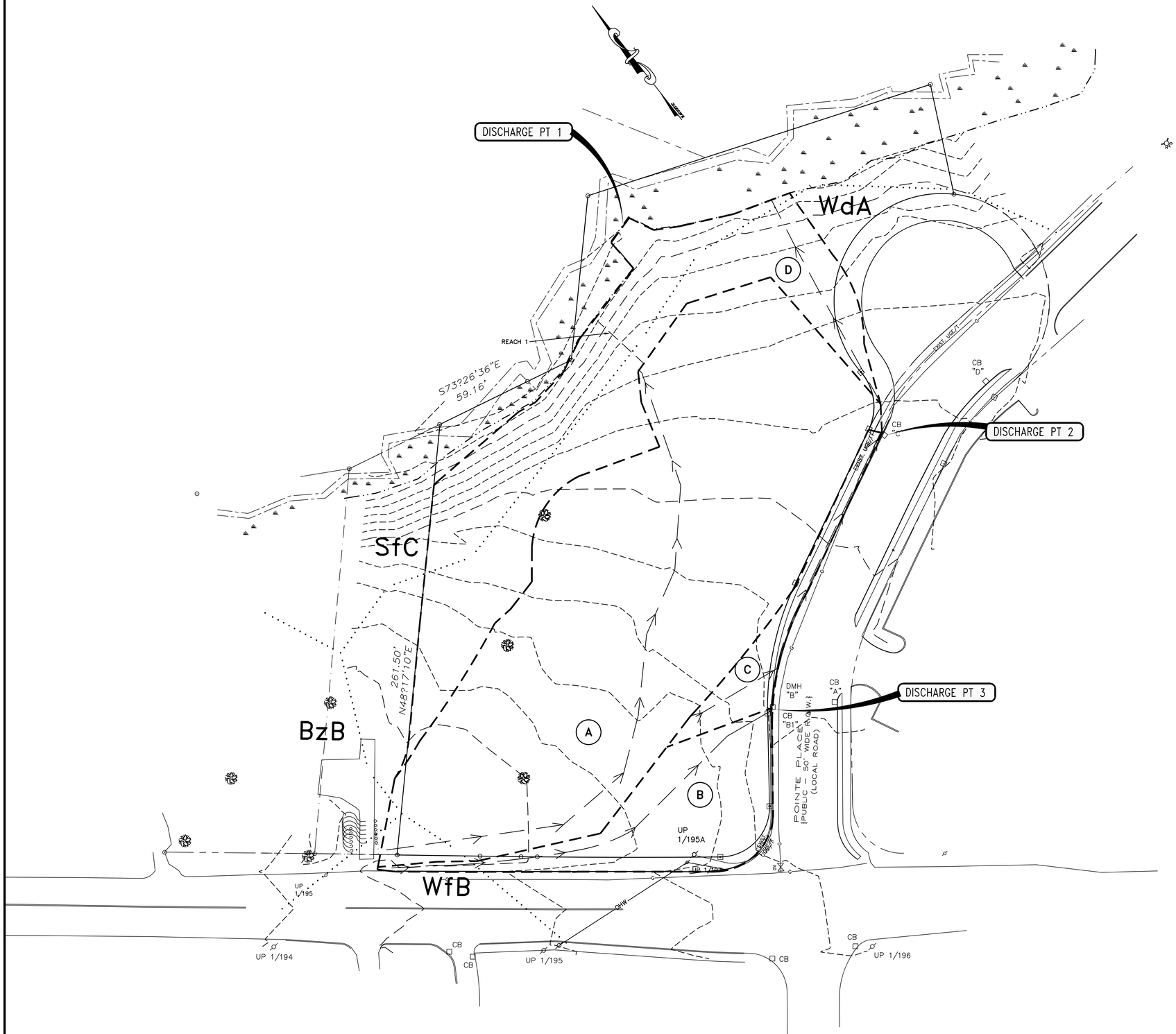
Total Runoff Area = 1.908 ac Runoff Volume = 0.605 af Average Runoff Depth = 3.80"
48.55% Pervious = 0.926 ac 51.45% Impervious = 0.982 ac

APPENDIX B

MAPS

B – 1

PRE-DEVELOPED CONDITIONS



REFERENCE PLAN
1. "EXISTING CONDITIONS PLAN OF LAND" PREPARED FOR MACS CONVENIENCE STORES LLC; TAX MAP K, LOT NO. 19C; DOVER POINT ROAD & POINTE PLACE, CITY OF DOVER, COUNTY OF STRAFFORD, STATE OF NEW HAMPSHIRE; FILE W10 CP\1720\18-1720 EC; PREPARED BY MCENEANEY SURVEY ASSOCIATES, INC.; SCALE: 1"=30'; DATE: NOV. 1, 2018.

LEGEND:

- EX 2' CONTOUR
- EX 10' CONTOUR
- PROPOSED CONTOUR (42)
- EX TREELINE
- NRCS BOUNDARY
- BzB — NRCS SYMBOL
- PROPERTY LINE
- SUBCATCHMENT BOUNDARY
- LONGEST FLOW PATH WITH DIRECTION OF FLOW
- (A2) — SUBCATCHMENT DESIGNATION
- REACH
- WETLANDS

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

PRE-DEVELOPMENT WATERSHED CHARACTERISTICS:

		LONGEST FLOW PATH (FEET)	Tc (MIN)
A	49,077	409	11.9
B	8,695	205	7.7
C	3,024	212	4.0
D	22,313	138	5.0

SOILS DATA:

SOIL GROUP	NRCS SYMBOL & NAME
A	WfB – WINDSOR LOAMY FINE SAND
A	WdA – WINDSOR LOAMY SAND
C	SfC – SUFFIELD SILT LOAM
C	BzB – BUXTON SILT LOAM

NOTES:

1. SOILS INFORMATION TAKEN FROM NATIONAL COOPERATIVE SOIL SURVEY (NRCS) FOR STRAFFORD COUNTY, NH.

~PERMIT PLAN~
NOT FOR CONSTRUCTION

CIVILWORKS NEW ENGLAND
civil engineering
181 Watson Road, P.O. Box 1166
Dover, New Hampshire 03820
(603) 749-9413

NO.	REVISION	APP'D	DATE

DATE: 4-4-19
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY: SJH
PROJECT NO: 1677
FILE: SITE.DWG

PLANNING FILE #P19-___

PRE-DEVELOPMENT PLAN

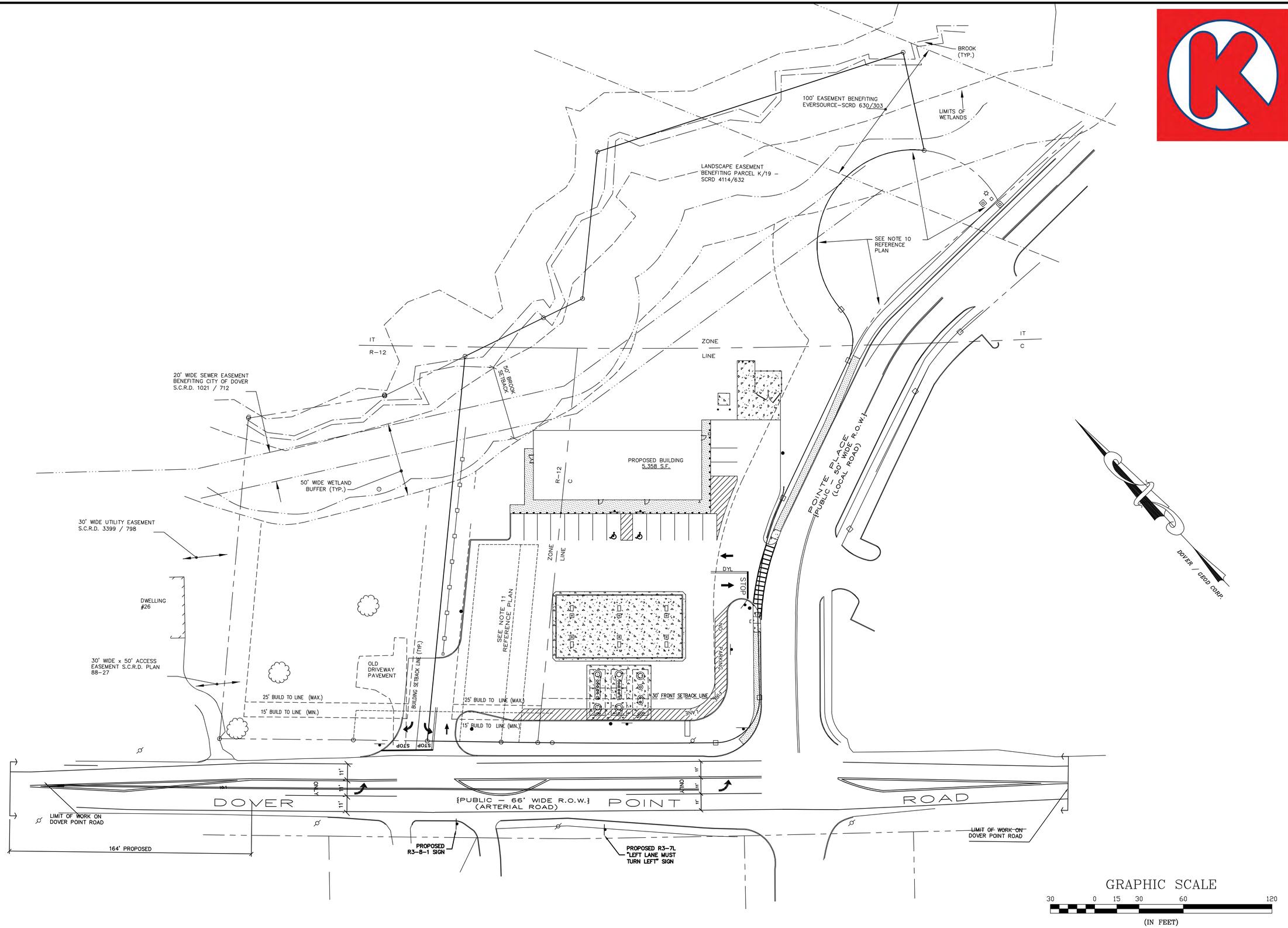
PROJECT:
CIRCLE K
MAP K, LOT 19
30 DOVER POINT ROAD
DOVER, NH 03820

APPLICANT/OWNER OF RECORD:
MAC'S CONVENIENCE STORES, LLC
935 E TALLMADGE AVE
AKRON, OH 44310

W1

B – 2

POST-DEVELOPED CONDITIONS



NOT FOR CONSTRUCTION FOR PERMIT USE ONLY

PLANNING FILE NO.: P21_

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

NO.	REVISION	APP'D	DATE

DATE: 3-1-21
SCALE: 1"=30'
DRAWN BY: SRD
DESIGN BY: SRD
APPROVED BY:JH
PROJECT NO:1677
FILE: SITE.DWG

DOVER POINT ROAD STRIPING PLAN

MAC CONVENIENCE STORES, LLC
935 EAST TALLMADGE AVENUE
AKRON, OHIO 44310

CIRCLE K #7264
DOVER POINT ROAD &
POINTE PLACE
DOVER, NH

1 OF 1



30 Dover Point Rd
Dover, NH

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Dover, NH

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