



PRELIMINARY
SITE PLAN APPLICATION
City of Rochester, New Hampshire

Check one of the following: ☒ Design Review ☐ Conceptual (design review is strongly encouraged)

Property information

Tax map #: 132; Lot #(s): 39; Zoning district: Residential

Property address/location: 25 Old Dover Road; # acres: 2.35

Name of project (if applicable): _____

Proposed project

Describe proposed project: Subdivide the lot into two parcels. Parcel 1 to include the existing building & parking.

Parcel 2 for proposed 10,700 S.F. retail development.

Nonresidential: current bldg. size 70,656 s.f.; total proposed bldg. size 10,700 s.f.

Residential: current # units _____ total proposed # units _____

City water? yes ☒ no _____; how far is City water from the site? Front of site

City sewer? yes ☒ no _____; how far is City sewer from the site? Front of site

Property owner

Name (include name of individual): SWD Property Management LLC, Attn. Brian Dumont / STEVE DUMONT

Mailing address: PO Box 716, Exeter, NH 03833 - 73 PICKERING ROAD - SUITE 203

Telephone #: 603-926-9029 Email: STEVE R. DUMONT PROPERTY GROUP, LLC

Applicant/developer (if different from property owner)

Name (include name of individual): Dumont Properties, Attn. Brian Dumont / STEVE DUMONT

Mailing address: 73 Pickering Road, Suite 203, Rochester, NH 03839

Telephone #: 603-661-2919 Email: bwdumontproperties@gmail.com

Engineer/surveyor

Name (include name of individual): Jones & Beach Engineers, Attn. Wayne Morrill

Mailing address: PO Box 219, Stratham, NH 03885

Telephone #: 603-772-4746 Fax #: _____

Email address: wmorrill@jonesandbeach.com Professional license #: _____

Signature

Date

1-24-24

Authorization to enter subject property

I hereby authorize members of the Rochester Planning Board, Zoning Board of Adjustment, Conservation Commission, Planning Department, and other pertinent City departments, boards and agencies to enter my property for the purpose of evaluating this application including performing any appropriate inspections during the application phase, review phase, post-approval phase, construction phase, and occupancy phase. This authorization applies specifically to those particular individuals legitimately involved in evaluating, reviewing, or inspecting this specific application/project. It is understood that these individuals must use all reasonable care, courtesy, and diligence when entering the property.

Signature of property owner:

Date:

1-24-24

Letter of Authorization

I, Brian Dumont, Dumont Properties, 73 Pickering Road, Suite 203, Rochester, NH 03839, developer of property located in Rochester, NH, known as Tax Map 132, Lot 39, 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 at 25 Old Dover Road in Rochester, 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


Brian Dumont
Dumont Properties




Date

JONES & BEACH
ENGINEERS, INC.

Letter of Authorization

I, Brian Dumont, SWD Property Management LLC, PO Box 716, Exeter, NH 03833, owner of property located in Rochester, NH, known as Tax Map 132, Lot 39, 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 at 25 Old Dover Road in Rochester, 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.

	 <i>Owner</i>	<i>1-24-24</i>
Witness	Brian Dumont SWD Property Management LLC	Date

JONES & BEACH
ENGINEERS INC.

**ABUTTERS LIST (DIRECT)
AS OF
JANUARY 2, 2024
FOR
25 OLD DOVER ROAD, ROCHESTER, NH
JBE PROJECT No. 23050**

OWNER OF RECORD:

TAX MAP 132/ LOT 39
SWD PROPERTY MANAGEMENT LLC
ATTN. BRIAN DUMONT
PO BOX 716
EXETER, NH 03833
BK 2885/PG 37 (10/22/03)

APPLICANT:

DUMONT PROPERTIES
ATTN. BRIAN DUMONT
73 PICKERING RD, STE. 203
ROCHESTER, NH 03839

ABUTTERS:

131/1 & 2
HALEY & RICHARD PARTNERS
724 COLUMBUS AVE
ROCHESTER, NH 03867
3043/379 (08/02/04)

131/3
KEVIN SIPULA
736 COLUMBUS AVE
ROCHESTER, NH 03867
5019/499 (03/25/22)

132/26
KENNETH POULIN
20 OLD DOVER RD
ROCHESTER, NH 03867
1873/270 (06/26/96)

132/37
RUTH WALLINGFORD
22 OLD DOVER RD
ROCHESTER, NH 03867
842/293 (05/14/68)

132/28
MICHAEL ELDRIDGE
24 OLD DOVER RD
ROCHESTER, NH 03867
4882/532 (03/17/21)

132/29
MICHAEL & MARCIA MAHAN
14 BRIALLIA CIRCLE
NEWMARKET, NH 03857
4839/673 (11/30/20)

132/30
DENNIS & CHERYL THOMPSON
28 OLD DOVER RD
ROCHESTER, NH 03867
3232/906 (08/01/05)

132/31-23
STEVEN K MCENTIRE FAM TRUST %
STEVEN K MCENTIRE TRUSTEE
115 MERRYMEETING RD
NEW DURHAM, NH 03855
4841/820 (10/09/20)

132/36
CITY OF ROCHESTER
31 WAKEFIELD ST
ROCHESTER, NH 03867
1379/483 (05/15/87)

132/37 & 38
41 OLD DOVER ROAD LLC
41 OLD DOVER RD
ROCHESTER, NH 03867
4007/189 (04/04/12) – LOT 37
4175/998 (10/15/13) – LOT 38

132/40
NORTHEAST CREDIT UNION
% ACCOUNTING DEPT
PO BOX 1240
PORTSMOUTH, NH 03802
2913/282 (12/10/03)

132/45
710 COLUMBUS AVENUE LLC
112 GATES ST
PORTSMOUTH, NH 03801
4484/94 (06/10/17)

ENGINEERS/SURVEYORS:

JONES & BEACH ENGINEERS, INC.
ATTN: WAYNE MORRILL
PO BOX 219
STRATHAM, NH 03885



City of Rochester, New Hampshire

Zoning Board of Adjustment

August 14, 2023

SWD Property Management, LLC
PO Box 716
Exeter, NH 03833

Notice of Decision

Z-23-17 SWD Property Management, LLC Seeks a *Variance* from Table 18-B to permit the construction of a 10,700 s.f. retail building in the R2 zone where the use is not permitted.

Location: 25 Old Dover Road, Map 132 Lots 39 in the Residential-2 Zone.

At its August 9, 2023 meeting, the Zoning Board of Adjustment **APPROVED the Variance** as presented citing the criteria has been met, as described by the applicant.


Shanna B. Saunders, 8.14.23
Director of Planning & Development

It is the applicant's responsibility to obtain any applicable permits from local, state, and federal agencies. Any work completed within the thirty (30) day appeal period, explained below, is at your risk.

APPEALS: Any party to the action, or any person directly affected has a right to appeal this decision within thirty calendar days following a hearing and to the Superior Court in accordance with State Statute. See New Hampshire Revised Statutes Annotated, Chapter 677 Rehearing and Appeal Procedures, available at the City of Rochester Planning Department. This notice has been placed on file and made available for public inspection in the records of the ZBA.

Cc: Open Gov Z-23-15
File

My Map



1/2/2024, 10:55:07 AM

 Tax Parcels

1:4,514
0 0.03 0.06 0.11 mi
0 0.04 0.09 0.17 km
Esri Community Maps Contributors, Rochester GIS, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

\\file1.sargarch.com\SA-Data\Architecture and Interiors\Collar General\02_New Projects\2023 Projects\1000-23_Rochester, NH (Ground Up)\04_Construction Documents\01_Architecture\02_Rochester, NH.dwg, A3.0, 12/1/2023 3:54 PM, Joshua Heldblower

GENERAL FIXTURE NOTES

- A. G.C. TO INSTALL ITEMS AS DIRECTED BY DOLLAR GENERAL CPM. VERIFY FINAL LOCATIONS OF FIXTURES AND EQUIPMENT PRIOR TO START OF CONSTRUCTION.
- B. ALL EQUIPMENT IS TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- C. G.C. TO PROVIDE IN WALL BLOCKING OR BACKING AS REQUIRED FOR FIXTURE INSTALLATION.
- D. CHECKOUT COUNTERS & MILLWORK ARE TENANT SUPPLIED AND TO BE INSTALLED PER DOLLAR GENERAL CPM DIRECTION. COUNTERS SHALL INCLUDE A PORTION OF AT LEAST 36" IN LENGTH WHICH IS NO MORE THEN 34" ABOVE THE FINISH FLOOR. COUNTERS TO BE ON AN ACCESSIBLE ROUTE.



461 FROM ROAD, PARAMUS, NJ 07652
T973.253.9393 • WWW.SARGARCH.COM

ARCHITECTURAL SEAL:



CONSULTANT (ENGINEER):

CONTRACTOR'S NOTES:

WRITTEN DIMENSIONS HOLD PREFERENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS. THE CONTRACTORS MUST VISIT JOB SITE TO VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE SUBMITTING BIDS. REPORT ANY DISCREPANCIES OF ANY CONDITIONS WHICH MAY INTERFERE WITH THE PROPER EXECUTION OF THE CONTRACT TO THE TENANT'S REPRESENTATIVE. REPORT DISCREPANCIES DURING BIDDING PROCESS AND BEFORE START OF CONSTRUCTION. CHANGE ORDERS WILL NOT BE APPROVED FOR ISSUES ARISING FROM THE FIELD CONDITIONS OR CONFLICTS BETWEEN THE PLANS AND THE EXISTING CONDITIONS.

DATE REVISION

12-01-2023 SITE PLAN SUBMISSION



LOCATION:

ROCHESTER, NH
OLD DOVER RD.
ROCHESTER, NH 03867

PROJECT INFORMATION:

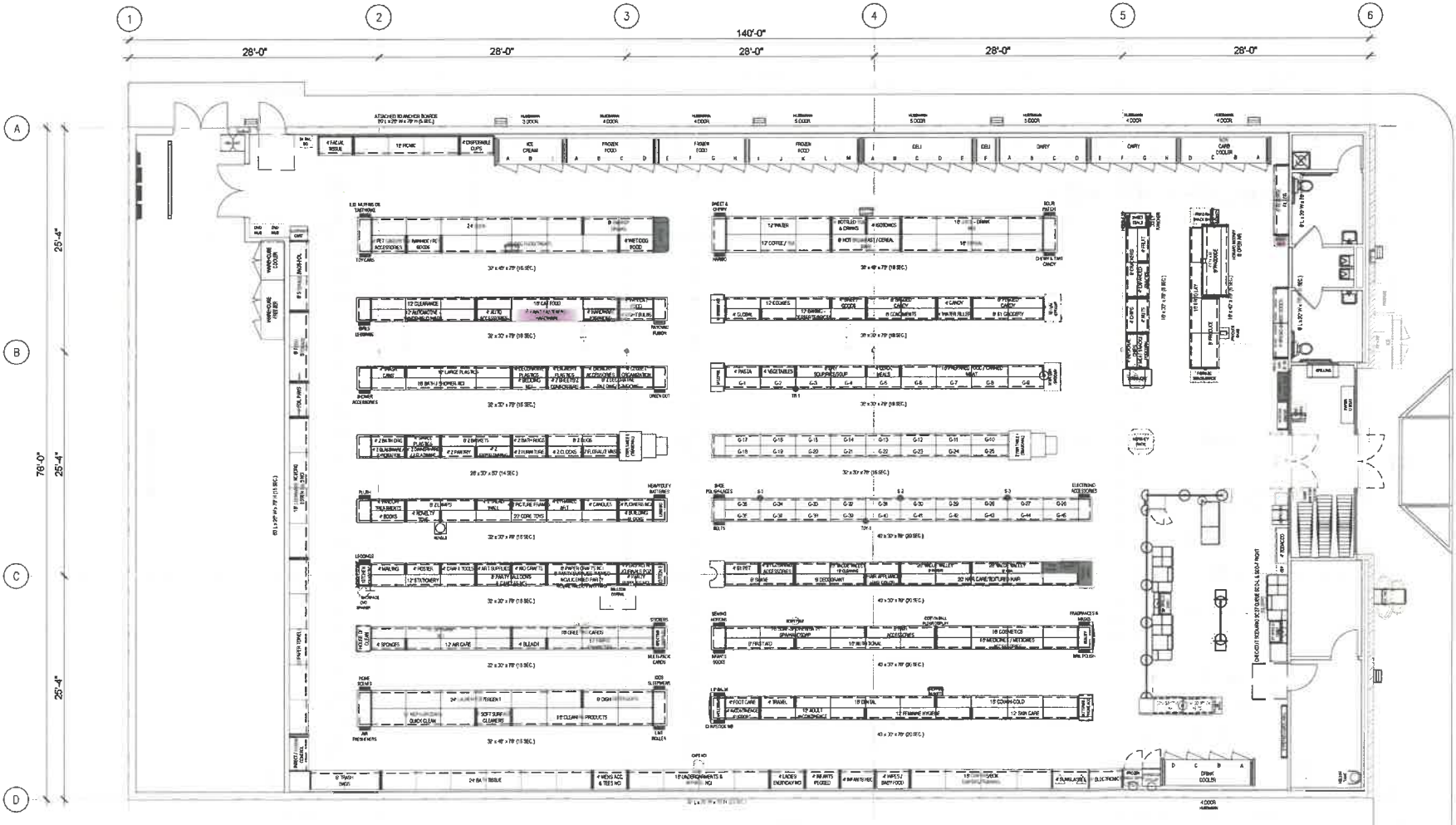
DATE: 12-01-2023
PROJECT NUMBER: 10463-23
AREA: 10,640 SF
DRAWN BY: NG CHECKED BY: JH

TITLE:

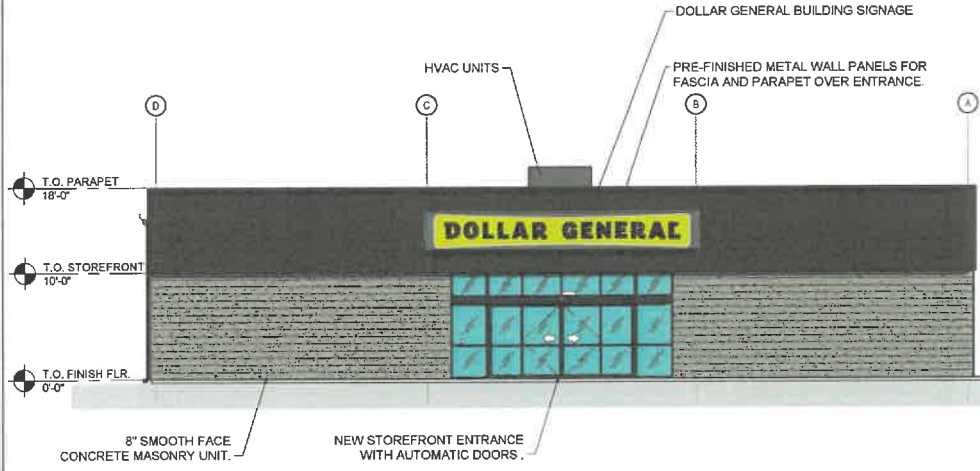
FIXTURE PLAN

SHEET NUMBER:

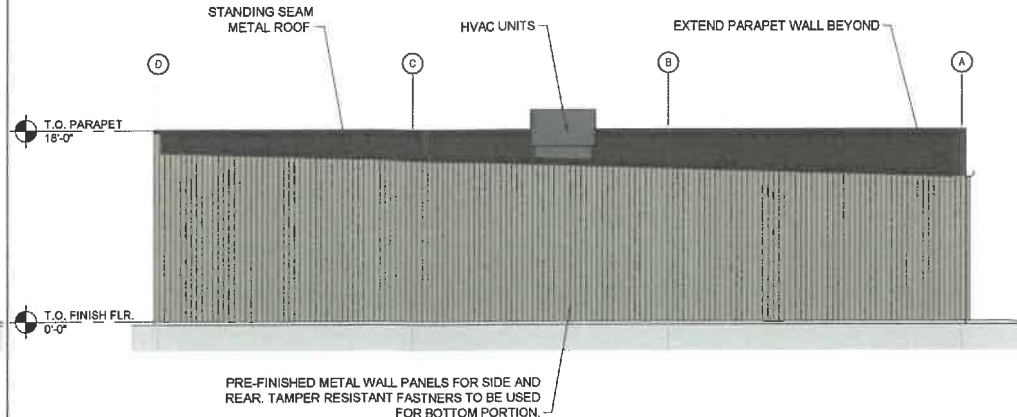
A3.0



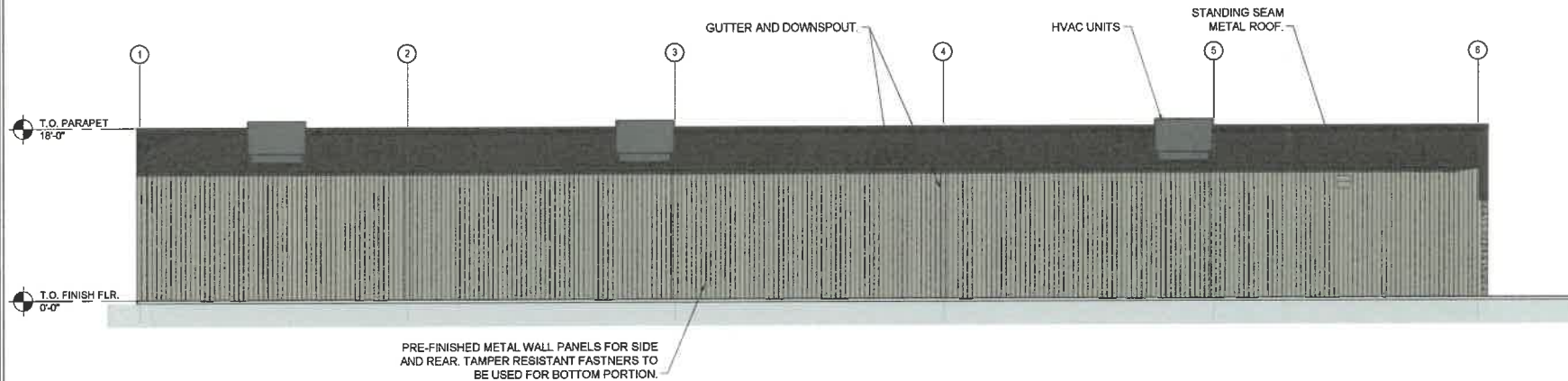
\\file1.sargenich.com\SA-Data\architecture\architect\Dollar\General\02_New Projects\2023\Projects\100x-23_Rochester, NH (Ground Up)\04_Construction Documents\01_Architecture\01_Rochester, NH.dwg, A5.0, 12/1/2023 3:54 PM, Joshua Halliwell



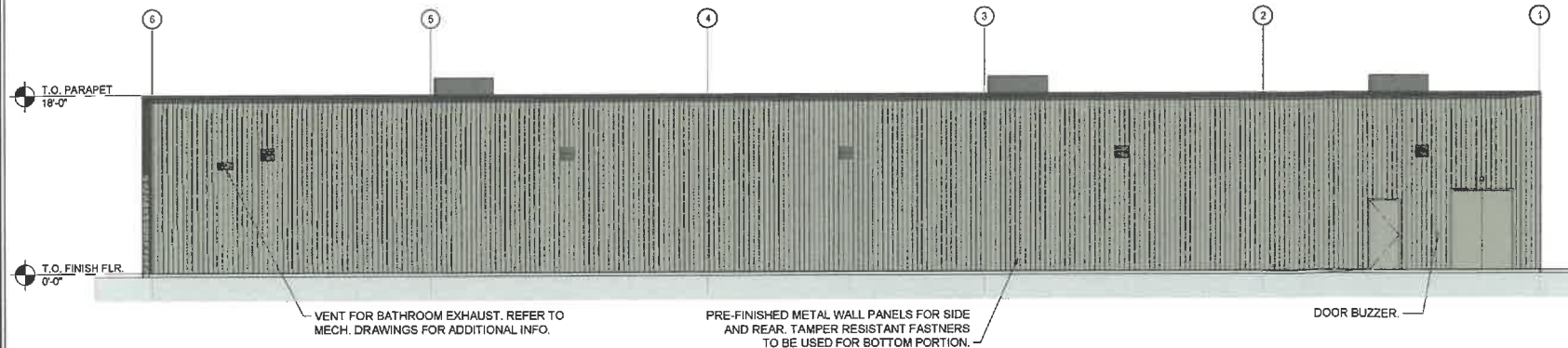
1 SCALE
1/8" = 1'-0" FRONT ELEVATION



2 SCALE
1/8" = 1'-0" REAR ELEVATION



3 SCALE
1/8" = 1'-0" LEFT ELEVATION



4 SCALE
1/8" = 1'-0" REAR ELEVATION

GENERAL NOTES

A. BUILDING SIGNAGE SHOWN FOR REFERENCE ONLY. SIGNAGE IS TO BE PROVIDED & INSTALLED BY VENDOR UNDER SEPARATE PERMIT.

EXTERIOR PAINT SCHEDULE

SUPPLIER	COLOR	AREAS
SHERWIN WILLIAMS	#SW7037 BALANCED BEIGE	ALL "LOW" PORTIONS OF BUILDING. COORDINATE WITH PM.
SHERWIN WILLIAMS	#SW7041 VAN DYKE BROWN	ALL "HIGH" PORTIONS OF BUILDING. COORDINATE WITH PM.



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T:973.253.9393 • WWW.SARGENTARCH.COM

ARCHITECTURAL SEAL:



CONSULTANT (ENGINEER):

CONTRACTOR'S NOTES:

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DATE	REVISION
12-01-2023	SITE PLAN SUBMISSION



LOCATION:

ROCHESTER, NH
OLD DOVER RD.
ROCHESTER, NH 03867

PROJECT INFORMATION:

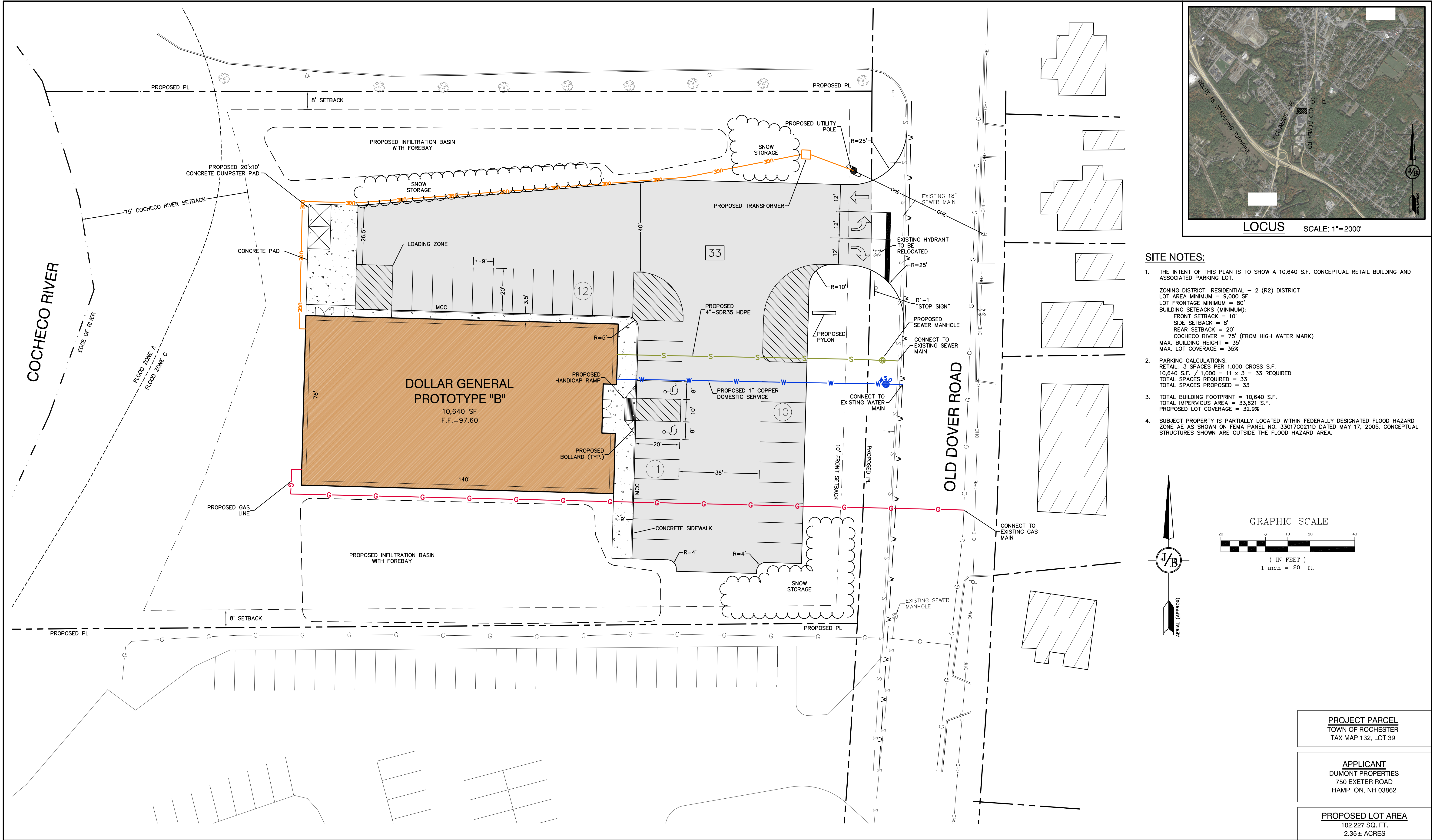
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PROJECT NUMBER: 10463-23
AREA: 10,840 SF
DRAWN BY: NG CHECKED BY: JH

TITLE:

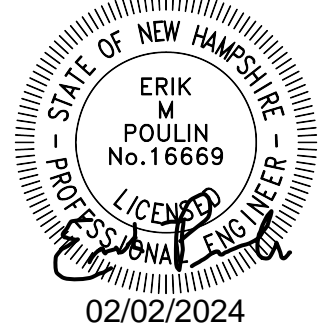
EXTERIOR ELEVATIONS

SHEET NUMBER:

A5.0



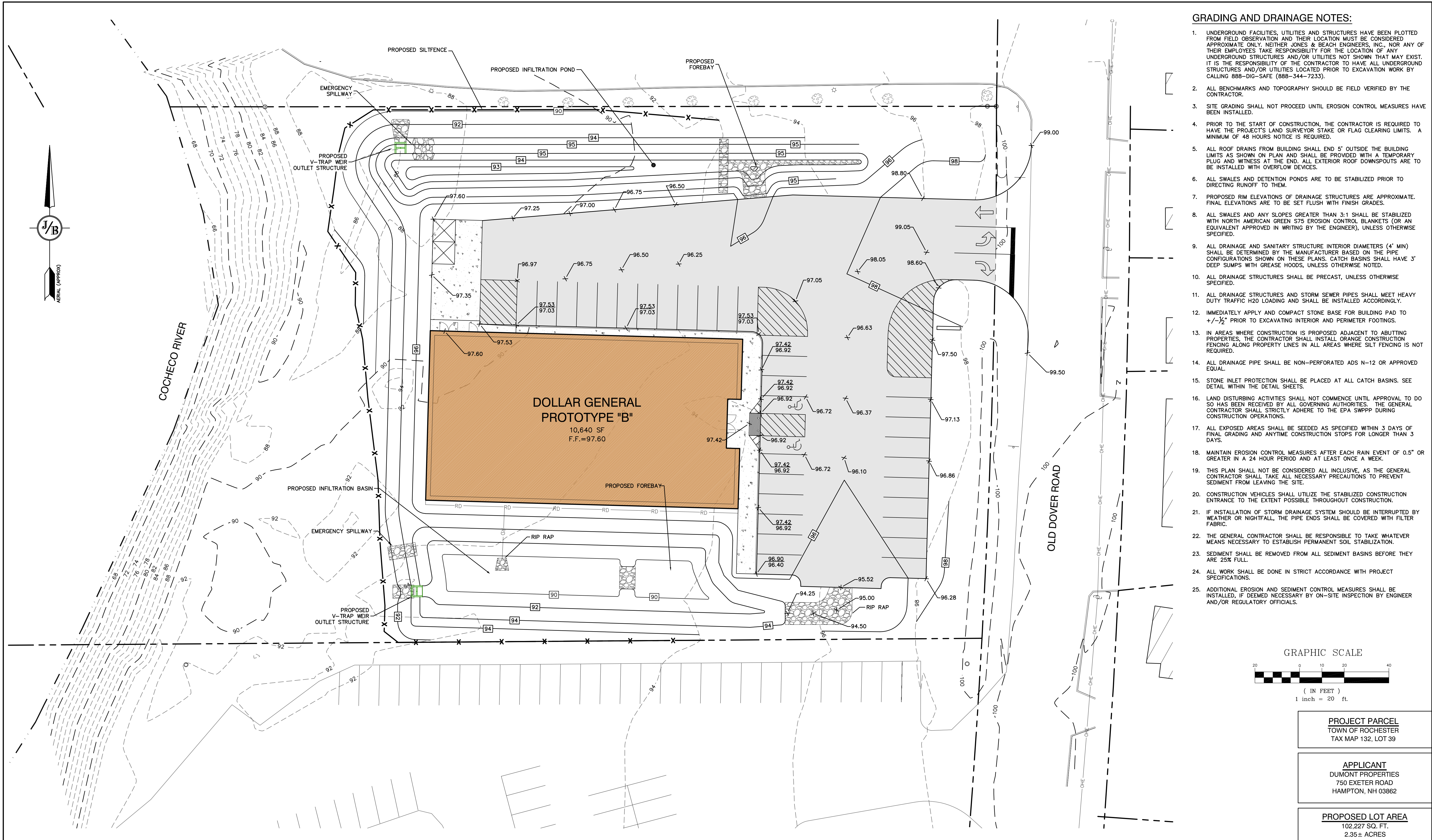
Design:WGM	Draft: GDR	Date: 1/02/24
Checked:WGM	Scale: AS NOTED	Project No.: 23050
Drawing Name: 23050-PLAN.dwg		
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM JONES & BEACH ENGINEERS, INC. (JBE). ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO JBE.		



REV.	DATE	REVISION	BY
2	02/01/23	ISSUED FOR DESIGN REVIEW	EMP
1	5/15/23	REVISED ZONING INFORMATION	GDR
0	3/24/23	ISSUED FOR REVIEW	GDR

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:	SITE PLAN MAP 132, LOT 39
Project:	RETAIL CONCEPT 25 OLD DOVER RD, ROCHESTER, NH
Owner of Record:	SWD PROPERTY MANAGEMENT LLC PO BOX 716, EXETER, NH 03833-0716



TRAFFIC IMPACT STATEMENT

ITE TRIP GENERATION MEMORANDUM

**Retail Development
Tax Map 132, Lot 39
25 Old Dover Road
Rochester, NH**

Prepared for:

**Dumont Properties
750 Exeter Road
Hampton, NH 03862**

**Prepared by:
Jones & Beach Engineers, Inc.
85 Portsmouth Avenue
P.O. Box 219
Stratham, NH 03885
(603) 772-4746
August 8, 2023
Revised January 4, 2024
JBE Project No. 23050**

EXECUTIVE SUMMARY

The intent of this project is to construction a 10,700 S.F. retail store with associated parking areas. The intent of this report is to evaluate the potential impacts on adjacent street traffic that this development would have on an average day.

Data from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition (ITE Manual) were used. The Land Use in the ITE Manual that most nearly matches the retail use is “Variety Store” (Land Use 814), defined by the ITE Manual as follows: “A variety store is a retail store that sells a broad range of inexpensive items often at a single price. These stores are typically referred to as ‘dollar stores’”. A dollar store is proposed for the property, so this land use code is a fitting one.

The estimates for the retail use were calculated from data from the ITE Manual based on the average number of trips generated per 1,000 S.F. gross floor area. Sometimes the ITE Manual is able to provide weekday as well as weekend trip generation estimates. However, for Land Use 814 only weekday trip generation estimates were available. The available estimates were for a full day, as well as the estimates for the peak hour of the generating use and the peak hour of adjacent street traffic.

Because a 10,700 SF retail use is proposed, the number of trips per 1,000 SF GFA was multiplied by 10.7 to come up with the estimated trip generation. The below table summarizes the average estimated traffic associated with the proposed use according to traffic from the ITE Manual:

Average Trip Generation Estimates

	Full Day (Trips/Day)	Peak Hour Generator (Trips/Hour)	Peak Hour Adjacent Street (Trips/Hour)
Weekday	679	N/A	N/A
Weekday AM	N/A	48.4	34.0
Weekday PM	N/A	80.0	73.2

CONCLUSION

Assuming 12 hours of operation per day, there would be an average of one trip entering or leaving the site every 64 seconds (one trip every minute, essentially). During the weekday PM peak hour of the generating use, which is the highest peak hour scenario available, 80 trips through the hour translates to one trip entering or leaving every 45 seconds based on ITE estimates for average trip generation. Because these are averages, on a particularly busy day there may be more traffic entering or leaving, and on a less busy day there would be fewer than the reported number of trips. Regardless, it appears that there will be appreciable time between entrances into and exits from the site. It is not anticipated that this will cause a significant impact on the traffic of Old Dover Road, which already experiences a moderate amount of traffic due to its proximity to several existing businesses.

Respectfully submitted,
JONES & BEACH ENGINEERS, INC.

A handwritten signature in blue ink, appearing to read 'WJME', is positioned above the printed name and title.

Wayne Morrill
President

Trip generation estimates used for this analysis were taken from the Trip Generation Manual, 10th Edition, published by the Institute of Traffic Engineers in September 2017.

Variety Store (814)

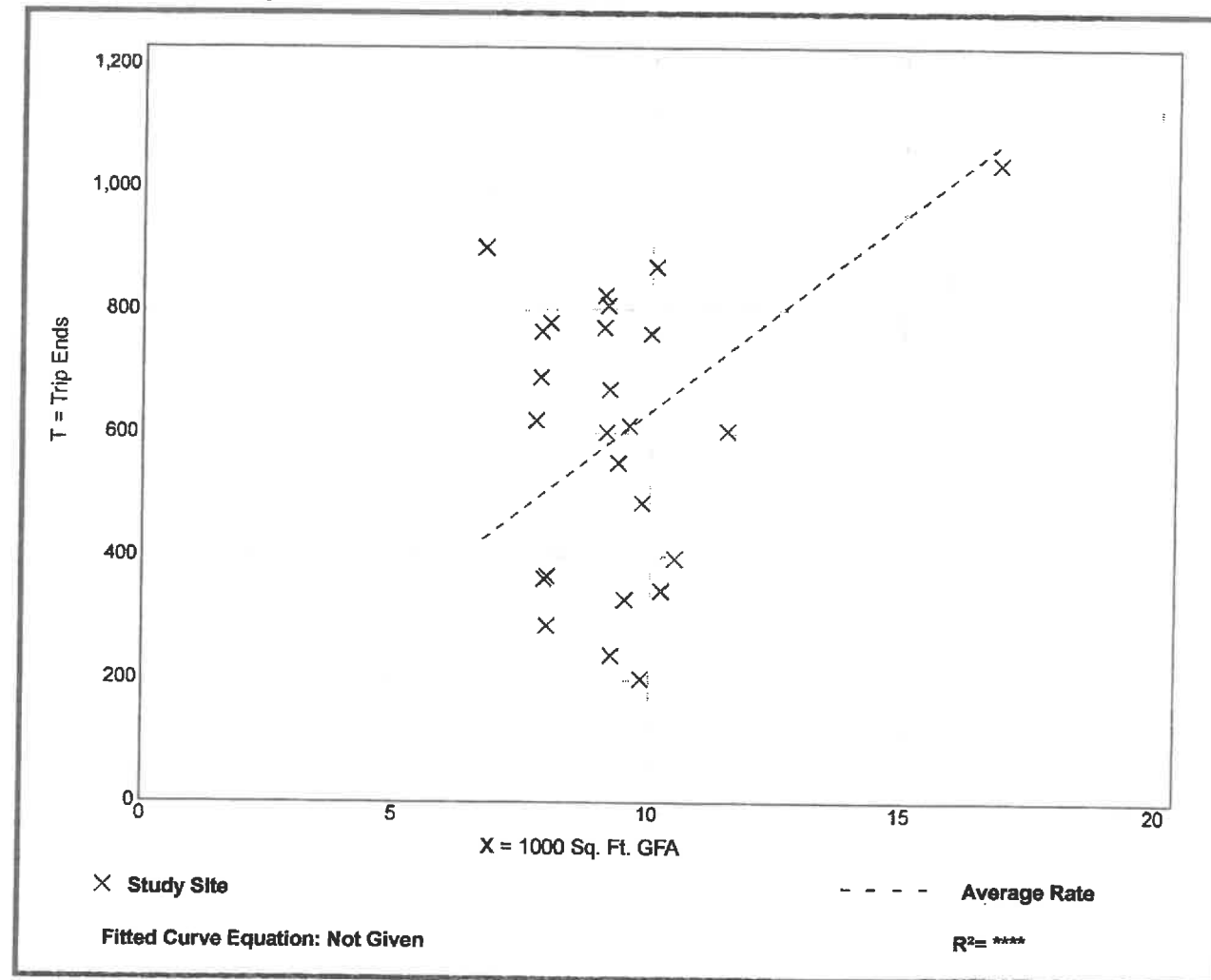
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 25
1000 Sq. Ft. GFA: 9
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
63.47	20.51 - 133.68	25.93

Data Plot and Equation



Variety Store (814)

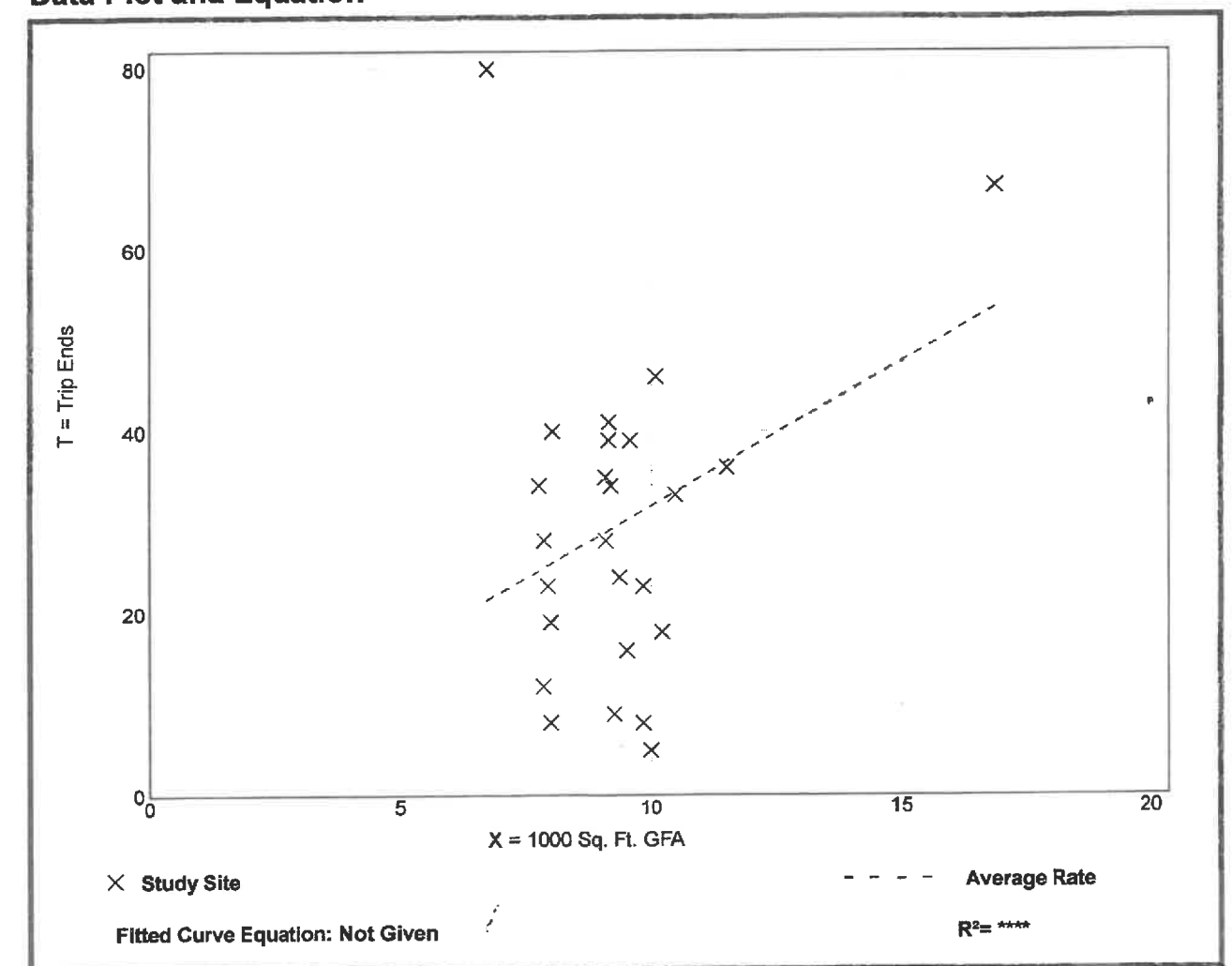
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban
Number of Studies: 25
1000 Sq. Ft. GFA: 9
Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.18	0.50 - 11.87	2.01

Data Plot and Equation



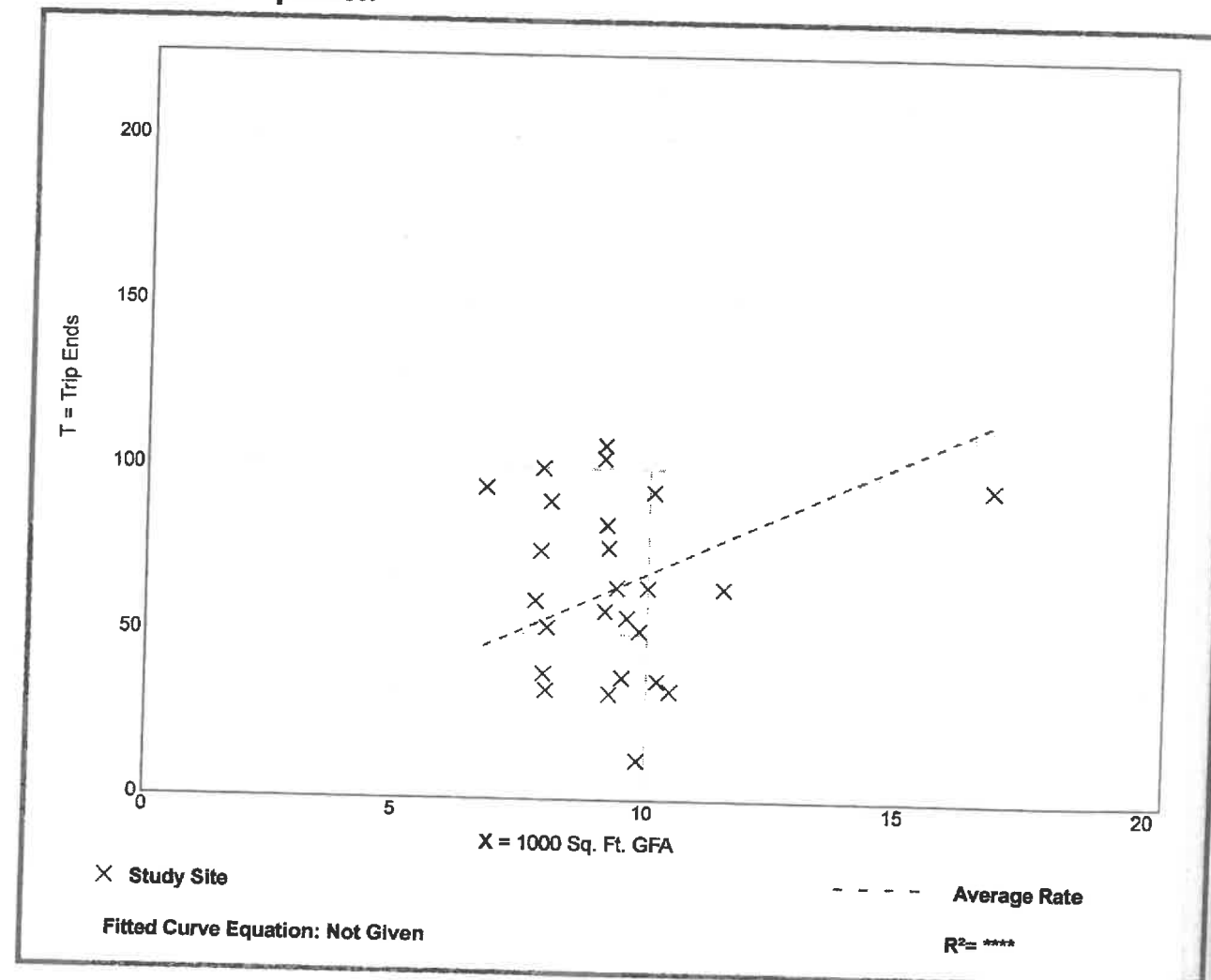
Variety Store (814)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.
 Setting/Location: General Urban/Suburban
 Number of Studies: 25
 1000 Sq. Ft. GFA: 9
 Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
6.84	1.22 - 13.95	3.19

Data Plot and Equation



Variety Store (814)

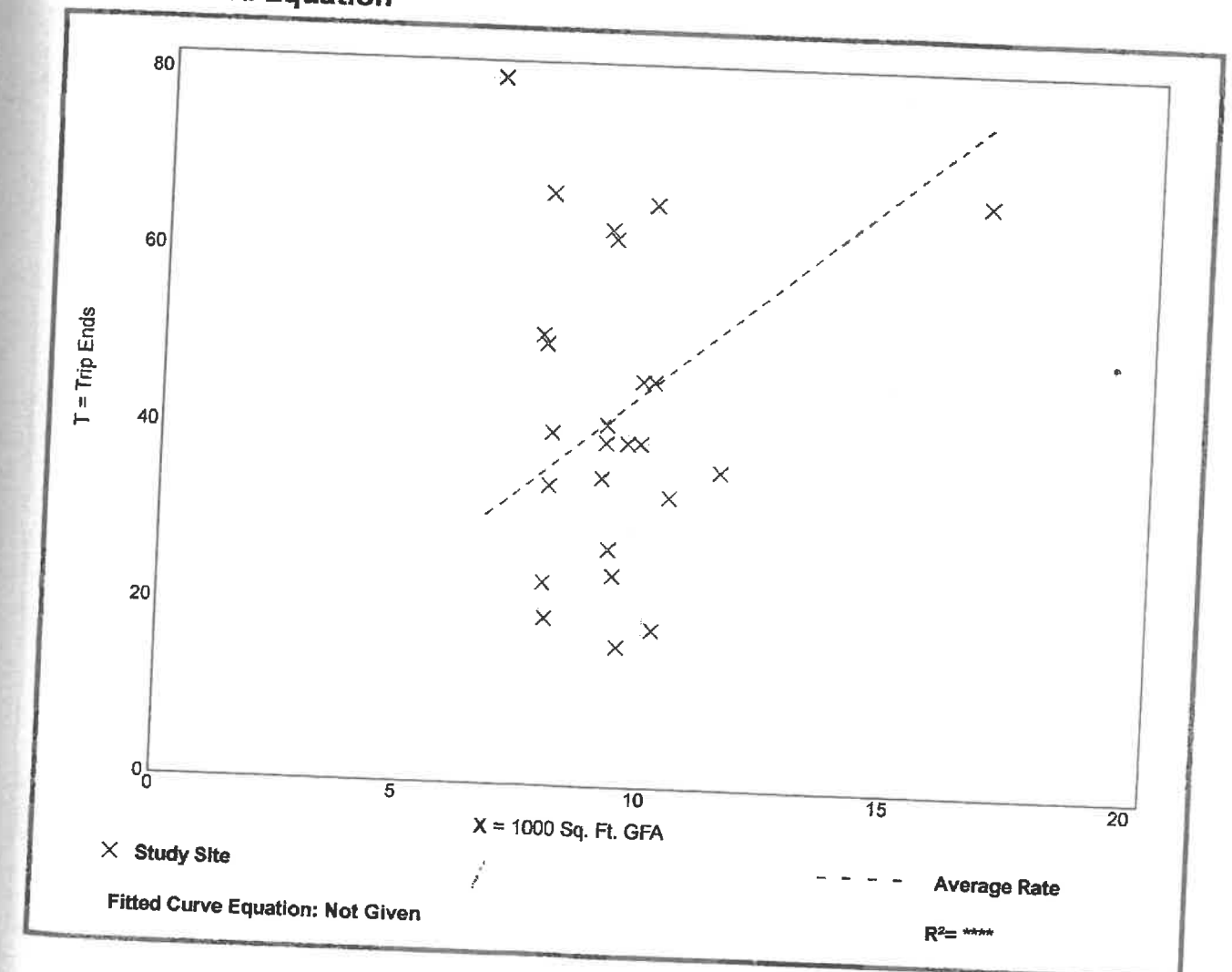
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
 On a: Weekday,
 AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
 Number of Studies: 25
 1000 Sq. Ft. GFA: 9
 Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
4.52	1.68 - 11.87	2.13

Data Plot and Equation



Variety Store (814)

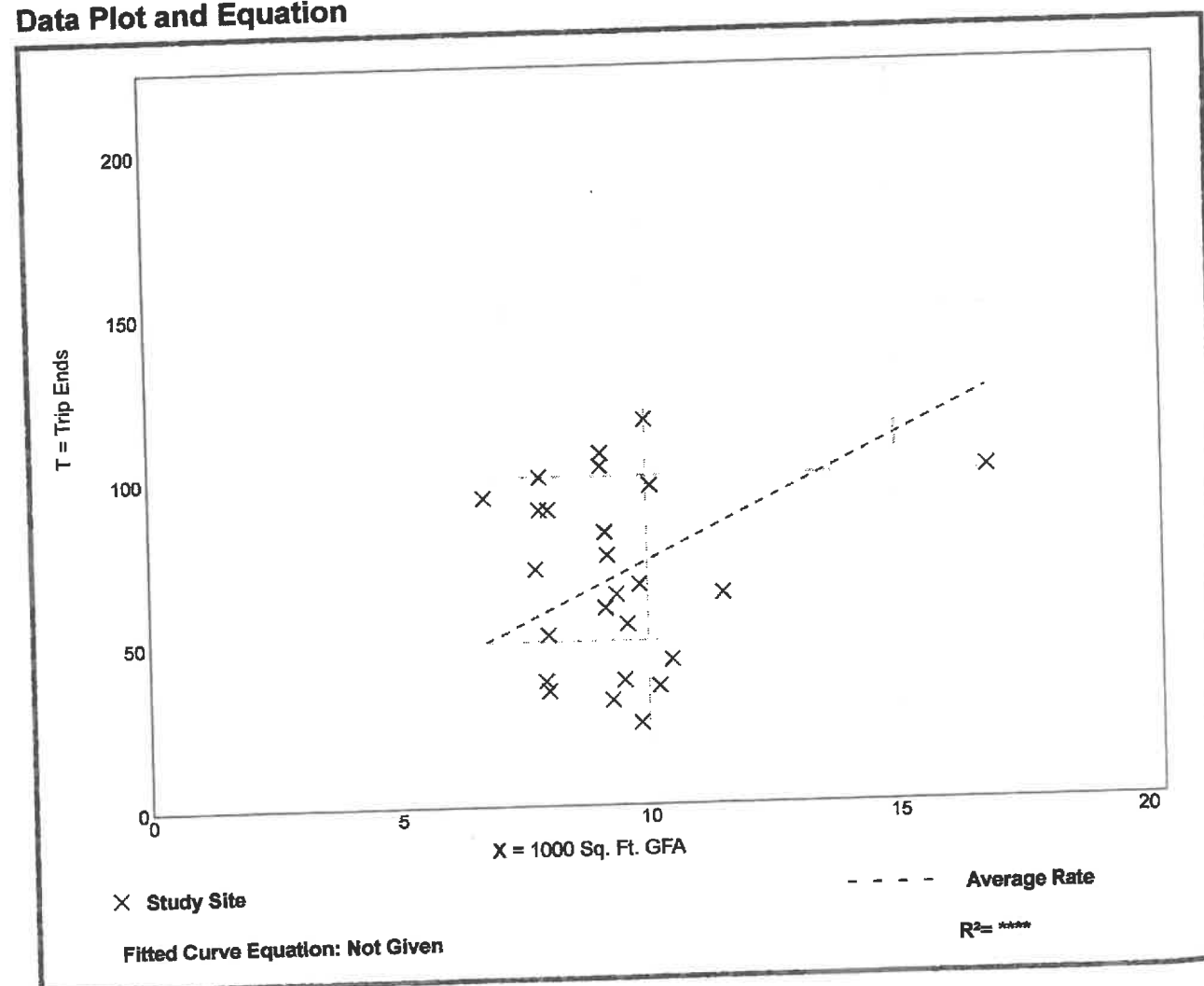
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 25
1000 Sq. Ft. GFA: 9
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
7.42	2.54 - 13.95	3.24

Data Plot and Equation



Variety Store (814)

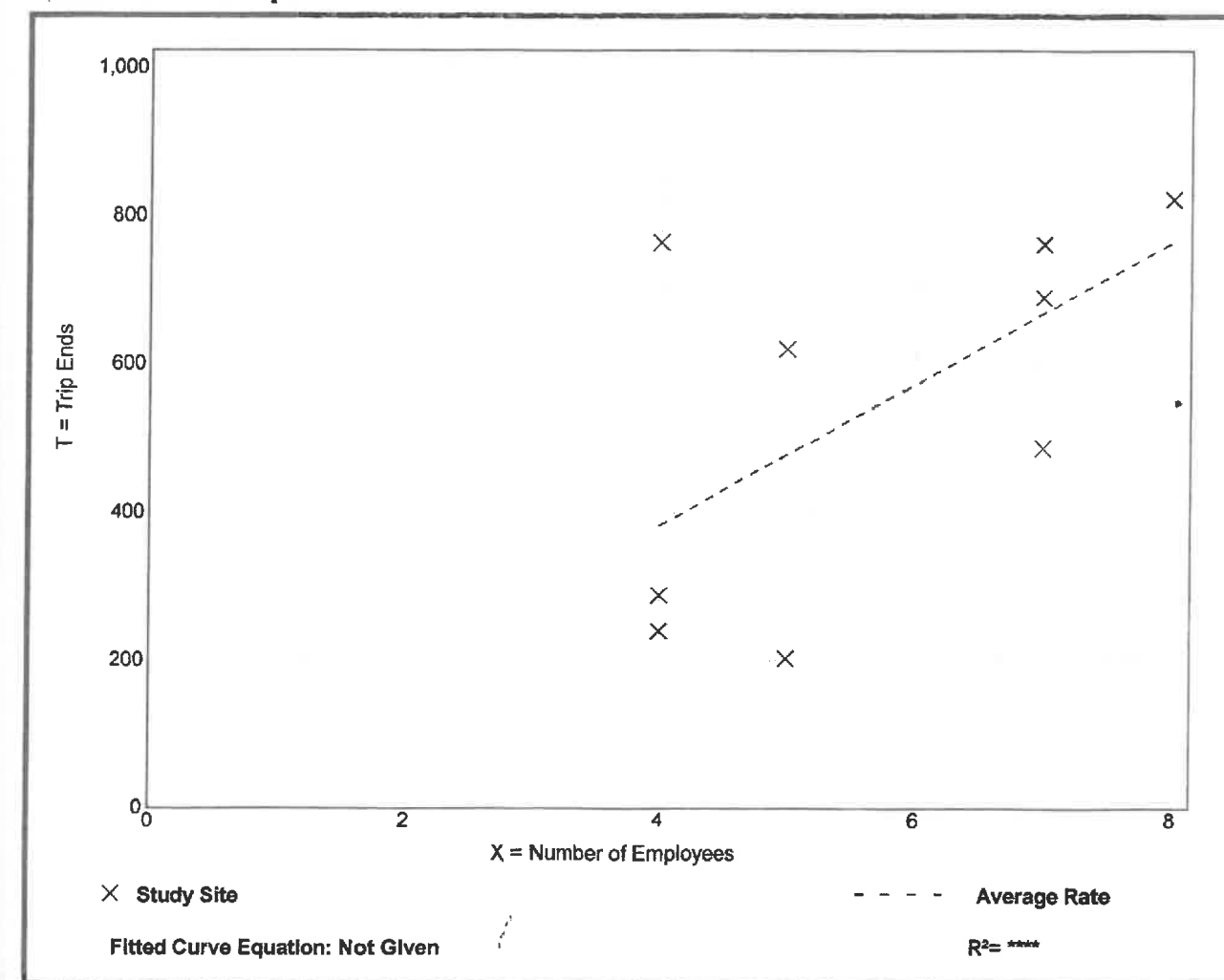
Vehicle Trip Ends vs: Employees
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 9
Avg. Num. of Employees: 6
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
95.59	40.40 - 191.00	39.13

Data Plot and Equation

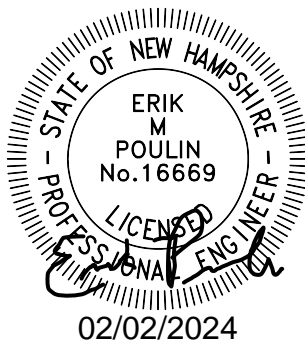


DRAINAGE ANALYSIS
SEDIMENT AND EROSION CONTROL PLAN

**Dollar General
Tax Map 132 Lot 39
25 Old Dover Road
Rochester, NH**

Prepared for:

**SWD Property Management LLC
PO Box 716
Exeter, NH 03833**



**Prepared by:
Jones & Beach Engineers, Inc.
85 Portsmouth Avenue
P.O. Box 219
Stratham, NH 03885
(603) 772-4746
February 01, 2023
JBE Project No. 23050**

EXECUTIVE SUMMARY

SWD Property Management LLC proposes to construct a 10,640± sq.ft. retail building on Old Dover Road, Rochester, NH. The existing lot, Tax Map 132 Lot 39, contains 2.35 acres. A drainage analysis of the site and its offsite contributing watershed areas was conducted for the purpose of estimating the peak rate of stormwater runoff and to subsequently design adequate drainage structures. Two models were compiled, one for the area in its existing (pre-development) condition, and a second for its proposed (post-development) condition. The analysis was conducted using data for the 2 Year – 24 Hour (3.08”), 10 Year – 24 Hour (4.63”), 25 Year – 24 Hour (5.84”), and 50 Year – 24 Hour (6.96”) storm events using the USDA SCS TR-20 method within the HydroCAD Stormwater Modeling System environment. A summary of the existing and proposed conditions peak rates of runoff is as follows:

COMPONENT	PEAK RATE OF RUNOFF (CUBIC FEET/SECOND)							
	2 Year		10 Year		25 Year		50 Year	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Analysis Point #1	0.00	0.00	0.12	0.04	0.56	0.42	1.35	0.94

The drainage design intent for this site is to maintain the post-development peak flow to the pre-development peak flow conditions. This has been accomplished through the use of two infiltration ponds to mitigate the peak flow exiting the site.

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1. Executive Summary
2. Stormwater Checklist
3. Drainage Analysis
 - 3.1. Introduction
 - 3.2. Methodology
 - 3.3. Existing Conditions Analysis
 - 3.4. Proposed Conditions Analysis
 - 3.5. Conclusion
4. Appendices

Appendix I – Existing Conditions Analysis

- 2 Year – 24 Hour Summary Analysis
- 10 Year – 24 Hour Complete Analysis
- 25 Year – 24 Hour Summary Analysis
- 50 Year – 24 Hour Summary Analysis

Appendix II – Proposed Conditions Analysis

- 2 Year – 24 Hour Summary Analysis
- 10 Year – 24 Hour Complete Analysis
- 25 Year - 24 Hour Summary Analysis
- 50 Year – 24 Hour Summary Analysis

- | | |
|--------------|--------------------------------|
| Appendix III | Web Soil Survey Map |
| Appendix IV | Aerial Photograph of Site |
| Appendix VI | Drainage Plans |
| | Pre-Development Drainage Plan |
| | Post-Development Drainage Plan |

1.0 INTRODUCTION

SWD Property Management LLC proposes to construct a 10,640± sq.ft. retail building on Old Dover Road, Rochester, NH. The proposed site will be located on the west side of Old Dover Road. Site improvements include the construction of the proposed 10,640± sq.ft retail building, construction of utilities, parking, and drainage improvements.

2.0 METHODOLOGY

The existing and proposed watersheds were modeled utilizing HydroCad stormwater software, version 9.10. The watersheds were analyzed utilizing the SCS TR-20 methodology for hydrograph development and the TR-55 methodology for Time of Concentration (Tc) determination. The Dynamic-Storage-Indicating method for reach and pond routing was utilized. Type III, 24-hour hydrographs were developed for the 2-year, 10-year, 25-year, and 50-year storm events corresponding to 3.08", 4.63", 5.84", and 6.96" rainfall storm events respectively as directed by the SCS *Technical Paper 40* (TP-40) and the *New Hampshire Stormwater Manual – Volume 2, Appendix A*.

Existing topography and site features were obtained through on-ground topography completed by Jones & Beach Engineers. Existing soil conditions were derived the Natural Resources Conservation Services (NRCS) Web Soil Service Mapping Tool.

3.0 EXISTING CONDITIONS ANALYSIS

The study area consists of the subject property and upstream contributing area. The contributing area contains 2.183 acres on the west side of Old Dover Road. The existing site consists of lightly wooded areas and grass areas.

The existing topography is such that the existing site drainage is one large watershed that drains in a westerly path towards the Cocheco River.

Existing soil conditions were obtained from the NRCS Soils Maps. The existing soils are classified by the NRCS as Windsor Loamy Sand. These soils are classified as Hydrologic Group 'A'.

Given all discharge points converge quickly into one River system, one Analysis Point (AP) has been defined for this project. The watershed in AP-1 collects drainage from the entire project site, and discharges into the Cocheco River.

4.0 PROPOSED CONDITIONS ANALYSIS

SWD Property Management LLC proposes to construct a 10,640± sq.ft. retail building with associated municipal sewer and water and on-site parking.

The proposed site has been designed to sheet flow runoff to the proposed drainage system comprised of surface drainage directed to proposed infiltration basins.

Runoff from the entire site sheet flows west towards the proposed infiltration basins via surface sheet flow. This flow first enters forebays for pretreatment. The flow then discharges to the rear of the property towards the Cocheco River (AP #1).

As the table in the Executive Summary demonstrates, the proposed peak rates of runoff have been maintained at the existing peak rates of runoff for the analyzed storms to the extent practicable.

Treatment is obtained through the use of a sediment forebay, and infiltration basin. Sizing for forebay and infiltration basin are based upon NHDES requirements as described in Volume 2 of the Stormwater Handbook.

5.0 CONCLUSION

This proposed site development will have minimal adverse effect on abutting infrastructures or properties by way of stormwater runoff or siltation. Peak runoff rate from the proposed site has been maintained to the existing conditions peak rate to the extent practicable.

Respectfully Submitted,
JONES & BEACH ENGINEERS, INC.

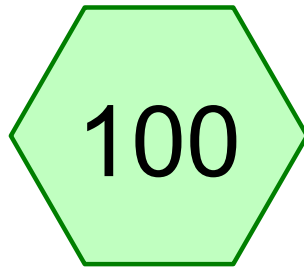
A handwritten signature in black ink, appearing to read 'Erik Poulin', with a stylized flourish at the end.

Erik Poulin, P.E.
Project Engineer

APPENDIX I

EXISTING CONDITIONS DRAINAGE ANALYSIS

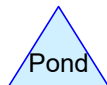
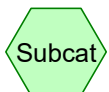
2 YEAR Summary Analysis
10 YEAR Complete Analysis
25 YEAR Summary Analysis
50 YEAR Summary Analysis



EX-WS-100



AP1



Routing Diagram for 23050-EXISTING

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.208	39	GRASS COVER >75%, HSG A (100)
0.078	96	GRAVEL, HSG A (100)
0.067	98	IMPERVIOUS, HSG A (100)
0.830	36	WOODS, HSG A (100)
2.182	42	TOTAL AREA

23050-EXISTING

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.182	HSG A	100
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
2.182		TOTAL AREA

23050-EXISTING*Type III 24-hr 2 YEAR Rainfall=3.08"*

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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

Subcatchment100: EX-WS-100Runoff Area=95,064 sf 3.05% Impervious Runoff Depth>0.01"
Flow Length=358' Tc=10.0 min CN=42 Runoff=0.00 cfs 0.001 af**Link AP1: AP1**Inflow=0.00 cfs 0.001 af
Primary=0.00 cfs 0.001 af**Total Runoff Area = 2.182 ac Runoff Volume = 0.001 af Average Runoff Depth = 0.01"**
96.95% Pervious = 2.116 ac 3.05% Impervious = 0.067 ac

23050-EXISTING*Type III 24-hr 10 YEAR Rainfall=4.63"*

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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

Subcatchment100: EX-WS-100Runoff Area=95,064 sf 3.05% Impervious Runoff Depth>0.22"
Flow Length=358' Tc=10.0 min CN=42 Runoff=0.12 cfs 0.040 af**Link AP1: AP1**Inflow=0.12 cfs 0.040 af
Primary=0.12 cfs 0.040 af**Total Runoff Area = 2.182 ac Runoff Volume = 0.040 af Average Runoff Depth = 0.22"**
96.95% Pervious = 2.116 ac 3.05% Impervious = 0.067 ac

23050-EXISTING

Type III 24-hr 10 YEAR Rainfall=4.63"

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Summary for Subcatchment 100: EX-WS-100

Runoff = 0.12 cfs @ 12.50 hrs, Volume= 0.040 af, Depth> 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YEAR Rainfall=4.63"

	Area (sf)	CN	Description
*	52,614	39	GRASS COVER >75%, HSG A
*	36,150	36	WOODS, HSG A
*	2,898	98	IMPERVIOUS, HSG A
*	3,402	96	GRAVEL, HSG A
	95,064	42	Weighted Average
	92,166		96.95% Pervious Area
	2,898		3.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	100	0.0550	0.25		Sheet Flow, Grass: Short n= 0.150 P2= 3.08"
0.8	68	0.0368	1.34		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
2.0	113	0.0177	0.93		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.5	77	0.2860	2.67		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
10.0	358	Total			

Summary for Link AP1: AP1

Inflow Area = 2.182 ac, 3.05% Impervious, Inflow Depth > 0.22" for 10 YEAR event
 Inflow = 0.12 cfs @ 12.50 hrs, Volume= 0.040 af
 Primary = 0.12 cfs @ 12.50 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

23050-EXISTING*Type III 24-hr 25 YEAR Rainfall=5.84"*

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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

Subcatchment100: EX-WS-100Runoff Area=95,064 sf 3.05% Impervious Runoff Depth>0.56"
Flow Length=358' Tc=10.0 min CN=42 Runoff=0.56 cfs 0.102 af**Link AP1: AP1**Inflow=0.56 cfs 0.102 af
Primary=0.56 cfs 0.102 af**Total Runoff Area = 2.182 ac Runoff Volume = 0.102 af Average Runoff Depth = 0.56"**
96.95% Pervious = 2.116 ac 3.05% Impervious = 0.067 ac

23050-EXISTING*Type III 24-hr 50 YEAR Rainfall=6.96"*

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

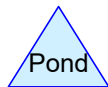
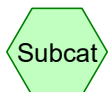
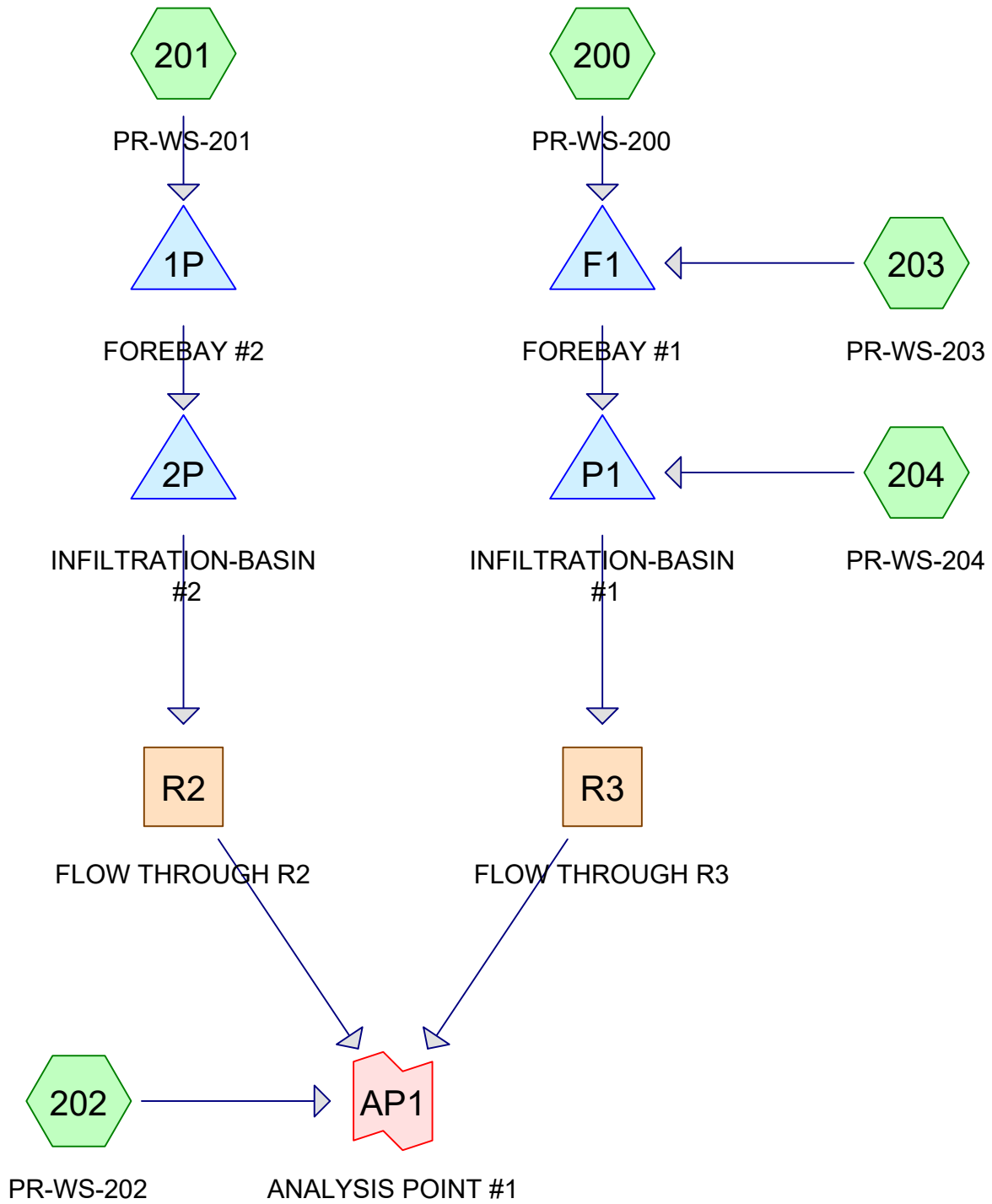
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment100: EX-WS-100Runoff Area=95,064 sf 3.05% Impervious Runoff Depth>0.98"
Flow Length=358' Tc=10.0 min CN=42 Runoff=1.35 cfs 0.177 af**Link AP1: AP1**Inflow=1.35 cfs 0.177 af
Primary=1.35 cfs 0.177 af**Total Runoff Area = 2.182 ac Runoff Volume = 0.177 af Average Runoff Depth = 0.98"**
96.95% Pervious = 2.116 ac 3.05% Impervious = 0.067 ac

APPENDIX II

PROPOSED CONDITIONS DRAINAGE ANALYSIS

2 YEAR Summary Analysis
10 YEAR Complete Analysis
25 YEAR Summary Analysis
50 YEAR Summary Analysis



Routing Diagram for 23050-PROPOSED

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.307	39	GRASS COVER >75%, HSG A (200, 201, 202, 203)
0.330	98	IMPERVIOUS AREA, HSG A (200)
0.304	98	IMPERVIOUS, HSG A (201)
0.241	98	Roofs, HSG A (204)
2.182	63	TOTAL AREA

23050-PROPOSED

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.182	HSG A	200, 201, 202, 203, 204
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
2.182		TOTAL AREA

23050-PROPOSED

Type III 24-hr 2 YEAR Rainfall=3.08"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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

Subcatchment200: PR-WS-200 Runoff Area=21,280 sf 67.50% Impervious Runoff Depth>1.25"
Tc=7.0 min CN=79 Runoff=0.67 cfs 0.051 af

Subcatchment201: PR-WS-201 Runoff Area=21,663 sf 61.18% Impervious Runoff Depth>1.01"
Tc=7.0 min CN=75 Runoff=0.54 cfs 0.042 af

Subcatchment202: PR-WS-202 Runoff Area=31,076 sf 0.00% Impervious Runoff Depth=0.00"
Tc=7.0 min CN=39 Runoff=0.00 cfs 0.000 af

Subcatchment203: PR-WS-203 Runoff Area=10,516 sf 0.00% Impervious Runoff Depth=0.00"
Tc=7.0 min CN=39 Runoff=0.00 cfs 0.000 af

Subcatchment204: PR-WS-204 Runoff Area=10,502 sf 100.00% Impervious Runoff Depth>2.85"
Tc=7.0 min CN=98 Runoff=0.69 cfs 0.057 af

Reach R2: FLOW THROUGH R2 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.022 L=124.0' S=0.1532 '/' Capacity=200.21 cfs Outflow=0.00 cfs 0.000 af

Reach R3: FLOW THROUGH R3 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.022 L=130.0' S=0.1846 '/' Capacity=368.09 cfs Outflow=0.00 cfs 0.000 af

Pond 1P: FOREBAY#2 Peak Elev=94.61' Storage=277 cf Inflow=0.54 cfs 0.042 af
Outflow=0.52 cfs 0.037 af

Pond 2P: INFILTRATION-BASIN#2 Peak Elev=93.79' Storage=492 cf Inflow=0.52 cfs 0.037 af
Discarded=0.08 cfs 0.036 af Primary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.036 af

Pond F1: FOREBAY#1 Peak Elev=91.07' Storage=670 cf Inflow=0.67 cfs 0.051 af
Outflow=0.43 cfs 0.036 af

Pond P1: INFILTRATION-BASIN#1 Peak Elev=90.79' Storage=1,207 cf Inflow=0.82 cfs 0.094 af
Discarded=0.16 cfs 0.093 af Primary=0.00 cfs 0.000 af Outflow=0.16 cfs 0.093 af

Link AP1: ANALYSISPOINT #1 Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 2.182 ac Runoff Volume = 0.150 af Average Runoff Depth = 0.82"
59.89% Pervious = 1.307 ac 40.11% Impervious = 0.875 ac

23050-PROPOSED

Type III 24-hr 10 YEAR Rainfall=4.63"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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

Subcatchment200: PR-WS-200 Runoff Area=21,280 sf 67.50% Impervious Runoff Depth>2.48"
 Tc=7.0 min CN=79 Runoff=1.36 cfs 0.101 af

Subcatchment201: PR-WS-201 Runoff Area=21,663 sf 61.18% Impervious Runoff Depth>2.15"
 Tc=7.0 min CN=75 Runoff=1.19 cfs 0.089 af

Subcatchment202: PR-WS-202 Runoff Area=31,076 sf 0.00% Impervious Runoff Depth>0.13"
 Tc=7.0 min CN=39 Runoff=0.01 cfs 0.008 af

Subcatchment203: PR-WS-203 Runoff Area=10,516 sf 0.00% Impervious Runoff Depth>0.13"
 Tc=7.0 min CN=39 Runoff=0.00 cfs 0.003 af

Subcatchment204: PR-WS-204 Runoff Area=10,502 sf 100.00% Impervious Runoff Depth>4.39"
 Tc=7.0 min CN=98 Runoff=1.04 cfs 0.088 af

Reach R2: FLOW THROUGH R2 Avg. Flow Depth=0.02' Max Vel=1.40 fps Inflow=0.03 cfs 0.001 af
 n=0.022 L=124.0' S=0.1532 '/' Capacity=200.21 cfs Outflow=0.03 cfs 0.001 af

Reach R3: FLOW THROUGH R3 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
 n=0.022 L=130.0' S=0.1846 '/' Capacity=368.09 cfs Outflow=0.00 cfs 0.000 af

Pond 1P: FOREBAY#2 Peak Elev=94.69' Storage=313 cf Inflow=1.19 cfs 0.089 af
 Outflow=1.17 cfs 0.084 af

Pond 2P: INFILTRATION-BASIN#2 Peak Elev=94.53' Storage=1,495 cf Inflow=1.17 cfs 0.084 af
 Discarded=0.14 cfs 0.082 af Primary=0.03 cfs 0.001 af Outflow=0.17 cfs 0.083 af

Pond F1: FOREBAY#1 Peak Elev=91.50' Storage=1,060 cf Inflow=1.36 cfs 0.104 af
 Outflow=1.32 cfs 0.089 af

Pond P1: INFILTRATION-BASIN#1 Peak Elev=91.50' Storage=2,611 cf Inflow=2.34 cfs 0.178 af
 Discarded=0.24 cfs 0.177 af Primary=0.00 cfs 0.000 af Outflow=0.24 cfs 0.177 af

Link AP1: ANALYSISPOINT #1 Inflow=0.04 cfs 0.009 af
 Primary=0.04 cfs 0.009 af

Total Runoff Area = 2.182 ac Runoff Volume = 0.289 af Average Runoff Depth = 1.59"
59.89% Pervious = 1.307 ac 40.11% Impervious = 0.875 ac

23050-PROPOSED

Type III 24-hr 10 YEAR Rainfall=4.63"

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Summary for Subcatchment 200: PR-WS-200

Runoff = 1.36 cfs @ 12.10 hrs, Volume= 0.101 af, Depth> 2.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YEAR Rainfall=4.63"

	Area (sf)	CN	Description
*	14,365	98	IMPERVIOUS AREA, HSG A
*	6,915	39	GRASS COVER >75%, HSG A
	21,280	79	Weighted Average
	6,915		32.50% Pervious Area
	14,365		67.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					Direct Entry,

Summary for Subcatchment 201: PR-WS-201

Runoff = 1.19 cfs @ 12.11 hrs, Volume= 0.089 af, Depth> 2.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YEAR Rainfall=4.63"

	Area (sf)	CN	Description
*	13,253	98	IMPERVIOUS, HSG A
*	8,410	39	GRASS COVER >75%, HSG A
	21,663	75	Weighted Average
	8,410		38.82% Pervious Area
	13,253		61.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					Direct Entry,

Summary for Subcatchment 202: PR-WS-202

Runoff = 0.01 cfs @ 14.55 hrs, Volume= 0.008 af, Depth> 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YEAR Rainfall=4.63"

	Area (sf)	CN	Description
*	31,076	39	GRASS COVER >75%, HSG A
	31,076		100.00% Pervious Area

23050-PROPOSED

Type III 24-hr 10 YEAR Rainfall=4.63"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					Direct Entry,

Summary for Subcatchment 203: PR-WS-203

Runoff = 0.00 cfs @ 14.55 hrs, Volume= 0.003 af, Depth> 0.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10 YEAR Rainfall=4.63"

Area (sf)	CN	Description
* 10,516	39	GRASS COVER >75%, HSG A
10,516		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					Direct Entry,

Summary for Subcatchment 204: PR-WS-204

Runoff = 1.04 cfs @ 12.10 hrs, Volume= 0.088 af, Depth> 4.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10 YEAR Rainfall=4.63"

Area (sf)	CN	Description
10,502	98	Roofs, HSG A
10,502		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					Direct Entry,

Summary for Reach R2: FLOW THROUGH R2

Inflow Area = 0.497 ac, 61.18% Impervious, Inflow Depth = 0.03" for 10 YEAR event
 Inflow = 0.03 cfs @ 12.79 hrs, Volume= 0.001 af
 Outflow = 0.03 cfs @ 12.81 hrs, Volume= 0.001 af, Atten= 0%, Lag= 1.2 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Max. Velocity= 1.40 fps, Min. Travel Time= 1.5 min
 Avg. Velocity = 1.20 fps, Avg. Travel Time= 1.7 min

Peak Storage= 3 cf @ 12.81 hrs
 Average Depth at Peak Storage= 0.02'
 Bank-Full Depth= 1.00' Flow Area= 10.0 sf, Capacity= 200.21 cfs

23050-PROPOSED

Type III 24-hr 10 YEAR Rainfall=4.63"

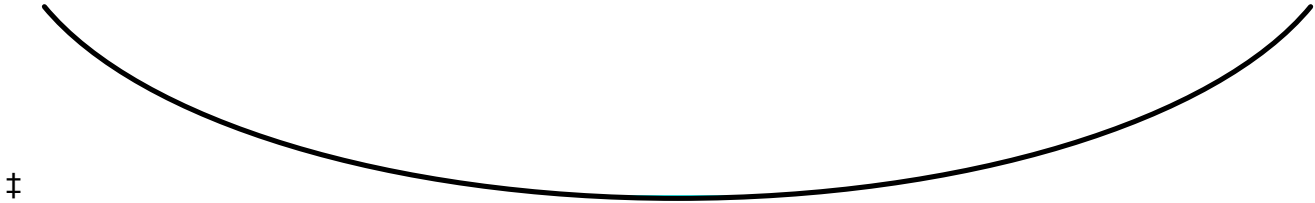
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15.00' x 1.00' deep Parabolic Channel, n= 0.022 Earth, clean & straight
Length= 124.0' Slope= 0.1532 '/'
Inlet Invert= 87.00', Outlet Invert= 68.00'



Summary for Reach R3: FLOW THROUGH R3

Inflow Area = 0.971 ac, 58.79% Impervious, Inflow Depth = 0.00" for 10 YEAR event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 1.00' Flow Area= 16.7 sf, Capacity= 368.09 cfs

25.00' x 1.00' deep Parabolic Channel, n= 0.022 Earth, clean & straight
Length= 130.0' Slope= 0.1846 '/'
Inlet Invert= 92.00', Outlet Invert= 68.00'



Summary for Pond 1P: FOREBAY #2

Inflow Area = 0.497 ac, 61.18% Impervious, Inflow Depth > 2.15" for 10 YEAR event
Inflow = 1.19 cfs @ 12.11 hrs, Volume= 0.089 af
Outflow = 1.17 cfs @ 12.12 hrs, Volume= 0.084 af, Atten= 2%, Lag= 0.9 min
Primary = 1.17 cfs @ 12.12 hrs, Volume= 0.084 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 94.69' @ 12.12 hrs Surf.Area= 467 sf Storage= 313 cf

Plug-Flow detention time= 44.6 min calculated for 0.084 af (94% of inflow)
Center-of-Mass det. time= 13.0 min (851.9 - 838.8)

23050-PROPOSED

Type III 24-hr 10 YEAR Rainfall=4.63"

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Volume	Invert	Avail.Storage	Storage Description			
#1	93.00'	480 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
93.00	5	8.5	0	0	5	
94.00	214	133.0	84	84	1,409	
95.00	613	149.0	396	480	1,794	

Device	Routing	Invert	Outlet Devices											
#1	Primary	94.50'	6.0' long x 4.0' 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)	2.38	2.54	2.69	2.68	2.67	2.67	2.65	2.66	2.66		
				2.68	2.72	2.73	2.76	2.79	2.88	3.07	3.32			

Primary OutFlow Max=1.13 cfs @ 12.12 hrs HW=94.68' TW=93.95' (Dynamic Tailwater)

↑1=Broad-Crested Rectangular Weir(Weir Controls 1.13 cfs @ 1.02 fps)

Summary for Pond 2P: INFILTRATION-BASIN #2

[58] Hint: Peaked 0.53' above defined flood level

Inflow Area = 0.497 ac, 61.18% Impervious, Inflow Depth > 2.02" for 10 YEAR event
 Inflow = 1.17 cfs @ 12.12 hrs, Volume= 0.084 af
 Outflow = 0.17 cfs @ 12.79 hrs, Volume= 0.083 af, Atten= 86%, Lag= 39.8 min
 Discarded = 0.14 cfs @ 12.79 hrs, Volume= 0.082 af
 Primary = 0.03 cfs @ 12.79 hrs, Volume= 0.001 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 94.53' @ 12.79 hrs Surf.Area= 1,695 sf Storage= 1,495 cf
 Flood Elev= 94.00' Surf.Area= 1,237 sf Storage= 726 cf

Plug-Flow detention time= 131.4 min calculated for 0.083 af (99% of inflow)
 Center-of-Mass det. time= 127.4 min (979.2 - 851.9)

Volume	Invert	Avail.Storage	Storage Description			
#1	93.00'	2,407 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)	
93.00	316	209.0	0	0	316	
94.00	1,237	311.0	726	726	4,545	
95.00	2,168	326.0	1,681	2,407	5,369	

Device	Routing	Invert	Outlet Devices											
#1	Device 2	94.30'	80.0 deg Sharp-Crested Vee/Trap Weir Cv= 2.51 (C= 3.14)											
#2	Device 3	94.50'	4.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)											
#3	Primary	94.50'	10.0' long x 6.0' breadth Emergency Spillway											
			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				

23050-PROPOSED

Type III 24-hr 10 YEAR Rainfall=4.63"

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Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65
 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
 #4 Discarded 93.00' **3.000 in/hr Exfiltration over Surface area**
 Conductivity to Groundwater Elevation = 88.00' Phase-In= 0.10'

Discarded OutFlow Max=0.14 cfs @ 12.79 hrs HW=94.53' (Free Discharge)↑**4=Exfiltration** (Controls 0.14 cfs)**Primary OutFlow** Max=0.03 cfs @ 12.79 hrs HW=94.53' TW=87.02' (Dynamic Tailwater)↑**3=Emergency Spillway** (Passes 0.03 cfs of 0.10 cfs potential flow)↑**2=Sharp-Crested Rectangular Weir** (Passes 0.03 cfs of 0.06 cfs potential flow)↑**1=Sharp-Crested Vee/Trap Weir** (Weir Controls 0.03 cfs @ 0.72 fps)**Summary for Pond F1: FOREBAY #1**

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=44)

Inflow Area = 0.730 ac, 45.18% Impervious, Inflow Depth > 1.71" for 10 YEAR event
 Inflow = 1.36 cfs @ 12.10 hrs, Volume= 0.104 af
 Outflow = 1.32 cfs @ 12.12 hrs, Volume= 0.089 af, Atten= 3%, Lag= 1.1 min
 Primary = 1.32 cfs @ 12.12 hrs, Volume= 0.089 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Peak Elev= 91.50' @ 13.05 hrs Surf.Area= 993 sf Storage= 1,060 cf

Plug-Flow detention time= 109.4 min calculated for 0.089 af (86% of inflow)

Center-of-Mass det. time= 47.9 min (881.4 - 833.5)

Volume	Invert	Avail.Storage	Storage Description
#1	90.00'	1,612 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
90.00	455	91.0	0	0	455
92.00	1,218	167.0	1,612	1,612	2,037

Device	Routing	Invert	Outlet Devices
#1	Primary	91.00'	10.0' long x 7.0' 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) 2.40 2.52 2.70 2.68 2.68 2.67 2.66 2.65 2.65 2.65 2.66 2.65 2.66 2.68 2.70 2.73 2.78

Primary OutFlow Max=1.28 cfs @ 12.12 hrs HW=91.14' TW=90.91' (Dynamic Tailwater)↑**1=Broad-Crested Rectangular Weir** (Weir Controls 1.28 cfs @ 0.90 fps)

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Summary for Pond P1: INFILTRATION-BASIN #1

[80] Warning: Exceeded Pond F1 by 0.09' @ 12.25 hrs (2.43 cfs 0.139 af)

Inflow Area = 0.971 ac, 58.79% Impervious, Inflow Depth > 2.19" for 10 YEAR event
 Inflow = 2.34 cfs @ 12.11 hrs, Volume= 0.178 af
 Outflow = 0.24 cfs @ 13.00 hrs, Volume= 0.177 af, Atten= 90%, Lag= 53.2 min
 Discarded = 0.24 cfs @ 13.00 hrs, Volume= 0.177 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 91.50' @ 13.00 hrs Surf.Area= 2,214 sf Storage= 2,611 cf
 Flood Elev= 94.00' Surf.Area= 5,895 sf Storage= 12,044 cf

Plug-Flow detention time= 121.3 min calculated for 0.177 af (99% of inflow)
 Center-of-Mass det. time= 118.0 min (934.0 - 816.0)

Volume	Invert	Avail.Storage	Storage Description
#1	90.00'	12,044 cf	Custom Stage Data (Irregular) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
90.00	1,306	189.0	0	0	1,306
92.00	2,570	229.0	3,805	3,805	2,701
94.00	5,895	397.0	8,238	12,044	11,093

Device	Routing	Invert	Outlet Devices
#1	Device 2	93.50'	10.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s) 0.5' Crest Height
#2	Device 3	91.25'	45.0 deg x 1.75' rise Sharp-Crested Vee/Trap Weir Cv= 2.56 (C= 3.20)
#3	Primary	93.50'	10.0' long x 6.0' breadth EMERGENCY SPILLWAY 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) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83
#4	Discarded	90.00'	3.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 88.00' Phase-In= 0.10'

Discarded OutFlow Max=0.24 cfs @ 13.00 hrs HW=91.50' (Free Discharge)↑ **4=Exfiltration** (Controls 0.24 cfs)**Primary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=90.00' TW=92.00' (Dynamic Tailwater)↑ **3=EMERGENCY SPILLWAY** (Controls 0.00 cfs)↑ **2=Sharp-Crested Vee/Trap Weir** (Controls 0.00 cfs)↑ **1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

23050-PROPOSED*Type III 24-hr 10 YEAR Rainfall=4.63"*

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Summary for Link AP1: ANALYSIS POINT #1

Inflow Area = 2.182 ac, 40.11% Impervious, Inflow Depth > 0.05" for 10 YEAR event

Inflow = 0.04 cfs @ 12.85 hrs, Volume= 0.009 af

Primary = 0.04 cfs @ 12.85 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

23050-PROPOSED

Type III 24-hr 25 YEAR Rainfall=5.84"

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Page 1

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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

Subcatchment200: PR-WS-200 Runoff Area=21,280 sf 67.50% Impervious Runoff Depth>3.53"
Tc=7.0 min CN=79 Runoff=1.93 cfs 0.144 af

Subcatchment201: PR-WS-201 Runoff Area=21,663 sf 61.18% Impervious Runoff Depth>3.14"
Tc=7.0 min CN=75 Runoff=1.75 cfs 0.130 af

Subcatchment202: PR-WS-202 Runoff Area=31,076 sf 0.00% Impervious Runoff Depth>0.40"
Tc=7.0 min CN=39 Runoff=0.11 cfs 0.024 af

Subcatchment203: PR-WS-203 Runoff Area=10,516 sf 0.00% Impervious Runoff Depth>0.40"
Tc=7.0 min CN=39 Runoff=0.04 cfs 0.008 af

Subcatchment204: PR-WS-204 Runoff Area=10,502 sf 100.00% Impervious Runoff Depth>5.60"
Tc=7.0 min CN=98 Runoff=1.32 cfs 0.112 af

Reach R2: FLOW THROUGH R2 Avg. Flow Depth=0.05' Max Vel=2.78 fps Inflow=0.32 cfs 0.024 af
n=0.022 L=124.0' S=0.1532 '/' Capacity=200.21 cfs Outflow=0.32 cfs 0.024 af

Reach R3: FLOW THROUGH R3 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
n=0.022 L=130.0' S=0.1846 '/' Capacity=368.09 cfs Outflow=0.00 cfs 0.000 af

Pond 1P: FOREBAY#2 Peak Elev=94.78' Storage=359 cf Inflow=1.75 cfs 0.130 af
Outflow=1.73 cfs 0.125 af

Pond 2P: INFILTRATION-BASIN#2 Peak Elev=94.78' Storage=1,956 cf Inflow=1.73 cfs 0.125 af
Discarded=0.16 cfs 0.098 af Primary=0.32 cfs 0.024 af Outflow=0.48 cfs 0.123 af

Pond F1: FOREBAY#1 Peak Elev=91.98' Storage=1,583 cf Inflow=1.93 cfs 0.152 af
Outflow=1.85 cfs 0.137 af

Pond P1: INFILTRATION-BASIN#1 Peak Elev=91.98' Storage=3,746 cf Inflow=3.16 cfs 0.249 af
Discarded=0.30 cfs 0.244 af Primary=0.00 cfs 0.000 af Outflow=0.30 cfs 0.244 af

Link AP1: ANALYSISPOINT #1 Inflow=0.42 cfs 0.048 af
Primary=0.42 cfs 0.048 af

Total Runoff Area = 2.182 ac Runoff Volume = 0.418 af Average Runoff Depth = 2.30"
59.89% Pervious = 1.307 ac 40.11% Impervious = 0.875 ac

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Type III 24-hr 50 YEAR Rainfall=6.96"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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

Subcatchment200: PR-WS-200 Runoff Area=21,280 sf 67.50% Impervious Runoff Depth>4.54"
 Tc=7.0 min CN=79 Runoff=2.47 cfs 0.185 af

Subcatchment201: PR-WS-201 Runoff Area=21,663 sf 61.18% Impervious Runoff Depth>4.11"
 Tc=7.0 min CN=75 Runoff=2.29 cfs 0.170 af

Subcatchment202: PR-WS-202 Runoff Area=31,076 sf 0.00% Impervious Runoff Depth>0.75"
 Tc=7.0 min CN=39 Runoff=0.28 cfs 0.045 af

Subcatchment203: PR-WS-203 Runoff Area=10,516 sf 0.00% Impervious Runoff Depth>0.75"
 Tc=7.0 min CN=39 Runoff=0.09 cfs 0.015 af

Subcatchment204: PR-WS-204 Runoff Area=10,502 sf 100.00% Impervious Runoff Depth>6.72"
 Tc=7.0 min CN=98 Runoff=1.57 cfs 0.135 af

Reach R2: FLOW THROUGH R2 Avg. Flow Depth=0.07' Max Vel=3.51 fps Inflow=0.68 cfs 0.050 af
 n=0.022 L=124.0' S=0.1532 '/' Capacity=200.21 cfs Outflow=0.68 cfs 0.050 af

Reach R3: FLOW THROUGH R3 Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.00 cfs 0.000 af
 n=0.022 L=130.0' S=0.1846 '/' Capacity=368.09 cfs Outflow=0.00 cfs 0.000 af

Pond 1P: FOREBAY#2 Peak Elev=94.95' Storage=448 cf Inflow=2.29 cfs 0.170 af
 Outflow=2.25 cfs 0.165 af

Pond 2P: INFILTRATION-BASIN#2 Peak Elev=94.94' Storage=2,284 cf Inflow=2.25 cfs 0.165 af
 Discarded=0.18 cfs 0.110 af Primary=0.68 cfs 0.050 af Outflow=0.86 cfs 0.161 af

Pond F1: FOREBAY#1 Peak Elev=92.51' Storage=1,612 cf Inflow=2.54 cfs 0.200 af
 Outflow=1.51 cfs 0.185 af

Pond P1: INFILTRATION-BASIN#1 Peak Elev=92.51' Storage=5,282 cf Inflow=3.05 cfs 0.319 af
 Discarded=0.39 cfs 0.301 af Primary=0.00 cfs 0.000 af Outflow=0.39 cfs 0.301 af

Link AP1: ANALYSISPOINT #1 Inflow=0.94 cfs 0.095 af
 Primary=0.94 cfs 0.095 af

Total Runoff Area = 2.182 ac Runoff Volume = 0.550 af Average Runoff Depth = 3.03"
59.89% Pervious = 1.307 ac 40.11% Impervious = 0.875 ac

APPENDIX III

Web Soil Survey


Custom Soil Resource Report Soil Map



Custom Soil Resource Report


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)


Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit


 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole


 Slide or Slip

 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

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 24, Aug 22, 2023

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

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

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.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BzB	Buxton silt loam, 3 to 8 percent slopes	0.2	4.8%
Gv	Gravel and borrow pits	2.1	43.2%
W	Water	1.0	19.8%
WdA	Windsor loamy sand, 0 to 3 percent slopes	1.6	32.3%
Totals for Area of Interest		4.9	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Strafford County, New Hampshire

BzB—Buxton silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d6p
Elevation: 0 to 260 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Buxton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Buxton

Setting

Parent material: Glaciomarine

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 28 inches: silty clay loam
H3 - 28 to 43 inches: silty clay

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C/D
Ecological site: F145XY006CT - Semi-Rich Moist Lake Plain
Hydric soil rating: No

Minor Components

Elmwood

Percent of map unit: 10 percent
Hydric soil rating: No

Not named

Percent of map unit: 5 percent
Hydric soil rating: No

Gv—Gravel and borrow pits

Map Unit Setting

National map unit symbol: 9d7c

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: Not prime farmland

Map Unit Composition

Gravel and borrow pits: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gravel And Borrow Pits

Typical profile

H1 - 0 to 6 inches: extremely gravelly sand

H2 - 6 to 60 inches: extremely gravelly sand

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8s

Hydric soil rating: Unranked

W—Water

Map Unit Composition

Water (less than 40 acres): 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

WdA—Windsor loamy sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2svkg

Elevation: 0 to 990 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days

Farmland classification: Farmland of local importance

Map Unit Composition

Windsor, loamy sand, and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor, Loamy Sand

Setting

Landform: Dunes, deltas, outwash terraces, outwash plains

Landform position (three-dimensional): Tread, riser

Down-slope shape: Convex, linear

Across-slope shape: Convex, linear

Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

O - 0 to 1 inches: moderately decomposed plant material

A - 1 to 3 inches: loamy sand

Bw - 3 to 25 inches: loamy sand

C - 25 to 65 inches: sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Excessively drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s

Hydrologic Soil Group: A

Ecological site: F144AY022MA - Dry Outwash

Hydric soil rating: No

Minor Components

Deerfield, loamy sand

Percent of map unit: 10 percent

Landform: Outwash plains, terraces, deltas

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread, tal

Down-slope shape: Linear

Across-slope shape: Linear

Hydric soil rating: No

Hinckley, loamy sand

Percent of map unit: 5 percent

Landform: Outwash plains, eskers, kames, deltas

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Head slope, nose slope, side slope, crest, rise

Down-slope shape: Convex

Custom Soil Resource Report

Across-slope shape: Linear, convex
Hydric soil rating: No

APPENDIX IV

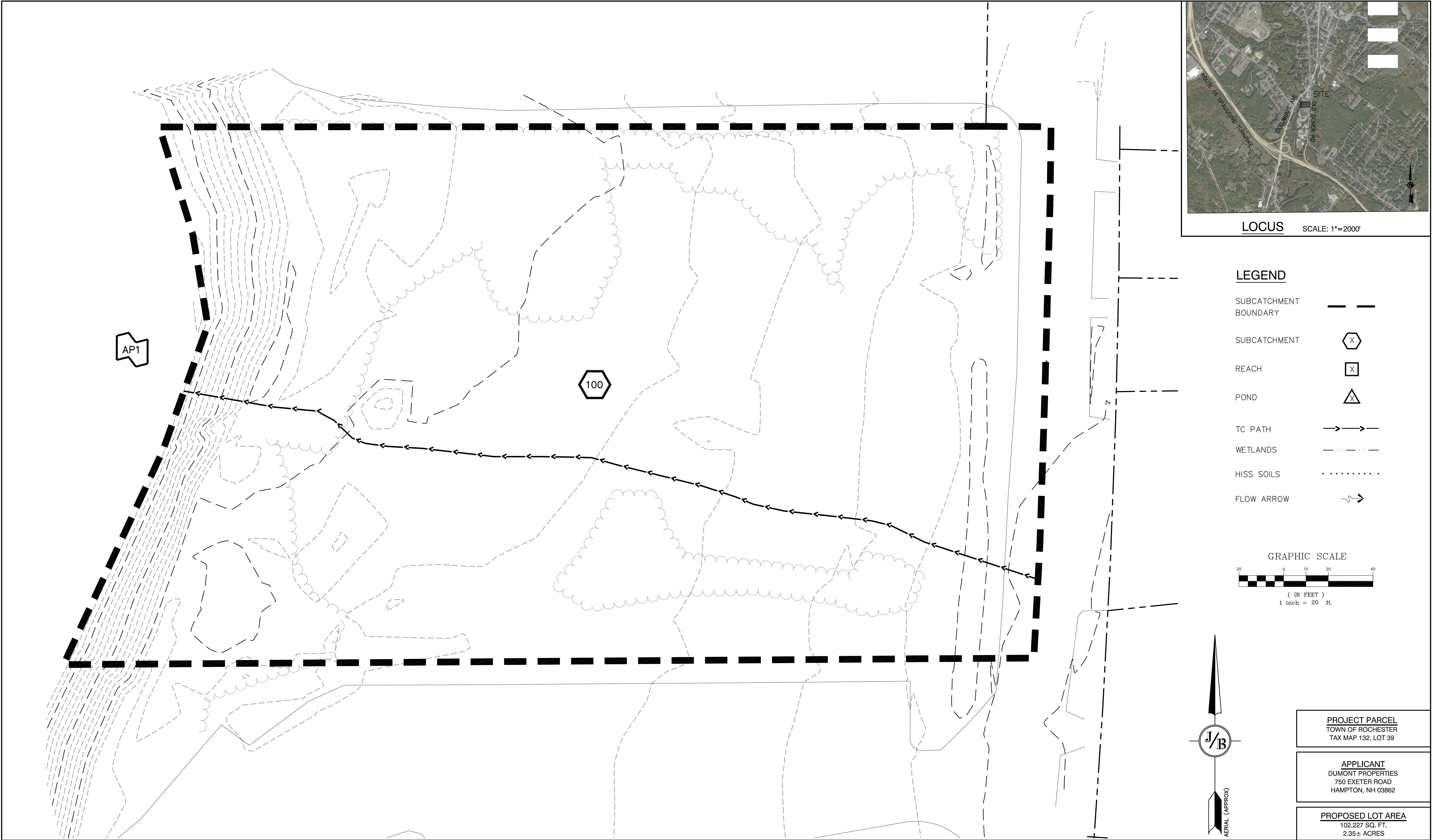
Aerial Photograph of Site



SITE

APPENDIX V

Drainage Plans:
Pre-Development Drainage Plan
Post-Development Drainage Plan



Design: WGM	Draft: GDR	Date: 1/15/24
Checked: WGM	Scale: AS NOTED	Project No.: 23050
Drawing Name: 23050-WATERSHED.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.		

2	02/01/24	ISSUED FOR DESIGN REVIEW	EMP
1	5/15/23	REVISED ZONING INFORMATION	GDR
0	3/24/23	ISSUED FOR REVIEW	GDR
REV.	DATE	REVISION	BY

J/B

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Stratham, NH 03885

Designed and Produced in NH
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603-772-4746

Plan Name:	EXISTING WATERSHED PLAN
Project:	RETAIL CONCEPT 25 OLD DOVER RD, ROCHESTER, NH
Owner of Record:	SWD PROPERTY MANAGEMENT LLC PO BOX 716, EXETER, NH 03833-0716

DRAWING No.

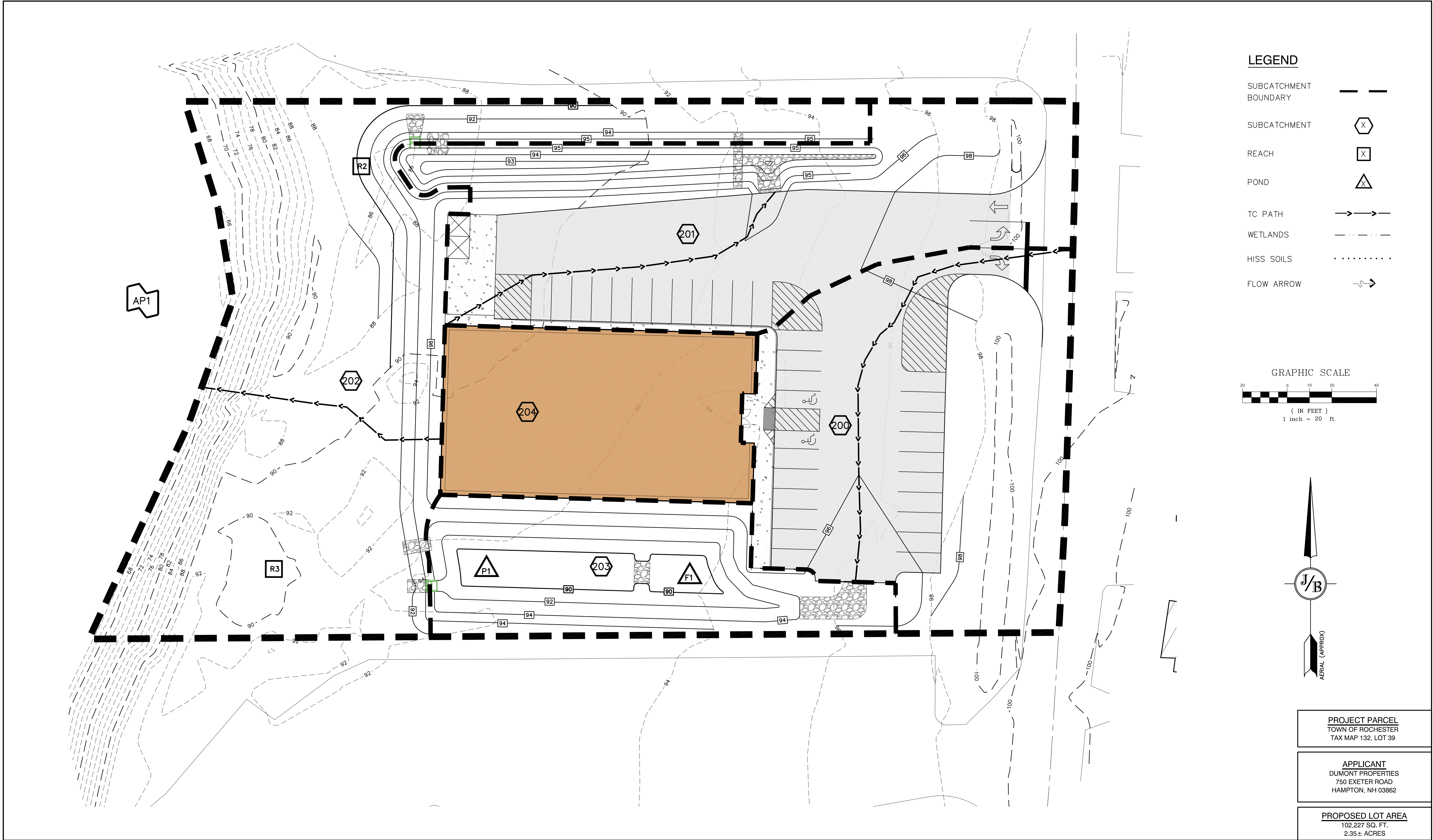
W1

SHEET 1 OF 2
JBE PROJECT NO. 23050

PROJECT PARCEL
TOWN OF ROCHESTER
TAX MAP 132, LOT 39

APPLICANT
DUMONT PROPERTIES
750 EXETER ROAD
HAMPTON, NH 03862

PROPOSED LOT AREA
102,227 SQ. FT.
2.35± ACRES



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DRAWING No.

W2

SHEET 2 OF 2
JBE PROJECT NO. 23050