CITY OF DOVER

DOVER PLANNING BOARD – AGENDA

Meeting Type:	Regular Meeting
Meeting Location:	Council Chambers, City Hall, 288 Central Avenue, Dover, NH 03820
Meeting Date:	**Tuesday, January 28, 2025**
Meeting Time:	**7:00 pm**

1. **CITIZENS' FORUM**
2. **APPROVAL OF THE PRIOR MINUTES**
   - January 11, 2025 Special Meeting Minutes and January 14, 2025 Regular Meeting Minutes
3. **OLD BUSINESS**
4. **NEW BUSINESS**

   A. Consideration and acceptance of a Lot Line Adjustment for Robert S. Mairs Revocable Trust, George Maglaras & Robert S, Mairs Trustee, & George Maglaras, Assessor's Map 24, Lots 141, 140 & 139, zoned CWD, located at 5, 11, and 31 Cocheco Street. *(LOTA-2024-0013)

   B. Consideration and acceptance of Transfer of Development Rights for 5 Sherman Street, LLC, Assessor's Map 19, Lot 8, zoned R-12, located at 103 Court Street. (Proposal is to purchase four (4) units through TDR.) *(TRAN-2024-0011)

   C. Consideration and acceptance of Site Review for 5 Sherman Street, LLC, Assessor's Map 19, Lot 8, zoned R-12, located at 103 Court Street. (Proposal is to maintain an existing single-family dwelling, construct a two-family dwelling that is deed-restricted to Fair Market Rent, and construct four (4) new size-restricted single-family homes for a total of seven (7) dwelling units. *(SITE-2024-0012)

   D. Consideration and acceptance of a Minor Subdivision for Allen & Major Associates, Inc., (Owners: 114 Silver Street Group, LLC), Assessor's Map 12, Lot 148, zoned HR, located at 114 Silver Street. (Proposal is to subdivide the parcel to make one (1) new lot for a total of two (2) lots.) *(SUBM-2024-0001)

   E. Consideration and acceptance of a Conditional Use Permit for Allen & Major Associates, Inc., (Owners: 114 Silver Street Group, LLC), Assessor's Map 12, Lot 148, zoned HR, located at 114 Silver Street. (Proposal is to convert a single-family residential home to a 4-unit residential dwelling within the Heritage Residential Zoning District.) *(COND-2024-0011)

   F. Consideration and acceptance of a Conditional Use Permit for Allen & Major Associates, Inc., (Owners: 114 Silver Street Group, LLC), Assessor's Map 12, Lot 148-1, zoned HR, located at 114 Silver Street. (Proposal is to construct a new 4-unit, residential dwelling in the Heritage Residential Zoning District.) *(COND-2024-0012)

   G. Consideration and acceptance of a Site Review for Allen & Major Associates, Inc., (Owners: 114 Silver Street Group, LLC), Assessor's Map 12, Lot 148 & 148-1 zoned HR, located at 114 Silver Street. (Proposal is to convert an existing single-family home into a 4-unit residential dwelling on the parent lot and to construct a 3-story, 4-unit residential dwelling on the proposed subdivided lot with eight (8) associated parking spaces for each building.) *(SITE-2024-0006)

5. **STAFF COMMENT**
6. **MEMBER COMMENTS**
7. **ADJOURNMENT**

*Indicates that if the application is accepted for discussion, the public hearing will be held the same evening. Note that some hearings will be continued from one meeting to another and some may be postponed. Since this is only a partial description of the proposal and may change, persons with questions or wishing to see the plans are invited to visit the Planning Office, Monday through Thursday from 8:30 am to 5:30 pm and Friday 8:30 am to 4:00 pm or email Dover-Planning@dover.nh.gov. You may also view materials at www.dover.nh.gov. Follow us on Twitter @DoverNHPlanning and find us on Facebook at https://www.facebook.com/DoverNHPlanning. The public is encouraged to leave comments in advance by emailing Dover-Planning@dover.nh.gov, or mailing written comments to Planning Board, Dover City Hall, 288 Central Ave., Dover, NH 03820. Messages must be received no later than 4 p.m. the day of the meeting and should identify the name and Dover address of the person leaving the message or providing the comment.

CITY OF DOVER

DOVER PLANNING BOARD – MINUTES

Meeting Type:	Special Meeting
Meeting Location:	Council Chambers, City Hall, 288 Central Ave, Dover, NH.
Meeting Date:	**Saturday, January 11, 2025**
Meeting Time:	**9:00 am**

Members Present: Ken Mavrogeorge, George DeBoer, Jeff Sanborn (Alternate), Doug Glennon, Fergus Cullen (Councilor), Melina Gambino
Members Not Present (excused): Gina Cruikshank (Chair), Kyle Pimental, Tom Clark, and Mallory Strange (Alternate)
Staff Present: Donna Benton, Planning Director

G.DeBoer called the meeting to order at 9am.

SITE WALK

Was called to order at 9am. The group went over the plans on-site, walked through the site locating at flags indicating centerline of driveway, and corners of building, etc. Discussion ensued about locations, plans, other design options, setbacks, green space, etc.

ADJOURNMENT

The site walk adjourned at 9:34 am.

CITY OF DOVER

DOVER PLANNING BOARD – MINUTES

Meeting Type:	Regular Meeting
Meeting Location:	Council Chambers, City Hall, 288 Central Ave, Dover, NH.
Meeting Date:	**Tuesday, January 14, 2025**
Meeting Time:	**7:00 pm**

Members Present: Gina Cruikshank (Chair), Ken Mavrogeorge, Tom Clark, Melina Gambino, Doug Glennon, George DeBoer, Fergus Cullen (Councilor), Mallory Strange (Alternate), Jeff Sanborn (Alternate)
Members Not Present (excused): Kyle Pimental
Staff Present: Donna Benton, Planning Director, Dave Carpenter, Community Development Planner, Erin Bassegio, City Planner, Paul Crouser, Zoning Administrator, Lexi Merchant, Resilience Coordinator and Makayla Edgecomb, Assistant City Planner.

Gina Cruikshank (Chair) called the meeting to order at 7:07p.m. and noted that M. Strange would sit in for K. Pimental, M. Gambino would Vice Chair, and Jeff Sanborn would sit in for the vacant seat.

1. CITIZENS' FORUM

Citizens Forum Open

Hilary Hamer, 91 Court St asked the board to create clearer and stricter guidelines for the TDR program. She expounded on precedence.

Scott Torr, 217 Durham Rd discussed the project on Grapevine Dr that's before TRC. The designation was changed to residential/ commercial overlay district. He described the phased proposals that were originally proposed. The final phases were never built. Last year one of the proposals was changed from commercial to residential and the latest proposal this year is to add a drive-thru McDonald's open 24hrs a day. He is opposed to this proposal and described the impacts to quality of life for the neighborhood, traffic, noise, trash and diminution of value. He requested the board deny the application and waiver request for additional parking and highlighted the police activity at an existing McDonald's in town.

Citizens Forum Closed

2. APPROVAL OF THE PRIOR MINUTES

- December 10, 2024 Regular Meeting Minutes

Motion: D. Glennon moved to approve the regular meeting minutes of December 10, 2024 as submitted. Seconded by: T. Clark. Vote: All in favor with F. Cullen abstaining

3. OLD BUSINESS

4. NEW BUSINESS

A. Election of Officers

T. Clark nominated G. Cruikshank as Chair. M. Gambino seconded.
T. Clark nominated D. Glennon as Vice Chair. K. Mavrogeorge seconded.

Motion: F. Cullen moved that the nominations be closed and the staff cast one ballot (based upon those nominations). Seconded by: T. Clark.
Vote: U/A

B. Discussion and possible adoption of the City-wide Conservation and Open Space Chapter update*

D. Benton noted an overview of the chapter was given at the meeting earlier tonight and E. Bassegio, City Planner, gave a brief overview to the Planning Board of the Conservation and Open Space Chapter and the process taken.
She highlighted definitions, the conservation vision, the community and steering committee input, and results and priorities.
M. Gambino and G. DeBoer gave comments and asked some clarifying questions which were addressed and discussed.

DRAFT

Opened Public Hearing
No one spoke
Closed public hearing

Motion: D. Glennon moved to adopt the Conservation and Open Space chapter update. Seconded by: K. Mavrogeorge. Vote: U/A

C. Natural Resource Inventory Update*

D. Benton explained the grant that was received from PREPA and used by SRPC for a Natural Resource Inventory for Dover which was conducted and whose findings were used in the Conservation and Open Space chapter update.
Opened Public Hearing
No one spoke
Closed or table public hearing

Motion: M. Gambino moved to adopt the Natural Resource Inventory update. Seconded by: T. Clark. Vote: U/A

D. Discussion of Land Use Amendments/Goal Setting

D Benton handed out a list of potential amendment topics that staff has compiled based on board feedback, public feedback, or RSA changes. Prior to drafting amendment language, the list is presented to the board for discussion and feedback.

Board members gave their feedback as each item on the list was reviewed.
P. Crouser, Zoning Administrator gave additional details about a particular topic relating to ADUs.

The board discussed their opinions on the TDR program and feedback on a suggestion of having a workshop specifically on that topic to receive feedback from developers and the public, and to have board discussion.

Having a broader discussion on ADUs was also suggested to clarify what's allowed, what's suggested for amending and what Dover's goals are regarding ADUs.

Discussion occurred on board member preference for TDR applicants coming to the board with full plans only or being allowed to come with a design idea and receive feedback or TDR approval/endorsement before having full plans drawn up and reviewed by TRC. The Board understood the desire to have TDR reviews with a more conceptual design before the rest of the engineering occurred as long as the total number of units could be diminished if the engineering or design wasn't meeting the regulations.

5. STAFF COMMENT

- Housing Academy being put on through the state. Let staff know if you are interested in attending.
- Handbooks for individual boards will be put together and handed out.

6. MEMBER COMMENTS

F. Cullen noted that the site visit was helpful on Saturday, was only the second held in three years, and suggested the Board do more site visits.

7. ADJOURNMENT

Motion: G. DeBoer moved to adjourn at 8:07pm. Seconded by K. Mavrogeorge. Vote: U/A

DRAFT

From: Scott Ablett <papascott11@yahoo.com>
Sent: Friday, January 17, 2025 3:28 PM
To: Planning Board - All <PlanningBoard-All@dover.nh.gov>
Subject: TDR

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

Stop abusing TDR. We need leaders in this city who won't abuse their power for personal gain. Or break the law. Spending is out of control. Be responsible. Don't be like Fergus.

Please consider conserving our natural resources before printing this e-mail and/or any attachments.

This electronic message and any attachments may contain information that is confidential and/or legally privileged in accordance with NH RSA 91-A and other applicable laws or regulations. It is intended only for the use of the person and/or entity identified as recipient(s) in the message. If you are not an intended recipient of this message, please notify the sender immediately and delete the material. Do not print, deliver, distribute or copy this message, and do not disclose its contents or take any action in reliance on the information it contains unless authorized to do so. Thank you.

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #LOTA-2024-0013

Application Type:	Lot Line Adjustment
Applicant(s):	Robert S. Mairs Revocable Living Trust (5 & 11 Cocheco St.) and George Maglaras (31 Cocheco St.)
Owner(s):	Robert S. Mairs Revocable Living Trust (5 & 11 Cocheco St.) and George Maglaras (31 Cocheco St.)
Location:	5 Cocheco St. (Map 24, Lot 141); 11 Cocheco St. (Map 24, Lot 140); and 31 Cocheco St. (Map 24, Lot 139)
Meeting Date:	Tuesday, January 28, 2025

INTENT: Proposal is to revise the lot lines between abutting properties located at 5 Cocheco St. (Map 24, Lot 141), 11 Cocheco St. (Map 24, Lot 140), and 31 Cocheco St. (Map 24, Lot 139) dissolving lot 140 and adding ±3,889 s.f. to lot 139 and ±4,176 s.f. to lot 141.

LOTS/UNITS PROPOSED: Two (2) Lots

AGENDA ITEM #: 4-A

FILE: LOTA-2024-0013

SQUARE FOOTAGE:
Existing/Proposed
141(5 Cocheco St.) = ±13,462 s.f. / ±17,638 s.f.
140(11 Cocheco St.) = ±8,064 s.f. / 0 s.f.
139(31 Cocheco St.) = ±22,462 s.f./±26,351 s.f.

ZONING DISTRICT: CWD, CDB-G, Conservation District

EXISTING USE: Commercial, Marina

PROPOSED USE: Commercial, Marina

SURROUNDING USE: Commercial, Marina, Cochecho River

ZBA ACTION: N/A

ATTACHMENTS: Application, Lot Line Revision Plan

APPLICATION IS COMPLETE: Yes

REGIONAL IMPACT: No

NOTICES SENT: Abutter notices were sent by certified mail for this meeting.

PERMITS / WAIVERS REQUIRED:
N/A

Summary of Request and Background
The applicant is submitting a proposed lot line adjustment to revise the lot lines between abutting properties located at 5 Cocheco St. (Map 24, Lot 141), 11 Cocheco St. (Map 24, Lot 140), and 31 Cocheco St. (Map 24, Lot 139). This lot line adjustment dissolves lot 140 and adds ± 3,889 s.f. (parcel A) to lot 139 and ±4,176 s.f. (parcel B) to lot 141.

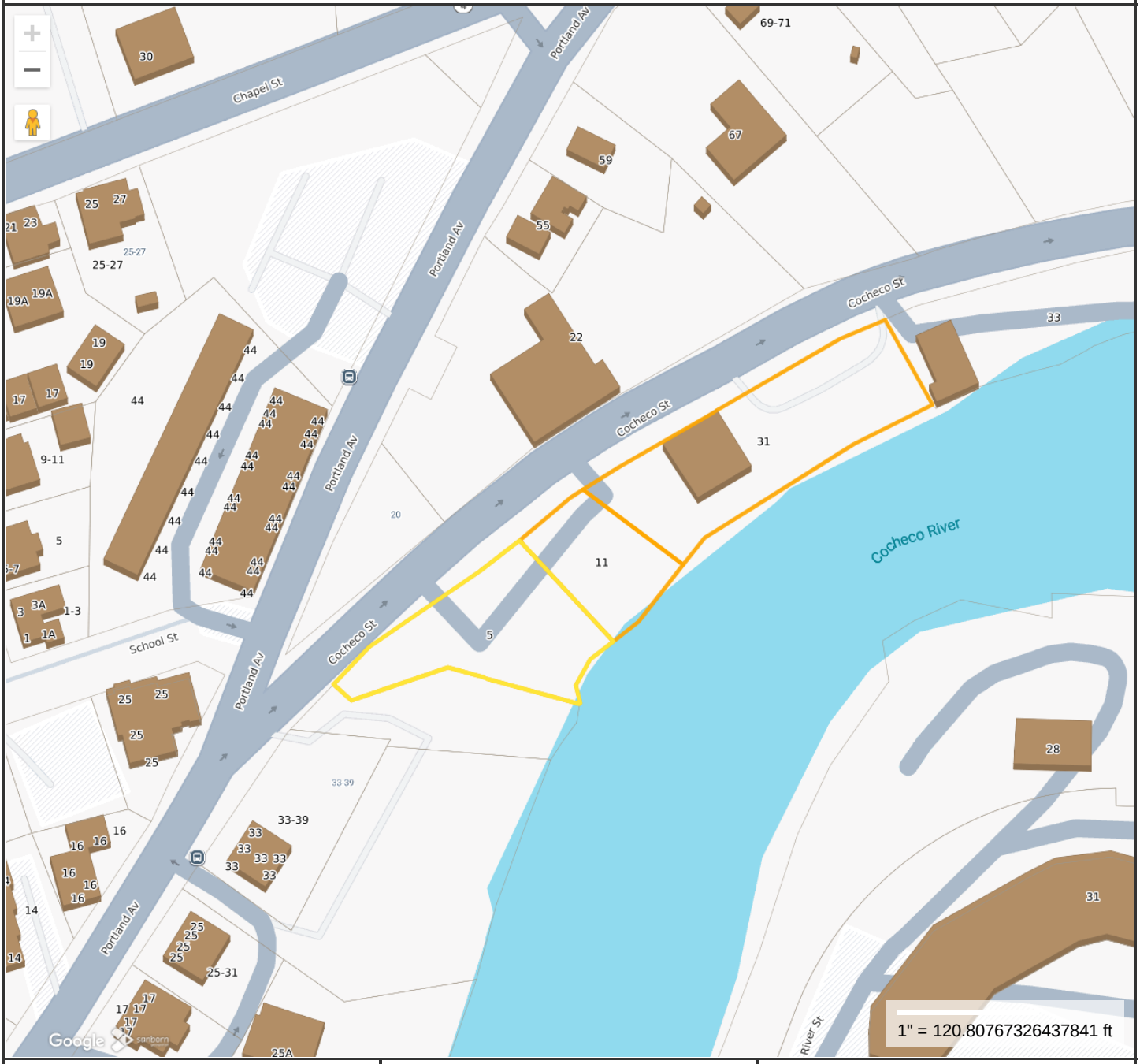
Each lot's frontage and compliance with underlying zoning regulations (CBD-G and CWD) will remain post-adjustment.

Consistency with Land Use Regulations
§157-17 of the Land Subdivision Regulations of the City Code provides for the adjustment of existing lot lines between two or more lots. This plan is consistent with those regulations.

STAFF RECOMMENDATION:
The Planning Department recommends the Planning Board accept the application, open the public hearing, make findings, and vote to approve the application with the following subsequent conditions:

Subsequent Conditions to Be Met Prior to Signing of Plans:
1. Provide physical and digital copies (including CAD) of complete plan set for recording at Strafford County Registry of Deeds which additionally shall include:
   a. Planning File Number #LOTA-2024-0013
   b. The owner's signatures
   c. City Assessor confirms lot numbering.

LOTA-2024-0013 5, 11, and 31 Cocheco Street



Property Information

Location	5 COCHECO ST
Owner	MAIRS ROBERT S TRUSTEE
Land Use	
Zoning Code	CBD-G*
Property Id	24141-000000

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 10/30/2023
Data updated Daily

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

PLAN SNAPSHOT REPORT LOTA-2024-0013
FOR CITY OF DOVER, N.H.

Plan Type:	Lot Adjustment	**Project:**		**App Date:**	11/08/2024
Work Class:	Lot Line Adjustment	**District:**	None	**Exp Date:**	01/12/2025
Status:	Review Expired	**Square Feet:**	0.00	**Completed:**	NOT COMPLETED
Valuation:	$0.00	**Assigned To:**	Blonigen, Rachel	**Approval Expire Date:**	

Description: Convey portions of lot 24/140 to lots 24/141 & 24/139, dissolving lot 24/140.

Parcel:		**Address:**		**Zone:**	CWD(Cocheco Waterfront District)
24140-000000		31 Cocheco St Dover, NH			
24139-000000		5 Cocheco St Dover, NH	Main		
24141-000000	Main	11 Cocheco St Dover, NH			

Owner
George Maglaras
Mobile: (603) 781-3713

Owner
Robert S. Mairs
14 Robert's rd.
Dover, NH 03820
Mobile: (603) 509-0029

Applicant
McEneaney Survey Associates
P.O. Box 1166
DOVER, NH 03821
Business: (603) 742-0911

Plan Custom Fields

Number of Parcels Involved	3	Parcel Map/Lot	24/139, 140, 141	Parcel Zoning	CWD & CBD-G
Existing Parcel Size (Ac)	0.39	Address of First Property	5 Cocheco Street	Existing Parcel Size (sqft)	16988.4
Owner Name	Robert S. Mairs Revocable Living Trust	Deed Book	4772	Deed Page	777
Owner Address	PO Box 28 Dover, NH 03821	Deed Date	2020.06.18	Owner Phone	
Parcel Feedback		Address of Second Property	11 Cocheco Street	Address of Third Property	31 Cocheco Street
Parcel 2 Map/Lot	24/140	Parcel 3 Map/Lot	24/141	Second Property Owner Name	Robert S. Mairs & George Maglaras
Third Property Owner Name	George Maglaras	Second Property Owner Address	33 Cocheco Street Dover, NH 03820	Third Property Owner Address	33 Cocheco Street Dover, NH 03820
Second Property Owner Phone		Third Property Owner Phone		First Easement Holder Name	
Second Easement Holder Name		First Easement Holder Address		Second Easement Holder Address	
First Easement Holder Phone		Second Easement Holder Phone			

Attachment File Name	Added On	Added By	Attachment Group	Notes
Signature_Kevin_McEneaney_11/8/2024.jpg	11/08/2024 17:03	McEneaney, Kevin		Uploaded via CSS
2024.12.10_PlanningBoard.Agenda.pdf	11/26/2024 15:24	Blonigen, Rachel		PB Agenda
Continuation 2024.12.04.pdf	12/04/2024 17:10	Blonigen, Rachel		Continuation letter
2024.12.10_PlanningBoard.Minutes.draft.pdf	12/20/2024 8:42	Blonigen, Rachel		Draft PB Minutes
2025.01.28_PlanningBoard.Agenda.pdf	01/15/2025 12:20	Blonigen, Rachel		PB Agenda

Note	Created By	Date and Time Created
1. Item was continued from 12/10/2024 PB meeting to 01/28/2025 PB meeting- RLB	Rachel Blonigen	12/04/2024 17:10

PLAN SNAPSHOT REPORT (LOTA-2024-0013)

Invoice No.	Fee		Fee Amount	Amount Paid
INV-00009967	Planning Lot Line Adjustment Fee		$300.00	$300.00
	Planning Lot Line Adjustment Application Fee		$200.00	$200.00
		Total for Invoice INV-00009967	$500.00	$500.00
INV-00010215	Planning Certified Mailing to Abutters		$250.00	$250.00
	Planning Public Notice in Newspaper		$120.00	$120.00
	Planning Creation / Printing of Abutter Labels		$30.00	$30.00
		Total for Invoice INV-00010215	$400.00	$400.00
INV-00010861	Planning Certified Mailing to Abutters		$250.00	$0.00
	Planning Public Notice in Newspaper		$120.00	$0.00
	Planning Creation / Printing of Abutter Labels		$30.00	$0.00
		Total for Invoice INV-00010861	$400.00	$0.00
		Grand Total for Plan	**$1,300.00**	**$900.00**

Activity Type	Activity Number	Name	Workflow Action Name	User	Created On
Recommendation to Planning Board	RCMND-000087-2024		Planner Creates Staff Recommendations v.1.00	Rachel Blonigen	12/05/2024

Activity Custom Fields

Agenda Item	4-B	Application Complete?	Yes	Summary Request & Background	*This item has requested to be continued to the Planning Board meeting on Tuesday, January 14, 2025.

Recommendation to Planning Board	RCMND-000005-2025	Planner Creates Staff Recommendations v.1.00	Rachel Blonigen	01/16/2025

Workflow Step / Action Name	Action Type	Start Date	End Date
Review v.1		11/12/2024 15:08	11/12/2024 15:08
Confirm application complete v.1	Generic Action		11/12/2024 15:08
Planning Board v.1		11/12/2024 15:08	01/15/2025 12:14
Planning Board Agenda v.1	Task	11/12/2024 15:08	11/26/2024 15:25
Planning Board Agenda v.1	Task	01/15/2025 12:19	01/15/2025 12:19
Invoice for Notices v.1	Task	11/26/2024 15:25	11/26/2024 15:25
Invoice for Notices v.1	Task	01/15/2025 12:19	01/16/2025 16:16
Send Notices v.1	Task	01/16/2025 16:15	01/16/2025 16:16
Send Notices v.1	Task	11/26/2024 15:25	11/26/2024 15:25
Planner Creates Staff Recommendations v.1	Plan Activity	12/05/2024 13:38	12/05/2024 13:39
Planner Creates Staff Recommendations v.1	Plan Activity	01/16/2025 16:16	
~~Distribute Planning Board Materials v.1~~	Task		01/15/2025 12:13
Distribute Planning Board Materials v.1	Task		
~~Planning Board Hearing v.1~~	Hold Hearing		01/15/2025 12:13
Planning Board Hearing v.1	Hold Hearing		
Planning Board Decision v.1	Plan Activity		
~~Planning Board Decision v.1~~	Plan Activity		01/15/2025 12:13
NOD Sent to Applicant v.1	Create Report		
~~NOD Sent to Applicant v.1~~	Create Report		01/15/2025 12:14
Final Plan v.1			
Land Use Plan Final Review v.1	Receive Submittal		
Land Use Plan Stamped and Signed v.1	Generic Action		
Recording v.1	Task		
Document Archival v.1	Generic Action		

Internal Notification of Plan Completion v.1	Generic Action
Create/Link to Records v.1	
Create / Link to Permit - Building Major v.1	Create Sub Permit

City of Dover, New Hampshire
MINOR LOT LINE ADJUSTMENT APPLICATION

[Revision Date: June 4, 2019]

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

APPLICANT INFORMATION

Name of Applicant: Robert S. Mairs, Trustee
Robert S. Mairs Revocable Living Trust Telephone # 603-509-0029

Address of Applicant: P.O. Box 28 Dover, NH 03821

FIRST PROPERTY OWNER AND PARCEL INFORMATION

Name of 1st Property Owner (*if different from applicant*): same Telephone #

Address of 1st Property Owner: same

Address of Property: 5 Cocheco Street

Assessor's Map # 24 Lot(s) # 141

Property Deed: Book 4772 Page: 777

Zoning District(s) CBD - G Overlay District(s) Dover Conservation District

Size of Existing Parcel (sq. ft.): 13,462 (.31 ac) Size of Proposed Parcel (sq. ft.): 17,638 (.40 ac)

SECOND PROPERTY OWNER AND PARCEL INFORMATION

Name of 2nd Property Owner (*if different from applicant*): Robert S. Mairs, Tstee
George Maglaras Telephone # 603-509-0029

Address of 2nd Property Owner: 33 Cocheco Street Dover, NH 03820

Address of Property: 11 Cocheco Street

Assessor's Map # 24 Lot(s) # 140

Property Deed: Book 4772, 1834 Page: 777, 622

Zoning District(s) CWD Overlay District(s) Dover Conservation District

Size of Existing Parcel (sq. ft.): 8,064 (.19 ac) Size of Proposed Parcel (sq. ft.): 0

THIRD PROPERTY OWNER AND PARCEL INFORMATION

Name of 3rd Property Owner (*if different from applicant*): George Maglaras Telephone # 603-781-3713

Address of 3rd Property Owner: 33 Cocheco Street Dover, NH 03820

Address of Property: 31 Cocheco Street

Assessor's Map # 24 Lot(s) # 139

Property Deed: Book 1049 Page: 122

Zoning District(s) CWD Overlay District(s) Dover Conservation District

Size of Existing Parcel (sq. ft.): 22,462 (.52 ac) Size of Proposed Parcel (sq. ft.): 26,351 (.60 ac)

[Use additional application form if more than two lots are being adjusted]

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Kevin McEneaney - McEneaney Survey Associates

Address P.O. Box 1166 Dover, NH 03821 Telephone #: 603-742-0911

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

CONSERVATION EASEMENT HOLDER (s)

Name of Easement Holder: N/A Telephone #_____

Address Easement Holder: _____

Name of 2nd Easement Holder: _____ Telephone #_____

Address 2nd 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. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of First Property Owner: Robert S Mairs Trustee Date: 7 Nov-24
Robert S. Mairs, Trustee

Signature of Second Property Owner: _____ Date: 7-Nov-24
George Maglaras

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

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I 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: Robert S Mairs Trustee Date: 7 NOV/24
S:\Department\Planning\Planning_Share\forms
Robert S. Mairs, Trustee

Signature of Property Owner: _____ Date: 7-Nov 24
George Maglaras

CITY OF DOVER MINOR LOT LINE ADJUSTMENT
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: 24 139 George Maglaras 33 Cocheco Street Dover, NH 03820

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
24	141	Robert S. Mairs, Trustee	P.O. Box 28 Dover, NH 03821

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
Kevin McEneaney	McEneaney Survey Associates	P.O. Box 1166 Dover, NH 03821

Conservation Easement Holder: N/A

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

City of Dover, New Hampshire
LOT LINE ADJUSTMENT SUBMISSION CHECKLIST

[Revision Date: June 4, 2019]

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

Plan Review Fees are due along with three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and materials, 3 weeks prior to the Planning Board meeting. Abutter/Notice Fees will be invoiced and are due 28 hours prior to Planning Board.

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

APPLICANT: Robert S. Mairs, Trustee
Robert S. Mairs Revocable Living Trust File Number: LOTA-2024-XXX

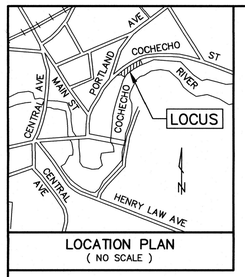
PROPERTY LOCATION: Cocheco Street Tax Map: 24 Lot: 139 and Lot: 140 & 141

	Where/How Provided	Reviewed
1. Completed and signed Application form	X	
2. Plan Review Fees are provided	X	
3. Electronic copy of the surveyed plat layout	X	
4. Electronic copy of supplementary materials and application	X	
5. Fifteen copies of LLA plan w/scale of not less than 1"=50' or 1"=100' for larger adjustments. Plans shall contain the following items as appropriate:	X	
Location map at appropriate scale	X	
Planning File #	X	
Date, north arrow and scale	X	
Names of all abutting property owners	X	
Name and address of owners	X	
Signature & stamp of NH licensed land surveyor	X	
Zoning District boundaries, including any special or overlay districts	X	
Location of Conservation District areas	N/A	
Location, names and widths of existing and streets, including pavement widths, grades, curbs and crosswalks	X	
Location and widths of existing & proposed easements & right of ways	X	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	X	
Existing and proposed lot areas in square feet	X	
Existing and proposed buildings and structure locations	X	
Minimum building setbacks or build to lines on all lots	N/A	
Map and lot numbers for existing and proposed lots as assigned by Tax Assessor	X	
Location, material and size of existing and proposed permanent monuments	X	
All applicable Dover Common Subdivision notes	X	

REVIEWED BY: _____ DATE_____

LOTA-2024-0013 **5, 11, 31 COCHECO STREET**

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
03006-000000	16 PORTLAND AV	F & A LLC		123 PENN AIR RD	WOLFBORO	NH	03894-4552
03009-000000	25 SCHOOL ST	25 SCHOOL ST CONDO ASSOCIATION	C/O RANDY JONES	34 GARFIELD DR	PORTSMOUTH	NH	03801
03009-000001	25 1 SCHOOL ST	CA HOLDINGS LLC		60 BOXWOOD LN	DOVER	NH	03820
03009-000002	25 2 SCHOOL ST	FOXDALE CAPITAL LLC		41 DEPOT RD	STRATHAM	NH	03885
03009-000003	25 3 SCHOOL ST	VEAZEY JOANNA &	VEAZEY CHARLES	1025 KINGS CT	VENICE	FL	34293
03009-000004	25 4 SCHOOL ST	DANIELS NICHOLAS		25 4 SCHOOL ST	DOVER	NH	03820
03009-000005	25 5 SCHOOL ST	GARVEY BROOKE		94 BELMONT DR	MERRIMACK	NH	03054-2648
03009-000006	25 6 SCHOOL ST	TRASK CHRISTOPHER &	TRASK TABITHA	46 CAMPBELL DR	MILTON	NH	03851
03009-000007	25 7 SCHOOL ST	STRZEPEK GARY JAMES		25 7 SCHOOL ST	DOVER	NH	03820
03009-000008	25 8 SCHOOL ST	POULIN DAVID VALMOR		25 SCHOOL ST #8	DOVER	NH	03820
03009-000009	25 9 SCHOOL ST	LANSFORD KEVIN		25 9 SCHOOL ST	DOVER	NH	03820
03010-000000	SCHOOL ST	FOURNIER DEAN A TRUSTEE	FOURNIER DEAN A REVOCABLE LIVING TRUST	42 ELM ST	DOVER	NH	03820
22001-001000	RIVER ST	CITY OF DOVER		288 CENTRAL AVE	DOVER	NH	03820
23001-000000	PORTLAND AV	ROBERT S MAIRS REV LIV TRUST	MAIRS ROBERT S TRUSTEE	14 ROBERTS ROAD	DOVER	NH	03820
23002-000000	33 39 PORTLAND AV	NOWA EXCHANGE PROPERTIES LLC		85 BROWN AVE UNIT 1	HAMPTON	NH	03842
24095-000000	PORTLAND AV	CITY OF DOVER		288 CENTRAL AVE	DOVER	NH	03820
24095-000LS1	PORTLAND AV	44 PORTLAND AVE LLC		42 J DOVER POINT RD	DOVER	NH	03820
24104-000000	44 PORTLAND AV	44 PORTLAND AVE LLC		42 J DOVER POINT RD	DOVER	NH	03820
24105-000000	22 COCHECO ST	MAGLARAS GEORGE		33 COCHECO ST	DOVER	NH	03820
24105-A00000	20 COCHECO ST	CITY OF DOVER		288 CENTRAL AVE	DOVER	NH	03820
24106-000000	55 57 PORTLAND AV	BOUCHER CAROL &	MAGLARAS GEORGE	33 COCHECO ST	DOVER	NH	03820
24107-000000	59 PORTLAND AV	MAGLARAS GEORGE		65 COCHECO ST	DOVER	NH	03820
24108-000000	67 PORTLAND AV	MAGLARAS GEORGE &	BOUCHER CAROL	169 LORDS MILL RD	EPSOM	NH	03234
24109-000000	69 PORTLAND AV	HUGHES JEFFREY		142 A HIGH ST	SOMERSWORTH	NH	03878
24109-A00000	COCHECO ST	MAGLARAS GEORGE		33 COCHECO ST	DOVER	NH	03820
24110-000000	73 PORTLAND AV	MAGLARAS CHRISTOPHER M &	MAGLARAS GEORGE	73 PORTLAND AVE	DOVER	NH	03820
24112-000000	COCHECO ST	PRINTY RITA C IRREV TRUST	PRINTY JAMES W TRUSTEE	461 LOCUST ST	ROLLINSFORD	NH	03869
24138-000000	33 COCHECO ST	MAGLARAS GEORGE		33 COCHECO STREET	DOVER	NH	03820
24142-000000	COCHECO ST	MAIRS ROBERT S TRUSTEE	ROBERT S MAIRS REV LIV TRUST	PO BOX 28	DOVER	NH	03821-0028
24139-000000	31 COCHECO ST	MAGLARAS GEORGE		33 COCHECO STREET	DOVER	NH	03820
24140-000000	11 COCHECO ST	MAGLARAS GEORGE &	MAIRS ROBERT S TRUSTEE	33 COCHECO ST	DOVER	NH	03820
24141-000000	5 COCHECO ST	MAIRS ROBERT S TRUSTEE	ROBERT S MAIRS REV LIV TRUST	PO BOX 28	DOVER	NH	03821-0028
		MCENEANEY SURVEY ASSOCIATES	KEVIN MCENEANEY	P.O. BOX 1166	DOVER	NH	03821



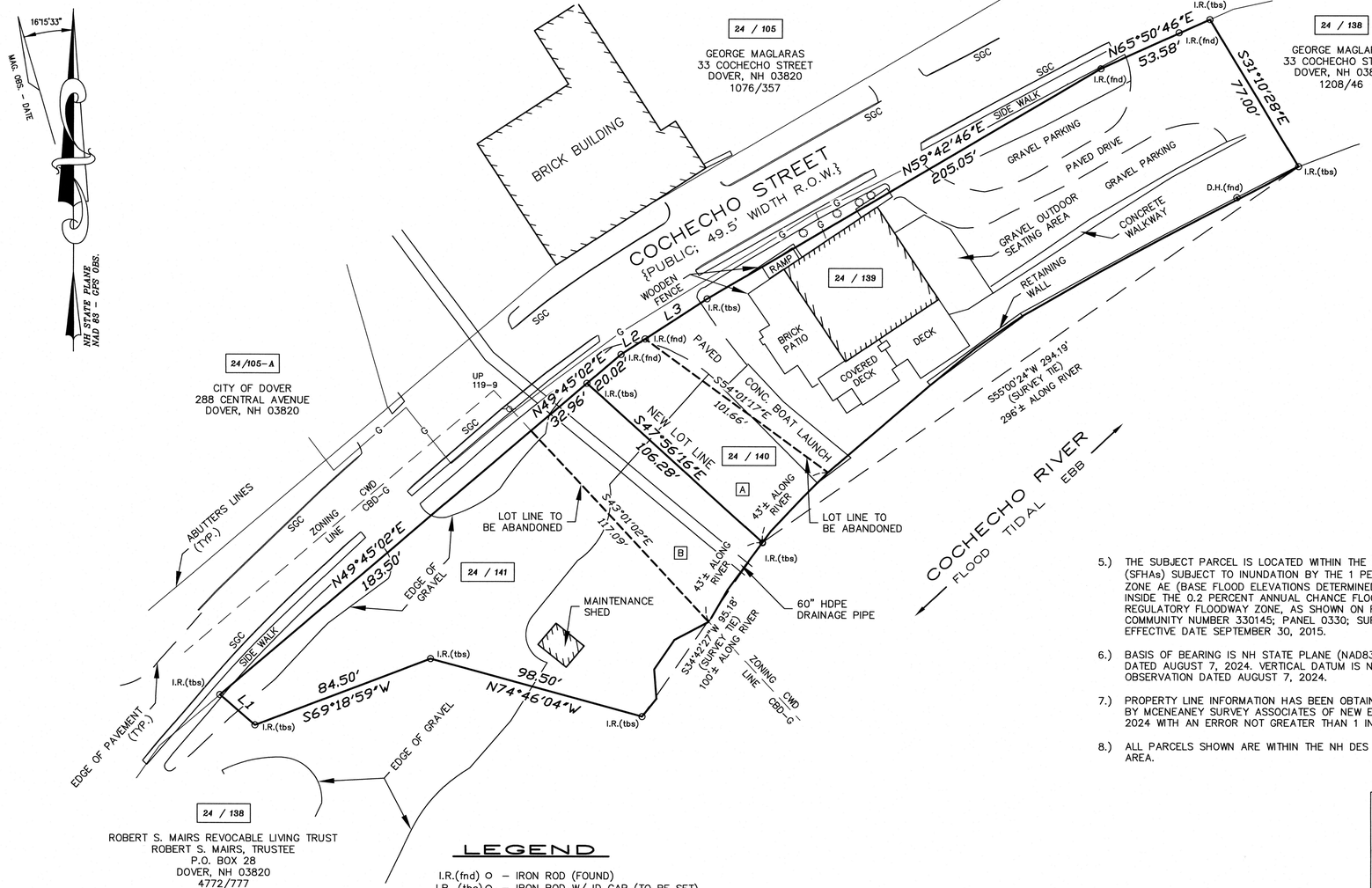
LOCATION PLAN
(NO SCALE)

REFERENCE PLANS:

1.) PLAN OF LAND PREPARED FOR GEORGE MAGLARAS TAX MAP 24, LOT No.s 105,135A,136,137,138,139,140, COCHECO STREET, CITY of DOVER, COUNTY of STRAFFORD STATE of NEW HAMPSHIRE, SCALE: 1" = 40'; DATED: JUNE 2007; BY MCENEANEY ASSOCIATES, INC.

2.) COCHECO STREET LAYOUT FOR THE CITY OF DOVER – IN DOVER, N.H.; SCALE: 1" = 50'; DATED: AUGUST 1, 1990; BY: BRUCE L. POHOPEK, LAND SURVEYOR; RECORDED: S.C.R.D. PLAN 40–82.

3.) PLAN OF LAND PREPARED FOR ROBERT S. MAIRS TAX MAP 23, LOT Nos. 3 & 3–1, 25 PORTLAND AVENUE, CITY OF DOVER, COUNTY OF STRAFFORD STATE OF NEW HAMPSHIRE; SCALE: 1" = 20'; DATED: MAY 1, 2015; BY: MCENEANEY SURVEY ASSOCIATES, INC. RECORDED: S.C.R.D. PLAN 109–79.



LEGEND

I.R.(fnd) O – IRON ROD (FOUND)
I.R. (tbs) O – IRON ROD W/ ID CAP (TO BE SET)
D.H. (fnd) ◉ – DRILL HOLE (FOUND)
—G— – UNDERGROUND GAS
O – ARBORVITAE
SGC – SLOPED GRANITE CURB
CONC. – CONCRETE
S.F. – SQUARE FEET
Ac. – ACRE
(TYP.) – TYPICAL
± – MORE OR LESS
ø – DIAMETER
S.C.R.D. – STRAFFORD COUNTY REGISTRY OF DEEDS
-o- UP 119/9 – UTILITY POLE W/ I.D. Nos.

No.	Bearing	Distance
L1	N49°24'49"W	20.83'
L2	N57°05'18"E	12.93'
L3	N57°05'18"E	33.30'

NOTES:

1.) OWNERS OF RECORD:

24 / 139 — GEORGE MAGLARAS
33 COCHECHO STREET
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOLUME 1049, PAGE 122

24 / 140 — ROBERT S. MAIRS REVOCABLE LIVING TRUST
ROBERT S. MAIRS, TRUSTEE
S.C.R.D. VOLUME 4772, PAGE 777
GEORGE MAGLARAS
33 COCHECHO STREET
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOLUME 1834, PAGE 622

24 / 141 — ROBERT S. MAIRS REVOCABLE LIVING TRUST
ROBERT S. MAIRS, TRUSTEE
P.O. BOX 28
DOVER, NEW HAMPSHIRE 03820
S.C.R.D. VOLUME 4772, PAGE 777

2.) 24 / 141 – DENOTES TAX MAP AND PARCEL NUMBER.

3.) THE INTENT OF THIS PLAN IS TO DEPICT A LOT LINE ADJUSTMENT BETWEEN LOTS 24/141 & 24/140 & 24/139 AND DISSOLVING LOT 24/140. PARCEL A, 3,889 S.F. WILL BE ADDED TO LOT 24/139. PARCEL B, 4,176 S.F. WILL BE ADDED TO LOT 24/141.

PARCEL AREAS:	EXISTING	PROPOSED
24 / 139	= 22,462 S.F. / 0.52 Ac.	= 26,351 S.F. / 0.60 Ac.
24 / 140	= 8,065 S.F. / 0.19 Ac.	= 0 S.F. / 0 Ac.
24 / 141	= 13,462 S.F. / 0.31 Ac.	= 17,638 S.F. / 0.40 Ac.

4.) ZONING DISTRICT: SUBJECT PARCELS ARE LOCATED WITHIN THE DOVER CONSERVATION DISTRICT. PARCEL 24/141 IS IN BOTH THE CWD & CBD–G. PARCEL 24/139 IS IN THE CWD ONLY.

COCHECHO WATERFRONT DISTRICT (CWD)

DIMENSIONAL REQUIREMENTS:	
MINIMUM LOT SIZE	= N/A
MAXIMUM LOT COVERAGE	= 75 PERCENT
MINIMUM FRONTAGE	= N/A
BUILDING SETBACK REQUIREMENTS:	
FRONT SETBACK	= 0 FT.
SIDE SETBACK	= 0 FT.
REAR SETBACK	= 0 FT.
MAXIMUM BUILDING HEIGHT	= 55 FT.

CENTRAL BUSINESS DISTRICT – GENERAL (CBD–G)

DIMENSIONAL REQUIREMENTS:	
MINIMUM LOT SIZE	= N/A
LOT COVERAGE	= 75 PERCENT
FRONTAGE BUILD–OUT	= 70 PERCENT
BUILDING SETBACK REQUIREMENTS:	
FRONT PRIMARY BUILD TO LINE	= 13.6' ± 5' (1)
FRONT SECONDARY BUILD TO LINE	= 13.6' ± 5' (1)
SIDE SETBACK	= 0 FT. MIN – 24 FT. MAX
REAR SETBACK	= 10 FT. MIN
MAXIMUM BUILDING HEIGHT	= 5 STORY MAX, 2 STORY MIN

5.) THE SUBJECT PARCEL IS LOCATED WITHIN THE SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1 PERCENT ANNUAL CHANCE FLOOD, ZONE AE (BASE FLOOD ELEVATIONS DETERMINED); AND AREAS DETERMINED TO BE INSIDE THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN; AND WITHIN THE REGULATORY FLOODWAY ZONE, AS SHOWN ON FLOOD INSURANCE RATE MAP, COMMUNITY NUMBER 330145; PANEL 0330; SUFFIX E; MAP NUMBER 33017C0330E; EFFECTIVE DATE SEPTEMBER 30, 2015.

6.) BASIS OF BEARING IS NH STATE PLANE (NAD83) BASED ON GPS OBSERVATION DATED AUGUST 7, 2024. VERTICAL DATUM IS NAVD88 BASED ON GPS OBSERVATION DATED AUGUST 7, 2024.

7.) PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY MCENEANEY SURVEY ASSOCIATES OF NEW ENGLAND ON DURING AUGUST OF 2024 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.

8.) ALL PARCELS SHOWN ARE WITHIN THE NH DES URBANIZED SHORELAND EXEMPTION AREA.

"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."

LOT LINE ADJUSTMENT PLAN
PREPARED FOR
GEORGE MAGLARAS
TAX MAP 24, LOT No. 139
GEORGE MAGLARAS &
ROBERT S. MAIRS REVOCABLE LIVING TRUST
TAX MAP 24, LOT No. 140
ROBERT S. MAIRS REVOCABLE LIVING TRUST
TAX MAP 24, LOT No. 141
COCHECHO STREET
CITY of DOVER
COUNTY of STRAFFORD
STATE of NEW HAMPSHIRE

DOVER PLANNING FILE No.

DRAWN BY: JJH	FILE: M:>2633\DWGS\24–2633 1
SCALE: 1" = 30'	DATE: DECEMBER 6, 2024

30 15 0 15 30 60 90 120

NO.	DATE	DESCRIPTION	BY	CHK
		REVISIONS		

24–2633	BOUNDARY & LLA	24–10	1–7
PROJECT NO	TYPE	FIELDBOOK & PAGES	

STATE OF NEW HAMPSHIRE – LICENSED LAND SURVEYOR – No. 661 – KEVIN M. McENEANEY – SIGNATURE

McEneaney Survey Associates of NEW ENGLAND
P.O. Box 1166 – 181 WATSON ROAD
DOVER, NH 03820 (603) 742–0911

SURVEYING – PLANNING – CONSULTING

24-2633 1.dwg 22x34 12/13/2024 10:43:48

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #TRAN-2024-0011

Application Type:	Transfer of Development Rights
Applicant(s):	5 Sherman Street, LLC
Owner(s):	5 Sherman Street, LLC
Location:	103 Court St. (Assessor's Map 19, Lot 8)
Meeting Date:	January 28, 2025

INTENT: To request the purchase of two (2) units through the Transfer of Development Rights (TDR) for a total of five (5) units, where three (3) units are allowed by right.

AGENDA ITEM #: 4-B

APPLICANT/OWNER: 5 Sherman Street, LLC

LOCATION: 103 Court St. (Assessor's Map 19, Lot 8)

LOT/UNITS PROPOSED: Two (2) TDR units, five (5) units total

ACREAGE: ±1.20 ac.

ZONING DISTRICT: R-12

EXISTING/PROPOSED USE: Residential

SURROUNDING USE: Residential, Cemetery

ZBA ACTION: None

PERMITS: None

WAIVERS REQUESTED: TBD if §153-14.D.6(a) and §153-14.D.6(b), can now be met or if a waiver will still be sought.

APPLICATION IS COMPLETE: Yes

REGIONAL IMPACT: No

NOTICES SENT: Abutter notices were sent by certified mail for the December meeting.

TRC: 09/06/2024, 09/26/2024, 11/14/2024

ATTACHMENTS: Site Plan, TDR Application, Narrative

Summary of Request and Background

The applicant is proposing a residential project consisting of five residential units by purchasing two size restricted units through TDR. The proposal includes renovation of the existing single-family dwelling and the construction of four single-family "cottage" dwelling units.

A Site Visit was conducted on January 11, 2025, to allow staff, Planning Board members, and members of the public to review the site in person, observe existing conditions, and be able discuss how the proposed development aligns with the surrounding area and zoning requirements.

The applicant provided previous iterations of this proposal for increased units on the subject property. The applicant is now proposing a decrease in total units, an increase in perimeter screening, and a change to the site layout with the "cottage" units and access driveway being shifted further from the side property boundaries.

The existing lot, Assessor's Map 19, Lot 8, contains one single-family dwelling. The current Zoning Ordinance permits the use of the Transfer of Development Rights ordinance (TDR) in the R-12 zone, but specifies that the applicant must apply single-family density for the creation of additional single-family homes. As the applicant is proposing single-family density, the single-family yield calculation has been used and has resulted in a base density calculation of three units. This, therefore, means that the remaining two sought units could be granted if the Planning Board votes to approve the use of TDR.

Per the applicant's plan, the existing single-family home will be renovated and remain, and four single-family "cottage" dwelling units will be constructed. Two of the cottage units are proposed to be size-restricted to 1,400 square and purchased through TDR.

Staff has reviewed the proposal and supplied a TDR memo to the applicant.

Consistency with Land Use Regulations - TDR

§170-29 provides for additional density to be purchased through Transfer of Development Rights, provided that four criteria are met:
The proposal is consistent with the Master Plan; is compatible with the land uses on neighboring lots; is created on property served by public water and sanitary sewer; and not seeking permitted relief caused by additional density. This application meets the criteria. Specifically, the lot is served by water and sewer, and the Master Plan supports housing diversity and encourages creating housing in walkable neighborhoods which encourage community engagement. Regarding the requested density, it is in line with neighboring land uses and development. The proposal is for single-family homes, and there are single- and two-family homes in the immediate area. Currently, the parcel has a single unit, and by right, the unit could be converted to a two-family dwelling unit. The applicant is proposing five total residential units, or an increase of four units. On the adjacent parcel at 109 Court Street, that and the three lots that were created from it, all meet the zoning to allow two-family units. These four lots equate to a

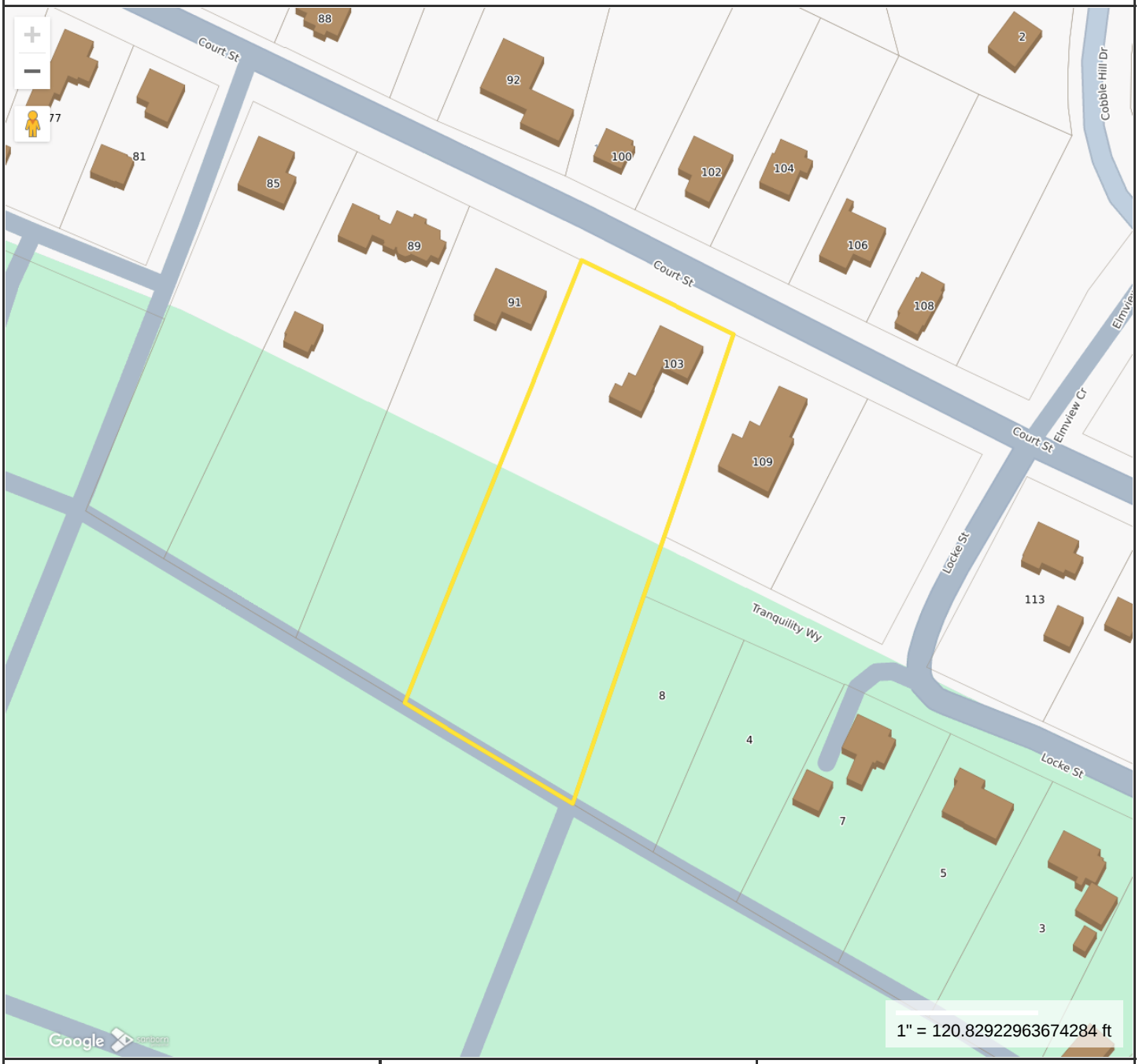
similar-sized area, (1.5 acres), and with no Planning Board review, eight units could be constructed by right where one unit exists today. There has been discussion about TDR buffers. Since 170-29.G(7) states, "A continuous visual buffer shall be created along the perimeter of the parent parcel, which shall include a thirty-foot no cut, no disturb buffer" and the proposal is not indicating to subdivide or add new lot lines, staff's interpretation has been that the buffer is not required. However, staff has continually asked the applicant to add more green space and screening as possible and to ensure the 25' setback from the cemetery has been met. This revised plan meets those requests.

STAFF RECOMMENDATION - TDR:
The Planning Department recommends the Planning Board accept the application, open the public hearing, make findings, and vote to approve the TDR request with the following subsequent conditions:

Subsequent Conditions to be Met Prior to Granting TDR:

1. A Site Plan application is required to be submitted for review and consideration;
2. Payment of TDR fees;
3. Add note to plan: "This site plan uses the Transfer of Development Rights ordinance which allows for relief to the setbacks, lot area, frontage, density and intensity of the development. The Board granted TDR relief to purchase up to two units for a maximum total of five units on the subject lot. The existing single-family unit and the proposed single-family dwellings may not be converted to a two-family dwelling without further review and approval by the Planning Board;"
4. The applicant provide a revised narrative including the latest TDR request;
5. Add note indicating which units will be purchased as size-restricted units through the TDR ordinance and that a deed restriction is required.

TRAN-2024-0011 103 Court Street



Property Information

Location	103 COURT ST
Owner	5 SHERMAN STREET LLC
Land Use	
Zoning Code	R-12
Property Id	19008-000000

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 10/30/2023
Data updated Daily

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

To: 5 Sherman Street, LLC, Applicant
From: Donna Benton, AICP
Cc: Tritech Engineering Corp.
Revised: January 23, 2025
Re: TDR 103 Court Street

ISSUE:
In February 2020, the Board recommended amendments to the Transfer of Development Rights (TDR) Ordinance. In June 2020, the Planning Board approved the amendments and on July 22, 2020, the City Council ratified them. One element is the requirement for staff to draft a review statement on the need for a sketch plan. Since then the criteria for TDR has also been amended.

INTENT:
This memo will serve as part of the staff report.

GOALS:
Provide background on balancing development vs. conservation needs and current housing shortage, and describe the TDR applications in Dover.

Background

On behalf of your client, you submitted a revised TDR plan for a project to purchase two (2) 1,400 square feet size-restricted, single-family residential units. The project also calls for the construction of two additional single-family "cottage" dwelling units and the renovation of the existing single-family home on the subject parcel. Therefore totaling 5 units on site if the TDR and site plan are approved.

The existing lot, Assessor's Map 19, Lot 8, contains one single-family dwelling. The current Zoning Ordinance permits TDR in the R-12, but specifies that the applicant must either use single-family density for the creation of additional single-family homes, or, if using two-family density, any TDR-purchased unit must be a two-family dwelling. As the applicant is proposing single-family density, it was determined by staff, per the applicant's yield plan, that three (3) units would be allowed by right, requiring that the remaining two units be purchased through TDR.

Staff performed this review based upon the information below, and is now providing the required staff report (Chapter 170-29.E.(4)a).

Project Information

Project:	103 Court Street, TDR
Where:	103 Court St. (Assessor's Map 19, Lot 8)
What:	Five (5) units total. Two (2) of which are requested to be purchased through TDR as 1,400 s.f. size-restricted, single-family dwelling units. The density calculation per R-12 specific zoning regulations, as stated above, was used to determine a base density calculation of three (3) units, requiring the purchase of the two (2) proposed units.
Acres:	±1.20 acres (no change in acreage) Assessor's Map 19, Lot 8 = 52,241± s.f. (1.20± ac.)
Zone:	R-12
Public Water:	Lot is serviced by municipal water.
Public Sewer:	Lot is serviced by municipal sewer.
Units:	Five (5) total units are proposed, staff considers three (3) of the units to be the base density as the applicant proposes single-family density, therefore requiring the applicant to purchase two (2) TDR units.
CUP:	Not applicable to this proposal.

Staff Comment

When reviewing projects, review the context, discuss options with the applicant, and advise on the feasibility of requesting the purchase or exchange before or after designing a fully laid out plan.

In reviewing this project, we note:

- Traffic
  - Court Street is a moderate-traffic thoroughfare connecting Central Ave. to Back and Middle Roads.
- Layout/topography
  - There is currently an existing residence onsite, the applicant is proposing to renovate the single-family dwelling.
  - The revised plan has shifted the access driveway and rear "cottage" units further from the side property boundaries.

    - The cumulative lot coverage of all proposed structures is approximately 8% (though the engineer should confirm on the plan), compared to the 30% allowed in R-12.

- Environmental
    - The property boundary is currently moderately wooded. Per the applicant's updated proposal, impact to existing vegetation has been reduced and proposed perimeter vegetative screening has been increased which includes an evergreen tree screen along both sides of the property.
    - The R-12 District is characterized by its medium density, requiring a minimum lot size of 12,000 square feet, 100 feet of frontage, and a maximum underlying density of 2 units per lot, with varying lot size requirements for 2-family structures, depending on whether they're newly constructed, or converted from an existing single-family home.

Staff Recommendation
Staff appreciates the revisions to the proposal based on feedback from staff, abutters, and Planning Board members which includes increased perimeter screening. Staff also notes that the reduction in units has allowed for more separation between the proposed structures and driveway and the neighboring properties and there is a clear demarcation of the required 25' cemetery setback per RSA 289:3.

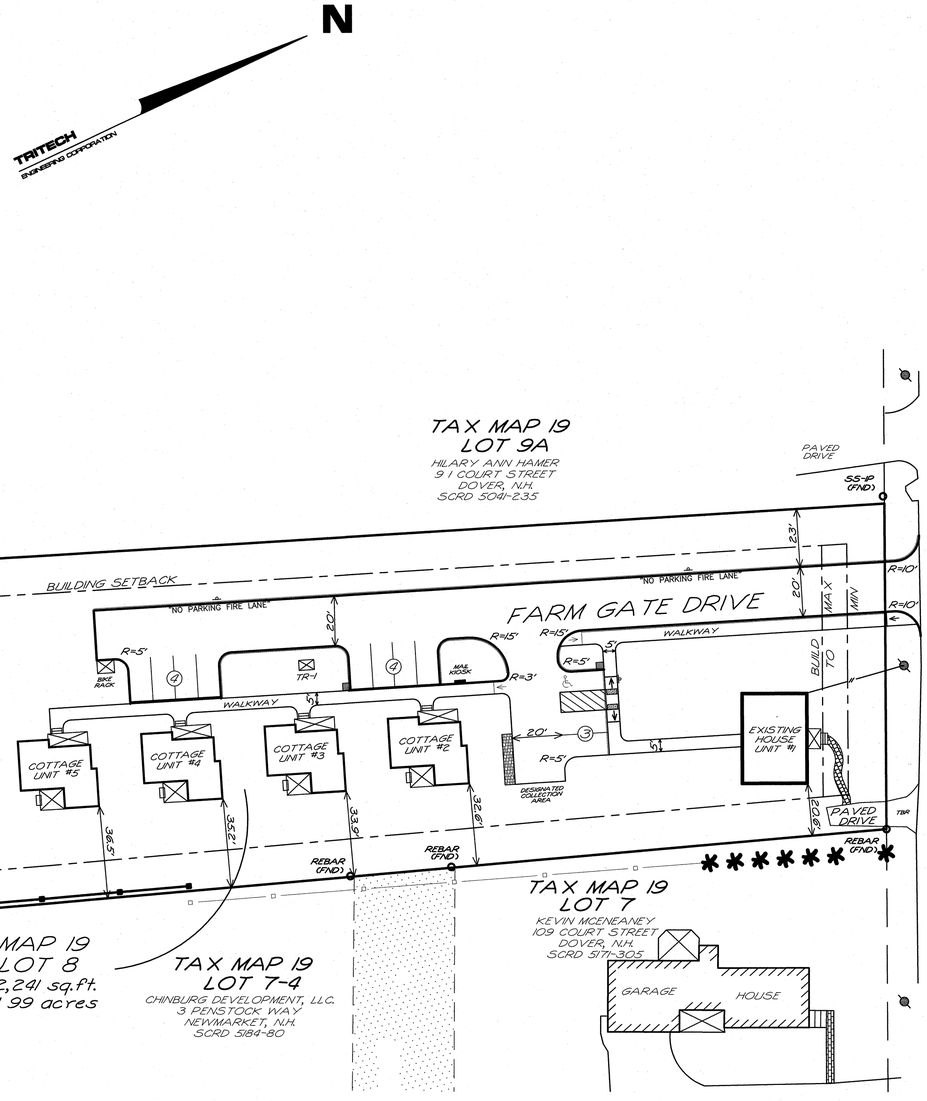
Though, your applicant was trying to do TDR endorsement and Site Plan approval at the same time, I understand the pivot to revising the TDR request before Planning Board before finishing design/engineering on the site plan.

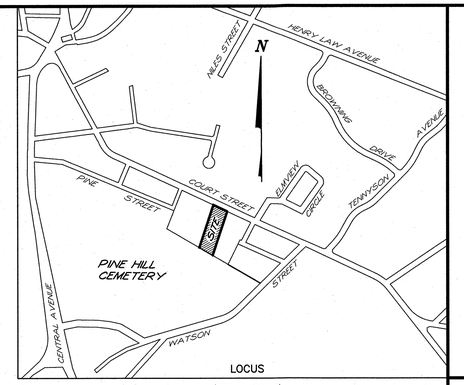
CITY OF DOVER

PLANNING BOARD – TRAN-2024-0011

Meeting Type:	Regular Meeting
Meeting Location:	Council Chambers, City Hall, 288 Central Ave, Dover, NH
Meeting Date:	**Tuesday, January 28, 2025**
Meeting Time:	**7:00 pm**

Dear Planning Board Members:
Please bring previous materials for TRAN-2024-0011.





LOCUS

(NOT TO SCALE)

NOTES

1.) INTENT: TO FURTHER DEVELOP TAX MAP 19 LOT 8. THIS DEVELOPMENT WILL INCLUDE THE RENOVATION OF THE EXISTING SINGLE FAMILY HOUSE (1 UNIT). THE DEVELOPMENT WILL ALSO INCLUDE THE CONSTRUCTION OF 4 SINGLE FAMILY SIZE RESTRICTED HOMES. THESE HOMES WILL BE CONSTRUCTED UNDER THE TDR ORDINANCE. 2 BASE UNIT AND THE PURCHASE OF 2 SIZE. RESTRICTED UNITS.

2.) CURRENT OWNER: 5 SHERMAN STREET LLC
242 CENTRAL AVENUE
DOVER, N.H.

AUTHORIZED SIGNATURE

3.) TAX MAP 19 LOT 8.

4.) TOTAL LOT AREA: 52,241 SQ.FT. – 1.199 ACRES

5.) PROJECT DEED REFERENCE: BOOK 5172 PAGE 55

6.) PROJECT PLAN REFERENCE: SURVEYED MAY 1935
W.S. WHEELER, CE
DOVER, N.H.
SCRD
POCKET #10, FOLDER #2, PLAN #11 & 12

LIMITED SUBDIVISION
CECIL TAYLOR
DOVER, N.H.
FREDERICK E. DREW ASSOCIATES
JULY 1977 SCRD 17–112

PROPERTY SURVEY
109 COURT STREET, DOVER
STRAFFORD COUNTY, NEW HAMPSHIRE
JOANNE RICHARD LIVING REVOCABLE TRUST
STONEWALL SURVEYING
AUGUST 1, 2023 SCRD #13011

7.) ALL APPLICABLE RIGHT–OF–WAY, CONSERVATION, SLOPE, CONSTRUCTION, POWER LINE, CROSS TRAVEL OR OTHER EASEMENTS HAVE BEEN REFERENCED IN A NOTE.

8.) ZONING: R–12
MIN. LOT SIZE: 12,000 SQ.FT.
MIN. FRONTAGE: 100 FT
MIN. SETBACKS:
FRONT: 15 FT TO 25 FT
SIDE: 15 FT
REAR: 30 FT
MAX. COVERAGE: 30 %

9.) VARIANCES, SPECIAL EXCEPTIONS, CONDITIONAL USE PERMITS: NONE

10.) THE RAW UNADJUSTED CLOSURE OF OUR RANDOM POINT TRAVERSE WAS 1 PART IN 60,000, AND WAS ACCOMPLISHED USING A TOPCON GT 503 TOTAL STATION, DURING THE MONTH OF FEBRUARY, 2024.

11.) SUBJECT PARCEL IS NOT WITHIN A FEDERALLY DESIGNATED SPECIAL FLOOD HAZARD ZONE (FLOOD HAZARD ZONE A – PANEL 0320E, MAP No. 33017C0340E, DATE: 9–30–2015).

12.) DURING THE MONTH OF MARCH, 2024 MICHAEL MARIANO, STATE OF NEW HAMPSHIRE CERTIFIED SOIL SCIENTIST #76, NH CERTIFIED WETLAND SCIENTIST #183, CONDUCTED AN ON–SITE WETLANDS DELINEATION OF THE SUBJECT PARCEL. WETLANDS WERE IDENTIFIED BASED ON THE CITY OF DOVER ZONING ORDINANCE (170–27.1) AND ON STATE & FEDERAL CRITERIA OUTLINED IN THE "CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL" (DEPT. OF THE ARMY, 1987) ON THIS SITE. WETLANDS BASED ON LOCAL CRITERIA SHARE THE SAME BOUNDARIES WITH THOSE BASED ON STATE AND FEDERAL CRITERIA. NO WETLANDS WERE FOUND.

13.) BASIS OF BEARING: BEARING SYSTEM BASED ON GPS FIELD OBSERVATIONS ON FEBRUARY 16, 2024 USING TOPCON HIPER SR RECEIVERS AND OPUS CORRECTED ON FEBRUARY 19, 2024. DATUM BASED ON NEW HAMPSHIRE STATE PLANE COORDINATES SPC (2800 NH), (NAVD 88).

14.) 25 FOOT SETBACK FROM PINE HILL CEMETERY (SEE RSA 289:3 III).

TDR BASE DENSITY CALCULATIONS

TOTAL AREA	=	52,241 SQ.FT.
LESS WETLANDS	=	<0> SQ.FT.
UPLAND AREA	=	52,241 SQ.FT.
LESS ROAD ALLOCATION (15%)	=	<7,836> SQ.FT.
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LEGEND

- REBAR WITH ID CAP TO BE SET
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TRITECH
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795 CENTRAL AVENUE
DOVER, NEW HAMPSHIRE 03820
TELEPHONE 603 742 8107
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ISSUED FOR PLANNING BOARD REVIEW
January 21, 2025

REVISIONS	DESCRIPTION:
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ROBERT J. STONEWALL No. 2410 LICENSED LAND SURVEYOR
STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER

GENERAL SITE PLAN

103 COURT STREET

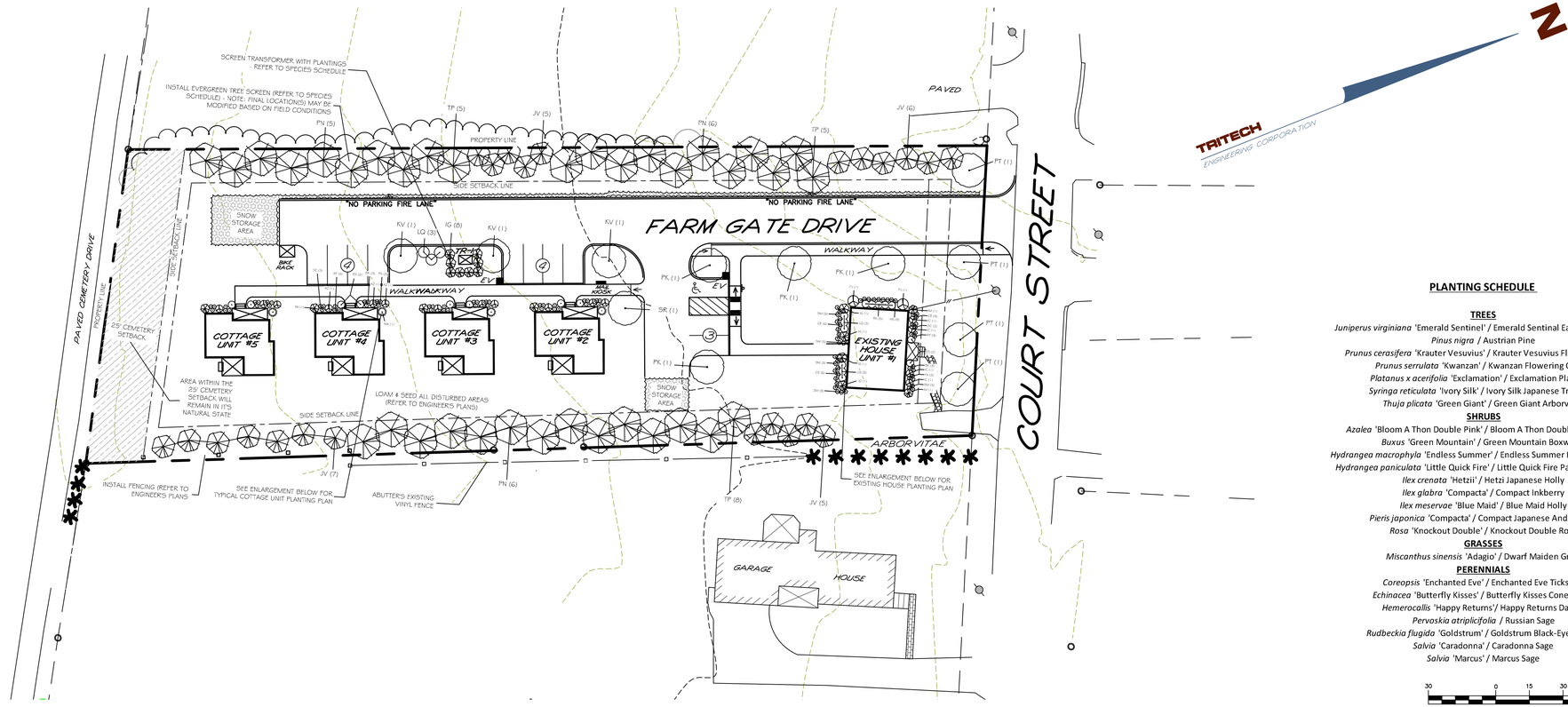
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DOVER, NEW HAMPSHIRE
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SEPTEMBER 20, 2024 JOB No. 2410

SCALE: 1" = 30'

SHEET No. SP-1

(P24-0012)



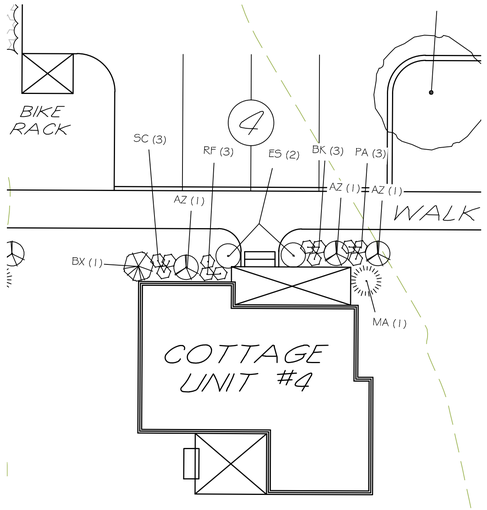
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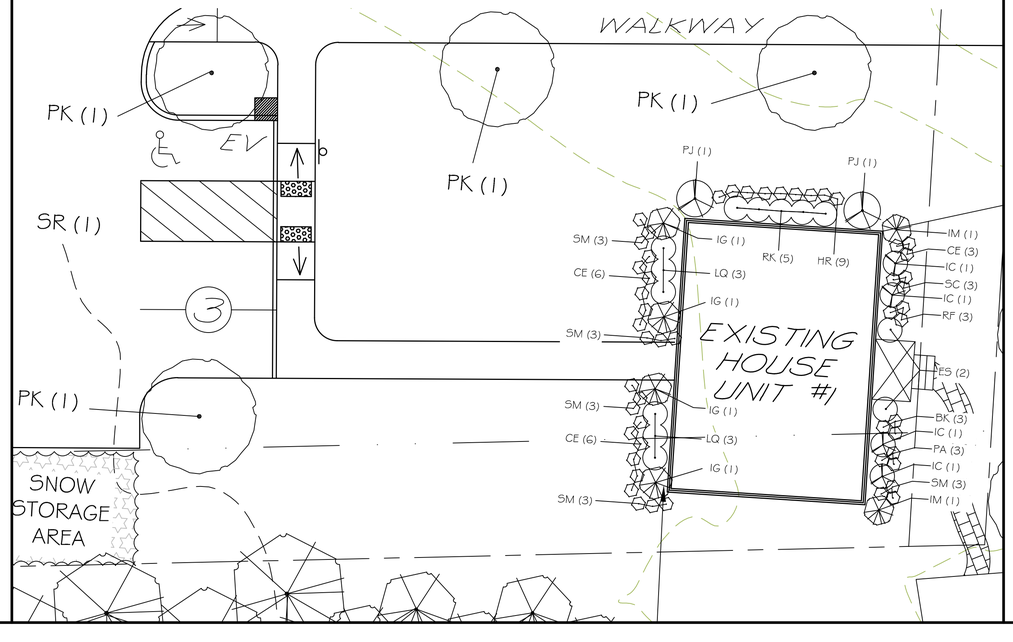
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TYPICAL COTTAGE UNIT PLANTING PLAN - 1" = 10'



EXISTING HOUSE PLANTING PLAN - 1" = 10'



LANDSCAPE CALCULATIONS:

INTERIOR PARKING LOT LANDSCAPING:
NOT REQUIRED FOR PARKING LOTS WITH 0-20 SPACES

STREETSCAPE LANDSCAPING:
REQUIRED: 1 STREET TREE / 35' LINEAR FEET OF ADJACENT ROADWAY
130 L.F.OF ADJACENT ROADWAY (COURT STREET) / 35 = 3.71 = 4 TREES REQUIRED
PROVIDED: 4 TREES PROPOSED ALONG COURT STREET

PLANTING NOTES

1. CONTRACTOR SHALL OBTAIN APPROVAL FROM LANDSCAPE ARCHITECT PRIOR TO PURCHASING AND/OR INSTALLING SUBSTITUTE PLANT MATERIAL PRIOR TO PURCHASE OF ANY SUBSTITUTE MATERIALS.
2. CONSTRUCTION ACCESS WILL BE AS DIRECTED BY LANDSCAPE ARCHITECT. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ACCESS ROUTE AND ALL AREAS DISTURBED BY PLANTING OPERATIONS UPON COMPLETION OF CONSTRUCTION OPERATIONS, AT NO ADDITIONAL COST TO THE OWNER.
3. LAYOUT OF ALL PLANTING BEDS AND LOCATION OF PLANTS TO BE APPROVED BY LANDSCAPE ARCHITECT ON SITE PRIOR TO CONSTRUCTION AND INSTALLATION.
4. CONTRACTOR TO REMOVE ALL DEBRIS GENERATED BY PLANT INSTALLATION. DEBRIS TO BE DISPOSED OF IN A LEGAL MANNER.
5. ALL PLANT MATERIAL SHALL BE GUARANTEED TO BE IN GOOD, HEALTHY AND FLOURISHING CONDITION FOR TWO (2) YEARS FROM THE DATE OF FINAL INSTALLATION APPROVAL BY LANDSCAPE ARCHITECT. CONTRACTOR SHALL REPLACE, WITHOUT COST TO OWNER, AND AS SOON AS WEATHER CONDITIONS PERMIT, ALL DEAD AND NON-FLOURISHING PLANTS AS DETERMINED BY THE LANDSCAPE ARCHITECT. REPLACEMENT PLANTS SHALL BE BE GUARANTEED IDENTICALLY TO ORIGINAL PLANTS, TIME PERIOD COMMENCING FROM DATE OF REPLACEMENT PLANTING APPROVAL BY LANDSCAPE ARCHITECT.
6. ALL BEDS TO BE MULCHED WITH 4" DEPTH SHREDDED BARK MULCH UNLESS NOTED OTHERWISE.
7. CONTRACTOR TO PROVIDE NECESSARY TEMPORARY IRRIGATION IF NEEDED BASED ON TIME OF YEAR THE PROJECT IS IMPLEMENTED.
8. ALL LANDSCAPED AREAS SHALL RECEIVE REGULAR MAINTENANCE AND UPKEEP. SEVERELY INJURED, DISEASED, OR DEAD PLANT MATERIAL SHALL BE REPLACED IN KIND IN PERPETUITY (AVOID REPLACING LANDSCAPE MATERIALS IN THE PERIOD FROM NOVEMBER TO MARCH.)
9. BEST PRACTICES TO MINIMIZE ENVIRONMENTAL IMPACTS SUCH AS THE USE OF LOW PHOSPHOROUS FERTILIZER AND SLOW RELEASE NITROGEN, SHALL BE IMPLEMENTED.
10. IF OWNERSHIP OF A SITE IS CONVEYED TO A NEW PROPERTY OWNER, THE NEW OWNER SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING IN ACCORDANCE WITH THE APPROVED FINAL LANDSCAPING PLAN.

ISSUED FOR PLANNING BOARD REVIEW
January 21, 2025

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LANDSCAPE PLAN

103 COURT STREET

103 COURT STREET
DOVER, NEW HAMPSHIRE
STRAFFORD COUNTY
AUGUST 15, 2024
JOB No. 24101

SHEET No.
La-1

(P24-0012)

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #SITE-2024-0012

Application Type:	Site Review
Applicant(s):	5 Sherman Street, LLC
Owner(s):	5 Sherman Street, LLC
Location:	103 Court St. (Assessor's Map 19, Lot 8)
Meeting Date:	January 28, 2025

INTENT: Project proposes the purchase of two (2) size-restricted (1,400 s.f.) units through the Transfer of Development Rights (TDR) for a total of five (5) units, where three (3) units are allowed by right via single-family base density calculation, to include the renovation of the existing single-family home and the construction of four (4) single-family cottages (two would be size restricted) along with parking, landscaping and utilities.

AGENDA ITEM #: 4-C

FILE: SITE-2024-0012

APPLICANT/OWNER: 5 Sherman Street, LLC

LOCATION: 103 Court St. (Assessor's Map 19, Lot 8)

LOTS/UNITS PROPOSED: Two (2) TDR units, Five (5) units total (the TDR application being heard during this same meeting)

ACREAGE: ±1.20 ac.

ZONING DISTRICT: R-12

EXISTING USE: Residential

PROPOSED USE: Residential

SURROUNDING USE: Residential, Cemetery

PERMITS: None

WAIVERS REQUESTED: §153-14.D.6(b), requiring an aisle width of 24', where an aisle width of 20' is being proposed.

ZBA ACTION: None

CONSERVATION COMMISSION: N/A

TRC: Reviewed on 09/06/2024, 09/26/2024 and 11/14/2024
(Subsequent TRC Review Required prior to Planning Board Review)

NOTICES: Abutter notices went out for the December meeting

ATTACHMENTS: Application materials including site plan.

Summary of Request and Background
The applicant is proposing a residential project consisting of five (5) residential units by purchasing two (2) units through TDR. The proposal includes reconstruction of the existing single-family dwelling and the construction four (4), single-family cottages, two of which would be size restricted.

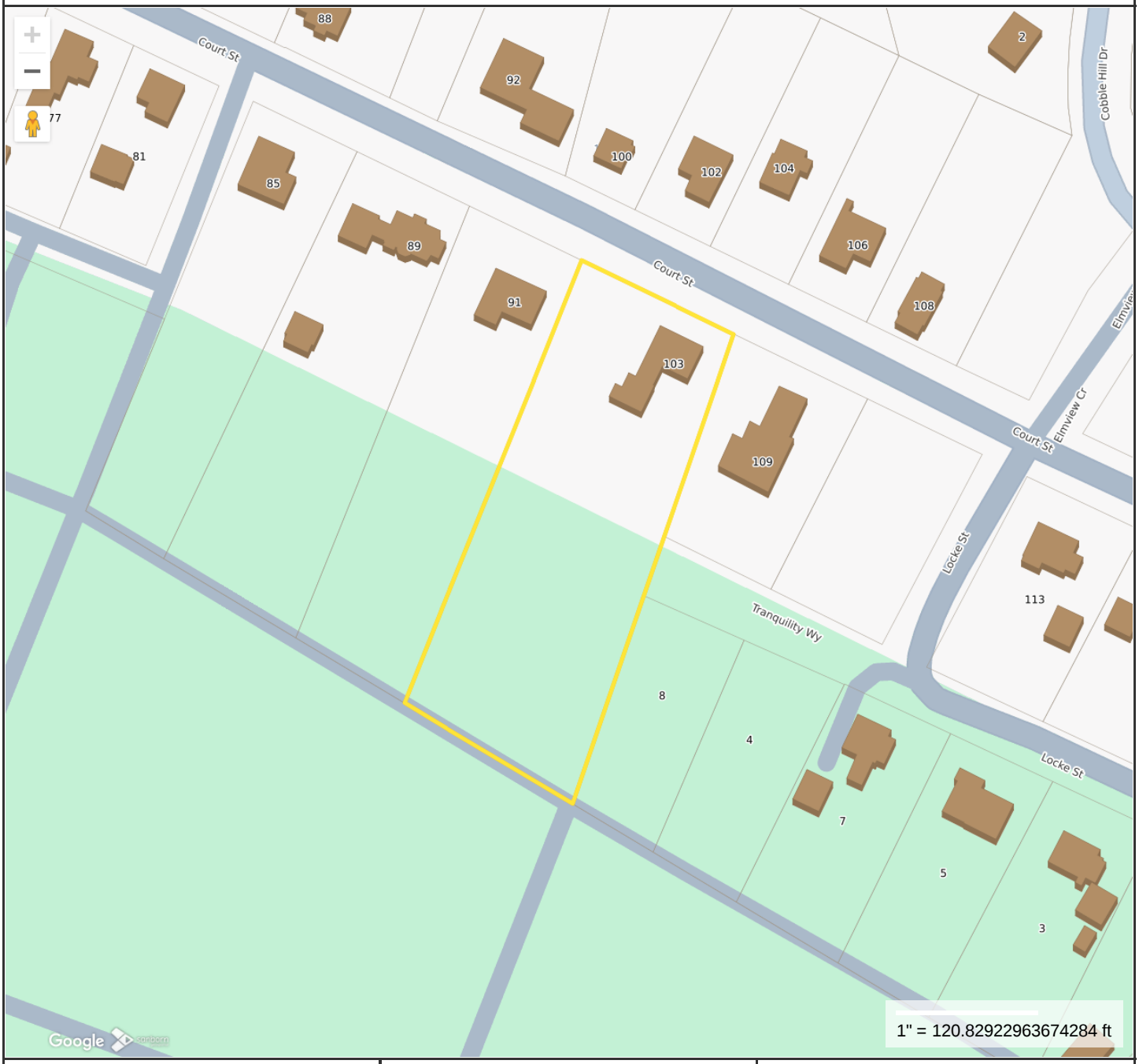
The base density for the parcel was determined to be three units and the additional two (2) units are to be ruled on by this Board (TRAN-2024-0011)

The Technical Review Committee reviewed the application at their September 6 and 26, 2024 and November 7, 2024. Meetings, with a subsequent TRC review required due to substantial plan changes. *(minutes previously attached for December meeting)*

Consistency with Land Use Regulations – Site Plan
§153-4 of the Site Review Regulations of the City Code provides for site review by the Planning Board of new construction of various types. Staff feels based on the design and location of this project that site plan review by TRC and the Planning Board is still required even with the reduction to 4 new units. While this plan currently does not meet the requirements of a site plan, the applicant is seeking to continue this site review item to a future meeting so that the Technical Review Committee can review a full revised site plan set and revised stormwater plans and then come back for Planning Board review should the Planning Board vote on the TDR request.

STAFF RECOMMENDATION- Site Plan:
The Planning Department recognizes that the proposed plan has been scaled-back to reduce density and improve visual screening, per Planning Board and abutter request. The TDR application associated with this site plan, TRAN-2024-0011, is to be reviewed and possibly voted on this meeting, with the applicant seeking to continue this item to a future Planning Board meeting, pending the TDR application's approval. As such, staff recommends the Planning Board should continue the site plan item.

SITE-2024-0012 103 Court Street



Property Information

Location	103 COURT ST
Owner	5 SHERMAN STREET LLC
Land Use	
Zoning Code	R-12
Property Id	19008-000000

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 10/30/2023
Data updated Daily

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

CITY OF DOVER

PLANNING BOARD – SITE-2024-0012

Meeting Type:	Regular Meeting
Meeting Location:	Council Chambers, City Hall, 288 Central Ave, Dover, NH
Meeting Date:	**Tuesday, January 28, 2025**
Meeting Time:	**7:00 pm**

Dear Planning Board Members:
Please bring previous materials for SITE-2024-0012.

TRITECH
ENGINEERING CORPORATION

755 Central Avenue
Dover, New Hampshire 03820

Telephone 603.742.8107
Facsimile 603.742.3830

January 21, 2025

Donna Benton, AICP
Director of Planning & Community Development
City of Dover, Planning Department
288 Central Avenue
Dover, New Hampshire 03820

Subject: Site Review & TDR Proposal
103 Court Street
Dover Tax Map 19 Lot 8
103 Court Street
Dover, New Hampshire
Job No. 24101

Dear Donna:

Since our last submission to the Planning Board, the applicant has evaluated questions and comments raised by the board and abutters at the Planning Board meeting on December 10th, 2024 and the site walk on January 11, 2025.

The applicant has revised the design addressing many of these questions and concerns:

1. The duplex that was proposed to be located where the existing barn is located has been removed from the plans.
2. With the duplex removed, we were able to straighten the driveway entrance to provide additional separation to the Hamer property.
3. The landscape plan has been revised to reduce the impact on existing vegetation along the perimeter of the property. This was achieved by the elimination of much of the proposed fence and providing a more robust landscape screening.

The plans have also been revised to include the 25-foot cemetery setback requirement of RSA 289: 3.III. The planning department has stated that the 30-foot perimeter buffer required by the City of Dover Zoning Regulations §170-29. G (7) is not applicable for this form of development; therefore, we have removed the 30-foot buffer line from the plans. The applicant has looked at a number of development options for this property and believes this design has the least overall impact to the site and surrounding properties.

These revisions also modify the TDR request as follows:

1. The total number of units has been reduced to 5 with 3 of the units allowed by the TDR base density calculations (the existing house and two of the cottage units).
2. Two units size restricted to 1400 sq. ft. will be purchased via the TDR regulations.
3. The 30-foot perimeter buffer waiver is not required.

These modifications will require significant utility and drainage revisions that are not available at this time. We respectfully request that the board discuss the updated proposal and act to approve the TDR request. This will allow the applicant to proceed with necessary revisions to the site plan with some confidence that the proposal is acceptable.

Project Submittal

Attached please find the supporting documentation:

- Six (6) Copies of this letter.
- Six (6) Copies of the revised General Site Plan (Sheet SP-1).
- Six (6) Copies of the revised Landscape Plan (Sheet LA-1).
- Additional documentation will be provided by the applicant under separate cover.

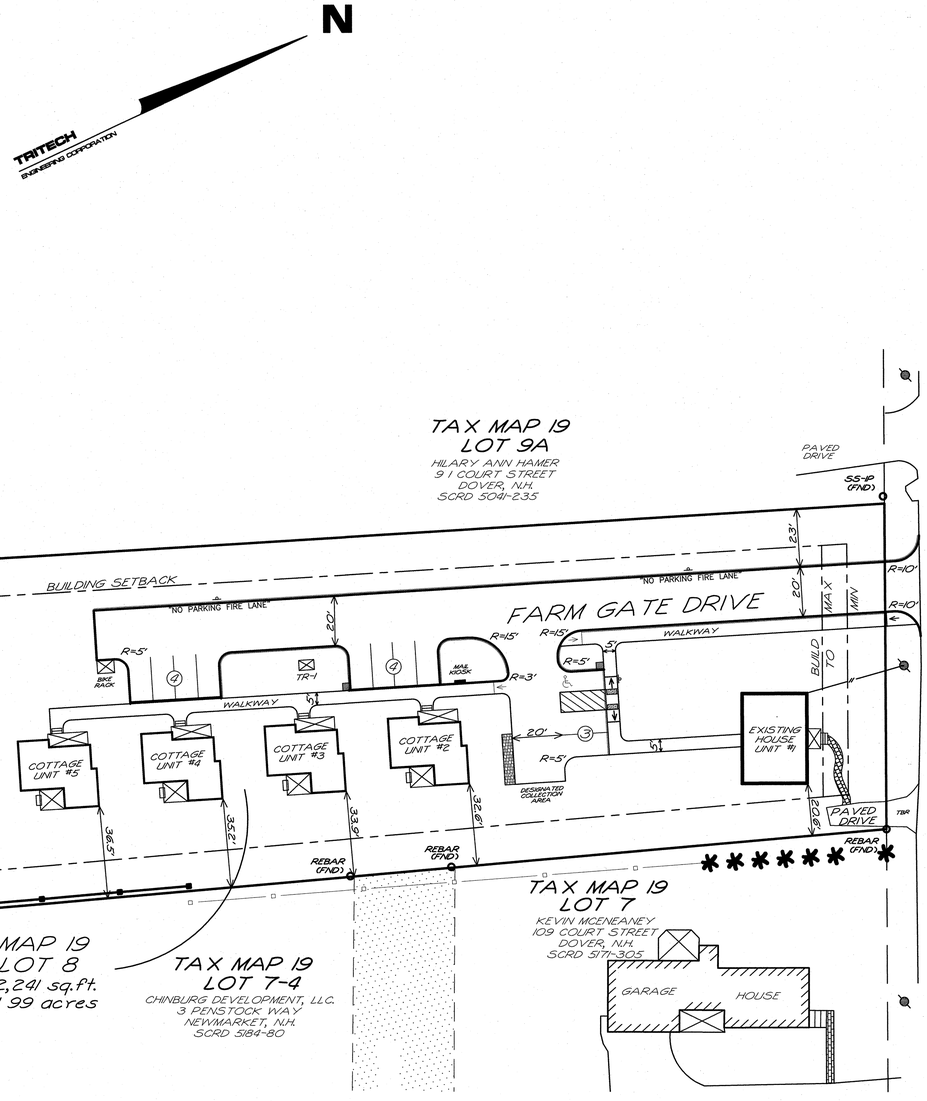
We look forward to further discussing this proposal with the Planning Board at their January 28th meeting.

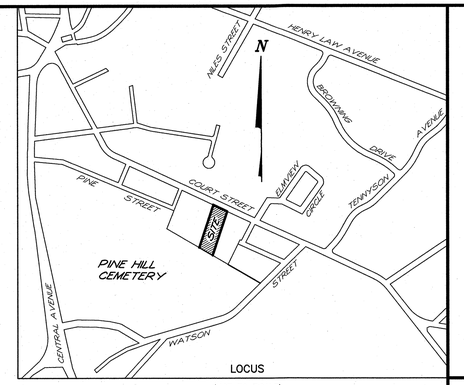
Please advise should you have any questions.

Very truly yours,
TRITECH ENGINEERING CORP.

Robert J. Stowell, P.E., L.L.S.
President

RJS / cmp
Attachments
\\24101_CourtStSubmittalltr5.docx





LOCUS

(NOT TO SCALE)

NOTES

1.) INTENT: TO FURTHER DEVELOP TAX MAP 19 LOT 8. THIS DEVELOPMENT WILL INCLUDE THE RENOVATION OF THE EXISTING SINGLE FAMILY HOUSE (1 UNIT). THE DEVELOPMENT WILL ALSO INCLUDE THE CONSTRUCTION OF 4 SINGLE FAMILY SIZE RESTRICTED HOMES. THESE HOMES WILL BE CONSTRUCTED UNDER THE TDR ORDINANCE. 2 BASE UNIT AND THE PURCHASE OF 2 SIZE. RESTRICTED UNITS.

2.) CURRENT OWNER: 5 SHERMAN STREET LLC
242 CENTRAL AVENUE
DOVER, N.H.

AUTHORIZED SIGNATURE

3.) TAX MAP 19 LOT 8.

4.) TOTAL LOT AREA: 52,241 SQ.FT. – 1.199 ACRES

5.) PROJECT DEED REFERENCE: BOOK 5172 PAGE 55

6.) PROJECT PLAN REFERENCE: SURVEYED MAY 1935
W.S. WHEELER, CE
DOVER, N.H.
SCRD
POCKET #10, FOLDER #2, PLAN #11 & 12

LIMITED SUBDIVISION
CECIL TAYLOR
DOVER, N.H.
FREDERICK E. DREW ASSOCIATES
JULY 1977 SCRD 17–112

PROPERTY SURVEY
109 COURT STREET, DOVER
STRAFFORD COUNTY, NEW HAMPSHIRE
JOANNE RICHARD LIVING REVOCABLE TRUST
STONEWALL SURVEYING
AUGUST 1, 2023 SCRD #13011

7.) ALL APPLICABLE RIGHT–OF–WAY, CONSERVATION, SLOPE, CONSTRUCTION, POWER LINE, CROSS TRAVEL OR OTHER EASEMENTS HAVE BEEN REFERENCED IN A NOTE.

8.) ZONING: R–12
MIN. LOT SIZE: 12,000 SQ.FT.
MIN. FRONTAGE: 100 FT
MIN. SETBACKS:
FRONT: 15 FT TO 25 FT
SIDE: 15 FT
REAR: 30 FT
MAX. COVERAGE: 30 %

9.) VARIANCES, SPECIAL EXCEPTIONS, CONDITIONAL USE PERMITS: NONE

10.) THE RAW UNADJUSTED CLOSURE OF OUR RANDOM POINT TRAVERSE WAS 1 PART IN 60,000, AND WAS ACCOMPLISHED USING A TOPCON GT 503 TOTAL STATION, DURING THE MONTH OF FEBRUARY, 2024.

11.) SUBJECT PARCEL IS NOT WITHIN A FEDERALLY DESIGNATED SPECIAL FLOOD HAZARD ZONE (FLOOD HAZARD ZONE A – PANEL 0320E, MAP No. 33017C0340E, DATE: 9–30–2015).

12.) DURING THE MONTH OF MARCH, 2024 MICHAEL MARIANO, STATE OF NEW HAMPSHIRE CERTIFIED SOIL SCIENTIST #76, NH CERTIFIED WETLAND SCIENTIST #183, CONDUCTED AN ON–SITE WETLANDS DELINEATION OF THE SUBJECT PARCEL. WETLANDS WERE IDENTIFIED BASED ON THE CITY OF DOVER ZONING ORDINANCE (170–27.1) AND ON STATE & FEDERAL CRITERIA OUTLINED IN THE "CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL" (DEPT. OF THE ARMY, 1987) ON THIS SITE. WETLANDS BASED ON LOCAL CRITERIA SHARE THE SAME BOUNDARIES WITH THOSE BASED ON STATE AND FEDERAL CRITERIA. NO WETLANDS WERE FOUND.

13.) BASIS OF BEARING: BEARING SYSTEM BASED ON GPS FIELD OBSERVATIONS ON FEBRUARY 16, 2024 USING TOPCON HIPER SR RECEIVERS AND OPUS CORRECTED ON FEBRUARY 19, 2024. DATUM BASED ON NEW HAMPSHIRE STATE PLANE COORDINATES SPC (2800 NH), (NAVD 88).

14.) 25 FOOT SETBACK FROM PINE HILL CEMETERY (SEE RSA 289:3 III).

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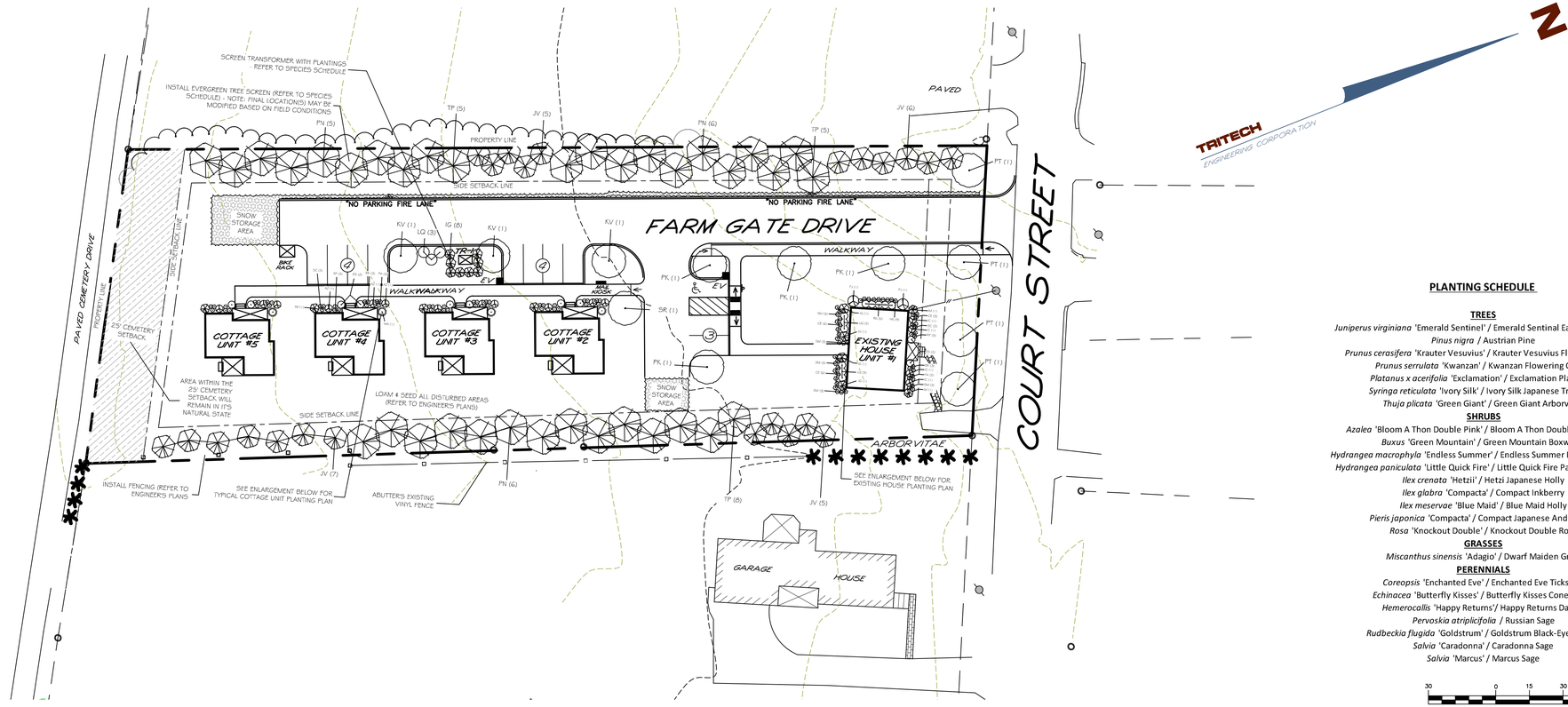
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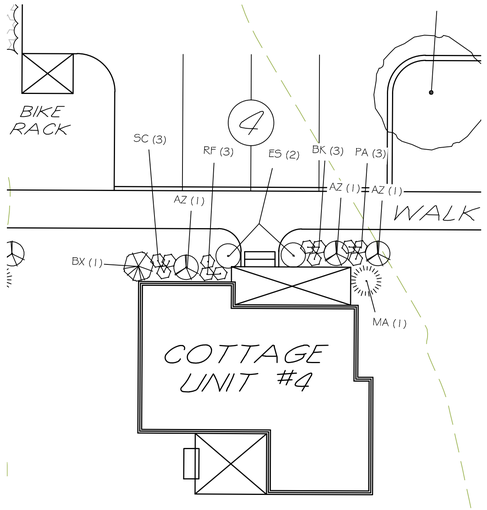
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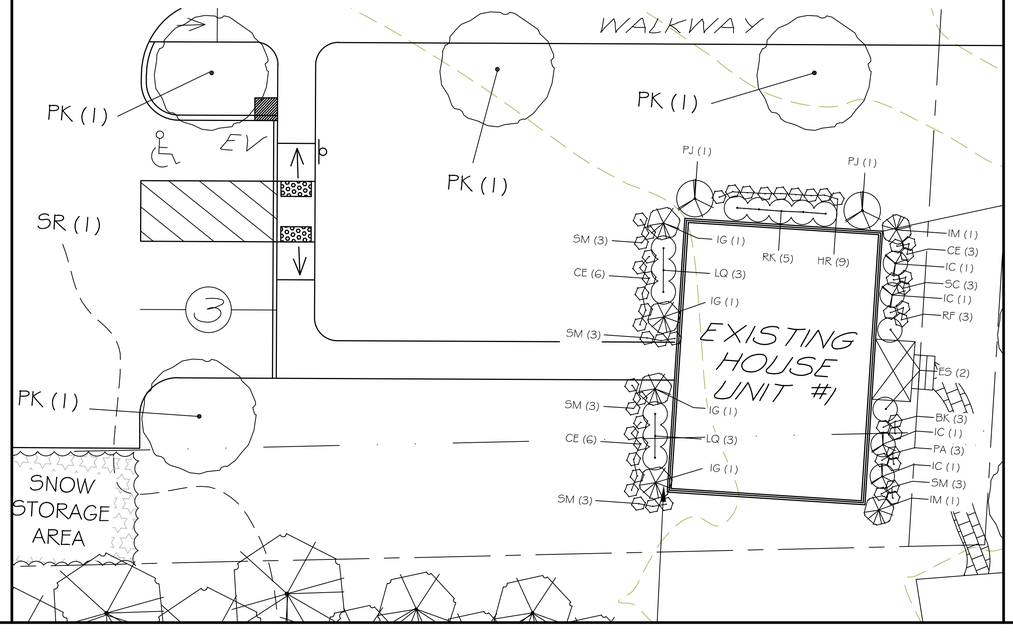
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NOT REQUIRED FOR PARKING LOTS WITH 0-20 SPACES

STREETSCAPE LANDSCAPING:
REQUIRED: 1 STREET TREE / 35' LINEAR FEET OF ADJACENT ROADWAY
130 L.F.OF ADJACENT ROADWAY (COURT STREET) / 35 = 3.71 = 4 TREES REQUIRED
PROVIDED: 4 TREES PROPOSED ALONG COURT STREET

PLANTING NOTES

1. CONTRACTOR SHALL OBTAIN APPROVAL FROM LANDSCAPE ARCHITECT PRIOR TO PURCHASING AND/OR INSTALLING SUBSTITUTE PLANT MATERIAL PRIOR TO PURCHASE OF ANY SUBSTITUTE MATERIALS.
2. CONSTRUCTION ACCESS WILL BE AS DIRECTED BY LANDSCAPE ARCHITECT. CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF ACCESS ROUTE AND ALL AREAS DISTURBED BY PLANTING OPERATIONS UPON COMPLETION OF CONSTRUCTION OPERATIONS, AT NO ADDITIONAL COST TO THE OWNER.
3. LAYOUT OF ALL PLANTING BEDS AND LOCATION OF PLANTS TO BE APPROVED BY LANDSCAPE ARCHITECT ON SITE PRIOR TO CONSTRUCTION AND INSTALLATION.
4. CONTRACTOR TO REMOVE ALL DEBRIS GENERATED BY PLANT INSTALLATION. DEBRIS TO BE DISPOSED OF IN A LEGAL MANNER.
5. ALL PLANT MATERIAL SHALL BE GUARANTEED TO BE IN GOOD, HEALTHY AND FLOURISHING CONDITION FOR TWO (2) YEARS FROM THE DATE OF FINAL INSTALLATION APPROVAL BY LANDSCAPE ARCHITECT. CONTRACTOR SHALL REPLACE, WITHOUT COST TO OWNER, AND AS SOON AS WEATHER CONDITIONS PERMIT, ALL DEAD AND NON-FLOURISHING PLANTS AS DETERMINED BY THE LANDSCAPE ARCHITECT. REPLACEMENT PLANTS SHALL BE BE GUARANTEED IDENTICALLY TO ORIGINAL PLANTS, TIME PERIOD COMMENCING FROM DATE OF REPLACEMENT PLANTING APPROVAL BY LANDSCAPE ARCHITECT.
6. ALL BEDS TO BE MULCHED WITH 4" DEPTH SHREDDED BARK MULCH UNLESS NOTED OTHERWISE.
7. CONTRACTOR TO PROVIDE NECESSARY TEMPORARY IRRIGATION IF NEEDED BASED ON TIME OF YEAR THE PROJECT IS IMPLEMENTED.
8. ALL LANDSCAPED AREAS SHALL RECEIVE REGULAR MAINTENANCE AND UPKEEP. SEVERELY INJURED, DISEASED, OR DEAD PLANT MATERIAL SHALL BE REPLACED IN KIND IN PERPETUITY (AVOID REPLACING LANDSCAPE MATERIALS IN THE PERIOD FROM NOVEMBER TO MARCH.)
9. BEST PRACTICES TO MINIMIZE ENVIRONMENTAL IMPACTS SUCH AS THE USE OF LOW PHOSPHOROUS FERTILIZER AND SLOW RELEASE NITROGEN, SHALL BE IMPLEMENTED.
10. IF OWNERSHIP OF A SITE IS CONVEYED TO A NEW PROPERTY OWNER, THE NEW OWNER SHALL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING IN ACCORDANCE WITH THE APPROVED FINAL LANDSCAPING PLAN.

ISSUED FOR PLANNING BOARD REVIEW
January 21, 2025

REVISIONS:	DESCRIPTION:
DATE:	
9-12-24	REVISED PER TRC COMMENTS
10-21-24	REVISED PER TRC COMMENTS
1-21-25	REVISED PER PLANNING BOARD COMMENTS.

LANDSCAPE PLAN

103 COURT STREET

103 COURT STREET
DOVER, NEW HAMPSHIRE
STRAFFORD COUNTY
AUGUST 15, 2024
JOB No. 24101

SHEET No.
La-1

(P24-0012)

-----Original Message-----
From: lisa o'grady <lissaogrady@gmail.com>
Sent: Friday, January 17, 2025 1:02 AM
To: City of Dover - Planning <Dover-Planning@dover.nh.gov>
Subject: 103 court st development

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

To The City of Dover N.H. Planning Board

My name is Lisa Ogrady and I am the owner of 100 court street which abuts the 103 court street property.

I want to thank you for listening to some of my concerns regarding this development at the Dec. 10,2024 meeting.

I would also like to apologize for not being properly prepared and unable to convey all the concerns i have during that meeting.

After educating myself about the Transfer of development rights i have come to understand and believe this is a good option if utilized correctly in the right situations, but it could also be detrimental if applied in others.

The proposed development does not provide the required 30 foot buffer zone and would increase the density of homes on the property which should have disqualified the proposed development from using a TDR.

Although these requirements have already been clarified to the developer during the second TRC meeting, the developer's new proposal still does not meet the requirements and therefore should never have been approved by the TRC and forwarded to the planning board for consideration. It simply does not meet the required criteria!

This proposal would adversely effect the integrity of our long established neighborhood because its buildings are in no way consistent with the surrounding ones which are owner occupied single family homes it will also reduce the lot size per home significantly.

If the aforementioned is not enough to see this proposal should be denied, i would ask that the planning board give more consideration to the placement of the road to serve as a driveway for the proposed houses to be built behind the existing one. The placement of this is currently directly accross the street from my driveway, my access easement on the property at 102 court and the driveway for 102 Court Street. Along with the driveway for 91 court street this would make a total of five access point's with in a space of about fifty feet and would add considerably to the traffic issues that already make it almost impossible to back out onto Court Street safely. The addition of this road would also endanger everyone traveling on Court Street in a car, on a bicycle and on foot.

Absolutely nothing should ever take presidente over the safety of our streets or the people who use them!

i also hope the planning board will also take a closer look at the existing water issues and will allow the opinions of the resident's who understand and know it best, help them to correctly address this ongoing problem while we have the chance.

Due of the clay in this area the ground does not drain well, this development will no doubt add to the water issues here on court street. The proposal clearly does not provide the drainage necessary to prevent itself from adding to the problem.

I have severe and ongoing destruction to my property from the water runoff caused by the past development of 102. 104 & 106 court street My property already will not tolerate another drop of water!

With that said, I pray the planning board will understand the people do not want this and will reject the proposed development for the 103 Court Street property.

I thank you for the opportunity to share and make these concerns known.

Respectfully,
Lisa O'Grady
100 Court Street
Dover, N.H. 03820

Sent from my iPhone

_____

Please consider conserving our natural resources before printing this e-mail and/or any attachments.

_____

This electronic message and any attachments may contain information that is confidential and/or legally privileged in accordance with NH RSA 91-A and other applicable laws or regulations. It is intended only for the use of the person and/or entity identified as recipient(s) in the message. If you are not an intended recipient of this message, please notify the sender immediately and delete the material. Do not print, deliver, distribute or copy this message, and do not disclose its contents or take any action in reliance on the information it contains unless authorized to do so. Thank you.

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #SUBM-2024-0001

Application Type:	Minor Subdivision
Applicant(s):	114 Silver Street Group, LLC
Owner(s):	114 Silver Street Group, LLC
Location:	114 Silver Street (Assessor's Map 12, Lot 148)
Meeting Date:	January 28, 2025

INTENT: Proposal is to subdivide the parcel to make one (1) new lot for a total of two (2) lots.

AGENDA ITEM #: 4-D

FILE: SUBM-2024-0001

APPLICANT/OWNER: 114 Silver Street Group, LLC

LOTS/UNITS PROPOSED: Two (2) lots

ACREAGE: Existing Acreage: 22,340 sq. ft./0.52± ac.
Proposed Lot 1: 11,650± sq. ft.
Proposed Lot 2: 10,690± sq. ft.

ZONING DISTRICT: HR (Heritage Residential)

EXISTING USE: Residential

PROPOSED USE: Residential

SURROUNDING USE: Residential, School

ZBA ACTION: N/A

PERMITS:
- COND-2024-0011, CUP to convert single-family dwelling to 4-unit dwelling
- COND-2024-0012, CUP to construct a new, 4-unit dwelling

WAIVERS REQUESTED: N/A

APPLICATION IS COMPLETE: Yes

REGIONAL IMPACT: No

NOTICES SENT: Abutter notices were sent by certified mail to all abutters.

TRC: July 18, 2024, Sept. 5, 2024, Oct. 31, 2024, and Nov. 21, 2024

ATTACHMENTS: Application materials including Subdivision Plan.

Summary of Request and Background:
The applicant proposes subdividing the subject lot at 114 Silver St., creating one new lot for a total of two lots. The proposed lots, Assessor's Map 12, Lots 148 & 148-1, are shown as having approximately 11,650 square feet and 10,690 square feet respectively.

The applicant is also proposing to convert an existing single-family home into a 4-unit residential dwelling on one lot, (Map 12, Lot 148), and to construct a 3-story, 4-unit residential dwelling on the proposed Lot 2, (Map 12, Lot 148-1)

The Technical Review Committee reviewed the application at their July 18, 2024, September 5, 2024, October 31, 2024, and November 21, 2024 meetings. *(minutes attached)*

Consistency with Land Use Regulations:
The plan is consistent with §157-15 of the City of Dover's Land Subdivision Regulations, which provides for subdivision of existing lots.

STAFF RECOMMENDATION:
The Planning Department recommends that the Planning Board vote to accept the application and determine it not to have regional impact, open a public hearing, close the public hearing, make the necessary and supporting findings of fact, and vote to approve the minor subdivision with the following subsequent conditions:

Subsequent Conditions to be Met Prior to Signing of Plans:
1. Provide physical and digital copies (including CAD) of complete plan set which additionally shall include:
   1.1. The owner's signatures for recording at Strafford County Registry of Deeds;
   1.2. Include the Planning File #: SUBM-2024-0001;
   1.3. The stamp and signature of the LLS on the final plans;
   1.4. Confirm lot numbering with City Assessor.
2. Provide copies of easements between the two lots for access, and utilities.

SUBM-2024-0001 114 Silver Street



Property Information

Location	114 SILVER ST
Owner	114 SILVER STREET GROUP LLC
Land Use	
Zoning Code	HR
Property Id	12148-000000

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 10/30/2023
Data updated Daily

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

PLAN SNAPSHOT REPORT SUBM-2024-0001
FOR CITY OF DOVER, N.H.

Plan Type:	Subdivision Plan - Minor	**Project:**		**App Date:**	06/25/2024
Work Class:	New Construction	**District:**	None	**Exp Date:**	08/29/2024
Status:	Review Expired	**Square Feet:**	10,690.00	**Completed:**	NOT COMPLETED
Valuation:	$400,000.00	**Assigned To:**		**Approval Expire Date:**	

Description: The Subdivision Plan of Land attached proposes to divide the existing 114 Silver Street lot into two (2) lots. The existing lot shown is Lot 148 and the proposed lot is Lot 148-1

Parcel: 12148-000000 Main	**Address:** 114 Silver St Dover, NH Main	**Zone:** HR(Residential - Heritage)

Surveyor	Engineer	Owner	Applicant
James Smith Home: (603) 627-5500	Michael Malynowski Home: (603) 627-5500	Thomas Toye IV Home: (603) 413-6175	Jared Grondin 400 Harvey Road, Suite D Manchester, NH 03103 Home: (781) 305-9408 Business: (603) 627-5500 Mobile: (603) 545-1649

Plan Custom Fields

Proposed Number of New Lots	1	Existing Number of Lots	1	Parcel Map/Lot	Map 12, Lot 148
Parcel Zoning Overlay	N/A	Select Subdivision Type	Conventional	Parcel Zoning	Heritage Residential (HR)
Property Address	114 Silver Street	Existing Parcel Size (Ac)	0.51	Existing Parcel Size (sqft)	22215.6
Proposed Use Detail	Four-family building	Owner Name	114 Silver Street Group, LLC	Deed Page	948
Deed Book	5161	Owner Address	10 Durham Road, Dover, NH 03820	Deed Date	01/24/2024
Refuse Removal	Public	Estimated Construction Value	400000.00	Owner Phone	603-412-6175
Parcel Feedback	Subdivide into (2) conforming lots	Owner EMail	tom@arthurthomasproperties.com	If purchasing units, how many?	0
Existing Use Detail	Single-family residential home	TDR Detail	N/A	subdroadtype	Municipal
Water Source?	Municipal	Distance to City Water (ft)	30	Distance to City Sewer (ft)	30
Sewer Service?	Municipal	Proposed Road Length (ft)	0	Subdivision Regulations section(s) to be waived	N/A
Justification for waiver request(s)	N/A				

Attachment File Name	Added On	Added By	Attachment Group	Notes
Signature_Jared_Grondin_6/25/2024.jpg	06/25/2024 9:11	Grondin, Jared		Uploaded via CSS
2025.01.28_PlanningBoard.Agenda.pdf	01/15/2025 13:47	Blonigen, Rachel		PB Agenda

Note	Created By	Date and Time Created
1. Emailing all invoices for SUBM-2024-0001, COND-2024-0011, COND-2024-0012 and SITE-2024-0006 at once 01/22/2025	Rachel Blonigen	01/22/2025 15:00

Invoice No.	Fee	Fee Amount	Amount Paid
INV-00008423	Planning Subdivision Lot Fee	$150.00	$150.00
	Planning Subdivision Application Fee	$200.00	$200.00
	Total for Invoice INV-00008423	$350.00	$350.00

PLAN SNAPSHOT REPORT (SUBM-2024-0001)

INV-00010937	Planning Public Notice in Newspaper		$120.00	$0.00
		Total for Invoice INV-00010937	$120.00	$0.00
		Grand Total for Plan	$470.00	$350.00

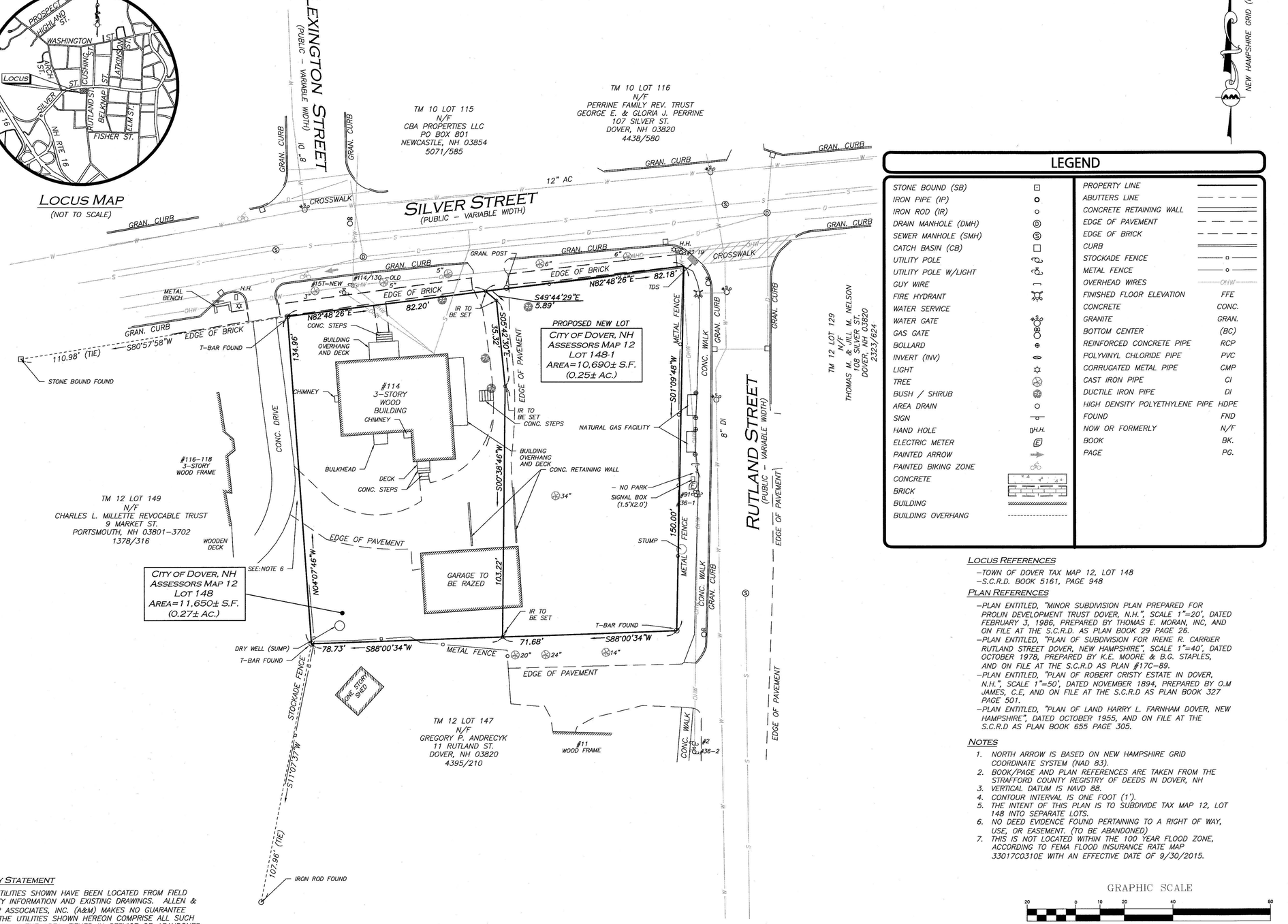
Activity Type	Activity Number	Name	Workflow Action Name	User	Created On
Recommendation to Planning Board	RCMND-000007-2025		Planner Creates Staff Recommendations v.1.00	Rachel Blonigen	01/22/2025

Workflow Step / Action Name	Action Type	Start Date	End Date
Review v.1		01/13/2025 15:28	01/13/2025 15:28
Confirm application complete v.1	Generic Action		01/13/2025 15:28
Planning Board v.1		01/13/2025 15:28	
Planning Board Agenda v.1	Task	01/13/2025 15:28	01/15/2025 13:47
Invoice for Notices v.1	Task	01/15/2025 13:46	01/22/2025 15:01
Send Notices v.1	Task	01/22/2025 15:01	01/22/2025 15:01
Planner Creates Staff Recommendations v.1	Plan Activity	01/22/2025 15:01	
Distribute Planning Board Materials v.1	Task		
Planning Board Hearing v.1	Hold Hearing		
Planning Board Decision v.1	Plan Activity		
NOD Sent to Applicant v.1	Create Report		
Final Plan v.1			
Land Use Plan Final Review v.1	Receive Submittal		
Land Use Plan Stamped and Signed v.1	Generic Action		
Recording v.1	Task		
Document Archival v.1	Generic Action		
Internal Notification of Plan Completion v.1	Generic Action		
Create/Link to Records v.1			
Create / Link to Permit - Building Major v.1	Create Sub Permit		

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
10114-000000	34 LEXINGTON ST	MORENO CHARLES A TRUSTEE	MORENO CHARLES 2008 REVOCABLE TRUST	PO BOX 60	CENTER STRAFFORD	NH	03815
10115-000000	109 111 SILVER ST	CBA PROPERTIES LLC		PO BOX 801	NEW CASTLE	NH	03854
10116-000000	107 SILVER ST	PERRINE GEORGE E & GLORIA J ET AL TRUSTE	PERRINE FAMILY REVOCABLE TRUST	107 SILVER STREET	DOVER	NH	03820
10117-000000	103 SILVER ST	103 SILVER CARRIAGE LLC		103 SILVER ST	DOVER	NH	03820
10168-000000	125 SILVER ST	LAWRENCE REALTY GROUP SILVER STREET LLC		25 NEW HAMPSHIRE AVE STE 276	PORTSMOUTH	NH	03801
10169-000000	117 SILVER ST	SESSLER GREGG F & LAWRENCE CHRISTINA L T	LAWRENCE-SESSLER FAMILY REVOCABLE TRUST	117 SILVER ST	DOVER	NH	03820
10169-A00000	37 41 LEXINGTON ST	LEXINGTON GARDEN CONDOMINIUMS		LEXINGTON ST	DOVER	NH	03820
12128-000000	102 SILVER ST	BONNER ROBERT &	MCCONNELL ALEXIS S	102 SILVER STREET	DOVER	NH	03820
12129-000000	108 SILVER ST	NELSON THOMAS M	NELSON JILL M	108 SILVER ST	DOVER	NH	03820
12130-000000	8 RUTLAND ST	CHILD THOMAS L & DEBORAH M TRUSTEES	THOMAS L CHILD REVOCABLE TRUST &	8 RUTLAND ST	DOVER	NH	03820
12130-A00000	12 RUTLAND ST	KELSCH ALBERT L & JUDITH E TRUSTEES	KELSCH FAMILY TRUST	12 RUTLAND ST	DOVER	NH	03820
12147-000000	11 RUTLAND ST	ANDRECYK GREGORY P		11 RUTLAND ST	DOVER	NH	03820
12147-A00000	15 RUTLAND ST	MOSCHILLI ROBIN M		15 RUTLAND ST	DOVER	NH	03820
12149-000000	116 118 SILVER ST	MILLETTE CHARLES L REV TRUST	MILLETTE CHARLES TRUSTEE	9 MARKET ST	PORTSMOUTH	NH	03801-3702
12151-000000	120 SILVER ST	WARACH RACHEL TRUSTEE	WARACH JONATHAN B FAMILY TRUST	53 BUCKS HILL RD	DURHAM	NH	03824-3208
12148-000000	114 SILVER ST	114 SILVER STREET GROUP LLC		10 DURHAM ROAD	DOVER	NH	03820
		ALLEN & MAJOR ASSOCIATES, INC	JAMES P. SMITH	400 HARVEY ROAD, SUITE D	MANCHESTER	NH	03103



LOCUS MAP
(NOT TO SCALE)



LEGEND

STONE BOUND (SB)	⊡	PROPERTY LINE	
IRON PIPE (IP)	o	ABUTTERS LINE	— — —
IRON ROD (IR)	○	CONCRETE RETAINING WALL	
DRAIN MANHOLE (DMH)	Ⓓ	EDGE OF PAVEMENT	— — —
SEWER MANHOLE (SMH)	Ⓢ	EDGE OF BRICK	— — —
CATCH BASIN (CB)	□	CURB	
UTILITY POLE		STOCKADE FENCE	—▫—
UTILITY POLE W/LIGHT		METAL FENCE	—○—
GUY WIRE		OVERHEAD WIRES	OHW
FIRE HYDRANT		FINISHED FLOOR ELEVATION	FFE
WATER SERVICE		CONCRETE	CONC.
WATER GATE	GV	GRANITE	GRAN.
GAS GATE	GG	BOTTOM CENTER	(BC)
BOLLARD	●	REINFORCED CONCRETE PIPE	RCP
INVERT (INV)		POLYVINYL CHLORIDE PIPE	PVC
LIGHT		CORRUGATED METAL PIPE	CMP
TREE		CAST IRON PIPE	CI
BUSH / SHRUB		DUCTILE IRON PIPE	DI
AREA DRAIN		HIGH DENSITY POLYETHYLENE PIPE	HDPE
SIGN		FOUND	FND
HAND HOLE	H.H.	NOW OR FORMERLY	N/F
ELECTRIC METER	E	BOOK	BK.
PAINTED ARROW		PAGE	PG.
PAINTED BIKING ZONE			
CONCRETE			
BRICK			
BUILDING			
BUILDING OVERHANG			

LOCUS REFERENCES

–TOWN OF DOVER TAX MAP 12, LOT 148
–S.C.R.D. BOOK 5161, PAGE 948

PLAN REFERENCES

–PLAN ENTITLED, "MINOR SUBDIVISION PLAN PREPARED FOR PROLIN DEVELOPMENT TRUST DOVER, N.H.", SCALE 1"=20', DATED FEBRUARY 3, 1986, PREPARED BY THOMAS E. MORAN, INC, AND ON FILE AT THE S.C.R.D. AS PLAN BOOK 29 PAGE 26.
–PLAN ENTITLED, "PLAN OF SUBDIVISION FOR IRENE R. CARRIER RUTLAND STREET DOVER, NEW HAMPSHIRE", SCALE 1"=40', DATED OCTOBER 1978, PREPARED BY K.E. MOORE & B.G. STAPLES, AND ON FILE AT THE S.C.R.D AS PLAN #17C–89.
–PLAN ENTITLED, "PLAN OF ROBERT CRISTY ESTATE IN DOVER, N.H.", SCALE 1"=50', DATED NOVEMBER 1894, PREPARED BY O.M JAMES, C.E, AND ON FILE AT THE S.C.R.D AS PLAN BOOK 327 PAGE 501.
–PLAN ENTITLED, "PLAN OF LAND HARRY L. FARNHAM DOVER, NEW HAMPSHIRE", DATED OCTOBER 1955, AND ON FILE AT THE S.C.R.D AS PLAN BOOK 655 PAGE 305.

NOTES

1. NORTH ARROW IS BASED ON NEW HAMPSHIRE GRID COORDINATE SYSTEM (NAD 83).
2. BOOK/PAGE AND PLAN REFERENCES ARE TAKEN FROM THE STRAFFORD COUNTY REGISTRY OF DEEDS IN DOVER, NH
3. VERTICAL DATUM IS NAVD 88.
4. CONTOUR INTERVAL IS ONE FOOT (1').
5. THE INTENT OF THIS PLAN IS TO SUBDIVIDE TAX MAP 12, LOT 148 INTO SEPARATE LOTS.
6. NO DEED EVIDENCE FOUND PERTAINING TO A RIGHT OF WAY, USE, OR EASEMENT. (TO BE ABANDONED)
7. THIS IS NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE, ACCORDING TO FEMA FLOOD INSURANCE RATE MAP 33017C0310E WITH AN EFFECTIVE DATE OF 9/30/2015.

UTILITY STATEMENT

THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. ALLEN & MAJOR ASSOCIATES, INC. (A&M) MAKES NO GUARANTEE THAT THE UTILITIES SHOWN HEREON COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. A&M FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. A&M HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

R:\PROJECTS\3347–01\SURVEY\DRAWINGS\CURRENT\S–3347–01–SUB.DWG

NEW HAMPSHIRE GRID (NAD 83)

THIS PLAN IS THE RESULT OF AN ACTUAL ON THE GROUND SURVEY PERFORMED ON OR BETWEEN APRIL 17, 2024 AND APRIL 18, 2024 AND HAD AN ERROR OF CLOSURE OF NO GREATER THAN 1/10,000.

ALLEN & MAJOR ASSOCIATES, INC.

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR NO. 908 JAMES P. SMITH

JAMES P. SMITH NH LLS #908 — DATE 6.24.24

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:
TAX MAP 12 LOT 148
114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	06/24/24
SCALE:	1" = 20'	DWG. NAME:	S-3347-01-SUB
DRAFTED BY:	KMT	CHECKED BY:	JPS

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
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environmental consulting ◆ landscape architecture
www.allenmajor.com
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WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE:	SHEET No.
SUBDIVISION PLAN OF LAND	1

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CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #COND-2024-0011

Application Type:	Conditional Use Permit
Applicant(s):	114 Silver Street Group, LLC
Owner(s):	114 Silver Street Group, LLC
Location:	114 Silver Street (Assessor's Map 12, Lot 148)
Meeting Date:	January 28, 2025

INTENT: Proposal is for a Conditional Use Permit to convert an existing single-family home into 4-unit residential dwelling in the Heritage Residential Zoning District.

AGENDA ITEM #: 4-E

FILE: COND-2024-0011

LOTS/UNITS PROPOSED: Four (4) Units

APPLICANT/OWNER: 114 Silver Street Group, LLC

LOCATION: 114 Silver Street (Assessor's Map 12, Lot 148)

ACREAGE: ±0.26 ac.*
Pending approval of proposed minor subdivision (SUBM-2024-0001)

ZONING DISTRICT: HR (Heritage Residential)

EXISTING USE: Residential

PROPOSED USE: Residential

SURROUNDING USE: Residential

WAIVERS REQUESTED:
N/A

ZBA ACTION: N/A

PERMITS REQUIRED: N/A

CONSERVATION COMMISSION:
N/A

ATTACHMENTS: CUP Application, Site Plan

Summary of Request and Background
Proposal is for a Conditional Use Permit to convert an existing single-family home into 4-unit residential dwelling in the Heritage Residential Zoning District.

Within the HR district, any conversion of a structure to a 3-4 family dwelling must meet the following CUP criteria:

A. The specific site must have an amount of open space, either landscaped or left natural, at least equal to the average amount of open space on all developed lots in the HR District that are wholly or partly within two hundred (200) feet of the subject parcel. Existing parking areas, either gravel, paved or unpaved, shall not be considered to be open space.
B. Off-street parking, in accordance with Chapter 153, Site Review, shall be provided as to avoid vehicles backing into the street. Two (2) parking spaces per unit shall be required.
C. Parking lots shall be at least five (5) feet from a side property line and ten (10) feet from a front property line.
D. Parking areas shall be screened from the street and from abutting lots.
E. Structures shall be at least twenty (20) feet from a front property line, thirty (30) feet from a rear property line and fifteen (15) from a side property line unless abutting a street, in which case, the distance from the side property line shall be twenty (20) feet.
F. For new construction, the building must be designed to look like a single-family dwelling. At a minimum, this shall mean that only one entrance shall be visible from a public street. For conversions, the building must retain its appearance as a single-family dwelling or a 2-family dwelling, whichever is the current use. notwithstanding any other provision of Chapter 170, a legal or legal non-conforming accessory structure existing as of the effective date of these regulations may be converted into one or more residential units, provided that the building shall not be enlarged, nor shall any exterior improvements be made to alter its appearance as an accessory structure.

Consistency with Land Use Regulations – HR CUP Criteria
The applicant assesses the average open space within 200' of the subject property to be 57.3%, which per the submitted Drainage Report and site plan pages C-102 & C-107, this CUP request complies with. Staff feels the parking requirements (criteria B, C, & D), were met during TRC review, with the applicant providing the required amount of spaces, adequate screening, and parking space setbacks as prescribed in criterion C. Setbacks, per the applicant's submitted plan, are compliant with criterion E, and the existing structure's existing appearance adheres to the aesthetic specifications detailed in criterion F.

Consistency with Land Use Regulations – Non-environmental CUP Criteria
Chapter 170-19.B.2 lists three criterion for granting a CUP for relief for a use. Staff feels this proposal meets those criteria as well which include:

(a) The requested use shall be compatible with abutting uses and the surrounding neighborhood.

(b) The requested use will not create undue traffic congestion, or unduly impair pedestrian safety.

(c) The requested use will not result in objectionable noise or odor which would constitute a nuisance.

STAFF RECOMMENDATION:

The Planning Department recommends that the Planning Board accept the application as complete, note it is not of regional impact, hold a public hearing, make the necessary and supporting findings of fact, and vote to approve the Conditional Use Permit, as staff notes that this CUP application, as presented, meets all CUP criteria requirements. Staff would, however, recommend the following conditions.

Subsequent Conditions to Be Met Prior to Issuance of a Conditional Use Permit:

1. Include sheet C107 from related site plan (SITE-2024-0006) in CUP plan set.

2. Amend sheet C107 to include site-specific open space calculations for both lots, post subdivision.

3. Work with the Planning Department to endorse a development agreement per Chapter 170-19.C and then record at SCRD. The development agreement shall include a contribution for the RRFB at Belknap St.

COND-2024-0011 114 Silver Street



Property Information

Location	114 SILVER ST
Owner	114 SILVER STREET GROUP LLC
Land Use	
Zoning Code	HR
Property Id	12148-000000

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 10/30/2023
Data updated Daily

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

PERMIT SNAPSHOT REPORT COND-2024-0011
FOR CITY OF DOVER, N.H.

Permit Type	Conditional Use	**Project:**		**App Date:**	06/20/2024
Work Class:	Non-Environmental	**District:**	None	**Exp Date:**	NOT AVAILABLE
Status:	Fees Due	**Square Feet:**	0.00	**Completed:**	NOT COMPLETED
Valuation:	$0.00	**Assigned To:**	Blonigen, Rachel	**Approval Expire Date:**	

Description: A Conditional Use Permit is requested to convert the existing house on the property to a 4 unit, multi-family dwelling. The existing lot is proposed to be subdivided into two conforming lots whereas the new lot will construct a new 4 unit, multi-family building as well. The Conditional Use Permit is required for a 4 unit, multi-family building in the Heritage Residential (HR) District.

Parcel:	12148-000000 Main	**Address:**	114 Silver St Dover, NH Main	**Zone:**	HR(Residential - Heritage)

Plan Preparer	Owner	Applicant
Michael Malynowski Home: (603) 627-5500	Thomas Toye IV Home: (603) 413-6175	Jared Grondin 400 Harvey Road, Suite D Manchester, NH 03103 Home: (781) 305-9408 Business: (603) 627-5500 Mobile: (603) 545-1649

Permit Custom Fields

Select Permit Type	Heritage Residential District	General Purpose	New Construction	Project Zone	Residential
What is the parcel zoned?	HR	New Change in Impervious/Paved Area (sq ft)	2028	Work	The conditional use permit is required to convert the existing home into a 4 unit, multi-family building as well as construct a new 4 unit, multi-family building. The lot is to be subdivided, conforming to local zoning code with one, 4 unit multi-family home on each lot.
permitstatefed	No State or Federal permits are required for this project.				

Attachment File Name	Added On	Added By	Attachment Group	Notes
Signature_Jared_Grondin_6/20/2024.jpg	06/20/2024 13:39	Grondin, Jared		Uploaded via CSS
Permit Snapshot Report.pdf	06/20/2024 13:39	Service, EnerGov		Attached by IO - ATTACH: Initial Permit Snapshot
2025.01.28_PlanningBoard.Agenda.pdf	01/15/2025 13:56	Blonigen, Rachel		PB Agenda

Note	Created By	Date and Time Created
1. All invoices sent at once to applicant	Rachel Blonigen	01/22/2025 15:11

Invoice No.	Fee		Fee Amount	Amount Paid
INV-00008424	Planning General Application Fee		$200.00	$200.00
		Total for Invoice INV-00008424	$200.00	$200.00
INV-00010863	Planning Public Notice in Newspaper		$120.00	$0.00
		Total for Invoice INV-00010863	$120.00	$0.00
		Grand Total for Permit	**$320.00**	**$200.00**

Activity Type	Activity Number	Name	Workflow Action Name	User	Created On
Recommendation to Planning Board	RCMND-000009-2025		Planner Creates Staff	Rachel Blonigen	01/22/2025

PERMIT SNAPSHOT REPORT (COND-2024-0011)

(Permit) Recommendations v.1.00

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Conditional Use Review v.1	Approved	01/13/2025	02/10/2025	01/13/2025	No	Yes

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Planning	Planning	Bassegio, Erin	Approved	01/13/2025	02/10/2025	01/13/2025

Workflow Step / Action Name	Action Type	Start Date	End Date
Review v.1		01/13/2025 16:21	01/13/2025 16:21
Confirm application complete v.1	Generic Action		01/13/2025 16:21
Conditional Use Review v.1	Receive Submittal	01/13/2025 0:00	01/13/2025 16:21
Planning Board v.1		01/13/2025 16:21	
Planning Board Agenda v.1	Task	01/13/2025 16:21	01/15/2025 13:56
Invoice for Notices v.1	Task	01/15/2025 13:56	01/22/2025 15:12
Send Notices v.1	Task	01/22/2025 15:12	01/22/2025 15:13
Planner Creates Staff Recommendations v.1	Permit Activity	01/22/2025 15:13	
Distribute Planning Board Materials v.1	Task		
Planning Board Hearing v.1	Hold Hearing		
Planning Board Decision v.1	Permit Activity		
NOD Sent to Applicant v.1	Create Report		
Issue Permit v.1			
Verify Fees Prior to Permit v.1	Generic Action		
Issue and Review Permit v.1	Generic Action		
Print and Email Permit v.1	Generic Action		
Plans uploaded to Treeno v.1	Generic Action		
Internal Notification of Plan Completion v.1	Generic Action		
Recording v.1	Task		

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: 114 Silver Street Group, LLC Telephone # (603) 412-6175

Address of Applicant: 10 Durham Road, Dover, NH 03820

E-Mail Address: tom@arthurthomasproperties.com

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

Address of Property Owner: _____

PROPERTY INFORMATION

Assessor's Map # 12 Lot(s) # 148

Address of Property: 114 Silver Street, Dover, NH 03820

Zoning District(s) Heritage Residential Overlay District(s) N/A

Existing Use of Property: Single-Family - 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:

Conditional use permit required for the conversion of a single-family residential home to multi-family (4 units). As well as the construction of a new 4-unit, multi-family building.

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: Michael A. Malynowski, PE

Address 400 Harvey Road, Suite D, Manchester, NH 03103 Telephone #: (603) 627-5500

Professional License #: 12205 E-mail address: mmalynowski@allenmajor.com

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: 6/18/2024
THOMAS A. TOYE IV, MEMBER 114 SILVER STREET GROUP, LLC

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: 6/18/2024
MEMBER: 114 SILVER STREET GROUP, LLC

COND-2024-0011 **114 SILVER STREET**

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
10114-000000	34 LEXINGTON ST	MORENO CHARLES A TRUSTEE	MORENO CHARLES 2008 REVOCABLE TRUST	PO BOX 60	CENTER STRAFFORD	NH	03815
10115-000000	109 111 SILVER ST	CBA PROPERTIES LLC		PO BOX 801	NEW CASTLE	NH	03854
10116-000000	107 SILVER ST	PERRINE GEORGE E & GLORIA J ET AL TRUSTE	PERRINE FAMILY REVOCABLE TRUST	107 SILVER STREET	DOVER	NH	03820
10117-000000	103 SILVER ST	103 SILVER CARRIAGE LLC		103 SILVER ST	DOVER	NH	03820
10168-000000	125 SILVER ST	LAWRENCE REALTY GROUP SILVER STREET LLC		25 NEW HAMPSHIRE AVE STE 276	PORTSMOUTH	NH	03801
10169-000000	117 SILVER ST	SESSLER GREGG F & LAWRENCE CHRISTINA L T	LAWRENCE-SESSLER FAMILY REVOCABLE TRUST	117 SILVER ST	DOVER	NH	03820
10169-A00000	37 41 LEXINGTON ST	LEXINGTON GARDEN CONDOMINIUMS		LEXINGTON ST	DOVER	NH	03820
12128-000000	102 SILVER ST	BONNER ROBERT &	MCCONNELL ALEXIS S	102 SILVER STREET	DOVER	NH	03820
12129-000000	108 SILVER ST	NELSON THOMAS M	NELSON JILL M	108 SILVER ST	DOVER	NH	03820
12130-000000	8 RUTLAND ST	CHILD THOMAS L & DEBORAH M TRUSTEES	THOMAS L CHILD REVOCABLE TRUST &	8 RUTLAND ST	DOVER	NH	03820
12130-A00000	12 RUTLAND ST	KELSCH ALBERT L & JUDITH E TRUSTEES	KELSCH FAMILY TRUST	12 RUTLAND ST	DOVER	NH	03820
12147-000000	11 RUTLAND ST	ANDRECYK GREGORY P		11 RUTLAND ST	DOVER	NH	03820
12147-A00000	15 RUTLAND ST	MOSCHILLI ROBIN M		15 RUTLAND ST	DOVER	NH	03820
12149-000000	116 118 SILVER ST	MILLETTE CHARLES L REV TRUST	MILLETTE CHARLES TRUSTEE	9 MARKET ST	PORTSMOUTH	NH	03801-3702
12151-000000	120 SILVER ST	WARACH RACHEL TRUSTEE	WARACH JONATHAN B FAMILY TRUST	53 BUCKS HILL RD	DURHAM	NH	03824-3208
12148-000000	114 SILVER ST	114 SILVER STREET GROUP LLC		10 DURHAM ROAD	DOVER	NH	03820
		ALLEN & MAJOR ASSOCIATES, INC	JAMES P. SMITH	400 HARVEY ROAD, SUITE D	MANCHESTER	NH	03103

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #COND-2024-0012

Application Type:	Conditional Use Permit
Applicant(s):	114 Silver Street Group, LLC
Owner(s):	114 Silver Street Group, LLC
Location:	114 Silver Street (Assessor's Map 12, Lot 148-1*)
Meeting Date:	January 28, 2025

INTENT: Proposal is for a Conditional Use Permit to construct a new 4-unit, residential dwelling in the Heritage Residential Zoning District, following a subdivision of the parent lot (Assessor's Map 12, Lot 148) at 114 Silver Street.

AGENDA ITEM #: 4-F

FILE: COND-2024-0012

LOTS/UNITS PROPOSED: Four (4) Units

APPLICANT/OWNER: 114 Silver Street Group, LLC

LOCATION: 114 Silver Street (Assessor's Map 12, Lot 148-1*)

ACREAGE: ±0.26 ac.*
Pending approval of proposed minor subdivision (SUBM-2024-0001)

ZONING DISTRICT: HR (Heritage Residential)

EXISTING USE: Residential

PROPOSED USE: Residential

SURROUNDING USE: Residential

WAIVERS REQUESTED:
N/A

ZBA ACTION: N/A

PERMITS REQUIRED: N/A

CONSERVATION COMMISSION:
N/A

ATTACHMENTS: CUP Application, Site Plan

Summary of Request and Background
Proposal is for a Conditional Use Permit to create a 3-story, 4-unit residential dwelling in the Heritage Residential Zoning District on a new lot following a proposed minor subdivision of the parent lot (Assessor's Map 12, Lot 148) at 114 Silver Street.

Within the HR district, any conversion of a structure to a 3-4 family dwelling must meet the following CUP criteria:

A. The specific site must have an amount of open space, either landscaped or left natural, at least equal to the average amount of open space on all developed lots in the HR District that are wholly or partly within two hundred (200) feet of the subject parcel. Existing parking areas, either gravel, paved or unpaved, shall not be considered to be open space.
B. Off-street parking, in accordance with Chapter 153, Site Review, shall be provided as to avoid vehicles backing into the street. Two (2) parking spaces per unit shall be required.
C. Parking lots shall be at least five (5) feet from a side property line and ten (10) feet from a front property line.
D. Parking areas shall be screened from the street and from abutting lots.
E. Structures shall be at least twenty (20) feet from a front property line, thirty (30) feet from a rear property line and fifteen (15) from a side property line unless abutting a street, in which case, the distance from the side property line shall be twenty (20) feet.
F. For new construction, the building must be designed to look like a single-family dwelling. At a minimum, this shall mean that only one entrance shall be visible from a public street. For conversions, the building must retain its appearance as a single-family dwelling or a 2-family dwelling, whichever is the current use. notwithstanding any other provision of Chapter 170, a legal or legal non-conforming accessory structure existing as of the effective date of these regulations may be converted into one or more residential units, provided that the building shall not be enlarged, nor shall any exterior improvements be made to alter its appearance as an accessory structure.

Consistency with Land Use Regulations – HR CUP Criteria
The applicant assesses the average open space within 200' of the subject property to be 57.3%, which per the submitted Drainage Report and site plan pages C-102 & C-107, this CUP request complies with. Parking requirements (criteria B, C, & D), were met per TRC review, with the applicant providing the required amount of spaces, adequate screening, and parking space setbacks as prescribed in criterion C. Setbacks, per the applicant's submitted plan, are compliant with criterion E, and the proposed (revised from previous versions) architecture, in staff's opinion, meets the criterion F's requirements, and is consistent with neighboring historic architectural design.

Consistency with Land Use Regulations – Non-Environmental CUP Criteria
Chapter 170-19.B.2 lists three criterion for granting a CUP for relief for a use. Staff feels this proposal meets those criteria as well which include:

(a) The requested use shall be compatible with abutting uses and the surrounding neighborhood.

(b) The requested use will not create undue traffic congestion, or unduly impair pedestrian safety.

(c) The requested use will not result in objectionable noise or odor which would constitute a nuisance.

STAFF RECOMMENDATION:
The Planning Department recommends that the Planning Board accept the application as complete, note it is not of regional impact, hold a public hearing, make the necessary and supporting findings of fact, and vote in the affirmative on the Conditional Use Permit, as staff notes that this CUP application, as presented, meets all CUP criteria requirements. Staff would, however, recommend the following conditions.

Subsequent Conditions to Be Met Prior to Issuance of a Conditional Use Permit:

1. Include sheet C107 from related site plan (SITE-2024-0006) on CUP plan set.

2. Amend sheet C107 to include site-specific open space calculations for both lots, post subdivision.

3. Work with the Planning Department to endorse a development agreement per Chapter 170-19.C and then record at SCRD. Said development agreement shall also include contribution to RRFP system at Belknap St.

COND-2024-0012 114 Silver Street



Property Information

Location	114 SILVER ST
Owner	114 SILVER STREET GROUP LLC
Land Use	
Zoning Code	HR
Property Id	12148-000000

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 10/30/2023
Data updated Daily

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

PERMIT SNAPSHOT REPORT COND-2024-0012
FOR CITY OF DOVER, N.H.

Permit Type	Conditional Use	**Project:**		**App Date:**	06/20/2024
Work Class:	Non-Environmental	**District:**	None	**Exp Date:**	NOT AVAILABLE
Status:	In Review	**Square Feet:**	0.00	**Completed:**	NOT COMPLETED
Valuation:	$0.00	**Assigned To:**	Blonigen, Rachel	**Approval Expire Date:**	

Description: A Conditional Use Permit is requested to construct a new, 4 unit, multi-family building on a proposed subdivided portion of the 114 Silver Street lot.

Parcel:	12148-000000 Main	**Address:**	114 Silver St Dover, NH Main	**Zone:**	HR(Residential - Heritage)

Plan Preparer	Owner	Applicant
Michael Malynowski Home: (603) 627-5500	Thomas Toye IV Home: (603) 413-6175	Jared Grondin 400 Harvey Road, Suite D Manchester, NH 03103 Home: (781) 305-9408 Business: (603) 627-5500 Mobile: (603) 545-1649

Permit Custom Fields

Select Permit Type	Heritage Residential District	General Purpose	New Construction	Project Zone	Residential
What is the parcel zoned?	HR	New Change in Impervious/Paved Area (sq ft)	2028	Work	A conditional use permit is required for a four (4) dwelling unit building in the Heritage Residential (HR) District.
permitstatefed	No federal permits are required.				

Attachment File Name	Added On	Added By	Attachment Group	Notes
Signature_Jared_Grondin_6/20/2024.jpg	06/20/2024 19:42	Grondin, Jared		Uploaded via CSS
Permit Snapshot Report.pdf	06/20/2024 19:42	Service, EnerGov		Attached by IO - ATTACH: Initial Permit Snapshot
2025.01.28_PlanningBoard.Agenda.pdf	01/15/2025 13:58	Blonigen, Rachel		PB Agenda

Invoice No.	Fee	Fee Amount	Amount Paid
INV-00008425	Planning General Application Fee	$200.00	$200.00
	Total for Invoice INV-00008425	$200.00	$200.00
INV-00010940	Planning Public Notice in Newspaper	$120.00	$0.00
	Total for Invoice INV-00010940	$120.00	$0.00
	Grand Total for Permit	**$320.00**	**$200.00**

Activity Type	Activity Number	Name	Workflow Action Name	User	Created On
Recommendation to Planning Board (Permit)	RCMND-000010-2025		Planner Creates Staff Recommendations v.1.00	Rachel Blonigen	01/22/2025

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Conditional Use Review v.1	Approved	12/17/2024	12/18/2024	12/18/2024	No	Yes

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Planning	Planning	Bassegio, Erin	Approved	12/18/2024	01/15/2025	12/18/2024

Workflow Step / Action Name	Action Type	Start Date	End Date
Review v.1		12/18/2024 10:10	12/18/2024 10:11
Confirm application complete v.1	Generic Action		12/18/2024 10:11

PERMIT SNAPSHOT REPORT (COND-2024-0012)

Conditional Use Review v.1	Receive Submittal	12/18/2024 0:00	12/18/2024 10:11
Planning Board v.1		12/18/2024 10:11	
Planning Board Agenda v.1	Task	12/18/2024 10:11	01/15/2025 13:57
Invoice for Notices v.1	Task	01/15/2025 13:57	01/22/2025 15:28
Send Notices v.1	Task	01/22/2025 15:28	01/22/2025 15:29
Planner Creates Staff Recommendations v.1	Permit Activity	01/22/2025 15:30	
Distribute Planning Board Materials v.1	Task		
Planning Board Hearing v.1	Hold Hearing		
Planning Board Decision v.1	Permit Activity		
NOD Sent to Applicant v.1	Create Report		
Issue Permit v.1			
Verify Fees Prior to Permit v.1	Generic Action		
Issue and Review Permit v.1	Generic Action		
Print and Email Permit v.1	Generic Action		
Plans uploaded to Treeno v.1	Generic Action		
Internal Notification of Plan Completion v.1	Generic Action		
Recording v.1	Task		

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: 114 Silver Street Group, LLC Telephone # (603) 412-6175

Address of Applicant: 10 Durham Road, Dover, NH 03820

E-Mail Address: tom@arthurthomasproperties.com

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

Address of Property Owner: _____

PROPERTY INFORMATION

Assessor's Map # 12 Lot(s) # 148

Address of Property: 114 Silver Street, Dover, NH 03820

Zoning District(s) Heritage Residential Overlay District(s) N/A

Existing Use of Property: Single-Family - 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:

Conditional use permit required for the conversion of a single-family residential home to multi-family (4 units). As well as the construction of a new 4-unit, multi-family building.

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: Michael A. Malynowski, PE

Address 400 Harvey Road, Suite D, Manchester, NH 03103 Telephone #: (603) 627-5500

Professional License #: 12205 E-mail address: mmalynowski@allenmajor.com

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: 6/18/2024
THOMAS A. TOYE IV, MEMBER 114 SILVER STREET GROUP, LLC

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: 6/18/2024
MEMBER: 114 SILVER STREET GROUP, LLC

COND-2024-0012 **114 SILVER STREET**

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
10114-000000	34 LEXINGTON ST	MORENO CHARLES A TRUSTEE	MORENO CHARLES 2008 REVOCABLE TRUST	PO BOX 60	CENTER STRAFFORD	NH	03815
10115-000000	109 111 SILVER ST	CBA PROPERTIES LLC		PO BOX 801	NEW CASTLE	NH	03854
10116-000000	107 SILVER ST	PERRINE GEORGE E & GLORIA J ET AL TRUSTE	PERRINE FAMILY REVOCABLE TRUST	107 SILVER STREET	DOVER	NH	03820
10117-000000	103 SILVER ST	103 SILVER CARRIAGE LLC		103 SILVER ST	DOVER	NH	03820
10168-000000	125 SILVER ST	LAWRENCE REALTY GROUP SILVER STREET LLC		25 NEW HAMPSHIRE AVE STE 276	PORTSMOUTH	NH	03801
10169-000000	117 SILVER ST	SESSLER GREGG F & LAWRENCE CHRISTINA L T	LAWRENCE-SESSLER FAMILY REVOCABLE TRUST	117 SILVER ST	DOVER	NH	03820
10169-A00000	37 41 LEXINGTON ST	LEXINGTON GARDEN CONDOMINIUMS		LEXINGTON ST	DOVER	NH	03820
10169-A00001	41 LEXINGTON ST	PAOLINI DAVID		242 CENTRAL AVE	DOVER	NH	03820
10169-A00002	40 LEXINGTON ST	PAOLINI DAVID TRUSTEE	GRANT REALTY TRUST	242 CENTRAL AVE	DOVER	NH	03820
10169-A00003	39 LEXINGTON ST	CARNEY WILLIAM Q		39 LEXINGTON ST	DOVER	NH	03820-3628
10169-A00004	37 LEXINGTON ST	DORAN CAROLYN R TRUSTEE	DORAN CAROLYN R 2003 REVOCABLE TRUST	37 LEXINGTON ST	DOVER	NH	03820
12128-000000	102 SILVER ST	BONNER ROBERT &	MCCONNELL ALEXIS S	102 SILVER STREET	DOVER	NH	03820
12129-000000	108 SILVER ST	NELSON THOMAS M	NELSON JILL M	108 SILVER ST	DOVER	NH	03820
12130-000000	8 RUTLAND ST	CHILD THOMAS L & DEBORAH M TRUSTEES	THOMAS L CHILD REVOCABLE TRUST &	8 RUTLAND ST	DOVER	NH	03820
12130-A00000	12 RUTLAND ST	KELSCH ALBERT L & JUDITH E TRUSTEES	KELSCH FAMILY TRUST	12 RUTLAND ST	DOVER	NH	03820
12147-000000	11 RUTLAND ST	ANDRECYK GREGORY P		11 RUTLAND ST	DOVER	NH	03820
12147-A00000	15 RUTLAND ST	MOSCHILLI ROBIN M		15 RUTLAND ST	DOVER	NH	03820
12149-000000	116 118 SILVER ST	MILLETTE CHARLES L REV TRUST	MILLETTE CHARLES TRUSTEE	9 MARKET ST	PORTSMOUTH	NH	03801-3702
12151-000000	120 SILVER ST	WARACH RACHEL TRUSTEE	WARACH JONATHAN B FAMILY TRUST	53 BUCKS HILL RD	DURHAM	NH	03824-3208
12148-000000	114 SILVER ST	114 SILVER STREET GROUP LLC		10 DURHAM ROAD	DOVER	NH	03820

CITY OF DOVER

PLANNING BOARD - STAFF MEMO FILE #SITE-2024-0006

Application Type:	Site Plan
Applicant(s):	114 Silver Street Group, LLC
Owner(s):	114 Silver Street Group, LLC
Location:	114 Silver Street (Assessor's Map 12, Lot 148)
Meeting Date:	January 28, 2025

INTENT: Proposal is to convert an existing single-family home into a 4-unit residential dwelling on one lot and to construct a 3-story, 4-unit residential dwelling on a proposed subdivided lot with eight (8) associated parking spaces for each building, landscaping, utilities, and access.

AGENDA ITEM #: 4-G

FILE: SITE-2024-0006

APPLICANT/OWNER: 114 Silver Street Group, LLC

LOTS/UNITS PROPOSED: Two (2) lots, eight (8) units

ACREAGE: Existing: 22,340 sq. ft./0.52± ac.
Proposed Lot 1: 11,650± sq. ft.
Proposed Lot 2: 10,690± sq. ft.

ZONING DISTRICT: HR (Heritage Residential)

EXISTING USE: Residential

PROPOSED USE: Residential

SURROUNDING USE: Residential, School

ZBA ACTION: N/A

PERMITS:

- COND-2024-0011, CUP to convert single-family dwelling to 4-unit dwelling
- COND-2024-0012, CUP to construct a new, 4-unit dwelling

WAIVERS REQUESTED: N/A

APPLICATION IS COMPLETE: Yes

REGIONAL IMPACT: No

NOTICES SENT: Abutter notices were sent by certified mail to all abutters.

TRC: July 18, 2024, Sept. 5, 2024, Oct. 31, 2024, and Nov. 21, 2024

ATTACHMENTS: Site Plan, Application Materials.

Summary of Request and Background:
The applicant proposes to convert an existing single-family home into a 4-unit residential dwelling on one lot and to construct a 3-story, 4-unit residential dwelling on a proposed subdivided lot.

The existing residential structure and new residential structure have been designed to appear as single-family homes facing Silver Street. The applicant provided an architectural narrative to explain adherence to guidelines set forth in the Dover Historic Preservation Guide including traditional materials and detailing.

The access driveway for the project, currently on Silver Street, is proposed to be moved to Rutland Street. The proposal includes 16 total surface parking spaces behind the residential structures with perimeter landscaping and fencing.

Within the Heritage Residential (HR) Zoning District, any conversion or creation of a structure to a 3-4 family dwelling, must meet the required criteria of a Conditional Use Permit (CUP). Two related CUPs have been submitted as part of this project (COND-2024-0011 and COND-2024-0012).

The applicant has also submitted a related Minor Subdivision application that proposes a subdivision of the subject lot at 114 Silver St., creating one new lot for a total of two lots (Assessor's Map 12, Lots 148 & 148-1).

The Technical Review Committee reviewed the application at their July 18, 2024, September 5, 2024, October 31, 2024, and November 21, 2024 meetings. *(latest minutes attached)*

Consistency with Land Use Regulations:
§153-4 of the Site Review Regulations of the City Code provides for site review by the Planning Board of new construction of various types. This plan is consistent with those regulations.

STAFF RECOMMENDATION:
The Planning Department recommends that the Planning Board vote to accept the application and determine it not to have regional impact, open a public hearing, close the public hearing, make the necessary and supporting findings of fact, and vote to approve the site plan with the following subsequent conditions:

Subsequent Conditions to be Met Prior to Signing of Plans:

1. Approval of COND-2024-0011;
2. Approval of COND-2024-0012;
3. Approval of SUBM-2024-0001;
4. Confirm lot numbering with City Assessor.

5. Confirm building addressing with Building Official.
6. Draft utility and access easement to be reviewed by the Planning Department.
7. Sewer services for each building must be independent and to the satisfaction of the Community Services Department or a waiver must be approved through the Dover Utilities Commission.
8. Provide letter from pest control management professional regarding whether pest control management plan is needed per Chapter 153-10.G.
9. Provide physical and digital copies (including CAD) of complete plan set for final Planning Board signature which additionally shall include:
   10.1. Owner's signatures;
   10.2. Professional stamps and signatures;
   10.3. Amend sheet C107 to include site-specific open space calculations for both lots, post subdivision.

Subsequent Condition to Be Met Prior to Construction:

8. If pest management is needed per letter from pest management professional, then pre-bating or any other recommendation occur.
9. City's standard site construction sign with the contact information for the general contractor must be displayed in a location approved by the City Engineer or Planning Director;

Subsequent Conditions to Be Met Prior to Building Permit:

10. Payment of Water and Sewer Investment Fees if applicable at time or request of service;

Subsequent Conditions to Be Met Prior to Occupancy:

11. Issuance of Certificate of Occupancy;
12. Surety or other form of security acceptable to the City is provided for any unfinished work;
13. Contribution for RRFP has been paid to the City per Development agreement.
14. Design engineer to submit a construction certification letter to the City ensuring construction was completed in accordance with the plans and specifications approved by the City of Dover.

SITE-2024-0006 114 Silver Street



Property Information

Location	114 SILVER ST
Owner	114 SILVER STREET GROUP LLC
Land Use	
Zoning Code	HR
Property Id	12148-000000

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 10/30/2023
Data updated Daily

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

PLAN SNAPSHOT REPORT SITE-2024-0006
FOR CITY OF DOVER, N.H.

Plan Type:	Site Plan - Major	**Project:**		**App Date:**	06/20/2024
Work Class:	New Construction	**District:**	None	**Exp Date:**	NOT AVAILABLE
Status:	In Review	**Square Feet:**	0.00	**Completed:**	NOT COMPLETED
Valuation:	$0.00	**Assigned To:**		**Approval Expire Date:**	

Description: The project proposes to subdivide the existing lot into two lots that conform to all zoning requirements. The existing single-family home will be converted into a 4 unit, multi-family dwelling on one lot. The second lot proposes a newly constructed 3-story, 4 unit multi-family dwelling. There is 8 parking stalls allocated for each building (2 per unit) that will be connected via a common driveway off of Rutland Street. The existing curb cut along Silver Street is to be closed.

Parcel:	12148-000000 Main	**Address:**	114 Silver St Dover, NH Main	**Zone:**

Owner	Applicant	Engineer
Thomas Toye IV Home: (603) 413-6175	Jared Grondin 400 Harvey Road, Suite D Manchester, NH 03103 Home: (781) 305-9408 Business: (603) 627-5500 Mobile: (603) 545-1649	Michael Malynowski Home: (603) 627-5500

Plan Custom Fields

Total	0	Total2	0	Total3	2028
Total4	0	Total5	0	Total6	8
Total7	0	Total8	3456	Total9	1152
Street Classification Type	Municipal	Net Change in # Parking Spaces (+/-)	16	Water Service	Municipal
Recording Number	to be determined	Sewer Service	Municipal	Total Acres (GIS)	0.51
Deed Book	5161	Total SQFT	22215.6	Deed Page	948
Deed Date	1/24/2024	Proposed Property Use	The existing lot is to be subdivided into two conforming lots. The existing home occupying one lot is to be converted to a 4 unit, multi-family building. The second, proposed lot is to be occupied by a newly constructed 3-story, 4 unit, multi-family building.	Area of Parcel to be Developed (SQFT)	17200
Number of Parking Spaces Existing	0	Number of Parking Spaces Proposed	16	Number of Employees Total	0
Number of Employees in Max Shift	0	Distance to City Water	30	Distance to City Sewer	30
Type of Building to be Built	3-story, 4 unit, multi-family building of 1,152+/- sf (36'x32')	Estimated Construction Value	400000.00	Refuse Removal	Public
Is there an existing Conservation Easement?	No	Existing Conservation Easement Details	Not applicable	TotalImpactFeeSDTOD	0.00
TotalImpactFeeTHTOD	0.00	TotalImpactFee23FTOD	0.00	TotalImpactFeeA4TOD	0.00
TotalImpactFeeMHTOD	0.00	TotalImpactFeeADUTOD	0.00	TotalImpactFeeAONRTOD	0.00
TotalImpactFeeAR55TOD	0.00	TotalImpactFeeAR62TOD	0.00	Sub Total Residential	0.00
TotalImpactFeeRIRCTOD	0.00	TotalImpactFeeOCSTOD	0.00	TotalImpactFeeITWCTOD	0.00

PLAN SNAPSHOT REPORT (SITE-2024-0006)

TotalImpactFeeNHALTOD	0.00	TotalImpactFeeOIUTOD	0.00	TotalImpactFeeAFAOTOD	0.00
Sub Total Non-Residential	0.00	Total of Impact Fees to be Assessed	0.00		

Attachment File Name	Added On	Added By	Attachment Group	Notes
Signature_Jared_Grondin_6/20/2024.jpg	06/20/2024 13:55	Grondin, Jared		Uploaded via CSS
2024.07.18_PlanningTechnicalReviewCommittee.AgendaRev.pdf	06/28/2024 15:04	Blonigen, Rachel		TRC Agenda
2024.07.18_PlanningTechnicalReviewCommittee.114Silver_SITE-2024-0006.pdf	07/29/2024 16:37	Blonigen, Rachel		Approved TRC Minutes
2024.09.05_PlanningTechnicalReviewCommittee.Agenda.pdf	08/27/2024 11:18	Blonigen, Rachel		TRC Agenda
2024.10.31_PlanningTechnicalReviewCommittee.Agenda.pdf	10/21/2024 11:48	Blonigen, Rachel		TRC Agenda
2024.09.05_PlanningTechnicalReviewCommittee.114Silver_SITE-2024-0006.pdf	10/21/2024 11:48	Blonigen, Rachel		Approved TRC Minutes
2024.11.21_PlanningTechnicalReviewCommittee.Agenda.pdf	11/13/2024 13:48	Blonigen, Rachel		TRC Agenda
2024.11.21_PlanningTechnicalReviewCommittee.Agenda.revised.pdf	11/18/2024 12:35	Blonigen, Rachel		Revised TRC Agenda
2024.11.21_PlanningTechnicalReviewCommittee.114Silver_SITE-2024-0006.pdf	12/09/2024 12:46	Blonigen, Rachel		Final TRC minutes
2025.01.28_PlanningBoard.Agenda.pdf	01/15/2025 14:03	Blonigen, Rachel		PB Agenda

Note	Created By	Date and Time Created
1. Application appears incomplete for complete review	Jim Maxfield	07/09/2024 8:17
2. Resubmit for second TRC- RLB	Rachel Blonigen	07/19/2024 10:57

Invoice No.	Fee		Fee Amount	Amount Paid
INV-00008370	Planning General Application Fee		$200.00	$200.00
		Total for Invoice INV-00008370	$200.00	$200.00
INV-00008422	Planning Impervious Paved Area Fee		$141.96	$141.96
	Planning Public Notice in Newspaper		$120.00	$120.00
	Planning Residential Fee		$800.00	$800.00
	Planning Certified Mailing to Abutters		$80.00	$80.00
		Total for Invoice INV-00008422	$1,141.96	$1,141.96
		Grand Total for Plan	**$1,341.96**	**$1,341.96**

Activity Type	Activity Number	Name	Workflow Action Name	User	Created On
Recommendation to Planning Board	RCMND-000008-2025		Planner Creates Staff Recommendations v.1.00	Rachel Blonigen	01/22/2025

Meeting Type	Location	Scheduled Date	Subject
Technical Review Committee Meeting v.1	City Hall, Second Floor Conference Room	07/18/2024	Technical Review Committee Meeting

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Land Use Plan Technical Review v.1	Approved	06/27/2024	07/25/2024	07/19/2024	No	Yes

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Business Development	Business Development	Burdin, James	Approved	06/27/2024	07/25/2024	07/19/2024

Comments: From a plan perspective, this project appears to be an appropriate scale and density for the site and comparable to similar developments in the neighborhood. However, missing design documents make it difficult to evaluate overall consistency.

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Land Use Plan Technical Review v.1	Requires Re-submit	08/27/2024	09/05/2024	09/06/2024	Yes	Yes

PLAN SNAPSHOT REPORT (SITE-2024-0006)

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Business Development	Business Development	Burdin, James	Requires Re-submit	08/27/2024	09/24/2024	09/06/2024

Comments: The effort to incorporate design elements (and possibly salvaged materials) from the existing barn is appreciated. Please clarify:
-Will the barn doors be functional, or attached as a facade treatment?
-The elevation marked "front" appears to be facing the parking lot, with the "right" and "rear" elevations that include barn doors facing Rutland and Silver, respectively. Is that correct? Suggest relabeling as N/S/E/W elevations or "Rutland/Silver" elevations to avoid confusion.

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
City Engineer	Community Services - Engineering	Mavrogeorge, Kenneth	Requires Re-submit	08/27/2024	09/05/2024	09/06/2024

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Land Use Plan Technical Review v.1	Approved	06/27/2024	07/25/2024	07/19/2024	No	Yes

PLAN SNAPSHOT REPORT (SITE-2024-0006)

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
City Engineer	Community Services - Engineering	Mavrogeorge, Kenneth	Approved	06/27/2024	07/25/2024	07/19/2024

Comments: - General Comment:
o Applicant and Contractor shall review the Dover Construction Guidelines prior to scheduling a Preconstruction meeting with City staff. The guidelines can be found on the City of Dover Website on the Engineering page. https://www.dover.nh.gov/Assets/government/city-operations/1form/community-services/engineering/engineering-documents/Construction%20Guidelines.pdf
o Coordinate with Community Services (Engineering Department) for latest City Standard Details.
o Dover Site Notes are from 2022 but have since been updated. Please coordinate with Planning to get the current notes.
o Change references from Town to City of Dover, NH.
o Recommend providing 1 sf of snow storage per 10 sf of pavement to be cleared. Verify snow storage meets or exceeds this recommendation or provide note to remove excess snow when storage areas are filled.
o Engineering requests a letter certifying the tie in locations or discharge points for all sump pumps and roof leaders for existing structures on the property.
o How will trash pickup be handled?
o No comprehensive narrative has been provided. It is strongly recommended Applicant's presentation to the TRC should mimic the presentation to the Planning Board.
o Site lighting plan has not been provided. Please clarify how the parking area will be lit for security purposes.
o Are there plans for electric vehicle charging and accessible charging?
o Clarify why the lot is being subdivided.
- Drainage Analysis:
o There appears to be a conflict between the increase in impervious noted on the Drainage Report and the Application (2028 sf versus 876 sf).
o Storm events that were analyzed should be consistent with 153-14 of the Dover Code which requires 2-, 10-, 25-, and 50-year storm events to be analyzed.
o Clarify why an infiltration rate of 6 inches per hour is appropriate rather than a fraction of that value (1/2).
o Applicant shall review the section 153-14 of the Dover Code and clarify how the design meets the City's requirements.
o Please provide a test pit in the proposed infiltration basin location as the ESHWT various across the proposed project site.
- Sheet 1:
o Provide a benchmark for layout.
o The sewer in Rutland does not connect to the sewer in Silver St.
o The existing building's utilities need to be shown.
o There are existing two gas vaults in Rutland St. where the proposed utilities are shown.
- Sheet C-101:
o Will existing pavement that crosses property line be removed? If so, will there be an easement from the neighbor?
- Sheet C-102:
o There appear to be steps leading to the aisle of the accessible parking making the building non accessible. Please confirm how this works?
o Note that the curbing from the right of way should be salvaged to the City.
- Sheet C-103:
o It is recommended that a precast concrete structure be used for a catch basins in paved surfaces rather than a nyloplast drain. Provide clarification if this structure is rated for vehicle loading.
o Provide deep sump with oil separator hoods in drainage basins.
o Given that drainage from one lot crosses onto another, a drainage easement would appear necessary.
o Add note that Design Engineer shall provide signed letter to City Engineer certifying that the stormwater management system has been installed in accordance with approved plans.
o The driveway should be graded to keep stormwater originating from the site, on site and not directed to the City's ROW.
o The inverts of the roof drain are off by 100.
o The rain garden does not have an emergency overflow. It is recommended to provide one for future heavy events.
o The lengths of pipes is not on the plan but rather a note that says TBD.
o HDPE drainage pipe has less than 3 feet of cover which is the minimum per code.
o Confirm 2% cross slope in all directions for ADA parking space.
o The proposed drainage is shown tying into Rutland but no drainage network exists in this area.
- Sheet C-104
o Cleanouts outside of the building are not permitted.
o Show location of existing utilities in Rutland including water and drainage.
o All valves and hydrants shall open left (counterclockwise)
o Sanitary Sewer shall be PVC pipe SDR35
o Clarify if either building needs to have fire suppression. IS to confirm.
o Coordinate with CS on the configuration of valves for domestic and fire lines.
- Details:
o Utility trench details do not meet city standards.
o Consolidate the utility trenches within City ROW and provide overlay of entire area of disturbance from curb to curb.
o Storm Drain Utility Trench Section – crushed stone shall extend 12" above top of pipe.
o Sewer Utility Trench Section – crushed stone shall extend 12" above top of pipe.
o Water Utility Trench Section – sand shall extend 12" above top of pipe.
o Water Service Connection: curb box shall be Erie-style
o Change "handicap" references to "accessible" where applicable throughout documents.
o Recommend individual water shut offs be located outside of paved surfaces and in grass. All shut offs in City ROWs must be in grass at the edge of the ROW. If shut offs on the private road remain in the paved surface, a road box should be provided.

- L101:
  - o Clarify how the design will mitigate the light from vehicles from crossing the property lines.

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Land Use Plan Technical Review v.1	Requires Re-submit	08/27/2024	09/05/2024	09/06/2024	Yes	Yes

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Planning	Planning	Kaspari, Jackson	Requires Re-submit	08/27/2024	09/24/2024	09/06/2024

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Land Use Plan Technical Review v.1	Approved	06/27/2024	07/25/2024	07/19/2024	No	Yes

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Planning	Planning	Bassegio, Erin	Approved	06/27/2024	07/25/2024	07/19/2024

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Zoning Administrator	Planning	Crouser, Paul	Approved	06/27/2024	07/25/2024	07/19/2024

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Land Use Plan Technical Review v.1	Requires Re-submit	08/27/2024	09/05/2024	09/06/2024	Yes	Yes

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Zoning Administrator	Planning	Crouser, Paul	Requires Re-submit	08/27/2024	09/05/2024	09/06/2024

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
IS Building Official	Planning / Inspection Services	Maxfield, Jim	Requires Re-submit	08/27/2024	09/05/2024	09/06/2024

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Land Use Plan Technical Review v.1	Approved	06/27/2024	07/25/2024	07/19/2024	No	Yes

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
IS Building Official	Planning / Inspection Services	Maxfield, Jim	Approved	06/27/2024	07/25/2024	07/19/2024

Comments: 1) Provide location of FDC for each structure
2) Address will have to be assigned for new structure.
3) Provide Architectural plan with elevations.
4)Provide street scape plan
5) Indicate if garden or townhouse style
6)Plans shall indicate accessible route to existing structure
7) Provide a utility plan for each structure, (i.e. indicate if the electrical utility will be underground when electrical service is upgrade for existing structure)
8) Utility plan to show separate water shut off/gates for suppression line to each structure.

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Traffic Bureau	Police	Speidel, Marn	Approved	06/27/2024	07/25/2024	07/19/2024

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Land Use Plan Technical Review v.1	Requires Re-submit	08/27/2024	09/05/2024	09/06/2024	Yes	Yes

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Traffic Bureau	Police	Speidel, Marn	Requires Re-submit	08/27/2024	09/05/2024	09/06/2024

Submittal Name	Status	Received Date	Due Date	Complete Date	Resubmit	Completed
Land Use Plan Technical Review v.2	Approved	10/17/2024	11/20/2024	11/22/2024	No	Yes

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Business Development	Business Development	Burdin, James	Approved	10/17/2024	11/14/2024	11/13/2024

Comments: No further comments

PLAN SNAPSHOT REPORT (SITE-2024-0006)

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
City Engineer	Community Services - Engineering	Mavrogeorge, Kenneth	Approved	10/17/2024	11/20/2024	11/22/2024

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Planning	Planning	Bassegio, Erin	Approved	10/17/2024	11/14/2024	11/22/2024

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Zoning Administrator	Planning	Crouser, Paul	Approved	10/17/2024	11/20/2024	11/22/2024

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
IS Building Official	Planning / Inspection Services	Maxfield, Jim	Approved	10/17/2024	11/20/2024	10/28/2024

Comments: Previous comments appear to have been resolved.

Item Review Name	Department	Assigned User	Status	Assigned Date	Due Date	Completed Date
Traffic Bureau	Police	Speidel, Marn	Approved	10/17/2024	11/20/2024	11/22/2024

Workflow Step / Action Name	Action Type	Start Date	End Date
Review v.1		06/27/2024 10:59	07/19/2024 11:02
Confirm application complete v.1	Generic Action		06/27/2024 11:00
Confirm application complete v.1	Generic Action		07/19/2024 11:05
Technical Review Committee Meeting Agenda v.1	Task	08/27/2024 11:25	08/27/2024 11:25
Technical Review Committee Meeting Agenda v.1	Task	06/27/2024 10:59	06/27/2024 11:00
Land Use Plan Technical Review v.1	Receive Submittal	06/27/2024 0:00	07/19/2024 11:02
Land Use Plan Technical Review v.1	Receive Submittal	08/27/2024 0:00	09/06/2024 12:11
Land Use Plan Technical Review v.2	Receive Submittal	10/17/2024 0:00	11/22/2024 14:36
Technical Review Committee Meeting v.1	Hold Meeting	06/27/2024 11:00	07/19/2024 10:57
Technical Review Committee Meeting v.1	Hold Meeting	08/27/2024 11:31	09/06/2024 12:11
Planning Board v.1		12/18/2024 9:53	
Planning Board Agenda v.1	Task	12/18/2024 9:53	01/15/2025 14:01
Invoice for Notices v.1	Task	01/15/2025 14:00	01/22/2025 15:40
Send Notices v.1	Task	01/22/2025 15:40	01/22/2025 15:41
Planner Creates Staff Recommendations v.1	Plan Activity	01/22/2025 15:41	
Distribute Planning Board Materials v.1	Task		
Planning Board Hearing v.1	Hold Hearing		
Planning Board Decision v.1	Plan Activity		
NOD Sent to Applicant v.1	Create Report		
Final Plan v.1			
Land Use Plan Stamped and Signed v.1	Generic Action		
Recording v.1	Task		
Document Archival v.1	Generic Action		
Internal Notification of Plan Completion v.1	Generic Action		
Building Official Notifies Address v.1	Generic Action		
Pre-Con Meeting v.1	Hold Meeting		
Create/Link to Records v.1			
Create / Link to Permit - Building Major v.1	Create Sub Permit		
Create / Link to Permit - Site Work, Construction v.1	Create Sub Permit		

City of Dover, New Hampshire
SITE REVIEW APPLICATION

[Revision Date: July 1, 2021]

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

APPLICANT AND OWNER INFORMATION

Name of Applicant: 114 Silver Street Group, LLC Telephone # (603) 412-6175

Address of Applicant: 10 Durham Road, Dover, NH 03820

E-Mail Address: tom@arthurthomasproperties.com

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

Address of Property Owner: _____

PROPERTY INFORMATION

Address of Property: 114 Silver Street, Dover, NH 03820

Assessor's Map # 12 Lot(s) # 148

Zoning District(s) Heritage Residential Overlay District(s) N/A

Size of Parcel: 22,340 sq. ft. 0.51 ac. Property Deed: Book 5161 Page: 948

Existing Use of Property: Single-Family - Residential

SITE PLAN INFORMATION

Describe Proposed Use: Multi-Family - Residential

Area of Parcel to be Developed: 17,200+/- sf sq. ft.

If Multi-family Residential: Number of Units 8 & Buildings Proposed 1 + existing structure

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

Number of Parking Spaces: Existing N/A Proposed 16

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

Number of Employees Total: N/A In Maximum Shift: _____

Disposition of Parcel:

Building Footprint 1,152 sq. ft.

Total Building Area 3,456 sq. ft.

Paved Area 876 (additional) sq. ft.

Building Setbacks:

Front Yard Lot 1=14.8, Lot 2=31.2 ft.

Rear Yard Lot 1=73.3, Lot 2=77.0 ft.

Side Yard: Right____ ft. Left_____ ft.
Lot 1=15.1 Lot 1=18.4
Lot 2=24.4 Lot 2=15.2

City Water? ✓ Yes ___ No How far is city water from the property? 30+/- ft

City Sewer? ✓ Yes ___ No How far is city sewer from the property? 30+/- ft

TRANSFER OF DEVELOPMENT RIGHTS INFORMATION

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

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

Relief sought (Check All That Apply):

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

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

_____

_____

_____

BUILDING INFORMATION

Type of Building to be Built: 3-story, multi-family apartment

Height of Building: <40 ft Finished Floor Elevation: 17.5

Number of Seats (where applicable) N/A

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

WAIVER REQUESTS

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

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

_____

_____

_____

_____

_____

_____

_____

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) James P. Smith (Allen & Major Associates, inc.)

Address 400 Harvey Road, Suite D, Manchester, NH 03103 Telephone #: (603) 627-5500

Professional License #: 00908 E-mail address: jsmith@allenmajor.com

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Michael A. Malynowski, PE (Allen & Major Associates, inc.)

Address 400 Harvey Road, Suite D, Manchester, NH 03103 Telephone #: (603) 627-5500

Professional License #: 12205 E-mail address: mmalynowski@allenmajor.com

ARCHITECT INFORMATION

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

Address _____ Telephone #: _____

Professional License #: _____ E-mail address: _____

LANDSCAPE ARCHITECT INFORMATION

Name of Landscape Architect and Company (Licensed in N.H.) Bethany C. Dermody (Allen & Major Associates, inc.)

Address 400 Harvey Road, Suite D, Manchester, NH 03103 Telephone #: (603) 627-5500

Professional License #: 00006 E-mail address: bdermody@allenmajor.com

SOIL SCIENTIST INFORMATION

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

Address _____ Telephone #: _____

Professional License #: _____ E-mail address: _____

CONSERVATION EASEMENT HOLDER

Name of Easement Holder: N/A Telephone #_____

Address Easement Holder: _____

SIGNATURES

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

Signature of Property Owner: _____ Date: 6.18.2024

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: 6.18.2024

AUTHORIZATION TO COMPLETE THE PROJECT ON SUBJECT PROPERTY

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

Signature of Property Owner: _____ Date: 6.18.2024

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

CERTIFICATION OF FEES

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

Signature of Property Owner: _____ Date: 6.18.2024

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

CITY OF DOVER SITE REVIEW
LIST OF ABUTTERS

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

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS
12	128	114 Silver Street Group, LLC	10 Durham Road, Dover, NH 03820

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS
James P. Smith	Allen & Major Associates, inc.	400 Harvey Road, Manchester, NH 03103
Michael A Malynowski, PE	Allen & Major Associates, inc.	400 Harvey Road, Manchester, NH 03103

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

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: _____ File Number: _____

PROJECT TITLE: _____

PROPERTY LOCATION: _____ Tax Map: ____ Lot: ____

	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	flash drive attached	
4. Electronic copy of supplementary materials and application	flash drive attached	
5. Traffic Impact Assessment and Analysis (Standard or Advanced)	not applicable	
6. Waiver requests to the Site Plan Review Regulations, with written justification	not applicable	
7. Conditional Use Permit applications	attached	
8. A colored rendering of the streetscape that will be created along the existing public right-of-way	tbd	
9. A colored architectural plan showing all sides of buildings	tbd	
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:	attached	
Location map at appropriate scale	Existing Conditions	
Proposed Project name and title and Planning File #	Cover Sheet	
Date, north arrow and scale	Site Development Plans	
Names of all abutting property owners	Existing Conditions	
Name and address of owners and/or applicants	Cover Sheet	
Signature & stamp of NH licensed land surveyor and/or engineer	Site Development Plans	
Zoning District boundaries, including any special or overlay districts	Layout & Materials Plan	
Location of Conservation District areas	not applicable	
Location, names and widths of existing and proposed streets, including pavement widths, grades, curbs and crosswalks	Layout & Materials Plan	
Location and widths of existing & proposed easements & right of ways	Layout & Materials Plan	
Location and width of existing and proposed access/egress ways	Layout & Materials Plan	

	Explain How Provided	Reviewed
Depict pedestrian walkways and accessible access	Layout & Materials Plan	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	Existing Conditions Plan	
Existing and proposed topographic information at two foot intervals	Site Development Plans	
Existing and proposed buildings and structure locations	Layout & Materials Plan	
Minimum building setbacks or build to lines on all lots	Layout & Materials Plan	
Location and size of existing and proposed electric, telephone, gas cable and other underground utilities	Existing Conditions & Utilities Plan	
Existing and proposed water lines and fire hydrants, including materials and capacity needed	Existing Conditions & Utilities Plan	
Location and materials of sanitary sewage facilities within project site and projected additional peak hour sewer load	Utilities Plan	
Existing and proposed stormwater lines and facilities	Grading & Drainage Plan	
Lighting plan depicting all existing and proposed exterior light fixtures and a lighting level analysis for parking lots	Building mounted lighting only	
Location of Flood Hazard Zone	not applicable	
Location of all bodies of water and watercourses	not applicable	
Location of wetlands and buffers	not applicable	
Neighborhood plan with aerial underlay showing how project relates to abutting uses within the plan set	Residential neighborhood w/ residential use exiting & proposed	
Existing natural features and/or significant vegetation on property	Existing Conditions Plan	
Depict existing contours up to 100 ft. beyond project limits	Landscape Plans	
Landscape plan depicting existing and proposed landscaping, prepared by a licensed Professional Landscape Architect	Landscape Plans	
Location of parking layout delineating spaces and arrangement; note addressing maximum required spaces	Layout & Materials Plan	
Location, material and size of existing and proposed pavement area	Layout & Materials Plan	
Location of proposed fire lanes	not applicable	
Specify finished floor elevations of buildings	Grading & Drainage Plan	
Location of solid waste disposal facilities (dumpster, pad and screening, etc.), including required screening	not applicable, roll-out containers to be used	
Depict all service, storage, loading bays and utility areas	not applicable	
All applicable Dover Common Site Plan notes	Site Development Plans	
11. Additional Information if appropriate		
Stormwater Management Plan depicting the existing & proposed storm drainage system and engineered drainage analysis	Drainage Report	
Stormwater Management System Operation and Maintenance Plan	Drainage Report	
Letter to Serve from Public and Private Utilities	tbd	
Erosion and Sedimentation Control Plan	Site Preparation Plan	
Landscape Operation and Maintenance Plan	Landscape Plans	
Proposed restrictive covenants or homeowners association documents	not applicable	
Dates and permit numbers of all required state and federal permits	not applicable	
If wetland buffer, indicate placards locations, as applicable	not applicable	
Depict test boring locations, groundwater elevations and soil profiles and/or soils types call-outs	Drainage Report	
Location of proposed drive-in facilities	not applicable	
Provide additional exhibits/technical data determined appropriate by the Planning Board or its staff as required	Additional project design information within the Site Development Plans & Drainage Report	

REVIEWED BY: _____ DATE_____ TRC DATE_____

SITE-2024-0006 **114 SILVER STREET**

Property ID	Location	Owner 1	Owner 2	Owner Address 1	City	State	Zip
10114-000000	34 LEXINGTON ST	MORENO CHARLES A TRUSTEE	MORENO CHARLES 2008 REVOCABLE TRUST	PO BOX 60	CENTER STRAFFORD	NH	03815
10115-000000	109 111 SILVER ST	CBA PROPERTIES LLC		PO BOX 801	NEW CASTLE	NH	03854
10116-000000	107 SILVER ST	PERRINE GEORGE E & GLORIA J ET AL TRUSTE	PERRINE FAMILY REVOCABLE TRUST	107 SILVER STREET	DOVER	NH	03820
10117-000000	103 SILVER ST	103 SILVER CARRIAGE LLC		103 SILVER ST	DOVER	NH	03820
10168-000000	125 SILVER ST	LAWRENCE REALTY GROUP SILVER STREET LLC		25 NEW HAMPSHIRE AVE STE 276	PORTSMOUTH	NH	03801
10169-000000	117 SILVER ST	SESSLER GREGG F & LAWRENCE CHRISTINA L T	LAWRENCE-SESSLER FAMILY REVOCABLE TRUST	117 SILVER ST	DOVER	NH	03820
10169-A00000	37 41 LEXINGTON ST	LEXINGTON GARDEN CONDOMINIUMS		LEXINGTON ST	DOVER	NH	03820
10169-A00001	41 LEXINGTON ST	PAOLINI DAVID		242 CENTRAL AVE	DOVER	NH	03820
10169-A00002	40 LEXINGTON ST	PAOLINI DAVID TRUSTEE	GRANT REALTY TRUST	242 CENTRAL AVE	DOVER	NH	03820
10169-A00003	39 LEXINGTON ST	CARNEY WILLIAM Q		39 LEXINGTON ST	DOVER	NH	03820-3628
10169-A00004	37 LEXINGTON ST	DORAN CAROLYN R TRUSTEE	DORAN CAROLYN R 2003 REVOCABLE TRUST	37 LEXINGTON ST	DOVER	NH	03820
12128-000000	102 SILVER ST	BONNER ROBERT &	MCCONNELL ALEXIS S	102 SILVER STREET	DOVER	NH	03820
12129-000000	108 SILVER ST	NELSON THOMAS M	NELSON JILL M	108 SILVER ST	DOVER	NH	03820
12130-000000	8 RUTLAND ST	CHILD THOMAS L & DEBORAH M TRUSTEES	THOMAS L CHILD REVOCABLE TRUST &	8 RUTLAND ST	DOVER	NH	03820
12130-A00000	12 RUTLAND ST	KELSCH ALBERT L & JUDITH E TRUSTEES	KELSCH FAMILY TRUST	12 RUTLAND ST	DOVER	NH	03820
12147-000000	11 RUTLAND ST	ANDRECYK GREGORY P		11 RUTLAND ST	DOVER	NH	03820
12147-A00000	15 RUTLAND ST	MOSCHILLI ROBIN M		15 RUTLAND ST	DOVER	NH	03820
12149-000000	116 118 SILVER ST	MILLETTE CHARLES L REV TRUST	MILLETTE CHARLES TRUSTEE	9 MARKET ST	PORTSMOUTH	NH	03801-3702
12151-000000	120 SILVER ST	WARACH RACHEL TRUSTEE	WARACH JONATHAN B FAMILY TRUST	53 BUCKS HILL RD	DURHAM	NH	03824-3208
12148-000000	114 SILVER ST	114 SILVER STREET GROUP LLC		10 DURHAM ROAD	DOVER	NH	03820

CITY OF DOVER

TECHNICAL REVIEW COMMITTEE MINUTES – SITE-2024-0006

Application Type:	Site Review
Applicant(s):	Allen Majors Associates, Inc.
Owner(s):	114 Silver Street Group, LLC
Location:	114 Silver St. (Assessor's Map 12, Lot 148)
Date:	November 21, 2024

INTENT: Following subdivision of the subject parcel into two lots, the proposal is to convert the existing single-family home into a 4-unit multi-family dwelling on one lot and construct a 3-story, 4-unit multi-family dwelling on the other lot with eight associated parking stalls for each building. *[This item was previously heard by the Technical Review Committee on July 18, 2024 and September 5, 2024]*

UNITS PROPOSED: Two (2) lots, eight (8) units

AGENDA ITEM #: 1

ACREAGE: Existing Acreage: 22,340 sq. ft./0.52± ac.
Proposed Lot 1: 11,650± sq. ft.
Proposed Lot 2: 10,690± sq. ft.

ZONING DISTRICT: HR

EXISTING LAND USE: Residential

PROPOSED LAND USE: Residential

SURROUNDING LAND USE: Residential, School

ZBA ACTION: None.

PERMITS REQUIRED:
- COND-2024-0011, CUP to convert single-family dwelling to 4-unit dwelling
- COND-2024-0012, CUP to construct a new, 4-unit dwelling

WAIVERS REQUESTED: None.

ATTENDANCE:
Donna Benton, Planning
Erin Bassegio, Zoning
Marn Speidel, Police
Jim Maxfield, Inspection Services
Ken Mavrogeorge, Engineering
James Burdin, Business Development
Tom Clark, Planning Board

Others:
Tom Toye, Applicant/Owner
Michael Malynowski, Allen & Major

Approval of minutes from November 14, 2024:
M. Speidel moved to approve the November 14, 2024 minutes. Seconded by T. Clark. Vote: U/A.

PLAN REVIEW:
Planning:
- *Reminder: Water and sewer investment fees*
- *Provide access, utility, and drainage easements*
  - *Show drainage easements on plan*
  - Easement language will be requested as a condition of approval.
- Confirm lot numbering with City Assessor
- Thank you for providing a updated design.
- Please indicate building materials on elevations and ensure materials meet HR standards
- Add owners signatures, all professional stamps, and signatures will be a condition of approval.
- Change note 30 on Sheet C-102 to include no Saturday hours.
- Provide revised streetscape
- Upload latest files to portal and print 6 copies of materials and 11x17s of plans for PB submission

Engineering:
- Sheet 2:
  - **Show proposed drainage easements on an easement plan.**
- Sheet C-104
  - Each lot needs to have its own sewer services independent of one another. This may require an extension to the sewer main in Rutland. A waiver from DUC would not be supported by Engineering or Community Services.

Police:
- Previous comment regarding overhead utilities has been addressed.
- Previous comment regarding suggested 25% contribution toward RRFB system at Silver/Belknap crosswalk remains.

Inspection Services:
- Previous comments appear to have been resolved.
- Include updated design in portal submission.

Application Type:	Site Review
Applicant(s):	Allen Majors Associates, Inc.
Owner(s):	114 Silver Street Group, LLC
Location:	114 Silver St. (Assessor's Map 12, Lot 148)
Date:	November 21, 2024

Fire Department:

- Prior comment addressed.

Business Development:

- No further comments.

Planning Board:

- *No comments.*

Next Steps: Revise plans per comments above and resubmit for Planning Board.

Paused TRC at: 10:52 a.m.

400 Harvey Road, Manchester, NH 03103 | T (603) 627-5500 | F (603) 627-5501
allenmajor.com

ALLEN & MAJOR ASSOCIATES, INC.

December 16, 2024

To: Donna Benton, AICP
Director of Planning and Community Development
City of Dover, NH
288 Central Avenue
Dover, NH 03820-4169

Copy:

A&M Project #: 3347-01

Re: Site Plan
114 Silver Street
(Assessor's Map 12, Lot 148)

Dear Ms. Benton:

On behalf of 114 Silver Street Group, LLC, Allen & Major Associates, Inc. (A&M) is pleased to submit the enclosed Site Review application and supporting materials for the Site Plan Application, Conditional Use Permit Application and Subdivision Application to support the creation of 8 residential dwelling units at the above-mentioned address.

The Site Plan Application process is facilitated the review of the development as proposed on the parcel, including parking placement, proposed utilities, overall stormwater management and landscaping to ensure the project adheres to requirements of the City.

The Conditional Use Permit application is to facilitate the conversion of the existing residential building into no more than 4 residential units as allowed in the Heritage Residential (HR) District. The special permit process also allows for the construction of new buildings up to 4 units provided they are designed to look like a single-family dwelling, which this project set to do.

The Subdivision application facilitates the division of the existing parcel into two dimensionally compliant parcels. The first lot will support the conversion of the existing single-family residence to multi-family, and the constructing a new multi-family building on the other lot.

1. INTRODUCTION

The proposed development consists of subdividing the existing lot into two conforming lots. One of the subdivided lots will construct a new 3-story, multi-family residence. The other lot will be composed of the existing residential home that will be converted into a multi-family dwelling. The new development will contain two buildings; the existing building footprint is 1,648± sf and the proposed building footprint is 1,152± sf. Each building will contain four (4) dwelling units, totaling 8 units for the development; 16 surface parking spaces will be provided. This letter is intended to summarize the project to aid in the review process.

2. EXISTING CONDITIONS

The Applicant is the current owner of the parcel of land located at 114 Silver Street and identified as Tax Map 12, Lot 148 on the City of Dover Tax Assessor Map. The 0.52+/- acre parcel is located in the Heritage Residential (HR) zone. The lot has 164.38 feet of frontage on Silver Street and 150.0 feet of frontage on Rutland Street. The current parcel encompasses an existing 3-story wood framed house and a 2-story wood framed barn with paved access to Silver Street. The site is services by municipal water and sewer.

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3. PROJECT DESCRIPTION

The proposed redevelopment area will disturb approximately 17,200 square feet. This disturbance includes the removal of the existing paved driveway, removal of the dilapidated barn structure and construction of an additional wood framed building. A newly constructed paved parking area will be situated behind the buildings and screened from the abutting properties with a combination of vegetation and fencing. Vehicular access to the lot will be shifted from Silver Street to Rutland Street as part of the proposal.

The existing utility services will be upgraded as necessary to support the added dwelling units. Trash is provided by a private hauling company which utilizes residential style plastic totes which removes the need for a dumpster.

4. COMPLIANCE WITH ZONING STANDARDS

As the proposed project is set in the HDR zone and requires the issuance of a Conditional Use Permit to allow up the four units within each of the buildings, there are several dimensional requirements which are unique to these conditions.

A. *The specific site must have an amount of open space, either landscaped or left natural, at least equal to the average amount of open space on all developed lots in the HR District that are wholly or partly within two hundred (200) feet of the subject parcel. Existing parking areas, either gravel, paved or unpaved, shall not be considered to be open space.*

The average open spaces for the abutting properties has been calculated to be 57.9% as illustrated on "Zoning Calculations Plan", sheet C-107 as attached. This was compared to the proposed open space for Lot 1 which is 57.5% and Lot 2 which is 57.3%, which exceeds the required average open space in the surrounding area.

B. *Off-street parking, in accordance with Chapter 153, Site Review, shall be provided as to avoid vehicles backing into the street. Two (2) parking spaces per unit shall be required.*

Proposed parking is provided at the rear of the existing and proposed building with a common singular access drive onto Rutland Street. This configuration will preclude the necessity for vehicles to back onto Rutland Street. A total of 16 parking spaces has been provided for the proposed 8 units which meets the requirements for parking ratios.

C. *Parking lots shall be at least five (5) feet from a side property line and ten (10) feet from a front property line.*

The required buffer requirements for parking lots have been adhered to in the proposed configuration.

D. *Parking areas shall be screened from the street and from abutting lots.*

The parking areas have been screened from abutting lots with a combination of vegetative and structural measures. Additionally, landscaping has been provided at the street side to buffer the parking area while not causing a visual impediment to driver leaving the property.

E. *Structures shall be at least twenty (20) feet from a front property line, thirty (30) feet from a rear property line and fifteen (15) from a side property line unless abutting a street, in which case, the distance from the side property line shall be twenty (20) feet.*

The requirements for building setbacks have been adhered to for both the existing structure to be converted into 4 dwelling units and the proposed 4 dwelling unit building. Supplement calculations have been provided to determine the "average front setbacks of all lots within the same zone located on the same side of the street, 250 ft in each direction from the center of the front lot line. This front setback dimension shall be considered to be a build to line. Structures may be constructed within five (5) ft plus or minus of the average." Based on the provided calculations, the average setback along Silver Street was determined to 14.16 feet and the average setback along Rutland Street was determined to 20.54 feet.

F. *For new construction, the building must be designed to look like a SINGLE FAMILY DWELLING. At a minimum, this shall mean that only one entrance shall be visible from a public street. For conversions, the building must retain its appearance as a SINGLE FAMILY DWELLING or a 2 family dwelling, whichever is the current use.*

Architectural plans for the new building have been submitted as part of the proposed work to illustrate that this requirement has been met. The existing building will be converted into 4 dwelling units and no visible modifications to the exterior of the building are proposed.

1. COMPLIANCE WITH SITE PLAN REVIEW STANDARDS

Section 153 of the Dover Code ordinance presents standards that must be met in order to obtain Site Plan Review approval. These are detailed in the following subsections:

5.A. Stormwater Management, Erosion Control, and Flood Hazards

A stormwater analysis has been performed for two project site situations. The first analysis consists of the existing site conditions and the second consists of the proposed site conditions. There is one study point located at the municipal drainage system where the stormwater flows were analyzed. The study points and contributing watersheds are further outlined in the accompanying text and calculations. The proposed project will disturb approximately 17,200± sf of earth. This disturbance includes site grading & drainage installation, paving, and building construction with associated utility connections. The proposed watershed analysis is comprised of approximately 9,054± square feet of impervious (an increase of 2,204± square feet from the pre-development conditions), including the new building, parking lot, and sidewalk. The generated stormwater runoff on both lots has been designed to be controlled using a combination of best management practices. The project proposes to construct a rain garden area that will capture lawn and roof runoff. A Stormtech infiltration system with an isolator row composed of filtration media will provide treatment for parking lot runoff prior to infiltration and or discharge.

5.B. Utilities

The existing building, which is to be converted to four 1-bedroom apartments is serviced by municipal water and municipal sewer. The existing sewer line which has been determined to be a 4" cast iron pipe through visual inspection by the office, exits the existing building along the southeast corner of the foundation and terminates at an existing sewer manhole within Rutland Street. The proposed project plans to utilize this transversing sewer lateral to service the proposed 4 dwelling unit as well.

Sewer

In Table 3-2 of *"Wastewater Engineering Treatment and Reuse",* fourth edition, by Metcalf & Eddy, it states for an apartment the typical flowrate is 120 gallons per bedroom. The estimated sewer flows for the multi-family residential buildings are:

- (120 gpd/bedroom) x (6 beds @ Lot 2) + (120 gpd/bedroom) x (4 beds @ Lot 1) = 1,200 gpd

The following is a conversion to find that average gallons per minute anticipated for project.

- (1,200 gpd / 24hrs/day) 60min/hr = 0.8 gpm
  Therefore use 1.0 gpm as average daily flow
  Apply a Peaking Factor = 5
  Mop_5 = 1 gpm x 5 = 5 gpm

The existing sanitary sewer line is 4" based visual observations of the building (private residence) and laid at the minimum required pitch of 1%, would have a capacity of approximately 98.7 gpm utilizing Manning's Formula. This would have sufficient capacity to handle the anticipated sewer loading.

Water

The current residential building is currently services by a 3/4" copper line which originates from Silver Street. Due to the need for fire suppression for both buildings, a new 6" supply line will be installed which originates from Rutland Street and will service both the proposed and existing residential building on the project. Refer to the "Utility Plan" for the alignment and valving requirements. Although both parcels will remain in common ownership, upon approval of the site plans by the Planning Board, utility easements will be drafted to allow for the crossing of services between the two lots.

Utility Impact Fees

Based on the City's current water and sewer investment fees, the following would be the anticipated one-time investment fee for the proposed increase:

As there is a base flow associated with the parcel, this should be deducted from any future investment fees. The following is a breakdown of these flows.

Existing dwelling: 4 bedrooms per City of Dover Accessors office = 4 bedrooms x (120 gpd/bedroom) = 480 gpd
Proposed flow = 1200 gpd
Net difference = 720 gpd

- Water Investment Fee $10.99 Gallons Per Day * 720 GPD = $7,912.80
- Sewer Investment Fee $6.12 Gallons Per Day* 720 GPD = $4,406.40

5.C. Driveways, Accessways and Internal Roads

The existing site is serviced from Silver Street by an existing approximately 12ft driveway along the northern frontage. The proposed development plans to close this existing driveway down and to construct a new 22ft driveway which exits onto Rutland Street. Per the requirements of the City of Dover a 22ft wide access road is extended into the property to accommodate maneuvering of vehicles into the designated parking spaces.

5.D. Parking

The proposed project plans to construct a new paved parking area along the southern portion of the site with 16 parking spaces and maneuvering areas. The supports the current parking ratio of 2 spaces per dwelling unit and also includes 2 accessible spaces.

5.E. Outdoor Lighting

The proposed parking area will be lit with three pole lights with full cut off fixtures to eliminate any light spillage onto abutting properties. The overall height of the poles is set such that they will be consistent with the neighborhood feel of the area. Any building lights proposed will be similar to any porch lights within the neighborhood.

5.F. Fire Hazards

The proposed project will not have any special conditions relative to fire hazards that currently exists within this residential neighborhood. Per the requirements of the City of Dover, both the existing residential building and proposed residential will have fire suppression systems installed.

5.G. Landscaping

Existing landscaping is provided along the frontage of the existing residential dwelling. A full landscape design has been provided for the project which will provide landscape buffers along the road frontage of Rutland Street and screen the parking areas from the abutting parcels.

5.H. Driveway Location and Spacing Standards for Non-Residential USES in the B-3, B-4, B-5, I-2,and I-4 Districts.

Not applicable as the project is not located within one of these designated districts.

5.J. Interconnections Between Parcels

Not applicable as the project is residential in nature and located within an existing residential zoning district.

5.K. Location of Parking Lots

The proposed parking lot is situated to the rear of both the existing and proposed residential buildings to conform to the requirement.

5.L. Architectural Design Standards

The existing building is to remain, which was originally a residential dwelling when first constructed. The proposed residential building is in harmony with the surrounding residential structures and conforms to the underlying zoning requirements in that it has the appearance of a single-family home with a single access point. A full set of architectural plans will be submitted to the building department for approval and the issuance of building permits once the site plans have been approved by the Planning Board.

CONCLUSION

In conclusion, the granting of the site plan and subdivision will not be contrary to the nature of the existing developments in the vicinity of project.

We thank you in advance for your anticipated cooperation regarding this project and look forward to meeting to discuss the plans.

Very Truly Yours,
ALLEN & MAJOR ASSOCIATES, INC.

Michael Malynowski

Michael A. Malynowski, PE - Senior Project Manager

400 Harvey Road, Manchester, NH 03103 | T (603) 627-5500 | F (603) 627-5501
allenmajor.com

ALLEN & MAJOR ASSOCIATES, INC.

July 9, 2024 *(revised 08-07-24)*

To: Donna Benton, AICP
Director of Planning and Community Development
City of Dover, NH
288 Central Avenue
Dover, NH 03820-4169

A&M Project #: 3188-01

Re: Traffic Memorandum
Office Conversion & Residential Construction
114 Silver Street
Dover, NH

Copy:

Dear Ms. Benton,

Allen & Major Associates, Inc. has prepared this memorandum to outline the anticipated traffic impacts generated by the proposed development consisting of subdividing the existing lot into two conforming lots. One of the subdivided lots will construct a new 3-story, multi-family residence with four (4) dwelling units. The other lot will be composed of the existing chiropractic office which will be converted into a multi-family residence with four (4) dwelling units. The new development will contain two buildings; the existing building footprint is 1,648± sf and the proposed building footprint is 1,152± sf. Each building will contain four (4) dwelling units, totaling 8 units for the development; 16 surface parking spaces will be provided.

Description of Site:
The overall project site is comprised of one lot totaling approximately 0.51 acres. The parcel is listed on the City of Dover Assessors Map 12, as Lot 148, and has the address of 114 Silver Street. The project proposes to subdivide the existing lot into two, converting the existing single-family residence to multi-family on one lot, and constructing a new multi-family building on the other. The site is located to the east of NH Route 16, accessed from Exit 8E. Currently, the existing parcel is a single-family residential home with barn and the land is relatively flat. Vehicular access to the lot will be shifted from Silver Street to Rutland Street as part of the proposal.

Description of Roadways:
The project is situated at the intersection of Silver Street and Rutland Street. Silver Street is a two-lane bituminous paved road consisting of 11ft +/- travel lanes, with 5ft wide designated bike lanes in each direction with appropriate painted lane markers. Pedestrian sidewalks (5 ft +/- wide) are present along both sides of Silver Street buffered from vehicular traffic by vertical granite curbing and an approximately 5ft +/- wide grass strip. Appropriate accessible ramps and painted crosswalks were observed in the vicinity of the project.

Rutland Street is a rural two-lane bituminous paved road consisting of 12ft +/- travel lanes with no painted lane markers which is typical for this type of roadway. Pedestrian sidewalks (5 ft +/- wide) are present along both sides of Rutland Street buffered from vehicular traffic by vertical granite curbing for approximately 175 ft +/-, then no curbing is present for the remainder of the street. An approximately 5ft +/- wide grass buffer strip between the travel way and pedestrian sidewalk is present for most of the roadway, except for the first 175 ft+/- where the sidewalk along the west side of the roadway is only buffered by vertical curbing due to utility cabinet situate behind the sidewalk.

The posted speed limit on both Silver Street and Rutland Street is 30 mph.

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SIGHT DISTANCE

To identify potential safety concerns associated with site access and egress, sight distances have been evaluated at the existing site driveway locations to determine if the available sight distances for vehicles exiting the site meet or exceed the minimum distances required for approaching vehicles to safely stop. The available sight distances were compared with minimum requirements, as established by the New Hampshire Department of Transportation (NHDOT) and the American Association of State Highway and Transportation Officials (AASHTO). AASHTO is the national standard by which vehicle sight distance is calculated, measured, and reported.

The NHDOT requires that any driveway onto a state highway provide at least 400 feet of all-season sight distance in both directions. All-season sight distance is measured from the driveway using an eye height of 3.75 feet to the center of the approaching travel lanes on the adjacent street using an object height of 3.75 feet above street level. The NHDOT requirements were evaluated at the proposed site driveway for consistency with state standards.

Sight Distance (feet)

Location/Direction	Measured	NHDOT Requirement [a]	AASHTO Minimum (SSD)[b]	AASHTO Desirable (ISD)[c]
Rutland Street at Site Drive:				
North of intersection	145[d]	400	80[e]	145[e]
South of intersection	524[f]	400	200	290

[a] Values based on NHDOT all-season sight distance requirement.
[b] Values based on AASHTO Stopping Sight Distance (SSD) requirements for the posted speed limit of 30 mph
[c] Values based on AASHTO Intersection Stopping Distance (ISD) requirements for posted speed limit of 30 mph
[d] Sightline visible to intersection of Silver Street and Rutland Street
[e] Values for both SSD and ISD reduced to ½ posted speed limit to account for turning movements onto Rutland Street from Silver Street
f Sightline visible to intersection of Clifford Street and Rutland Street

As shown in the table, both the minimum required, and desirable sight distances to the south are exceeded at the proposed driveway on Rutland Street and safe operation of these driveways can therefore be expected. Sightlines at the intersection of Rutland Street and the site driveway also exceed NHDOT requirements. Looking north from the site driveway, sightlines are visible through the intersection of Rutland Street and Silver Street. While this sightline does not meet the NHDOT standard, the 400 feet of all-season sight distance does not take vehicle speeds into account. Based on the AASHTO requirements which do take vehicle speeds into account, safe operation is expected at this site driveway. To ensure that maximum sight distances are maintained, it is recommended that any proposed landscaping be kept low (maximum two feet in height from street level), or set back sufficiently so as not to impede the available sight distances.

Trip Generation

In order to determine the traffic characteristics of the proposed Project, the trip-generation methodologies established by the ITE were used for the proposed uses at the site. ITE Land Use Code (LUC) 220, Multifamily Housing (Low-Rise) [1], was used to develop the traffic characteristics of the proposed Project, the results of which are summarized in Table 1.

[1] *Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse. A mansion apartment is a single structure that contains several apartments within what appears to be a single-family dwelling unit*

The estimated proposed vehicle trips are shown in the following Table 1:

Time Period	Total	Incoming	Outgoing
Average Weekday:	54	27	27
Weekday Morning Peak-Hour:	4	1	3
Weekday Evening Peak-Hour:	5	3	2

The proposed residential development is expected to generate approximately 54 vehicle trips on an average weekday with 4 vehicle trips (1 entering and 3 exiting) expected during the weekday morning peak-hour and, 5 vehicle trips (3 entering and 2 exiting) expected during the weekday evening peak-hour.

To provide a comparison, the proposed residential development was compared to the existing chiropractic office on the property to aid in the evaluation of the potential impacts of the project on the existing network.

A summary of the data is in the Table 2 below.

Existing Chiropractic Office			
	Weekday		
	Total	IN	OUT
Daily	65	32	33
AM Peak	9	5	4
PM Peak	9	3	6

Proposed Residential			
	Weekday		
	Total	IN	OUT
Daily	54	27	27
AM Peak	4	1	3
PM Peak	5	3	2

Net Difference			
	Weekday		
	Total	IN	OUT
Daily	-11	-5	-6
AM Peak	-5	-4	-1
PM Peak	-4	0	-4

The proposed re-development will have a net decrease in vehicle trips for all data points and would not result in an increase in motorist delays to the surrounding network.

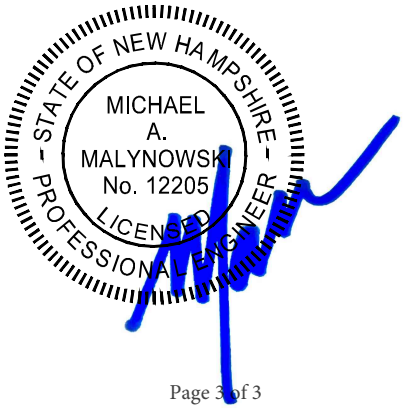
Public Transit

In the City of Dover, bus service is provided by either The Cooperative Alliance for Seacoast Transportation, more commonly known as COAST or Wildcat Transit operated by the University of NH. Both services have routes along Silver Street with dedicated stops in the westbound and eastbound direction and is close proximity to the project site. The eastbound stop is approximately 30 feet west of the project parcel and the westbound stop is approximately 200 feet west of the project site. Both existing bus stops have accessible access, bench, and pullout to accommodate safe movements.

We trust that this explanation illustrates that the proposed use changes are minor in nature as related to traffic impacts and do not require any additional mitigation.

Very Truly Yours,
ALLEN & MAJOR ASSOCIATES, INC.

Michael A. Malynowski, PE
Senior Project Manager



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DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
215

LAND USE GROUP:
(200-299) Residential

LAND USE :
215 - Single-Family Attached Housing

LAND USE SUBCATEGORY:
All Sites

SETTING/LOCATION:
General Urban/Suburban

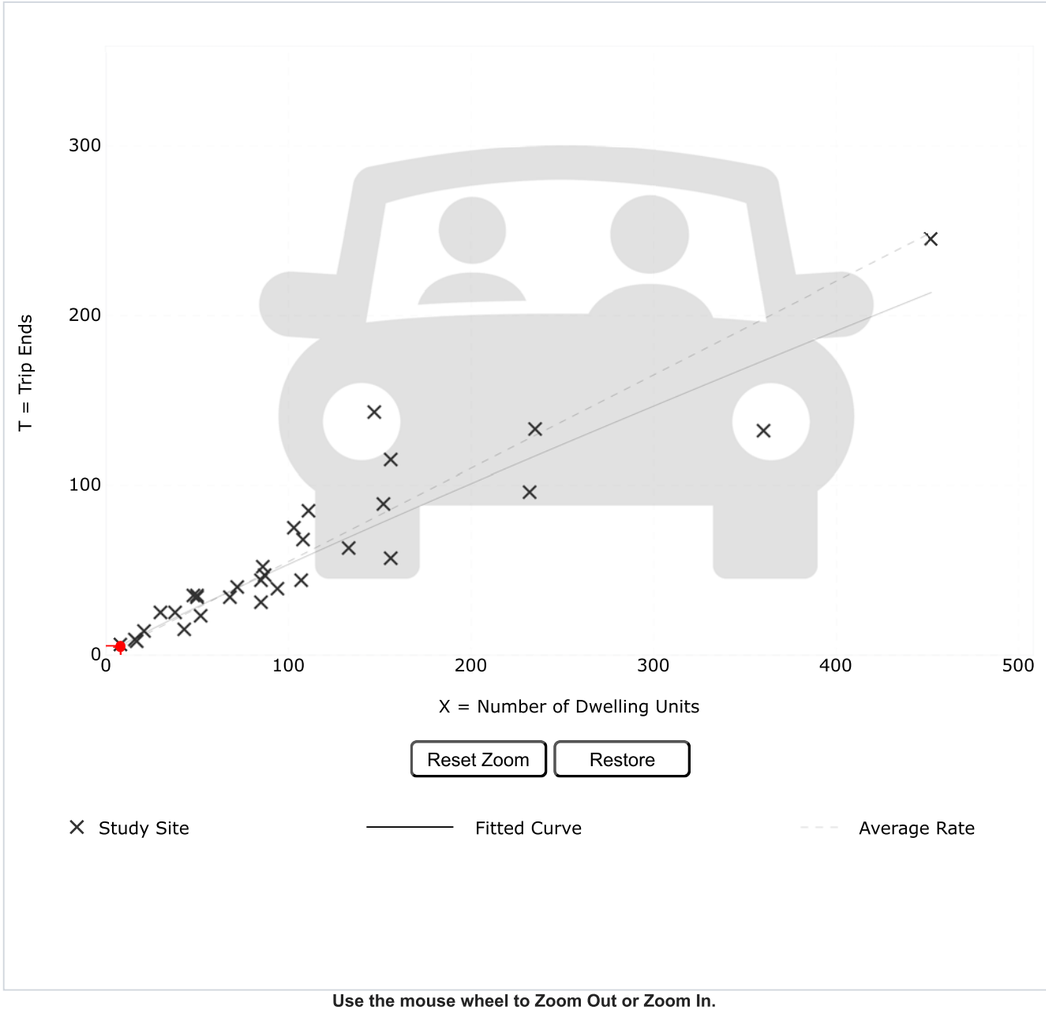
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday, AM Peak Hour of Generator

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
8 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Single-Family Attached Housing (215) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday
AM Peak Hour of Generator

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
31

Avg. Num. of Dwelling Units:
110

Average Rate:
0.55

Range of Rates:
0.35 - 0.97

Standard Deviation:
0.16

Fitted Curve Equation:
Ln(T) = 0.92 Ln(X) - 0.26

R^2:
0.91

Directional Distribution:
25% entering, 75% exiting

Calculated Trip Ends:
Average Rate: 4 (Total), 1 (Entry), 3 (Exit)
Fitted Curve: 5 (Total), 1 (Entry), 4 (Exit)

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DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
215

LAND USE GROUP:
(200-299) Residential

LAND USE :
215 - Single-Family Attached Housing

LAND USE SUBCATEGORY:
All Sites

SETTING/LOCATION:
General Urban/Suburban

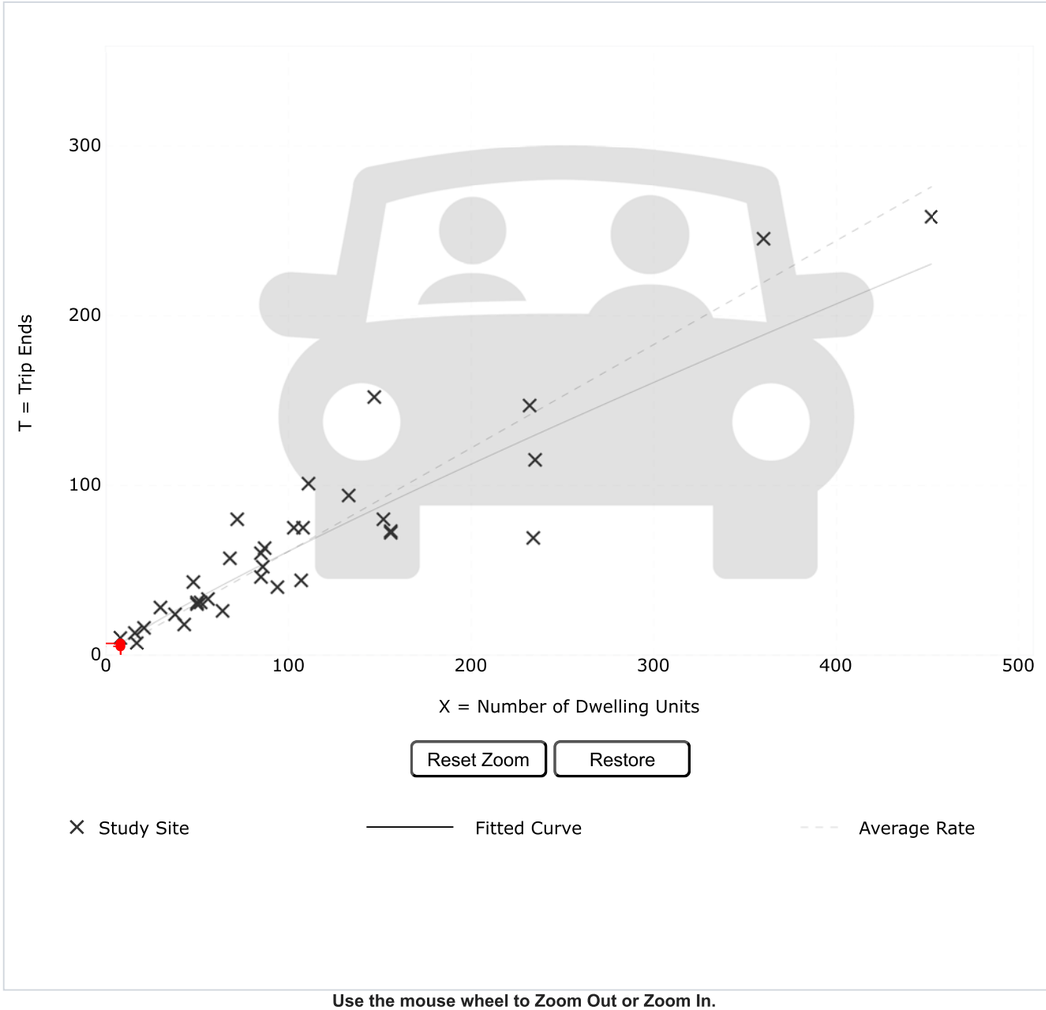
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday, PM Peak Hour of Generator

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
8 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Single-Family Attached Housing (215) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday
PM Peak Hour of Generator

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
34

Avg. Num. of Dwelling Units:
110

Average Rate:
0.61

Range of Rates:
0.29 - 1.25

Standard Deviation:
0.18

Fitted Curve Equation:
Ln(T) = 0.88 Ln(X) + 0.06

R^2:
0.87

Directional Distribution:
62% entering, 38% exiting

Calculated Trip Ends:
Average Rate: 5 (Total), 3 (Entry), 2 (Exit)
Fitted Curve: 7 (Total), 4 (Entry), 3 (Exit)

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DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
215

LAND USE GROUP:
(200-299) Residential

LAND USE :
215 - Single-Family Attached Housing

LAND USE SUBCATEGORY:
All Sites

SETTING/LOCATION:
General Urban/Suburban

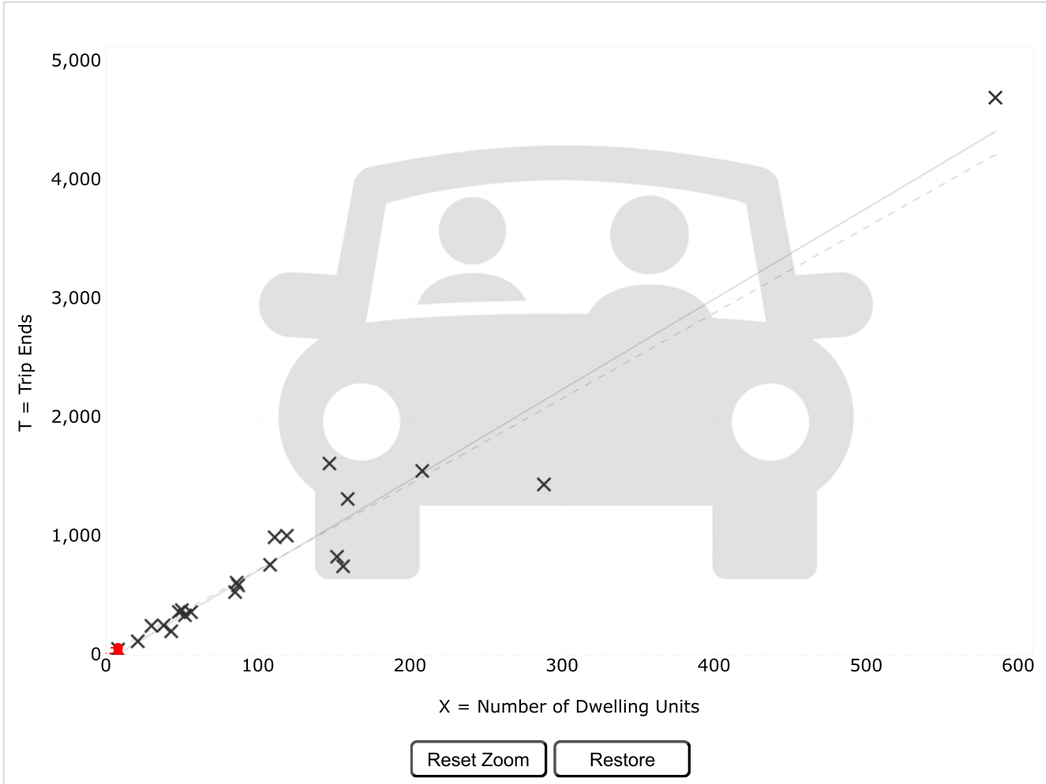
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
8 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Single-Family Attached Housing (215) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
22

Avg. Num. of Dwelling Units:
120

Average Rate:
7.20

Range of Rates:
4.70 - 10.97

Standard Deviation:
1.61

Fitted Curve Equation:
T = 7.62(X) - 50.48

R^2:
0.94

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 58 (Total), 29 (Entry), 29 (Exit)
Fitted Curve: 10 (Total), 5 (Entry), 5 (Exit)

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DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
220

LAND USE GROUP:
(200-299) Residential

LAND USE :
220 - Multifamily Housing (Low-Rise)

LAND USE SUBCATEGORY:
Not Close to Rail Transit

SETTING/LOCATION:
General Urban/Suburban

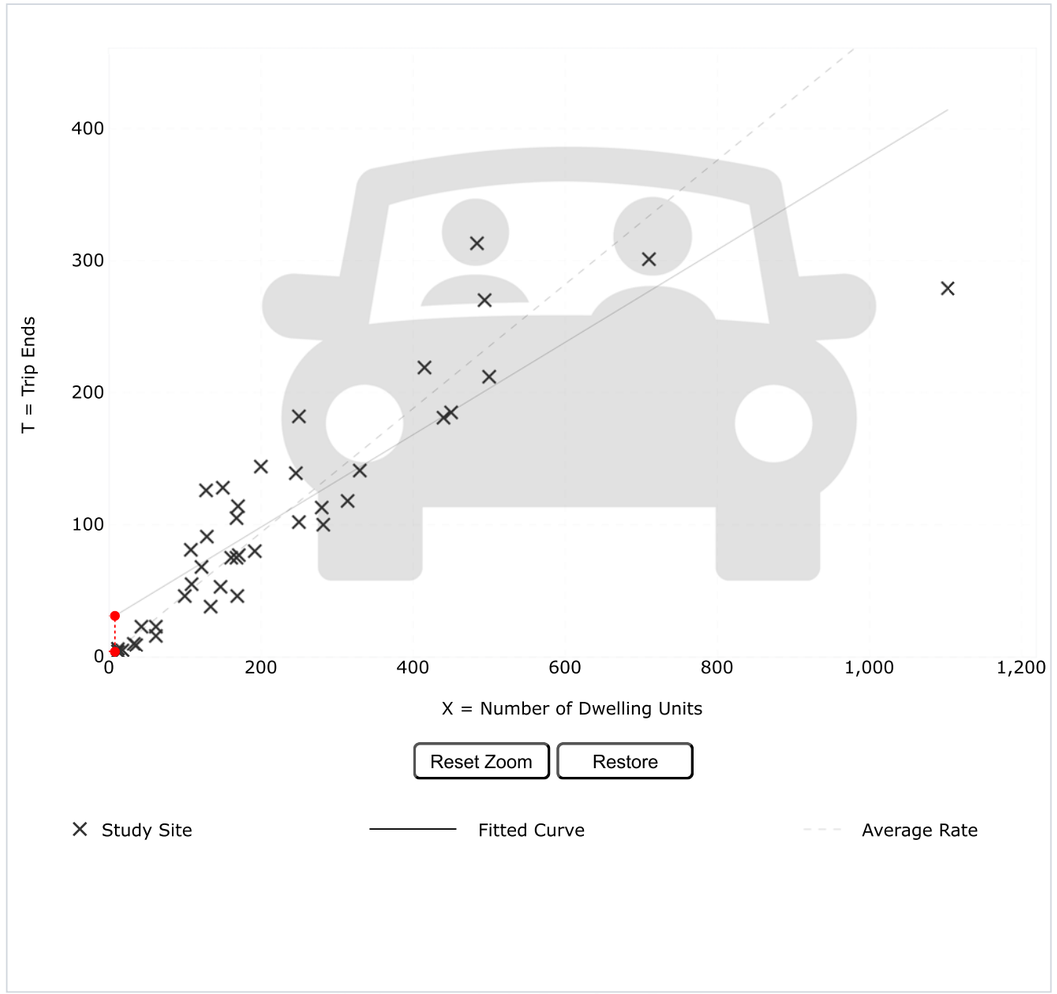
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday, AM Peak Hour of Generator

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
8 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Multifamily Housing (Low-Rise) - Not Close to Rail Transit (220) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday
AM Peak Hour of Generator

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
40

Avg. Num. of Dwelling Units:
234

Average Rate:
0.47

Range of Rates:
0.25 - 0.98

Standard Deviation:
0.16

Fitted Curve Equation:
T = 0.35(X) + 28.13

R^2:
0.76

Directional Distribution:
24% entering, 76% exiting

Calculated Trip Ends:
Average Rate: 4 (Total), 1 (Entry), 3 (Exit)
Fitted Curve: 31 (Total), 7 (Entry), 24 (Exit)

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DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
220

LAND USE GROUP:
(200-299) Residential

LAND USE :
220 - Multifamily Housing (Low-Rise)

LAND USE SUBCATEGORY:
Not Close to Rail Transit

SETTING/LOCATION:
General Urban/Suburban

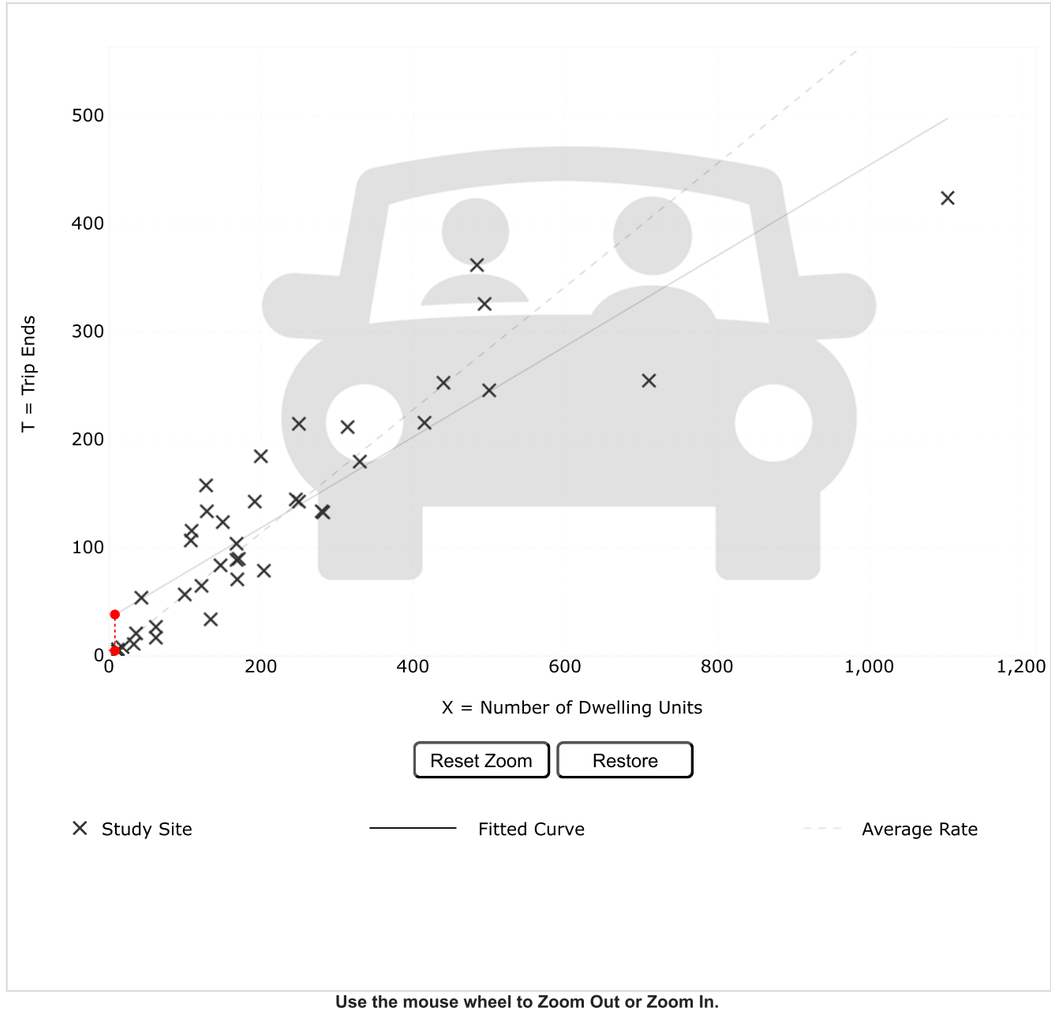
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday, PM Peak Hour of Generator

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
8 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Multifamily Housing (Low-Rise) - Not Close to Rail Transit (220) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday
PM Peak Hour of Generator

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
38

Avg. Num. of Dwelling Units:
231

Average Rate:
0.57

Range of Rates:
0.25 - 1.26

Standard Deviation:
0.20

Fitted Curve Equation:
T = 0.42(X) + 34.78

R^2:
0.80

Directional Distribution:
62% entering, 38% exiting

Calculated Trip Ends:
Average Rate: 5 (Total), 3 (Entry), 2 (Exit)
Fitted Curve: 38 (Total), 24 (Entry), 14 (Exit)

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SEARCH BY LAND USE CODE:
220

LAND USE GROUP:
(200-299) Residential

LAND USE :
220 - Multifamily Housing (Low-Rise)

LAND USE SUBCATEGORY:
Not Close to Rail Transit

SETTING/LOCATION:
General Urban/Suburban

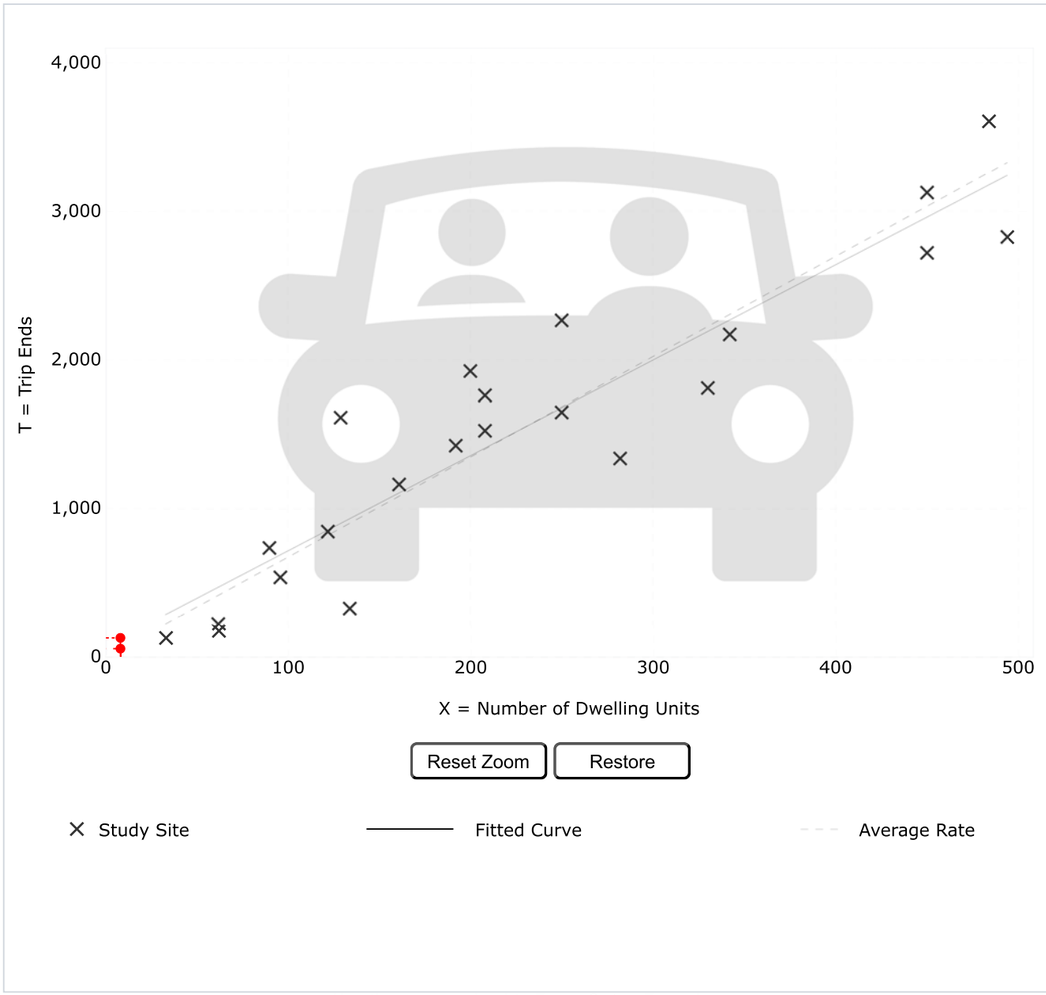
INDEPENDENT VARIABLE (IV):
Dwelling Units

TIME PERIOD:
Weekday

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
8 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Multifamily Housing (Low-Rise) - Not Close to Rail Transit (220) Click for Description and Data Plots

Independent Variable:
Dwelling Units

Time Period:
Weekday

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
22

Avg. Num. of Dwelling Units:
229

Average Rate:
6.74

Range of Rates:
2.46 - 12.50

Standard Deviation:
1.79

Fitted Curve Equation:
T = 6.41(X) + 75.31

R^2:
0.86

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 54 (Total), 27 (Entry), 27 (Exit)
Fitted Curve: 127 (Total), 63 (Entry), 64 (Exit)

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DATA SOURCE:
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SEARCH BY LAND USE CODE:
720

LAND USE GROUP:
(700-799) Office

LAND USE :
720 - Medical-Dental Office Building

LAND USE SUBCATEGORY:
Stand-Alone

SETTING/LOCATION:
General Urban/Suburban

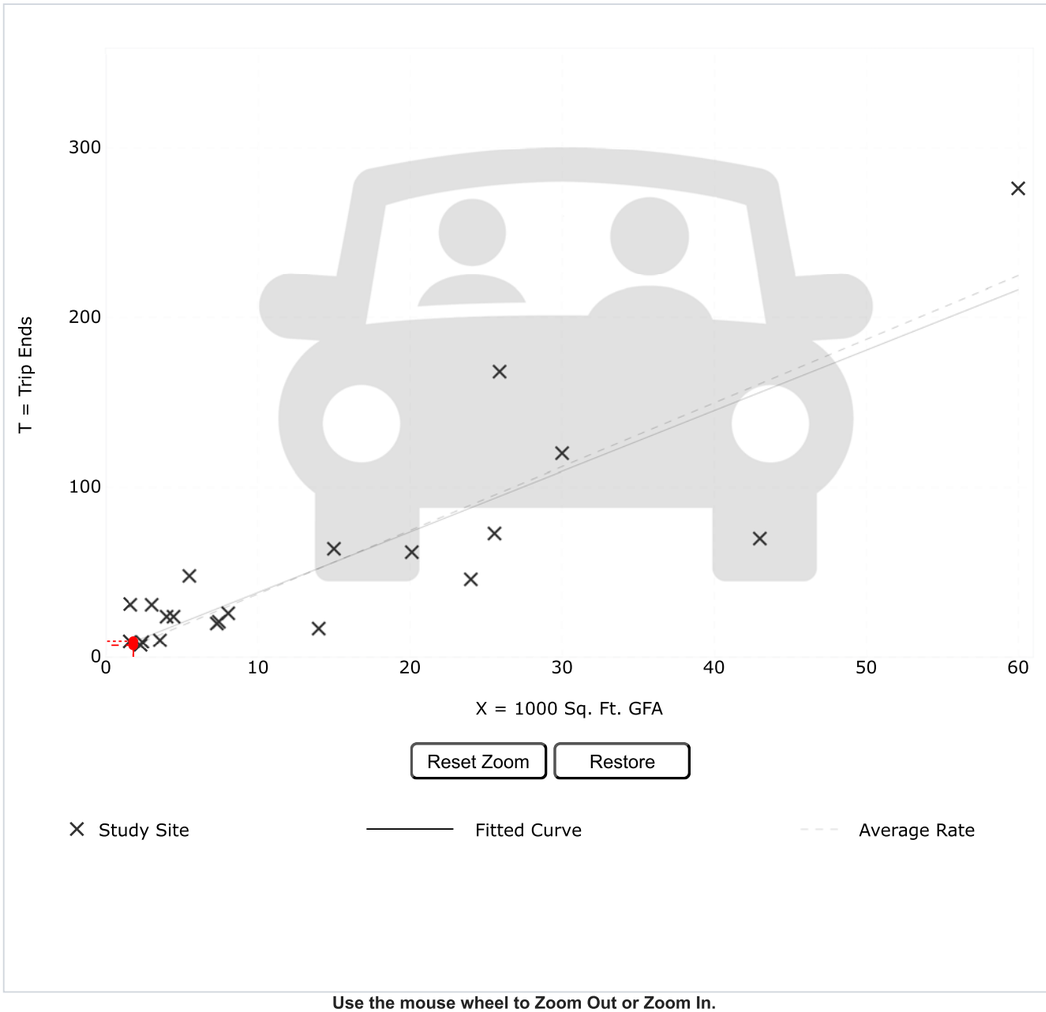
INDEPENDENT VARIABLE (IV):
1000 Sq. Ft. GFA

TIME PERIOD:
Weekday, AM Peak Hour of Generator

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
1.8 Calculate

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Medical-Dental Office Building - Stand-Alone (720)
Click for Description and Data Plots

Independent Variable:
1000 Sq. Ft. GFA

Time Period:
Weekday
AM Peak Hour of Generator

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
21

Avg. 1000 Sq. Ft. GFA:
15

Average Rate:
3.74

Range of Rates:
1.21 - 19.28

Standard Deviation:
2.14

Fitted Curve Equation:
T = 3.56(X) + 2.66

R^2:
0.74

Directional Distribution:
59% entering, 41% exiting

Calculated Trip Ends:
Average Rate: 7 (Total), 4 (Entry), 3 (Exit)
Fitted Curve: 9 (Total), 5 (Entry), 4 (Exit)

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Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
720

LAND USE GROUP:
(700-799) Office

LAND USE :
720 - Medical-Dental Office Building

LAND USE SUBCATEGORY:
Stand-Alone

SETTING/LOCATION:
General Urban/Suburban

INDEPENDENT VARIABLE (IV):
1000 Sq. Ft. GFA

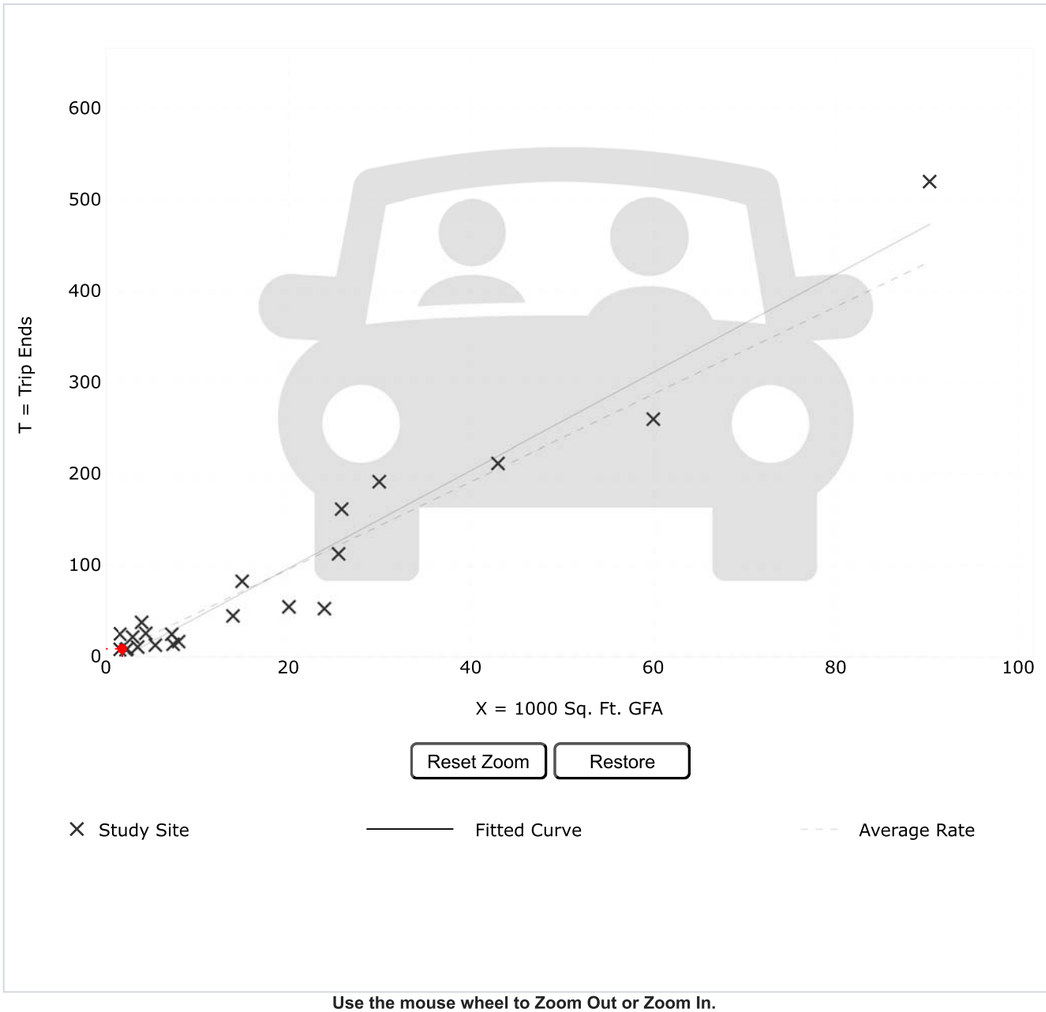
TIME PERIOD:
Weekday, PM Peak Hour of Generator

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
1.8 Calculate

Trip ends are not estimated for some methods as it yields negative values

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Medical-Dental Office Building - Stand-Alone (720)
Click for Description and Data Plots

Independent Variable:
1000 Sq. Ft. GFA

Time Period:
Weekday
PM Peak Hour of Generator

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
22

Avg. 1000 Sq. Ft. GFA:
18

Average Rate:
4.79

Range of Rates:
1.88 - 15.55

Standard Deviation:
1.62

Fitted Curve Equation:
T = 5.36(X) - 10.42

R^2:
0.95

Directional Distribution:
40% entering, 60% exiting

Calculated Trip Ends:
Average Rate: 9 (Total), 3 (Entry), 6 (Exit)
Fitted Curve: Not Available

Add-ons to do more

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DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
720

LAND USE GROUP:
(700-799) Office

LAND USE :
720 - Medical-Dental Office Building

LAND USE SUBCATEGORY:
Stand-Alone

SETTING/LOCATION:
General Urban/Suburban

INDEPENDENT VARIABLE (IV):
1000 Sq. Ft. GFA

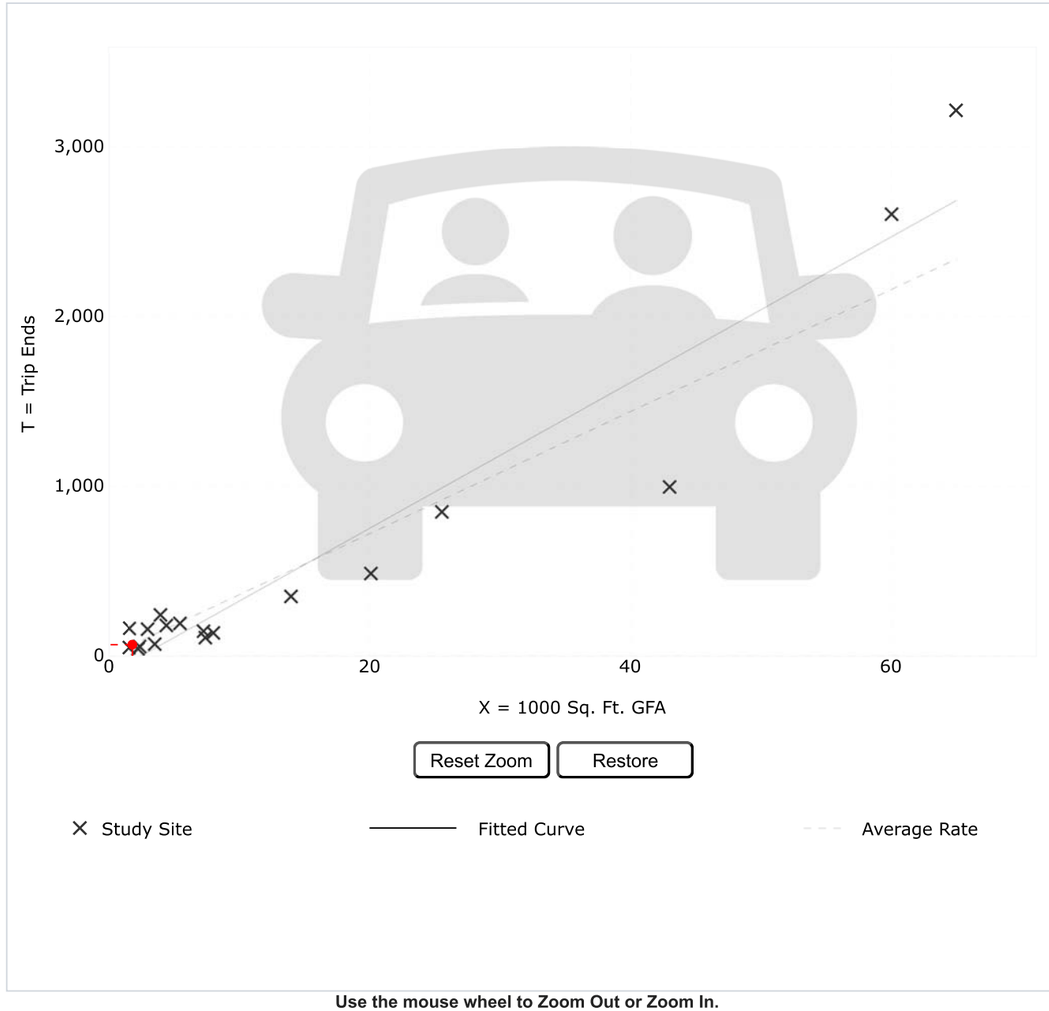
TIME PERIOD:
Weekday

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
1.8 Calculate

Trip ends are not estimated for some methods as it yields negative values

Data Plot and Equation



Use the mouse wheel to Zoom Out or Zoom In.
Hover the mouse pointer on data points to view X and T values.

DATA STATISTICS

Land Use:
Medical-Dental Office Building - Stand-Alone (720)
Click for Description and Data Plots

Independent Variable:
1000 Sq. Ft. GFA

Time Period:
Weekday

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
18

Avg. 1000 Sq. Ft. GFA:
15

Average Rate:
36.00

Range of Rates:
14.52 - 100.75

Standard Deviation:
13.38

Fitted Curve Equation:
T = 42.97(X) - 108.01

R^2:
0.92

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 65 (Total), 32 (Entry), 33 (Exit)
Fitted Curve: Not Available

Add-ons to do more

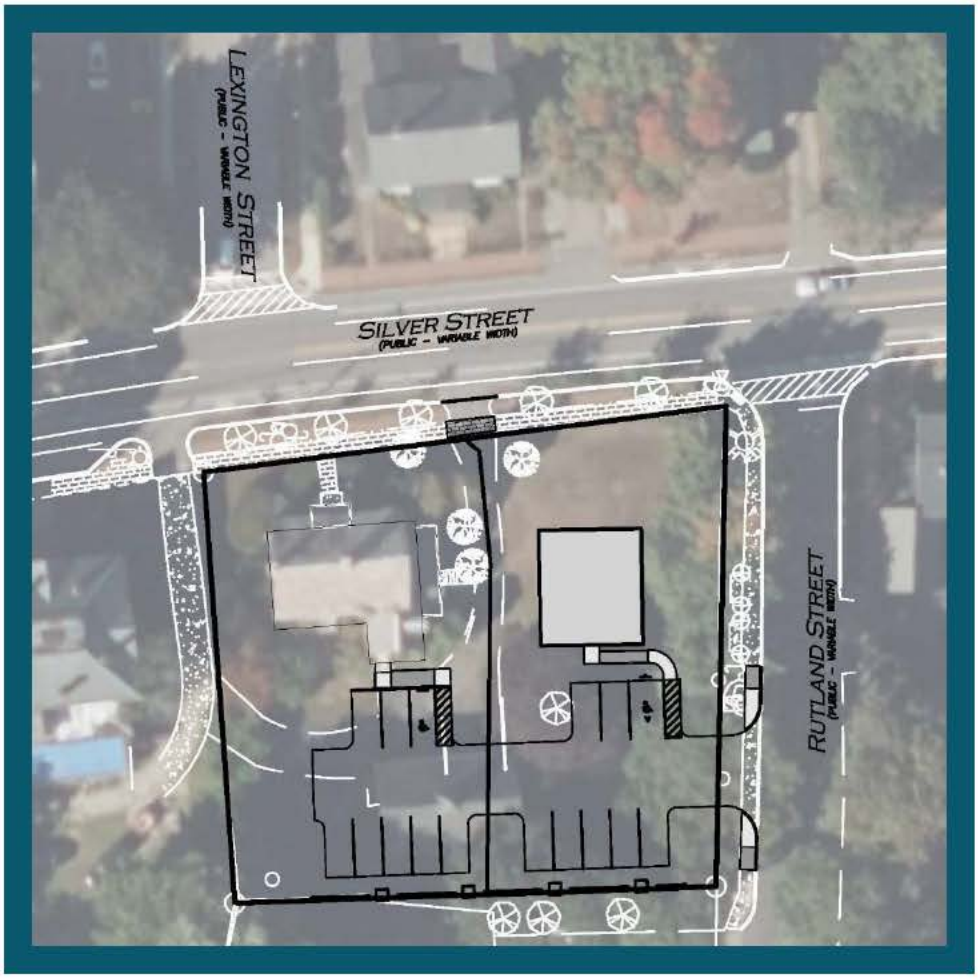
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DRAINAGE REPORT

ALLEN & MAJOR
ASSOCIATES, INC.

114 Silver Street – Residential Development
Dover, New Hampshire



APPLICANT:
114 Silver Street Group, LLC
10 Durham Road
Dover, NH 03820

PREPARED BY:
Allen & Major Associates, Inc.
400 Harvey Road
Manchester, NH 03103

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Dover, NH

APPLICANT:
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10 Durham Road
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PREPARED BY:
Allen & Major Associates, Inc.
400 Harvey Road, Suite D
Manchester, NH 03103

ISSUED:
June 20, 2024

REVISED:
August 6, 2024
October 8, 2024

A&M PROJECT NO.:
3347-01

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SECTION 1.0 -
OVERVIEW

Executive Summary

The purpose of this drainage report is to provide a detailed review of the stormwater runoff, both quality and quantity, as it pertains to the existing and proposed developed conditions. This report will show by means of narrative, calculations and exhibits that appropriate best management practices have been implemented into the design to mitigate the impacts from the proposed development. The following table demonstrates that there is no increase in total peak rate of runoff and discharge volume from the site for all design storm events.

STUDY POINT #1 (Municipal Drainage System)				
	2-Year	10-Year	25-Year	50-Year
Existing Flow (CFS)	0.07	0.63	1.24	1.89
Proposed Flow (CFS)	0.00	0.63	1.07	1.59
Decrease (CFS)	**0.07**	**0.00**	**0.17**	**0.30**
Existing Volume (CF)	487	1,769	3,141	4,616
Proposed Volume (CF)	6	525	1,317	2,208
Decrease (CF)	**481**	**1,244**	**1,824**	**2,408**

Site Location and Description

The overall project site is comprised of one lot totaling approximately 0.51 acres. The parcel is listed on the City of Dover Assessors Map 12, as Lot 148, and has the address of 114 Silver Street. The project proposes to subdivide the existing lot into two, converting the existing single-family residence to multi-family on one lot, and constructing a new multi-family building on the other.

The site is located to the east of NH Route 16, accessed from Exit 8E. Currently, the existing parcel is a single-family residential home with barn. The existing tract of land is relatively flat with elevations ranging from 119 around the existing house to 116 along Rutland Street.

The proposed development consists of subdividing the existing lot into two conforming lots. One of the subdivided lots will construct a new 3-story, multi-family residence. The other lot will be composed of the existing residential home that will be converted into a multi-family dwelling. The new development will contain two buildings; the existing building footprint is 1,648± sf and the proposed building footprint is 1,152± sf. Each building will contain four (4) dwelling units, totaling 8 units for the development; 16 surface parking spaces will be provided.

The underlying soils were identified using the USDA Natural Resources Conservation Service (NRCS) soil survey for Strafford County. The site is shown to have a soil type of Windsor loamy fine sand which is classified as Hydrologic Soil Group "A". A copy of the NRCS Soil Report is included in the Appendix of this report.

WfB	Windsor loamy fine sand	0-8% slopes

The saturated hydraulic conductivity (Ksat) rate of the Windsor soil was used to establish the infiltration rate on-site. The Ksat value of the Windsor soil is 6.0 inches per hour. A safety factor of 2 was applied and a design infiltration rate of 3.0 inches per hour was used. This Ksat value is referenced from "Ksat Values for New Hampshire Soils", SSSNNE Special Publication No. 5, September 2009.

A stormwater analysis has been performed for two project site situations. The first analysis consists of the existing site conditions and the second consists of the proposed site conditions. There is one study point located at the municipal drainage system where the stormwater flows were analyzed. The study points and contributing watersheds are further outlined in the accompanying text and calculations.

Site Data for Stormwater Modeling

The proposed project will disturb approximately 17,200± sf of land area. This disturbance includes: site grading & drainage installation, paving, and building construction with associated utility connections.

The proposed watershed analysis is comprised of approximately **9,054±** square feet of impervious (an increase of **2,204±** square feet from the pre-development conditions), including the new building, parking lot, and sidewalk. Rainfall data used for modeling the stormwater runoff was derived from the "Extreme Precipitation Tables" from the Northeast Regional Climate Center at Cornell University. The storm events were broken down for the 2, 10, 25, and 50-year storms.

Existing Site Conditions

Stormwater runoff exits the site to one study point location. To exhibit no increase in runoff to these points, stormwater runoff flows were analyzed at the study point, being the City's municipal drainage system. The included Pre-Development Watershed Plan (EWS-1) outlines the boundaries and contributing watershed to the study point.

1. Study Point 1: This study point is located at the existing drainage infrastructure within Silver & Rutland Streets. The stormwater flowing from the project site to the

street is captured within the existing catch basins and routed through the City's municipal drainage network.

Proposed Site Conditions

The stormwater management system has been designed to control runoff using a combination of best management practices. The project proposes to construct a rain garden area that will capture lawn and roof runoff. A Stormtech infiltration system with an isolator row will provide treatment for parking lot runoff prior to infiltration.

1. Study Point 1: This study point is located at the existing drainage infrastructure within Silver & Rutland Streets. The stormwater flowing from the project site to the street is captured within the existing catch basins and routed through the City's municipal drainage network.

A hydrologic study of the site was conducted to determine the impact of the proposed development on the existing stormwater runoff. The study determined the rates and volume of runoff at this study point discussed have decreased. The included Proposed Watershed Plan (PWS-1) outlines the boundaries and contributing watershed for the study point.





SECTION 2.0 - DISCUSSION

Methodology

The peak discharge rates were determined using techniques and data found in the following:

1. Urban Hydrology for Small Watersheds – Technical Release 55 by the United States Department of Agriculture Soils Conservation Service, June 1986. Runoff curve numbers and 24-hour precipitation values were obtained from this reference.
2. HydroCAD© Stormwater Modeling System by HydroCAD Software Solutions, LLC, version 10.20-5a. The HydroCAD program was used to generate the runoff hydrographs for the watershed areas, to determine discharge, stage, and storage characteristics for the rain garden and Stormtech infiltration system, to perform drainage routing and to combine the results of the runoff hydrographs.
3. Soil Survey of Strafford County, New Hampshire by the United States Department of Agriculture, Natural Resources Conservation Services (NRCS). Soil types and boundaries were obtained from this reference.

Peak Discharge Rates

The stormwater runoff analysis of the existing and proposed conditions includes an estimation of the peak discharge rate from various rainfall events. Peak discharge rates were developed using TR-55 Urban Hydrology for Small Watersheds, developed by the United States Department of Commerce, Engineering Division and the HydroCAD 10.20-5a computer program. Further, the analysis has been prepared in accordance with the New Hampshire Stormwater Management Manual and standard engineering practices. The peak discharge rate has been estimated for each watershed during the 2, 10, 25, and 50-year storm events.

The stormwater runoff model shows that the proposed site design results in no increase in the total rate of runoff during all storm events. This is accomplished through the construction of the rain garden and Stormtech infiltration system. The table in *Section 1: Overview* provides a summary of the estimated peak discharge rates for each study point during each of the design storm events. The HydroCAD worksheets for the existing and proposed drainage conditions are included within Sections 3 and 4 of this report.

Performance Standards

Stormwater performance standards have been implemented as part of the overall stormwater management plan for the proposed development. The goal of these standards is to improve water quality and protect the waters of New Hampshire from adverse impacts due to development. The performance standards are met by implementing appropriate Best Management Practices (BMPs). BMPs were designed in accordance with the NH Stormwater Management Manual and Env.Wq. 1500.

BMPs implemented in the design include:

1. Rain garden
2. Stormtech infiltration system

Groundwater Recharge Volume (GRV)

The purpose of the groundwater recharge volume criterion is to protect groundwater resources by minimizing the loss of annual pre-development groundwater recharge as a result of the proposed development.
The required Groundwater Recharge Volume (GRV) should be based on the site soils and the following equation:

GRV = (AI)(Rd)

Where:
AI = the total effective area of impervious surfaces that will exist on the site after development
Rd = the groundwater recharge depth based on the USDA/NRCS hydrologic soil group, as follows:

0.05	ac	Area of HSG A soil that was replaced by impervious cover	0.40"
0.4	inches	Rd = weighted groundwater recharge depth	
0.0186	ac-in	GRV = AI * Rd	
73	cf	GRV conversion (ac-in x 43,560 sf/ac x 1ft/12")	

Recharge required = 73 cf

Provided – 1,289 cubic feet

- Recharge provided = 330 cf within Stormtech infiltration system
- Recharge provided = 959 cf within rain garden

See the stage storage table within the calculation pages in the appendix of this report.

Explanation of Drainage System

References:

1. **New Hampshire Stormwater Management Manual, Volumes 2 & 3, December 2008 and Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas In New Hampshire**
2. **SCS - TR55** *(Second Ed., 1986) - for runoff curve numbers.*

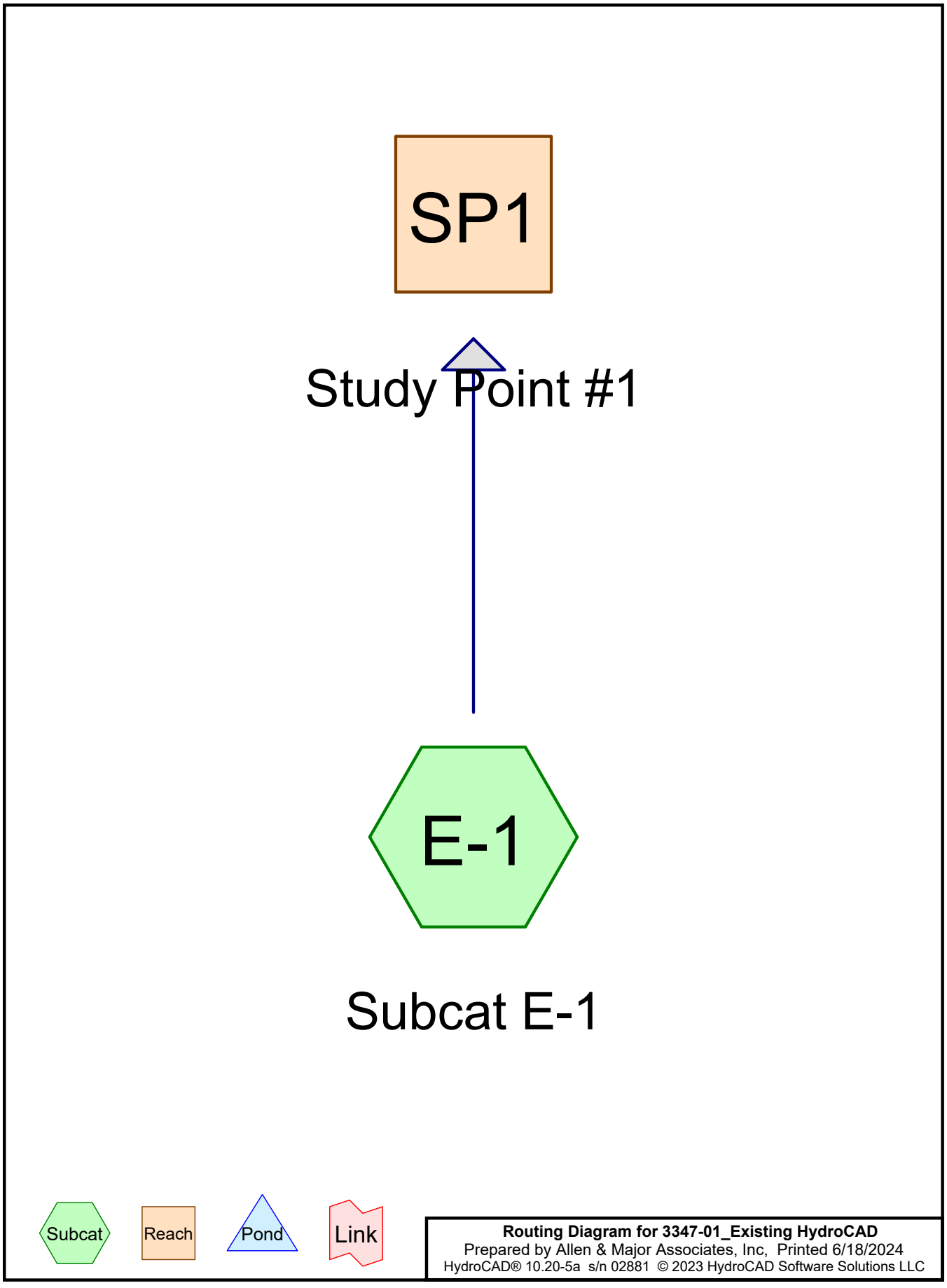
Pavement runoff is collected utilizing deep sump catch basins which route the stormwater to the Stormtech infiltration system. Runoff generated from the building roofs and landscaped areas will be routed to a rain garden and infiltrated.

The 2, 10, 25, & 50-year storm events were analyzed for pre versus post development conditions (see Drainage Summary).

See complete results in the Appendix.

SECTION 3.0 -
EXISTING DRAINAGE ANALYSIS

Existing HydroCAD



Routing Diagram for 3347-01_Existing HydroCAD
Prepared by Allen & Major Associates, Inc, Printed 6/18/2024
HydroCAD® 10.20-5a s/n 02881 © 2023 HydroCAD Software Solutions LLC

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-year	NRCC 24-hr	A	Default	24.00	1	3.15	2
2	10-year	NRCC 24-hr	A	Default	24.00	1	4.75	2
3	25-year	NRCC 24-hr	A	Default	24.00	1	6.01	2
4	50-year	NRCC 24-hr	A	Default	24.00	1	7.18	2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
17,888	39	>75% Grass cover, Good, HSG A (E-1)
3,893	98	Paved parking, HSG A (E-1)
2,957	98	Roofs, HSG A (E-1)
24,739	**55**	**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Sub Num
17,888	0	0	0	0	17,888	>75% Grass cover, Good	
3,893	0	0	0	0	3,893	Paved parking	
2,957	0	0	0	0	2,957	Roofs	
24,739	**0**	**0**	**0**	**0**	**24,739**	**TOTAL AREA**	

Summary for Subcatchment E-1: Subcat E-1

Runoff = 0.07 cfs @ 12.22 hrs, Volume= 487 cf, Depth= 0.24"
Routed to Reach SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 2-year Rainfall=3.15"

Area (sf)	CN	Description
17,888	39	>75% Grass cover, Good, HSG A
3,893	98	Paved parking, HSG A
2,957	98	Roofs, HSG A
24,739	55	Weighted Average
17,888		72.31% Pervious Area
6,850		27.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 min.**

Summary for Reach SP1: Study Point #1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 24,739 sf, 27.69% Impervious, Inflow Depth = 0.24" for 2-year event
Inflow = 0.07 cfs @ 12.22 hrs, Volume= 487 cf
Outflow = 0.07 cfs @ 12.22 hrs, Volume= 487 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Subcatchment E-1: Subcat E-1

Runoff = 0.63 cfs @ 12.15 hrs, Volume= 1,769 cf, Depth= 0.86"
Routed to Reach SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-year Rainfall=4.75"

Area (sf)	CN	Description
17,888	39	>75% Grass cover, Good, HSG A
3,893	98	Paved parking, HSG A
2,957	98	Roofs, HSG A
24,739	55	Weighted Average
17,888		72.31% Pervious Area
6,850		27.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 min.**

Summary for Reach SP1: Study Point #1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 24,739 sf, 27.69% Impervious, Inflow Depth = 0.86" for 10-year event
Inflow = 0.63 cfs @ 12.15 hrs, Volume= 1,769 cf
Outflow = 0.63 cfs @ 12.15 hrs, Volume= 1,769 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Subcatchment E-1: Subcat E-1

Runoff = 1.24 cfs @ 12.14 hrs, Volume= 3,141 cf, Depth= 1.52"
Routed to Reach SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 25-year Rainfall=6.01"

Area (sf)	CN	Description
17,888	39	>75% Grass cover, Good, HSG A
3,893	98	Paved parking, HSG A
2,957	98	Roofs, HSG A
24,739	55	Weighted Average
17,888		72.31% Pervious Area
6,850		27.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 min.**

Summary for Reach SP1: Study Point #1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 24,739 sf, 27.69% Impervious, Inflow Depth = 1.52" for 25-year event
Inflow = 1.24 cfs @ 12.14 hrs, Volume= 3,141 cf
Outflow = 1.24 cfs @ 12.14 hrs, Volume= 3,141 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Subcatchment E-1: Subcat E-1

Runoff = 1.89 cfs @ 12.14 hrs, Volume= 4,616 cf, Depth= 2.24"
Routed to Reach SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 50-year Rainfall=7.18"

Area (sf)	CN	Description
17,888	39	>75% Grass cover, Good, HSG A
3,893	98	Paved parking, HSG A
2,957	98	Roofs, HSG A
24,739	55	Weighted Average
17,888		72.31% Pervious Area
6,850		27.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 min.**

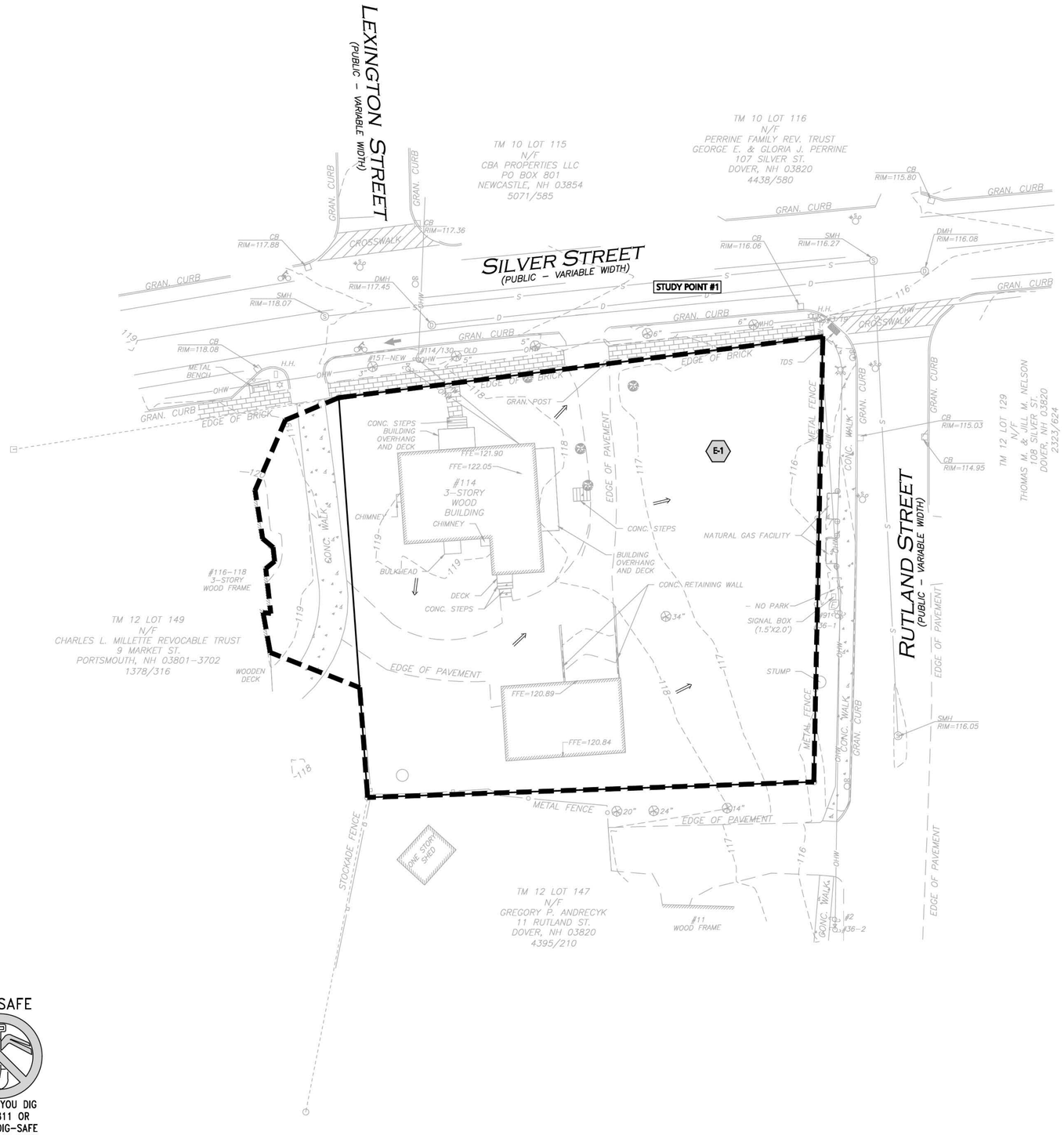
Summary for Reach SP1: Study Point #1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 24,739 sf, 27.69% Impervious, Inflow Depth = 2.24" for 50-year event
Inflow = 1.89 cfs @ 12.14 hrs, Volume= 4,616 cf
Outflow = 1.89 cfs @ 12.14 hrs, Volume= 4,616 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Existing Watershed Plan



LEGEND

SUBCATCHMENT LABEL	E-1
SUBCATCHMENT BOUNDARY	
FLOW DIRECTION	

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT\OWNER:

114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:

114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	06/20/24
SCALE:	1" = 20'	DWG. NAME:	C3347-01
DESIGNED BY:	JRG	CHECKED BY:	MAM

PREPARED BY:

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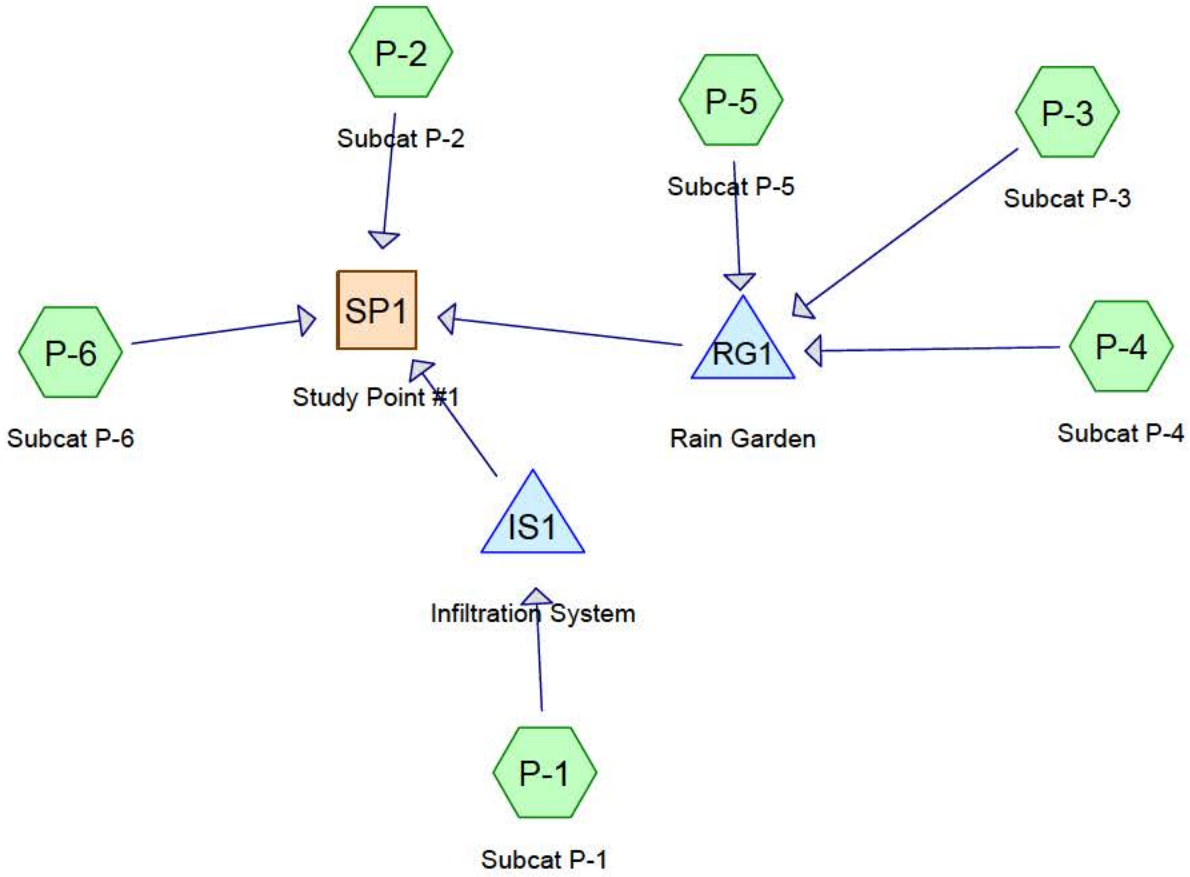
EWS-1

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SECTION 4.0 -
PROPOSED DRAINAGE ANALYSIS

Proposed HydroCAD



Subcat Reach Pond Link

Routing Diagram for 3347-01_Proposed HydroCAD
Prepared by Allen & Major Associates, Inc, Printed 8/7/2024
HydroCAD® 10.20-5a s/n 02881 © 2023 HydroCAD Software Solutions LLC

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-year	NRCC 24-hr	A	Default	24.00	1	3.15	2
2	10-year	NRCC 24-hr	A	Default	24.00	1	4.75	2
3	25-year	NRCC 24-hr	A	Default	24.00	1	6.01	2
4	50-year	NRCC 24-hr	A	Default	24.00	1	7.18	2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
15,685	39	>75% Grass cover, Good, HSG A (P-1, P-2, P-4, P-6)
5,962	98	Paved parking, HSG A (P-1, P-2, P-6)
3,092	98	Roofs, HSG A (P-3, P-5)
24,739	**61**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
24,739	HSG A	P-1, P-2, P-3, P-4, P-5, P-6
0	HSG B	
0	HSG C	
0	HSG D	
0	Other	
24,739		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Sub Num
15,685	0	0	0	0	15,685	>75% Grass cover, Good	
5,962	0	0	0	0	5,962	Paved parking	
3,092	0	0	0	0	3,092	Roofs	
24,739	**0**	**0**	**0**	**0**	**24,739**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	IS1	112.70	111.91	79.0	0.0100	0.013	0.0	12.0	0.0	
2	RG1	112.83	112.74	3.0	0.0300	0.013	0.0	8.0	0.0	

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment P-1: Subcat P-1 Runoff Area=12,277 sf 46.59% Impervious Runoff Depth=0.62"
Tc=6.0 min CN=66 Runoff=0.23 cfs 632 cf

Subcatchment P-2: Subcat P-2 Runoff Area=1,610 sf 10.07% Impervious Runoff Depth=0.04"
Tc=6.0 min CN=45 Runoff=0.00 cfs 5 cf

Subcatchment P-3: Subcat P-3 Runoff Area=1,152 sf 100.00% Impervious Runoff Depth=2.92"
Tc=6.0 min CN=98 Runoff=0.10 cfs 280 cf

Subcatchment P-4: Subcat P-4 Runoff Area=4,181 sf 0.00% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=39 Runoff=0.00 cfs 0 cf

Subcatchment P-5: Subcat P-5 Runoff Area=1,940 sf 100.00% Impervious Runoff Depth=2.92"
Tc=6.0 min CN=98 Runoff=0.17 cfs 472 cf

Subcatchment P-6: Subcat P-6 Runoff Area=3,579 sf 2.23% Impervious Runoff Depth=0.00"
Tc=6.0 min CN=40 Runoff=0.00 cfs 0 cf

Reach SP1: Study Point #1 Inflow=0.00 cfs 6 cf
Outflow=0.00 cfs 6 cf

Pond IS1: Infiltration System Peak Elev=113.35' Storage=188 cf Inflow=0.23 cfs 632 cf
Discarded=0.04 cfs 632 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 632 cf

Pond RG1: Rain Garden Peak Elev=114.54' Storage=250 cf Inflow=0.27 cfs 752 cf
Discarded=0.04 cfs 752 cf Primary=0.00 cfs 0 cf Outflow=0.04 cfs 752 cf

Total Runoff Area = 24,739 sf Runoff Volume = 1,390 cf Average Runoff Depth = 0.67"
63.40% Pervious = 15,685 sf 36.60% Impervious = 9,054 sf

Summary for Subcatchment P-1: Subcat P-1

Runoff = 0.23 cfs @ 12.15 hrs, Volume= 632 cf, Depth= 0.62"
Routed to Pond IS1 : Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 2-year Rainfall=3.15"

Area (sf)	CN	Description
6,557	39	>75% Grass cover, Good, HSG A
5,720	98	Paved parking, HSG A
12,277	66	Weighted Average
6,557		53.41% Pervious Area
5,720		46.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-2: Subcat P-2

Runoff = 0.00 cfs @ 14.45 hrs, Volume= 5 cf, Depth= 0.04"
Routed to Reach SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 2-year Rainfall=3.15"

Area (sf)	CN	Description
1,448	39	>75% Grass cover, Good, HSG A
162	98	Paved parking, HSG A
1,610	45	Weighted Average
1,448		89.93% Pervious Area
162		10.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-3: Subcat P-3

Runoff = 0.10 cfs @ 12.13 hrs, Volume= 280 cf, Depth= 2.92"
Routed to Pond RG1 : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 2-year Rainfall=3.15"

Area (sf)	CN	Description
1,152	98	Roofs, HSG A
1,152		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-4: Subcat P-4

Runoff = 0.00 cfs @ 24.01 hrs, Volume= 0 cf, Depth= 0.00"
Routed to Pond RG1 : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 2-year Rainfall=3.15"

Area (sf)	CN	Description
4,181	39	>75% Grass cover, Good, HSG A
4,181		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-5: Subcat P-5

Runoff = 0.17 cfs @ 12.13 hrs, Volume= 472 cf, Depth= 2.92"
Routed to Pond RG1 : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 2-year Rainfall=3.15"

Area (sf)	CN	Description
1,940	98	Roofs, HSG A
1,940		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-6: Subcat P-6

Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0 cf, Depth= 0.00"
Routed to Reach SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 2-year Rainfall=3.15"

Area (sf)	CN	Description
3,499	39	>75% Grass cover, Good, HSG A
80	98	Paved parking, HSG A
3,579	40	Weighted Average
3,499		97.77% Pervious Area
80		2.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Reach SP1: Study Point #1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 24,739 sf, 36.60% Impervious, Inflow Depth = 0.00" for 2-year event
Inflow = 0.00 cfs @ 14.45 hrs, Volume= 6 cf
Outflow = 0.00 cfs @ 14.45 hrs, Volume= 6 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Pond IS1: Infiltration System

Ksat value derived from "Ksat Values for New Hampshire Soils", SSSNNE Special Publication No. 5, September, 2009. The Ksat value for Windsor soil is 6 inches per hour. A 2x safety factor was applied and an exfiltration rate of 3 inches per hour was used.

Inflow Area = 12,277 sf, 46.59% Impervious, Inflow Depth = 0.62" for 2-year event
Inflow = 0.23 cfs @ 12.15 hrs, Volume= 632 cf
Outflow = 0.04 cfs @ 12.92 hrs, Volume= 632 cf, Atten= 85%, Lag= 46.4 min
Discarded = 0.04 cfs @ 12.92 hrs, Volume= 632 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach SP1 : Study Point #1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 113.35' @ 12.92 hrs Surf.Area= 373 sf Storage= 188 cf
Flood Elev= 114.40' Surf.Area= 373 sf Storage= 372 cf

Plug-Flow detention time= 43.4 min calculated for 632 cf (100% of inflow)
Center-of-Mass det. time= 43.4 min (916.6 - 873.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	112.40'	249 cf	**8.25'W x 45.19'L x 2.00'H Field A** 746 cf Overall - 123 cf Embedded = 623 cf x 40.0% Voids
#2A	112.90'	123 cf	**ADS_StormTech SC-160LP +Cap** x 18 Inside #1 Effective Size= 18.0"W x 12.0"H => 0.96 sf x 7.12'L = 6.8 cf Overall Size= 25.0"W x 12.0"H x 7.56'L with 0.44' Overlap 18 Chambers in 3 Rows
		372 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	112.40'	**3.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 110.00' Phase-In= 0.01'
#2	Primary	112.70'	**12.0" Round Culvert** L= 79.0' Ke= 0.500 Inlet / Outlet Invert= 112.70' / 111.91' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	114.12'	**12.0" Horiz. outlet control orifice** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.04 cfs @ 12.92 hrs HW=113.35' (Free Discharge)
└**1=Exfiltration** (Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=112.40' (Free Discharge)
└**2=Culvert** (Controls 0.00 cfs)
└**3=outlet control orifice** (Controls 0.00 cfs)

Summary for Pond RG1: Rain Garden

Ksat value derived from "Ksat Values for New Hampshire Soils", SSSNNE Special Publication No. 5, September, 2009. The Ksat value for Windsor soil is 6 inches per hour. A 2x safety factor was applied and an exfiltration rate of 3 inches per hour was used.

Inflow Area = 7,273 sf, 42.52% Impervious, Inflow Depth = 1.24" for 2-year event
Inflow = 0.27 cfs @ 12.13 hrs, Volume= 752 cf
Outflow = 0.04 cfs @ 12.57 hrs, Volume= 752 cf, Atten= 84%, Lag= 26.4 min
Discarded = 0.04 cfs @ 12.57 hrs, Volume= 752 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach SP1 : Study Point #1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 114.54' @ 12.57 hrs Surf.Area= 557 sf Storage= 250 cf
Flood Elev= 116.00' Surf.Area= 1,166 sf Storage= 1,486 cf

Plug-Flow detention time= 43.0 min calculated for 751 cf (100% of inflow)
Center-of-Mass det. time= 43.0 min (798.5 - 755.5)

Volume	Invert	Avail.Storage	Storage Description
#1	114.00'	1,486 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
114.00	374	0	0
115.00	716	545	545
116.00	1,166	941	1,486

Device	Routing	Invert	Outlet Devices
#1	Primary	115.99'	**3.0' long x 3.0' 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 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

#2	Discarded	114.00'	**3.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 110.00' Phase-In= 0.01'
#3	Device 4	115.50'	**15.0" Horiz. beehive** C= 0.600 Limited to weir flow at low heads
#4	Primary	112.83'	**8.0" Round Culvert** L= 3.0' Ke= 0.500 Inlet / Outlet Invert= 112.83' / 112.74' S= 0.0300 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Discarded OutFlow Max=0.04 cfs @ 12.57 hrs HW=114.54' (Free Discharge)
└**2=Exfiltration** (Controls 0.04 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=114.00' (Free Discharge)
├**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
└**4=Culvert** (Passes 0.00 cfs of 1.54 cfs potential flow)
└**3=beehive** (Controls 0.00 cfs)

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment P-1: Subcat P-1 Runoff Area=12,277 sf 46.59% Impervious Runoff Depth=1.56"
Tc=6.0 min CN=66 Runoff=0.66 cfs 1,596 cf

Subcatchment P-2: Subcat P-2 Runoff Area=1,610 sf 10.07% Impervious Runoff Depth=0.37"
Tc=6.0 min CN=45 Runoff=0.01 cfs 49 cf

Subcatchment P-3: Subcat P-3 Runoff Area=1,152 sf 100.00% Impervious Runoff Depth=4.51"
Tc=6.0 min CN=98 Runoff=0.15 cfs 433 cf

Subcatchment P-4: Subcat P-4 Runoff Area=4,181 sf 0.00% Impervious Runoff Depth=0.15"
Tc=6.0 min CN=39 Runoff=0.00 cfs 53 cf

Subcatchment P-5: Subcat P-5 Runoff Area=1,940 sf 100.00% Impervious Runoff Depth=4.51"
Tc=6.0 min CN=98 Runoff=0.26 cfs 730 cf

Subcatchment P-6: Subcat P-6 Runoff Area=3,579 sf 2.23% Impervious Runoff Depth=0.18"
Tc=6.0 min CN=40 Runoff=0.00 cfs 55 cf

Reach SP1: Study Point #1 Inflow=0.63 cfs 525 cf
Outflow=0.63 cfs 525 cf

Pond IS1: Infiltration System Peak Elev=114.28' Storage=355 cf Inflow=0.66 cfs 1,596 cf
Discarded=0.05 cfs 1,175 cf Primary=0.62 cfs 421 cf Outflow=0.67 cfs 1,596 cf

Pond RG1: Rain Garden Peak Elev=114.85' Storage=440 cf Inflow=0.41 cfs 1,216 cf
Discarded=0.05 cfs 1,216 cf Primary=0.00 cfs 0 cf Outflow=0.05 cfs 1,216 cf

Total Runoff Area = 24,739 sf Runoff Volume = 2,915 cf Average Runoff Depth = 1.41"
63.40% Pervious = 15,685 sf 36.60% Impervious = 9,054 sf

Summary for Subcatchment P-1: Subcat P-1

Runoff = 0.66 cfs @ 12.14 hrs, Volume= 1,596 cf, Depth= 1.56"
Routed to Pond IS1 : Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-year Rainfall=4.75"

Area (sf)	CN	Description
6,557	39	>75% Grass cover, Good, HSG A
5,720	98	Paved parking, HSG A
12,277	66	Weighted Average
6,557		53.41% Pervious Area
5,720		46.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-2: Subcat P-2

Runoff = 0.01 cfs @ 12.21 hrs, Volume= 49 cf, Depth= 0.37"
Routed to Reach SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-year Rainfall=4.75"

Area (sf)	CN	Description
1,448	39	>75% Grass cover, Good, HSG A
162	98	Paved parking, HSG A
1,610	45	Weighted Average
1,448		89.93% Pervious Area
162		10.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-3: Subcat P-3

Runoff = 0.15 cfs @ 12.13 hrs, Volume= 433 cf, Depth= 4.51"
Routed to Pond RG1 : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-year Rainfall=4.75"

Area (sf)	CN	Description
1,152	98	Roofs, HSG A
1,152		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-4: Subcat P-4

Runoff = 0.00 cfs @ 12.55 hrs, Volume= 53 cf, Depth= 0.15"
Routed to Pond RG1 : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-year Rainfall=4.75"

Area (sf)	CN	Description
4,181	39	>75% Grass cover, Good, HSG A
4,181		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-5: Subcat P-5

Runoff = 0.26 cfs @ 12.13 hrs, Volume= 730 cf, Depth= 4.51"
Routed to Pond RG1 : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-year Rainfall=4.75"

Area (sf)	CN	Description
1,940	98	Roofs, HSG A
1,940		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-6: Subcat P-6

Runoff = 0.00 cfs @ 12.54 hrs, Volume= 55 cf, Depth= 0.18"
Routed to Reach SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-year Rainfall=4.75"

Area (sf)	CN	Description
3,499	39	>75% Grass cover, Good, HSG A
80	98	Paved parking, HSG A
3,579	40	Weighted Average
3,499		97.77% Pervious Area
80		2.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Reach SP1: Study Point #1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 24,739 sf, 36.60% Impervious, Inflow Depth = 0.25" for 10-year event
Inflow = 0.63 cfs @ 12.21 hrs, Volume= 525 cf
Outflow = 0.63 cfs @ 12.21 hrs, Volume= 525 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Pond IS1: Infiltration System

Ksat value derived from "Ksat Values for New Hampshire Soils", SSSNNE Special Publication No. 5, September, 2009. The Ksat value for Windsor soil is 6 inches per hour. A 2x safety factor was applied and an exfiltration rate of 3 inches per hour was used.

[88] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 12,277 sf, 46.59% Impervious, Inflow Depth = 1.56" for 10-year event
Inflow = 0.66 cfs @ 12.14 hrs, Volume= 1,596 cf
Outflow = 0.67 cfs @ 12.21 hrs, Volume= 1,596 cf, Atten= 0%, Lag= 4.0 min
Discarded = 0.05 cfs @ 12.21 hrs, Volume= 1,175 cf
Primary = 0.62 cfs @ 12.21 hrs, Volume= 421 cf
Routed to Reach SP1 : Study Point #1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 114.28' @ 12.21 hrs Surf.Area= 373 sf Storage= 355 cf
Flood Elev= 114.40' Surf.Area= 373 sf Storage= 372 cf

Plug-Flow detention time= 56.4 min calculated for 1,595 cf (100% of inflow)
Center-of-Mass det. time= 56.3 min (901.8 - 845.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	112.40'	249 cf	**8.25'W x 45.19'L x 2.00'H Field A** 746 cf Overall - 123 cf Embedded = 623 cf x 40.0% Voids
#2A	112.90'	123 cf	**ADS_StormTech SC-160LP +Cap** x 18 Inside #1 Effective Size= 18.0"W x 12.0"H => 0.96 sf x 7.12'L = 6.8 cf Overall Size= 25.0"W x 12.0"H x 7.56'L with 0.44' Overlap 18 Chambers in 3 Rows
		372 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	112.40'	**3.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 110.00' Phase-In= 0.01'
#2	Primary	112.70'	**12.0" Round Culvert** L= 79.0' Ke= 0.500 Inlet / Outlet Invert= 112.70' / 111.91' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	114.12'	**12.0" Horiz. outlet control orifice** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.05 cfs @ 12.21 hrs HW=114.25' (Free Discharge)
└**1=Exfiltration** (Controls 0.05 cfs)

Primary OutFlow Max=0.57 cfs @ 12.21 hrs HW=114.27' (Free Discharge)
└**2=Culvert** (Passes 0.57 cfs of 3.68 cfs potential flow)
└**3=outlet control orifice** (Weir Controls 0.57 cfs @ 1.25 fps)

Summary for Pond RG1: Rain Garden

Ksat value derived from "Ksat Values for New Hampshire Soils", SSSNNE Special Publication No. 5, September, 2009. The Ksat value for Windsor soil is 6 inches per hour. A 2x safety factor was applied and an exfiltration rate of 3 inches per hour was used.

Inflow Area = 7,273 sf, 42.52% Impervious, Inflow Depth = 2.01" for 10-year event
Inflow = 0.41 cfs @ 12.13 hrs, Volume= 1,216 cf
Outflow = 0.05 cfs @ 12.65 hrs, Volume= 1,216 cf, Atten= 87%, Lag= 31.2 min
Discarded = 0.05 cfs @ 12.65 hrs, Volume= 1,216 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach SP1 : Study Point #1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 114.85' @ 12.65 hrs Surf.Area= 664 sf Storage= 440 cf
Flood Elev= 116.00' Surf.Area= 1,166 sf Storage= 1,486 cf

Plug-Flow detention time= 66.4 min calculated for 1,215 cf (100% of inflow)
Center-of-Mass det. time= 66.4 min (825.7 - 759.3)

Volume	Invert	Avail.Storage	Storage Description
#1	114.00'	1,486 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
114.00	374	0	0
115.00	716	545	545
116.00	1,166	941	1,486

Device	Routing	Invert	Outlet Devices
#1	Primary	115.99'	**3.0' long x 3.0' 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 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#2	Discarded	114.00'	**3.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 110.00' Phase-In= 0.01'
#3	Device 4	115.50'	**15.0" Horiz. beehive** C= 0.600 Limited to weir flow at low heads
#4	Primary	112.83'	**8.0" Round Culvert** L= 3.0' Ke= 0.500 Inlet / Outlet Invert= 112.83' / 112.74' S= 0.0300 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Discarded OutFlow Max=0.05 cfs @ 12.65 hrs HW=114.85' (Free Discharge)
└**2=Exfiltration** (Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=114.00' (Free Discharge)
├**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
└**4=Culvert** (Passes 0.00 cfs of 1.54 cfs potential flow)
└**3=beehive** (Controls 0.00 cfs)

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment P-1: Subcat P-1 Runoff Area=12,277 sf 46.59% Impervious Runoff Depth=2.45"
Tc=6.0 min CN=66 Runoff=1.05 cfs 2,504 cf

Subcatchment P-2: Subcat P-2 Runoff Area=1,610 sf 10.07% Impervious Runoff Depth=0.81"
Tc=6.0 min CN=45 Runoff=0.03 cfs 108 cf

Subcatchment P-3: Subcat P-3 Runoff Area=1,152 sf 100.00% Impervious Runoff Depth=5.77"
Tc=6.0 min CN=98 Runoff=0.19 cfs 554 cf

Subcatchment P-4: Subcat P-4 Runoff Area=4,181 sf 0.00% Impervious Runoff Depth=0.45"
Tc=6.0 min CN=39 Runoff=0.02 cfs 156 cf

Subcatchment P-5: Subcat P-5 Runoff Area=1,940 sf 100.00% Impervious Runoff Depth=5.77"
Tc=6.0 min CN=98 Runoff=0.33 cfs 933 cf

Subcatchment P-6: Subcat P-6 Runoff Area=3,579 sf 2.23% Impervious Runoff Depth=0.50"
Tc=6.0 min CN=40 Runoff=0.03 cfs 150 cf

Reach SP1: Study Point #1 Inflow=1.07 cfs 1,317 cf
Outflow=1.07 cfs 1,317 cf

Pond IS1: Infiltration System Peak Elev=114.33' Storage=362 cf Inflow=1.05 cfs 2,504 cf
Discarded=0.05 cfs 1,445 cf Primary=1.01 cfs 1,059 cf Outflow=1.06 cfs 2,504 cf

Pond RG1: Rain Garden Peak Elev=115.11' Storage=628 cf Inflow=0.54 cfs 1,643 cf
Discarded=0.06 cfs 1,643 cf Primary=0.00 cfs 0 cf Outflow=0.06 cfs 1,643 cf

Total Runoff Area = 24,739 sf Runoff Volume = 4,406 cf Average Runoff Depth = 2.14"
63.40% Pervious = 15,685 sf 36.60% Impervious = 9,054 sf

Summary for Subcatchment P-1: Subcat P-1

Runoff = 1.05 cfs @ 12.14 hrs, Volume= 2,504 cf, Depth= 2.45"
Routed to Pond IS1 : Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 25-year Rainfall=6.01"

Area (sf)	CN	Description
6,557	39	>75% Grass cover, Good, HSG A
5,720	98	Paved parking, HSG A
12,277	66	Weighted Average
6,557		53.41% Pervious Area
5,720		46.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-2: Subcat P-2

Runoff = 0.03 cfs @ 12.16 hrs, Volume= 108 cf, Depth= 0.81"
Routed to Reach SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 25-year Rainfall=6.01"

Area (sf)	CN	Description
1,448	39	>75% Grass cover, Good, HSG A
162	98	Paved parking, HSG A
1,610	45	Weighted Average
1,448		89.93% Pervious Area
162		10.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-3: Subcat P-3

Runoff = 0.19 cfs @ 12.13 hrs, Volume= 554 cf, Depth= 5.77"
Routed to Pond RG1 : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 25-year Rainfall=6.01"

Area (sf)	CN	Description
1,152	98	Roofs, HSG A
1,152		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-4: Subcat P-4

Runoff = 0.02 cfs @ 12.22 hrs, Volume= 156 cf, Depth= 0.45"
Routed to Pond RG1 : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 25-year Rainfall=6.01"

Area (sf)	CN	Description
4,181	39	>75% Grass cover, Good, HSG A
4,181		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-5: Subcat P-5

Runoff = 0.33 cfs @ 12.13 hrs, Volume= 933 cf, Depth= 5.77"
Routed to Pond RG1 : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 25-year Rainfall=6.01"

Area (sf)	CN	Description
1,940	98	Roofs, HSG A
1,940		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-6: Subcat P-6

Runoff = 0.03 cfs @ 12.19 hrs, Volume= 150 cf, Depth= 0.50"
Routed to Reach SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 25-year Rainfall=6.01"

Area (sf)	CN	Description
3,499	39	>75% Grass cover, Good, HSG A
80	98	Paved parking, HSG A
3,579	40	Weighted Average
3,499		97.77% Pervious Area
80		2.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Reach SP1: Study Point #1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 24,739 sf, 36.60% Impervious, Inflow Depth = 0.64" for 25-year event
Inflow = 1.07 cfs @ 12.15 hrs, Volume= 1,317 cf
Outflow = 1.07 cfs @ 12.15 hrs, Volume= 1,317 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Pond IS1: Infiltration System

Ksat value derived from "Ksat Values for New Hampshire Soils", SSSNNE Special Publication No. 5, September, 2009. The Ksat value for Windsor soil is 6 inches per hour. A 2x safety factor was applied and an exfiltration rate of 3 inches per hour was used.

[88] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 12,277 sf, 46.59% Impervious, Inflow Depth = 2.45" for 25-year event
Inflow = 1.05 cfs @ 12.14 hrs, Volume= 2,504 cf
Outflow = 1.06 cfs @ 12.14 hrs, Volume= 2,504 cf, Atten= 0%, Lag= 0.5 min
Discarded = 0.05 cfs @ 12.14 hrs, Volume= 1,445 cf
Primary = 1.01 cfs @ 12.14 hrs, Volume= 1,059 cf
Routed to Reach SP1 : Study Point #1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 114.33' @ 12.14 hrs Surf.Area= 373 sf Storage= 362 cf
Flood Elev= 114.40' Surf.Area= 373 sf Storage= 372 cf

Plug-Flow detention time= 47.0 min calculated for 2,502 cf (100% of inflow)
Center-of-Mass det. time= 47.0 min (880.7 - 833.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	112.40'	249 cf	**8.25'W x 45.19'L x 2.00'H Field A** 746 cf Overall - 123 cf Embedded = 623 cf x 40.0% Voids
#2A	112.90'	123 cf	**ADS_StormTech SC-160LP +Cap** x 18 Inside #1 Effective Size= 18.0"W x 12.0"H => 0.96 sf x 7.12'L = 6.8 cf Overall Size= 25.0"W x 12.0"H x 7.56'L with 0.44' Overlap 18 Chambers in 3 Rows
		372 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	112.40'	**3.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 110.00' Phase-In= 0.01'
#2	Primary	112.70'	**12.0" Round Culvert** L= 79.0' Ke= 0.500 Inlet / Outlet Invert= 112.70' / 111.91' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	114.12'	**12.0" Horiz. outlet control orifice** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.05 cfs @ 12.14 hrs HW=114.33' (Free Discharge)
└**1=Exfiltration** (Controls 0.05 cfs)

Primary OutFlow Max=0.99 cfs @ 12.14 hrs HW=114.33' (Free Discharge)
└**2=Culvert** (Passes 0.99 cfs of 3.76 cfs potential flow)
└**3=outlet control orifice** (Weir Controls 0.99 cfs @ 1.50 fps)

Summary for Pond RG1: Rain Garden

Ksat value derived from "Ksat Values for New Hampshire Soils", SSSNNE Special Publication No. 5, September, 2009. The Ksat value for Windsor soil is 6 inches per hour. A 2x safety factor was applied and an exfiltration rate of 3 inches per hour was used.

Inflow Area = 7,273 sf, 42.52% Impervious, Inflow Depth = 2.71" for 25-year event
Inflow = 0.54 cfs @ 12.13 hrs, Volume= 1,643 cf
Outflow = 0.06 cfs @ 12.79 hrs, Volume= 1,643 cf, Atten= 88%, Lag= 39.4 min
Discarded = 0.06 cfs @ 12.79 hrs, Volume= 1,643 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach SP1 : Study Point #1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 115.11' @ 12.79 hrs Surf.Area= 766 sf Storage= 628 cf
Flood Elev= 116.00' Surf.Area= 1,166 sf Storage= 1,486 cf

Plug-Flow detention time= 86.5 min calculated for 1,643 cf (100% of inflow)
Center-of-Mass det. time= 86.5 min (849.2 - 762.7)

Volume	Invert	Avail.Storage	Storage Description
#1	114.00'	1,486 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
114.00	374	0	0
115.00	716	545	545
116.00	1,166	941	1,486

Device	Routing	Invert	Outlet Devices
#1	Primary	115.99'	**3.0' long x 3.0' 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 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#2	Discarded	114.00'	**3.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 110.00' Phase-In= 0.01'
#3	Device 4	115.50'	**15.0" Horiz. beehive** C= 0.600 Limited to weir flow at low heads
#4	Primary	112.83'	**8.0" Round Culvert** L= 3.0' Ke= 0.500 Inlet / Outlet Invert= 112.83' / 112.74' S= 0.0300 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Discarded OutFlow Max=0.06 cfs @ 12.79 hrs HW=115.11' (Free Discharge)
└**2=Exfiltration** (Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=114.00' (Free Discharge)
├**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
└**4=Culvert** (Passes 0.00 cfs of 1.54 cfs potential flow)
└**3=beehive** (Controls 0.00 cfs)

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment P-1: Subcat P-1 Runoff Area=12,277 sf 46.59% Impervious Runoff Depth=3.35"
Tc=6.0 min CN=66 Runoff=1.43 cfs 3,424 cf

Subcatchment P-2: Subcat P-2 Runoff Area=1,610 sf 10.07% Impervious Runoff Depth=1.32"
Tc=6.0 min CN=45 Runoff=0.06 cfs 177 cf

Subcatchment P-3: Subcat P-3 Runoff Area=1,152 sf 100.00% Impervious Runoff Depth=6.94"
Tc=6.0 min CN=98 Runoff=0.23 cfs 666 cf

Subcatchment P-4: Subcat P-4 Runoff Area=4,181 sf 0.00% Impervious Runoff Depth=0.83"
Tc=6.0 min CN=39 Runoff=0.08 cfs 290 cf

Subcatchment P-5: Subcat P-5 Runoff Area=1,940 sf 100.00% Impervious Runoff Depth=6.94"
Tc=6.0 min CN=98 Runoff=0.39 cfs 1,122 cf

Subcatchment P-6: Subcat P-6 Runoff Area=3,579 sf 2.23% Impervious Runoff Depth=0.91"
Tc=6.0 min CN=40 Runoff=0.08 cfs 272 cf

Reach SP1: Study Point #1 Inflow=1.59 cfs 2,208 cf
Outflow=1.59 cfs 2,208 cf

Pond IS1: Infiltration System Peak Elev=114.39' Storage=371 cf Inflow=1.43 cfs 3,424 cf
Discarded=0.05 cfs 1,665 cf Primary=1.45 cfs 1,759 cf Outflow=1.50 cfs 3,424 cf

Pond RG1: Rain Garden Peak Elev=115.36' Storage=834 cf Inflow=0.69 cfs 2,079 cf
Discarded=0.07 cfs 2,079 cf Primary=0.00 cfs 0 cf Outflow=0.07 cfs 2,079 cf

Total Runoff Area = 24,739 sf Runoff Volume = 5,952 cf Average Runoff Depth = 2.89"
63.40% Pervious = 15,685 sf 36.60% Impervious = 9,054 sf

Summary for Subcatchment P-1: Subcat P-1

Runoff = 1.43 cfs @ 12.13 hrs, Volume= 3,424 cf, Depth= 3.35"
Routed to Pond IS1 : Infiltration System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 50-year Rainfall=7.18"

Area (sf)	CN	Description
6,557	39	>75% Grass cover, Good, HSG A
5,720	98	Paved parking, HSG A
12,277	66	Weighted Average
6,557		53.41% Pervious Area
5,720		46.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-2: Subcat P-2

Runoff = 0.06 cfs @ 12.15 hrs, Volume= 177 cf, Depth= 1.32"
Routed to Reach SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 50-year Rainfall=7.18"

Area (sf)	CN	Description
1,448	39	>75% Grass cover, Good, HSG A
162	98	Paved parking, HSG A
1,610	45	Weighted Average
1,448		89.93% Pervious Area
162		10.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-3: Subcat P-3

Runoff = 0.23 cfs @ 12.13 hrs, Volume= 666 cf, Depth= 6.94"
Routed to Pond RG1 : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 50-year Rainfall=7.18"

Area (sf)	CN	Description
1,152	98	Roofs, HSG A
1,152		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-4: Subcat P-4

Runoff = 0.08 cfs @ 12.16 hrs, Volume= 290 cf, Depth= 0.83"
Routed to Pond RG1 : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 50-year Rainfall=7.18"

Area (sf)	CN	Description
4,181	39	>75% Grass cover, Good, HSG A
4,181		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-5: Subcat P-5

Runoff = 0.39 cfs @ 12.13 hrs, Volume= 1,122 cf, Depth= 6.94"
Routed to Pond RG1 : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 50-year Rainfall=7.18"

Area (sf)	CN	Description
1,940	98	Roofs, HSG A
1,940		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Subcatchment P-6: Subcat P-6

Runoff = 0.08 cfs @ 12.16 hrs, Volume= 272 cf, Depth= 0.91"
Routed to Reach SP1 : Study Point #1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 50-year Rainfall=7.18"

Area (sf)	CN	Description
3,499	39	>75% Grass cover, Good, HSG A
80	98	Paved parking, HSG A
3,579	40	Weighted Average
3,499		97.77% Pervious Area
80		2.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR 55 min.**

Summary for Reach SP1: Study Point #1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 24,739 sf, 36.60% Impervious, Inflow Depth = 1.07" for 50-year event
Inflow = 1.59 cfs @ 12.15 hrs, Volume= 2,208 cf
Outflow = 1.59 cfs @ 12.15 hrs, Volume= 2,208 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Pond IS1: Infiltration System

Ksat value derived from "Ksat Values for New Hampshire Soils", SSSNNE Special Publication No. 5, September, 2009. The Ksat value for Windsor soil is 6 inches per hour. A 2x safety factor was applied and an exfiltration rate of 3 inches per hour was used.

[88] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 12,277 sf, 46.59% Impervious, Inflow Depth = 3.35" for 50-year event
Inflow = 1.43 cfs @ 12.13 hrs, Volume= 3,424 cf
Outflow = 1.50 cfs @ 12.15 hrs, Volume= 3,424 cf, Atten= 0%, Lag= 0.7 min
Discarded = 0.05 cfs @ 12.15 hrs, Volume= 1,665 cf
Primary = 1.45 cfs @ 12.15 hrs, Volume= 1,759 cf
Routed to Reach SP1 : Study Point #1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 114.39' @ 12.15 hrs Surf.Area= 373 sf Storage= 371 cf
Flood Elev= 114.40' Surf.Area= 373 sf Storage= 372 cf

Plug-Flow detention time= 41.9 min calculated for 3,421 cf (100% of inflow)
Center-of-Mass det. time= 41.9 min (867.8 - 825.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	112.40'	249 cf	**8.25'W x 45.19'L x 2.00'H Field A** 746 cf Overall - 123 cf Embedded = 623 cf x 40.0% Voids
#2A	112.90'	123 cf	**ADS_StormTech SC-160LP +Cap** x 18 Inside #1 Effective Size= 18.0"W x 12.0"H => 0.96 sf x 7.12'L = 6.8 cf Overall Size= 25.0"W x 12.0"H x 7.56'L with 0.44' Overlap 18 Chambers in 3 Rows
		372 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	112.40'	**3.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 110.00' Phase-In= 0.01'
#2	Primary	112.70'	**12.0" Round Culvert** L= 79.0' Ke= 0.500 Inlet / Outlet Invert= 112.70' / 111.91' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Device 2	114.12'	**12.0" Horiz. outlet control orifice** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.05 cfs @ 12.15 hrs HW=114.39' (Free Discharge)
└**1=Exfiltration** (Controls 0.05 cfs)

Primary OutFlow Max=1.41 cfs @ 12.15 hrs HW=114.39' (Free Discharge)
└**2=Culvert** (Passes 1.41 cfs of 3.84 cfs potential flow)
└**3=outlet control orifice** (Weir Controls 1.41 cfs @ 1.69 fps)

Summary for Pond RG1: Rain Garden

Ksat value derived from "Ksat Values for New Hampshire Soils", SSSNNE Special Publication No. 5, September, 2009. The Ksat value for Windsor soil is 6 inches per hour. A 2x safety factor was applied and an exfiltration rate of 3 inches per hour was used.

Inflow Area = 7,273 sf, 42.52% Impervious, Inflow Depth = 3.43" for 50-year event
Inflow = 0.69 cfs @ 12.13 hrs, Volume= 2,079 cf
Outflow = 0.07 cfs @ 12.89 hrs, Volume= 2,079 cf, Atten= 89%, Lag= 45.5 min
Discarded = 0.07 cfs @ 12.89 hrs, Volume= 2,079 cf
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
Routed to Reach SP1 : Study Point #1

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 115.36' @ 12.89 hrs Surf.Area= 879 sf Storage= 834 cf
Flood Elev= 116.00' Surf.Area= 1,166 sf Storage= 1,486 cf

Plug-Flow detention time= 104.4 min calculated for 2,079 cf (100% of inflow)
Center-of-Mass det. time= 104.4 min (869.3 - 765.0)

Volume	Invert	Avail.Storage	Storage Description
#1	114.00'	1,486 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

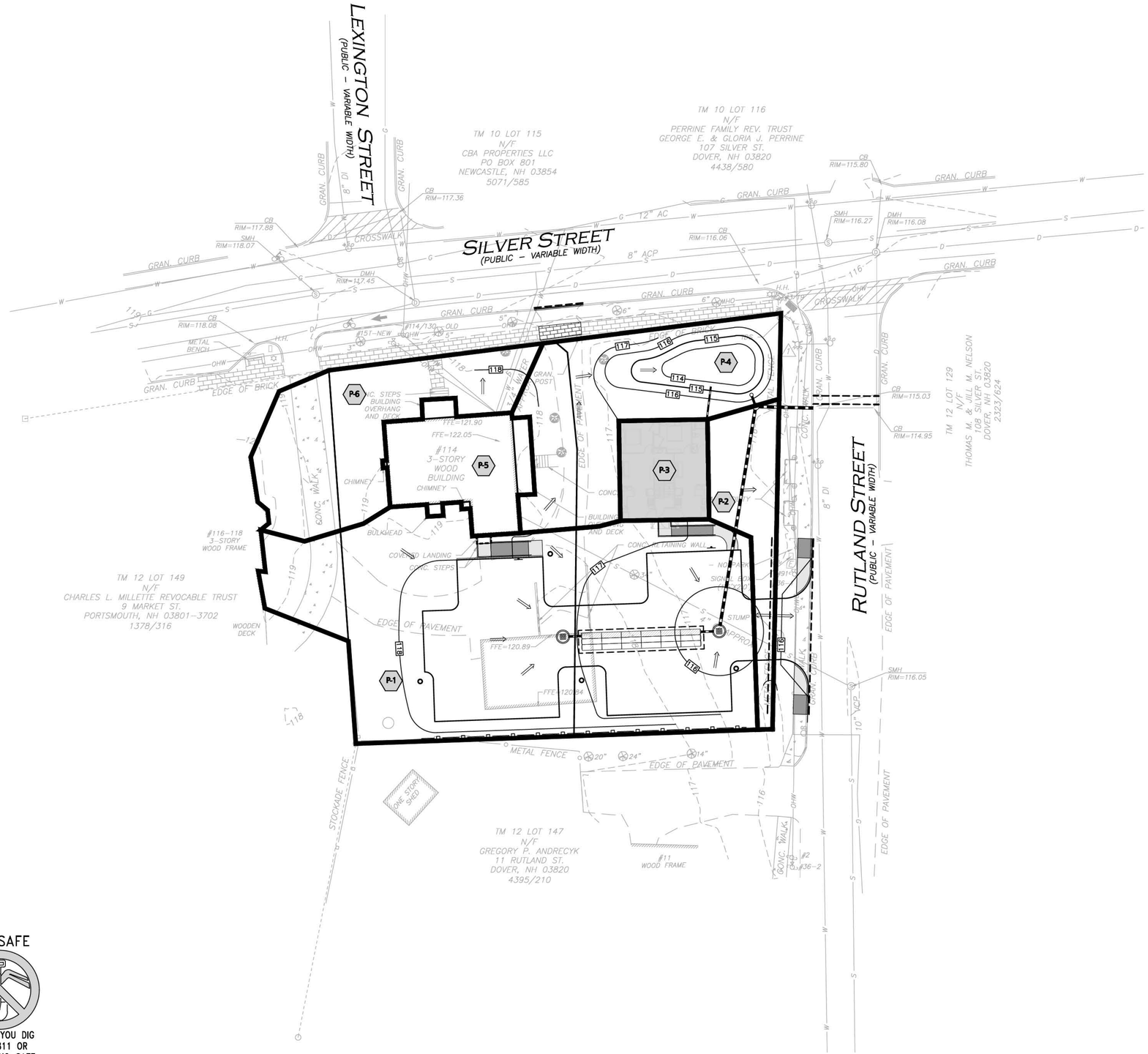
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
114.00	374	0	0
115.00	716	545	545
116.00	1,166	941	1,486

Device	Routing	Invert	Outlet Devices
#1	Primary	115.99'	**3.0' long x 3.0' 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 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32
#2	Discarded	114.00'	**3.000 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 110.00' Phase-In= 0.01'
#3	Device 4	115.50'	**15.0" Horiz. beehive** C= 0.600 Limited to weir flow at low heads
#4	Primary	112.83'	**8.0" Round Culvert** L= 3.0' Ke= 0.500 Inlet / Outlet Invert= 112.83' / 112.74' S= 0.0300 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.35 sf

Discarded OutFlow Max=0.07 cfs @ 12.89 hrs HW=115.36' (Free Discharge)
└**2=Exfiltration** (Controls 0.07 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=114.00' (Free Discharge)
├**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
└**4=Culvert** (Passes 0.00 cfs of 1.54 cfs potential flow)
└**3=beehive** (Controls 0.00 cfs)

Proposed Watershed Plan



LEGEND

SUBCATCHMENT LABEL	P-1
SUBCATCHMENT BOUNDARY	
FLOW DIRECTION	⟹

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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1-888-344-7233

R: \PROJECTS\3347-01\CIVIL\DRAWINGS\CURRENT\C-3347-01_WATERSHED-PROPOSED.DWG

REV	DATE	DESCRIPTION
1	08-06-24	MISC. REVS. PER T.R.C. COMMENTS

APPLICANT\OWNER:

114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:

114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	06/20/24
SCALE:	1" = 20'	DWG. NAME:	C3347-01
DESIGNED BY:	JRG/SM	CHECKED BY:	MAM

PREPARED BY:

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DRAWING TITLE:

PROPOSED WATERSHED PLAN

SHEET No.

PWS-1

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SECTION 5.0 -
APPENDIX

Extreme Precipitation Tables

Extreme Precipitation Tables

Northeast Regional Climate Center

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

Metadata for Point

Smoothing	Yes
State	
Location	
Latitude	43.191 degrees North
Longitude	70.882 degrees West
Elevation	30 feet
Date/Time	Mon Jun 10 2024 13:34:38 GMT-0400 (Eastern Daylight Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.81	1.03	**1yr**	0.70	0.98	1.20	1.54	2.00	2.60	2.87	**1yr**	2.31	2.76	3.15	3.88	4.45	**1yr**
2yr	0.32	0.49	0.61	0.81	1.01	1.29	**2yr**	0.88	1.17	1.50	1.91	2.45	3.15	3.50	**2yr**	2.79	3.37	3.86	4.60	5.23	**2yr**
5yr	0.37	0.57	0.72	0.96	1.23	1.58	**5yr**	1.06	1.44	1.85	2.39	3.08	3.98	4.49	**5yr**	3.52	4.32	4.94	5.81	6.57	**5yr**
10yr	0.40	0.63	0.80	1.09	1.42	1.85	**10yr**	1.22	1.69	2.18	2.83	3.66	4.75	5.42	**10yr**	4.20	5.21	5.95	6.93	7.80	**10yr**
25yr	0.46	0.74	0.94	1.30	1.72	2.27	**25yr**	1.49	2.09	2.70	3.53	4.61	6.01	6.95	**25yr**	5.32	6.68	7.61	8.77	9.80	**25yr**
50yr	0.52	0.83	1.06	1.48	2.00	2.67	**50yr**	1.73	2.46	3.18	4.19	5.49	7.18	8.39	**50yr**	6.35	8.07	9.17	10.48	11.65	**50yr**
100yr	0.58	0.94	1.21	1.71	2.32	3.12	**100yr**	2.00	2.89	3.75	4.96	6.53	8.58	10.14	**100yr**	7.60	9.75	11.06	12.53	13.86	**100yr**
200yr	0.64	1.05	1.36	1.95	2.70	3.67	**200yr**	2.33	3.40	4.43	5.89	7.79	10.26	12.26	**200yr**	9.08	11.79	13.34	14.98	16.49	**200yr**
500yr	0.76	1.24	1.62	2.36	3.30	4.54	**500yr**	2.85	4.22	5.50	7.37	9.82	13.01	15.75	**500yr**	11.51	15.15	17.10	18.99	20.77	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.24	0.37	0.45	0.60	0.74	0.90	1yr	0.64	0.88	0.92	1.26	1.57	2.12	2.46	1yr	1.88	2.36	2.88	3.35	4.03	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	5.05	2yr
5yr	0.35	0.54	0.67	0.91	1.16	1.40	5yr	1.00	1.37	1.61	2.15	2.78	3.71	4.12	5yr	3.28	3.97	4.61	5.41	6.11	5yr
10yr	0.38	0.59	0.73	1.02	1.31	1.60	10yr	1.13	1.56	1.81	2.44	3.13	4.27	4.78	10yr	3.78	4.60	5.32	6.24	7.01	10yr
25yr	0.44	0.66	0.82	1.18	1.55	1.91	25yr	1.34	1.87	2.11	2.84	3.65	4.94	5.79	25yr	4.37	5.57	6.48	7.55	8.42	25yr
50yr	0.48	0.73	0.91	1.31	1.76	2.19	50yr	1.52	2.14	2.35	3.19	4.09	5.64	6.68	50yr	4.99	6.42	7.53	8.71	9.66	50yr
100yr	0.54	0.81	1.01	1.46	2.01	2.51	100yr	1.73	2.45	2.63	3.57	4.57	6.42	7.69	100yr	5.68	7.40	8.74	10.06	11.07	100yr
200yr	0.59	0.89	1.13	1.64	2.29	2.87	200yr	1.97	2.80	2.93	4.00	5.10	7.31	8.87	200yr	6.47	8.53	10.14	11.61	12.70	200yr
500yr	0.69	1.03	1.33	1.93	2.74	3.45	500yr	2.36	3.37	3.40	4.63	5.92	8.64	10.68	500yr	7.65	10.27	12.33	14.06	15.18	500yr

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.43	0.53	0.71	0.87	1.08	1yr	0.75	1.05	1.23	1.74	2.21	2.87	3.08	1yr	2.54	2.97	3.43	4.22	4.81	1yr
2yr	0.33	0.51	0.62	0.85	1.04	1.25	2yr	0.90	1.22	1.48	1.95	2.51	3.29	3.62	2yr	2.91	3.49	4.00	4.75	5.45	2yr
5yr	0.39	0.61	0.75	1.03	1.31	1.58	5yr	1.13	1.55	1.86	2.50	3.20	4.24	4.85	5yr	3.75	4.67	5.28	6.23	7.00	5yr
10yr	0.46	0.70	0.87	1.22	1.57	1.92	10yr	1.36	1.88	2.23	3.05	3.86	5.21	6.06	10yr	4.62	5.83	6.65	7.65	8.53	10yr
25yr	0.56	0.84	1.05	1.50	1.97	2.48	25yr	1.70	2.42	2.88	3.97	4.96	7.07	8.14	25yr	6.26	7.82	8.90	10.07	11.12	25yr
50yr	0.64	0.98	1.22	1.75	2.35	2.99	50yr	2.03	2.93	3.49	4.83	6.03	8.74	10.20	50yr	7.74	9.80	11.12	12.38	13.59	50yr
100yr	0.75	1.13	1.42	2.04	2.80	3.62	100yr	2.42	3.54	4.24	5.92	7.33	10.81	12.78	100yr	9.56	12.28	13.88	15.25	16.63	100yr
200yr	0.87	1.30	1.65	2.39	3.34	4.39	200yr	2.88	4.29	5.16	7.24	8.90	13.39	16.03	200yr	11.85	15.41	17.35	18.78	20.38	200yr
500yr	1.06	1.58	2.03	2.95	4.19	5.64	500yr	3.62	5.51	6.66	9.47	11.54	17.81	21.63	500yr	15.76	20.80	23.31	24.76	26.67	500yr

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Northeast Regional Climate Center

NRCS Web Soil Survey

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Strafford County, New Hampshire



June 10, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:553 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 5 10 20 30

Feet: 0 25 50 100 150

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

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
WfB	Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes	1.4	100.0%
Totals for Area of Interest		**1.4**	**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

WfB—Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 9d9b
Elevation: 0 to 280 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

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

Description of Windsor Variant

Typical profile

H1 - 0 to 26 inches: loamy fine sand
H2 - 26 to 30 inches: loamy sand
H3 - 30 to 42 inches: silt loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Not named

Percent of map unit: 15 percent
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Physical Properties

Soil Physical Properties are measured or inferred from direct observations in the field or laboratory. Examples of soil physical properties include percent clay, organic matter, saturated hydraulic conductivity, available water capacity, and bulk density.

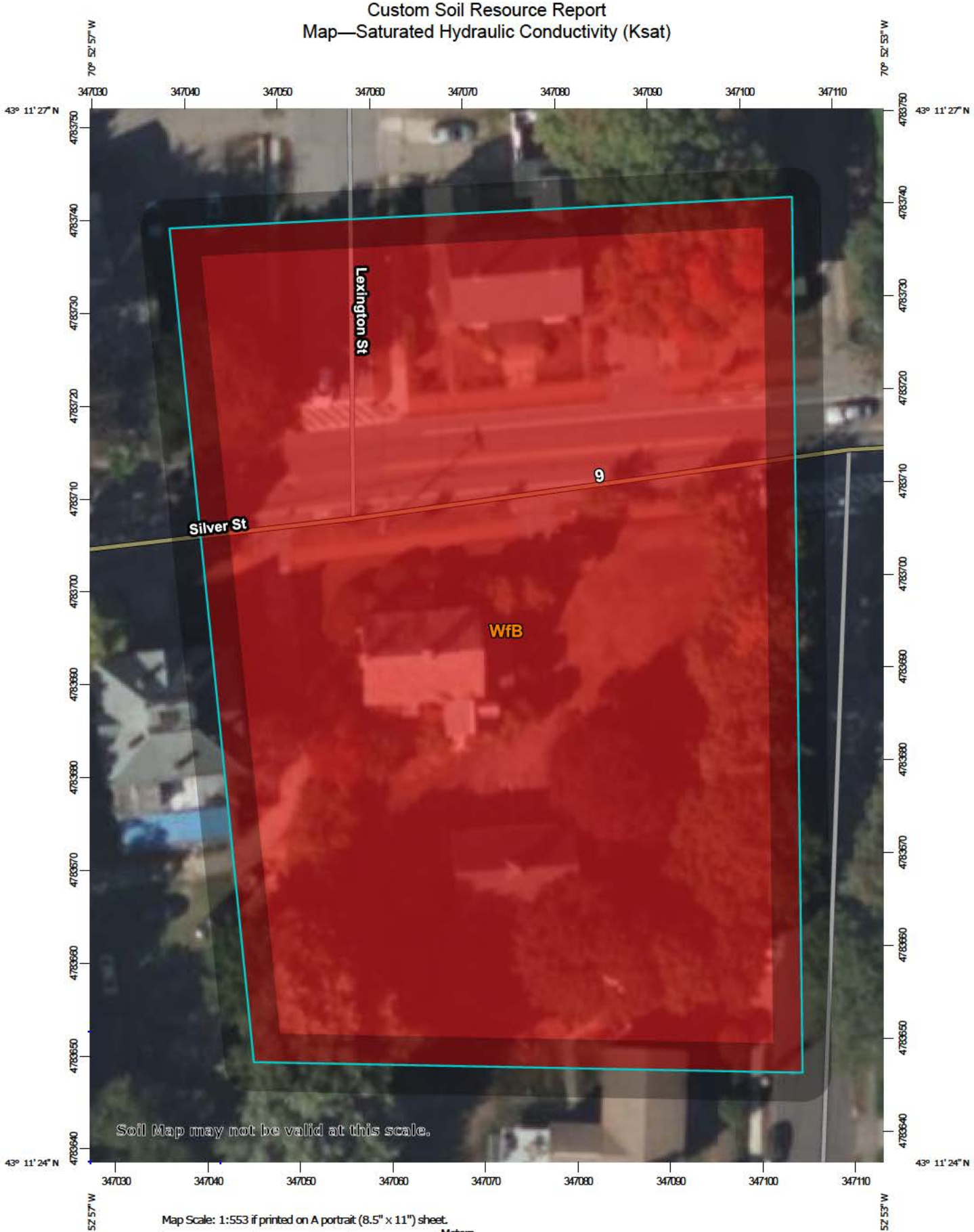
Saturated Hydraulic Conductivity (Ksat)

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits.

Custom Soil Resource Report
Map—Saturated Hydraulic Conductivity (Ksat)



Map Scale: 1:553 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 5 10 20 30

Feet: 0 25 50 100 150

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

= 70.3862

Not rated or not available

Soil Rating Lines

= 70.3862

Not rated or not available

Soil Rating Points

= 70.3862

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.

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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.

Table—Saturated Hydraulic Conductivity (Ksat)

Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI
WfB	Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes	70.3862	1.4	100.0%
Totals for Area of Interest			**1.4**	**100.0%**

Rating Options—Saturated Hydraulic Conductivity (Ksat)

Units of Measure: micrometers per second

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Fastest

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 0

Bottom Depth: 100

Units of Measure: Centimeters

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report
Map—Hydrologic Soil Group



Map Scale: 1:553 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 5 10 20 30

Feet: 0 25 50 100 150

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

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 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.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
WfB	Windsor loamy fine sand, clay subsoil variant, 0 to 8 percent slopes	A	1.4	100.0%
Totals for Area of Interest			**1.4**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

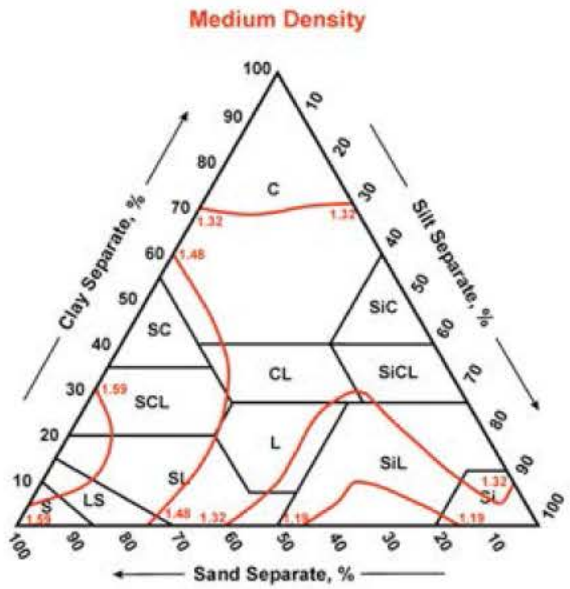
United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

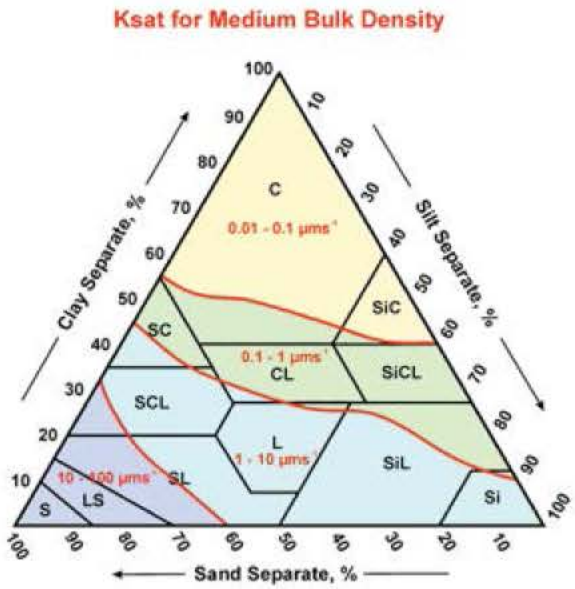
United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Ksat Value, SSSNNE

K_{sat} VALUES
FOR
NEW HAMPSHIRE SOILS
(Including Hydrologic and DES Soil Lot Sizing Groups)





From: **Guide for Estimating Ksat from Soil Properties (Exhibit 618-9).** (http://soils.usda.gov/technical/handbook/contents/part618ex.html)

Sponsored by the Society of Soil Scientists of Northern New England
SSSNNE Special Publication No. 5
September, 2009

Soil Series	legend number	Ksat low - B in/hr	Ksat high - B in/hr	Ksat low - C in/hr	Ksat high - C in/hr	Hyd. Grp.	Group	Land Form	Temp.	Soil Textures	Spodosol ?	Other
Suffield	536	0.6	2.0	0.00	0.2	C	3	Sandy/loamy over silt/clay	mesic	silty over clayey	no	deep to clay C
Sunapee	168	0.6	2.0	0.60	6.0	B	3	Loose till, loamy textures	frigid	loamy	yes	
Sunapee var	269	0.6	2.0	0.60	6.0	B	3	Loose till, loamy textures	frigid	loamy	yes	frigid dystrudept
Suncook	2	6.0	20.0	6.00	20.0	A	1	Flood Plain (Bottomland)	mesic	sandy	no	occasionally flooded
Suncook	402	6.0	20.0	6.00	20.0	A	1	Flood Plain (Bottomland)	mesic	sandy	no	frequent flooding
Sunday	102	6.0	20.0	6.00	20.0	A	1	Flood Plain (Bottomland)	frigid	sandy	no	occasionally flooded
Sunday	202	6.0	20.0	6.00	20.0	A	1	Flood Plain (Bottomland)	frigid	sandy	no	frequently flooded
Surplus	669	0.6	2.0	0.00	0.6	C	3	Firm, platy, loamy till	cryic	loamy	yes	mwd, sandy loam in Cd
Sutton	68	0.6	6.0	0.60	6.0	B	3	Loose till, loamy textures	mesic	loamy	no	
Swanton	438	2.0	6.0	0.00	0.2	C	5	Sandy/loamy over silt/clay	frigid	co. loamy over clayey	no	
Telos	123	0.6	2.0	0.02	0.2	C	3	Firm, platy, silty till, schist & phyllite	frigid	loamy	yes	channery silt loam in Cd
Thorndike	84	0.6	2.0	0.60	2.0	C/D	4	Friable till, silty, schist & phyllite	frigid	loamy-skeletal	yes	less than 20 in. deep
Timakwa	393			6.00	100.0	D	6	Organic Materials - Freshwater	mesic	sandy or sandy-skeletal	no	organic over sand
Tunbridge	99	0.6	6.0	0.60	6.0	C	4	Loose till, bedrock	frigid	loamy	yes	20 to 40 in. deep
Unadilla	30	0.6	2.0	2.00	20.0	B	2	Terraces and glacial lake plains	mesic	silty	no	silty over gravelly
Vassalboro	150					D	6	Organic Materials - Freshwater	frigid	peat	no	deep organic
Walpole	546	2.0	6.0	6.00	20.0	C	5	Outwash and Stream Terraces	mesic	sandy	no	
Wareham	34	6.0	20.0	6.00	20.0	C	5	Outwash and Stream Terraces	mesic	sandy	no	
Warwick	210	2.0	6.0	20.00	100.0	A	1	Outwash and Stream Terraces	mesic	loamy-skeletal	no	loamy over slate gravel
Waskish	195					D	6	Organic Materials - Freshwater	frigid	peat	no	deep organic
Waumbeck	58	2.0	20.0	6.00	20.0	B	3	Loose till, sandy textures	frigid	sandy-skeletal	yes	very cobbly loamy sand
Westbrook	597			0.00	2.0	D	6	Tidal Flat	mesic	loamy	no	organic over loam
Whitman	49	0.0	0.2	0.00	0.2	D	6	Firm, platy, loamy till	mesic	loamy	no	mucky loam
Windsor	26	6.0	20.0	6.00	20.0	A	1	Outwash and Stream Terraces	mesic	sandy	no	
Winnecook	88	0.6	2.0	0.60	2.0	C	4	Friable till, silty, schist & phyllite	frigid	loamy-skeletal	yes	20 to 40 in. deep
Winooski	9	0.6	6.0	0.60	6.0	B		Flood Plain (Bottom Land)	mesic	silty over loamy	no	
Winooski	103	0.6	6.0	0.60	6.0	B	3	Flood Plain (Bottom Land)	mesic	silty	no	very fine sandy loam
Wonsqueak	995			0.20	2.0	D	6	Organic Materials - Freshwater	frigid	loamy	no	organic over loam
Woodbridge	29	0.6	2.0	0.00	0.6	C	3	Firm, platy, loamy till	mesic	loamy	no	sandy loam in Cd
Woodstock	93	2.0	6.0	2.00	6.0	C/D	4	Loose till, bedrock	frigid	loamy	no	less than 20 in. deep

no longer recognized
organic materials

NHDES Groundwater Recharge Calculation

GROUNDWATER RECHARGE VOLULME (GRV) CALCULATION
(Env-Wq 1507.04)

0.05	ac	Area of HSG A soil that was replaced by impervious cover	0.40"
	ac	Area of HSG B soil that was replaced by impervious cover	0.25"
	ac	Area of HSG C soil that was replaced by impervious cover	0.10"
	ac	Area of HSG D soil or impervious cover that was replaced by impervious cover	0.0"
0.40	inches	Rd = Weighted groundwater recharge depth	
0.0202	ac-in	GRV = AI * Rd	
73	cf	GRV conversion (ac-in x 43,560 sf/ac x 1ft/12")	

Provide calculations below showing that the project meets the groundwater recharge requirements (Env-Wq 1507.04):

A total of 1,289 CF of recharge volume is provided.

330 CF of recharge volume is provided in the infiltation system, below the overflow. See HydroCAD Stor. Table.

959 CF of recharge is provided in the rain garden, below the overflow. See attached HydroCAD Storage Table.

Stage-Area-Storage for Pond IS1: Infiltration System

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
112.40	**373**	0	112.93	373	82
112.41	373	1	112.94	373	85
112.42	373	3	112.95	373	88
112.43	373	4	112.96	373	90
112.44	373	6	112.97	373	93
112.45	373	7	112.98	373	96
112.46	373	9	112.99	373	98
112.47	373	10	113.00	373	101
112.48	373	12	113.01	373	104
112.49	373	13	113.02	373	106
112.50	373	15	113.03	373	109
112.51	373	16	113.04	373	111
112.52	373	18	113.05	373	114
112.53	373	19	113.06	373	117
112.54	373	21	113.07	373	119
112.55	373	22	113.08	373	122
112.56	373	24	113.09	373	124
112.57	373	25	113.10	373	127
112.58	373	27	113.11	373	129
112.59	373	28	113.12	373	132
112.60	373	30	113.13	373	135
112.61	373	31	113.14	373	137
112.62	373	33	113.15	373	140
112.63	373	34	113.16	373	142
112.64	373	36	113.17	373	145
112.65	373	37	113.18	373	147
112.66	373	39	113.19	373	150
112.67	373	40	113.20	373	152
112.68	373	42	113.21	373	155
112.69	373	43	113.22	373	157
112.70	373	45	113.23	373	160
112.71	373	46	113.24	373	162
112.72	373	48	113.25	373	165
112.73	373	49	113.26	373	167
112.74	373	51	113.27	373	169
112.75	373	52	113.28	373	172
112.76	373	54	113.29	373	174
112.77	373	55	113.30	373	177
112.78	373	57	113.31	373	179
112.79	373	58	113.32	373	182
112.80	373	60	113.33	373	184
112.81	373	61	113.34	373	186
112.82	373	63	113.35	373	189
112.83	373	64	113.36	373	191
112.84	373	66	113.37	373	194
112.85	373	67	113.38	373	196
112.86	373	69	113.39	373	198
112.87	373	70	113.40	373	201
112.88	373	72	113.41	373	203
112.89	373	73	113.42	373	205
112.90	373	75	113.43	373	208
112.91	373	77	113.44	373	210
112.92	373	80	113.45	373	212

Stage-Area-Storage for Pond IS1: Infiltration System (continued)

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
113.46	373	214
113.47	373	217
113.48	373	219
113.49	373	221
113.50	373	223
113.51	373	226
113.52	373	228
113.53	373	230
113.54	373	232
113.55	373	234
113.56	373	236
113.57	373	239
113.58	373	241
113.59	373	243
113.60	373	245
113.61	373	247
113.62	373	249
113.63	373	251
113.64	373	253
113.65	373	255
113.66	373	257
113.67	373	259
113.68	373	261
113.69	373	263
113.70	373	264
113.71	373	266
113.72	373	268
113.73	373	270
113.74	373	272
113.75	373	273
113.76	373	275
113.77	373	277
113.78	373	279
113.79	373	280
113.80	373	282
113.81	373	283
113.82	373	285
113.83	373	287
113.84	373	288
113.85	373	290
113.86	373	291
113.87	373	293
113.88	373	294
113.89	373	296
113.90	373	298
113.91	373	299
113.92	373	300
113.93	373	302
113.94	373	303
113.95	373	305
113.96	373	306
113.97	373	308
113.98	373	309
113.99	373	311
114.00	373	312
114.01	373	314
114.02	373	315
114.03	373	317
114.04	373	318
114.05	373	320
114.06	373	321
114.07	373	323
114.08	373	324
114.09	373	326
114.10	373	327
114.11	373	329
114.12	373	330
114.13	373	332
114.14	373	333
114.15	373	335
114.16	373	336
114.17	373	338
114.18	373	339
114.19	373	341
114.20	373	342
114.21	373	344
114.22	373	345
114.23	373	347
114.24	373	348
114.25	373	350
114.26	373	351
114.27	373	353
114.28	373	354
114.29	373	356
114.30	373	357
114.31	373	359
114.32	373	360
114.33	373	362
114.34	373	363
114.35	373	365
114.36	373	366
114.37	373	368
114.38	373	369
114.39	373	371
114.40	373	**372**

Stage-Area-Storage for Pond RG1: Rain Garden

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
114.00	374	0
114.02	381	8
114.04	388	15
114.06	395	23
114.08	401	31
114.10	408	39
114.12	415	47
114.14	422	56
114.16	429	64
114.18	436	73
114.20	442	82
114.22	449	91
114.24	456	100
114.26	463	109
114.28	470	118
114.30	477	128
114.32	483	137
114.34	490	147
114.36	497	157
114.38	504	167
114.40	511	177
114.42	518	187
114.44	524	198
114.46	531	208
114.48	538	219
114.50	545	230
114.52	552	241
114.54	559	252
114.56	566	263
114.58	572	274
114.60	579	286
114.62	586	298
114.64	593	309
114.66	600	321
114.68	607	333
114.70	613	346
114.72	620	358
114.74	627	370
114.76	634	383
114.78	641	396
114.80	648	409
114.82	654	422
114.84	661	435
114.86	668	448
114.88	675	462
114.90	682	475
114.92	689	489
114.94	695	503
114.96	702	517
114.98	709	531
115.00	716	545
115.02	725	559
115.04	734	574
115.06	743	589
115.08	752	604
115.10	761	619
115.12	770	634
115.14	779	650
115.16	788	665
115.18	797	681
115.20	806	697
115.22	815	713
115.24	824	730
115.26	833	746
115.28	842	763
115.30	851	780
115.32	860	797
115.34	869	814
115.36	878	832
115.38	887	850
115.40	896	867
115.42	905	885
115.44	914	904
115.46	923	922
115.48	932	941
115.50	941	959
115.52	950	978
115.54	959	997
115.56	968	1,017
115.58	977	1,036
115.60	986	1,056
115.62	995	1,075
115.64	1,004	1,095
115.66	1,013	1,116
115.68	1,022	1,136
115.70	1,031	1,156
115.72	1,040	1,177
115.74	1,049	1,198
115.76	1,058	1,219
115.78	1,067	1,240
115.80	1,076	1,262
115.82	1,085	1,283
115.84	1,094	1,305
115.86	1,103	1,327
115.88	1,112	1,349
115.90	1,121	1,372
115.92	1,130	1,394
115.94	1,139	1,417
115.96	1,148	1,440
115.98	1,157	1,463
116.00	**1,166**	**1,486**

Operation & Maintenance Procedure/Log Form

OPERATION AND MAINTENANCE PLAN SCHEDULE

ALLEN & MAJOR ASSOCIATES, INC.

Project: Residential Development
Project Address: 114 Silver Street, Dover, NH

Responsible for O&M Plan: 114 Silver Street Group, LLC
Address: 10 Durham Road, Dover, NH 03820
Phone: (603) 412-6175

All information within table is derived from New Hampshire Stormwater Manual: Chapter 4, Sections 3 and 4

BMP CATEGORY	BMP OR MAINTENANCE ACTIVITY	SCHEDULE/ FREQUENCY	NOTES	INSPECTION PERFORMED	
				DATE:	BY:
PRETREATMENT PRACTICES	DEEP SUMP CATCH BASIN	May require frequent maintenance. It is recommended that catch basins be inspected at least twice annually.	Sediment should be removed when it approaches half the sump depth. If floating hydrocarbons are observed the material should be removed immediately. Damaged hoods should be replaced when noted by inspection.		
TREATMENT PRACTICES	UNDERGROUND INFILTRATION SYSTEM	Inspect at least twice annually and with any rainfall event exceeding 2.5 inches in a 24-hour period.	Removal of debris from inlet and outlet structures. Removal of accumulated sediment. Inspection and repair of outlet structures and appurtenances. If system does not drain within a 72-hour period following a rainfall event, a professional should assess the facility's condition.		
	RAIN GARDEN	Inspect at least twice annually and with any rainfall event exceeding 2.5 inches in a 24-hour period.	Annually the system should be inspected for drawdown time. Trash and debris should be removed at each inspection.		
OTHER MAINTENANCE	SNOW STORAGE	Clear and remove snow to approved storage locations as necessary to ensure systems are working properly and are protected from meltwater pollutants.	Carefully select snow disposal sites before winter. Avoid dumping removed snow over catch basins, or in detention ponds, sediment forebays, rivers, wetlands, and flood plains. It is also prohibited to dump snow in the bioretention basins or gravel swales.		
	STREET SWEEPING	Clear accumulations of winter sand in parking lots and along roadways at least once a year, preferably in the spring.	Sweep, power broom or vacuum paved areas. Submit information that confirms that all street sweepings have been completed in accordance with state and local requirements		

ADS Stormtech Technical Specifications

StormTech® SC-160LP Chamber



Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for commercial and municipal applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

The SC-160LP chamber was developed for infiltration and detention in shallow cover applications

- Only 14" (350 mm) required from top of chamber to bottom of pavement
- Only 12" (300 mm) tall

Nominal Chamber Specifications
(not to scale)

Size (L x W x H)
85.4" x 25" x 12"
2170 mm x 635 mm x 305 mm

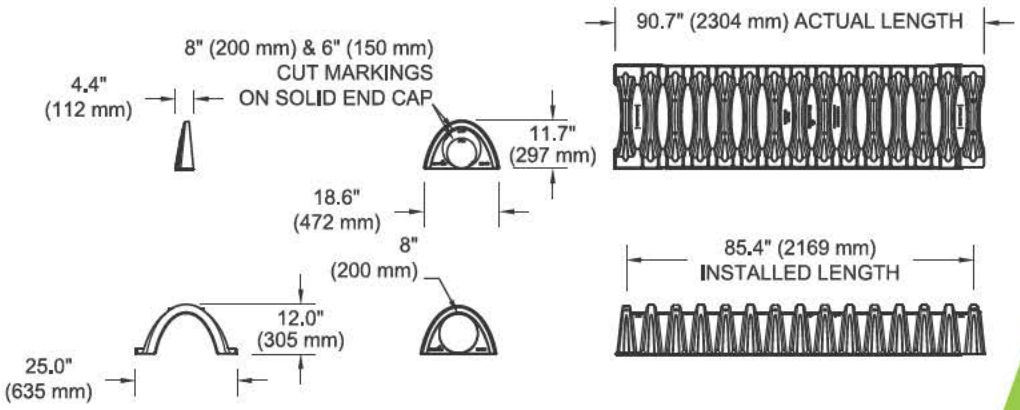
Chamber Storage
6.85 ft³ (0.19 m³)

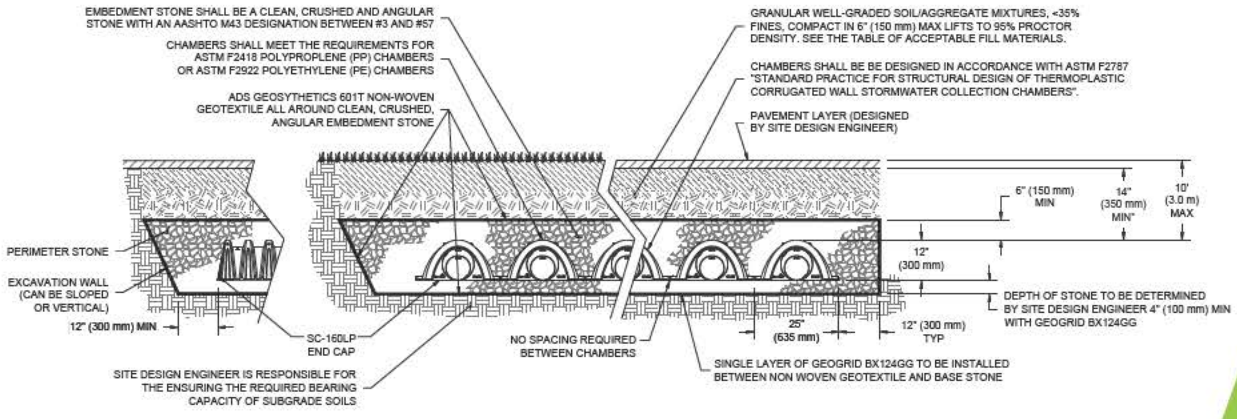
Min. Installed Storage*
15.0 ft³ (0.42 m³)

Weight
24.0 lbs (10.9 kg)

Shipping
132 chambers/pallet
144 end caps/pallet
12 pallets/truck

*Assumes 6" (150 mm) stone above, 4" (100 mm) below and stone between chambers with 40% stone porosity.





*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 20" (510 mm).

ADS StormTech™

StormTech SC-160LP Specifications

Cumulative Storage Volumes Per Chamber

Assumes 40% Stone Porosity. Calculations are Based Upon a 4" (100 mm) Stone Base Under Chambers.

Depth of Water in System Inches (mm)	Cumulative Chamber Storage ft³ (m³)	Total System Cumulative Storage ft³ (m³)
22 (559)	6.85 (0.194)	14.98 (0.424)
21 (533)	6.85 (0.194)	14.49 (0.410)
20 (508)	6.85 (0.194)	14.00 (0.396)
19 (483)	6.85 (0.194)	13.50 (0.382)
18 (457)	6.85 (0.194)	13.01 (0.368)
17 (432)	6.85 (0.194)	12.51 (0.354)
16 (406)	6.85 (0.194)	12.02 (0.340)
15 (381)	6.80 (0.193)	11.49 (0.325)
14 (356)	6.67 (0.189)	10.92 (0.309)
13 (330)	6.38 (0.181)	10.25 (0.290)
12 (305)	5.94 (0.168)	9.49 (0.269)
11 (279)	5.40 (0.153)	8.67 (0.246)
10 (254)	4.78 (0.135)	7.81 (0.221)
9 (229)	4.10 (0.116)	6.91 (0.196)
8 (203)	3.36 (0.095)	5.97 (0.169)
7 (178)	2.58 (0.073)	5.01 (0.142)
6 (152)	1.76 (0.050)	4.02 (0.114)
5 (127)	0.89 (0.025)	3.01 (0.085)
4 (102)	0 (0)	1.98 (0.056)
3 (76)	0 (0)	1.48 (0.042)
2 (51)	0 (0)	0.99 (0.028)
1 (25)	0 (0)	0.49 (0.014)

Stone Cover

Stone Foundation

Note: Add 0.49 ft³ (0.014 m³) of storage for each additional inch (25 mm) of stone foundation.

Amount of Stone Per Chamber

English Tons (yds³)	Stone Foundation Depth		
	4"	6"	8"
SC-160LP	1.1 (0.8)	1.2 (0.9)	1.3 (0.9)
Metric Kilograms (m³)	**100 mm**	**150 mm**	**200 mm**
SC-160LP	652 (0.7)	1074 (0.8)	1197 (0.8)

Note: Assumes 6" (150 mm) of stone above and only embedment stone between chambers.

Volume Excavation Per Chamber yd³ (m³)

	Stone Foundation Depth		
	4 (100)	8 (200)	12 (300)
SC-160LP	1.4 (1.1)	1.6 (1.2)	1.8 (1.3)

Note: Assumes no row separation and 14" (350 mm) of cover. The volume of excavation will vary as depth of cover increases.

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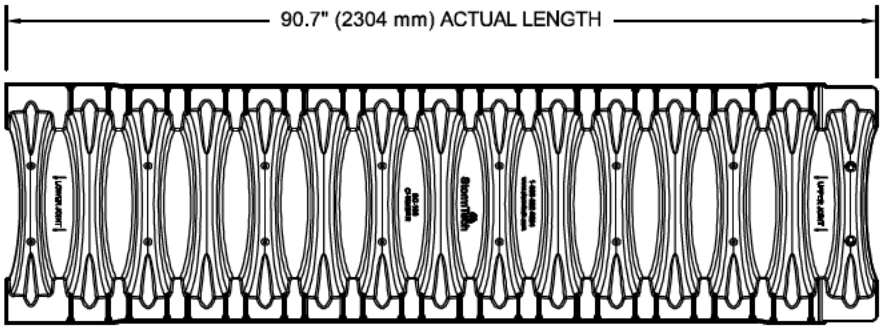
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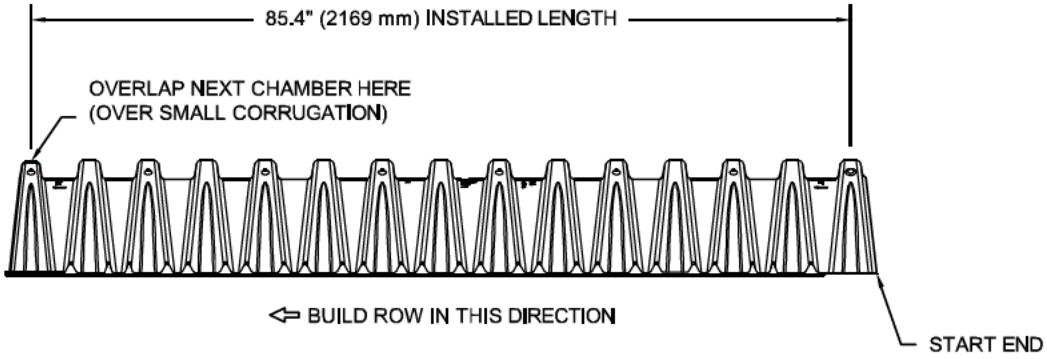
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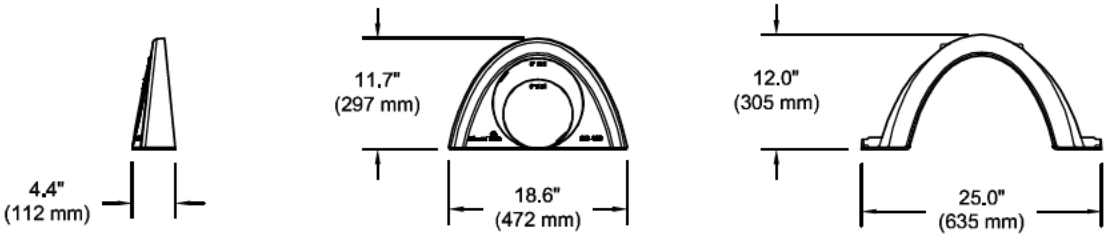
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SC-160LP TECHNICAL SPECIFICATION

NTS





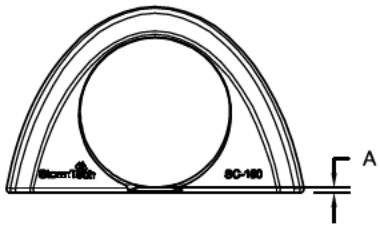


NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	25.0" X 12.0" X 85.4"	(635 mm X 305 mm X 2169 mm)
CHAMBER STORAGE	6.85 CUBIC FEET	(0.19 m³)
MINIMUM INSTALLED STORAGE*	16.0 CUBIC FEET	(0.45 m³)
WEIGHT	24.0 lbs.	(10.9 kg)

*ASSUMES 6" (152 mm) ABOVE, 6" (152 mm) BELOW, AND STONE BETWEEN CHAMBERS WITH 40% STONE POROSITY.

PART #	STUB	A
SC160IEPP	6" (150 mm)	0.66" (16 mm)
	8" (200 mm)	0.80" (20 mm)
SC160IEPP08	8" (200 mm)	0.96" (24 mm)



ALL STUBS ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

NOTE: ALL DIMENSIONS ARE NOMINAL

Isolator® Row Plus
O&M Manual



ADS StormTech

The Isolator® Row Plus

Introduction

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row Plus is a technique to inexpensively enhance Total Suspended Solids (TSS) and Total Phosphorus (TP) removal with easy access for inspection and maintenance.

The Isolator Row Plus

The Isolator Row Plus is a row of StormTech chambers, either SC-160, SC-310, SC-310-3, SC-740, DC-780, MC-3500 or MC-7200 models, that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for sediment settling and filtration as stormwater rises in the Isolator Row Plus and passes through the filter fabric. The open bottom chambers and perforated sidewalls (SC-310, SC- 310-3 and SC-740 models) allow stormwater to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row Plus protecting the adjacent stone and chambers storage areas from sediment accumulation.

ADS geotextile fabric is placed between the stone and the Isolator Row Plus chambers. The woven geotextile provides a media for stormwater filtration, a durable surface for maintenance, prevents scour of the underlying stone and remains intact during high pressure jetting. A non-woven fabric is placed over the chambers to provide a filter media for flows passing through the chamber's sidewall. The non-woven fabric is not required over the SC-160, DC-780, MC-3500 or MC-7200 models as these chambers do not have perforated side walls.

The Isolator Row Plus is designed to capture the "first flush" runoff and offers the versatility to be sized on a volume basis or a flow-rate basis. An upstream manhole provides access to the Isolator Row Plus and includes a high/low concept such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row Plus bypass through a manifold to the other chambers. This is achieved with an elevated bypass manifold or a high-flow weir. This creates a differential between the Isolator Row Plus row of chambers and the manifold to the rest of the system, thus allowing for settlement time in the Isolator Row Plus. After Stormwater flows through the Isolator Row Plus and into the rest of the chamber system it is either exfiltrated into the soils below or passed at a controlled rate through an outlet manifold and outlet control structure.

The Isolator Row FLAMP™ (patent pending) is a flared end ramp apparatus attached to the inlet pipe on the inside of the chamber end cap. The FLAMP provides a smooth transition from pipe invert to fabric bottom. It is configured to improve chamber function performance by enhancing outflow of solid debris that would otherwise collect at the chamber's end. It also serves to improve the fluid and solid flow into the access pipe during maintenance and cleaning and to guide cleaning and inspection equipment back into the inlet pipe when complete.

The Isolator Row Plus may be part of a treatment train system. The treatment train design and pretreatment device selection by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, StormTech recommend using the Isolator Row Plus to minimize maintenance requirements and maintenance costs.

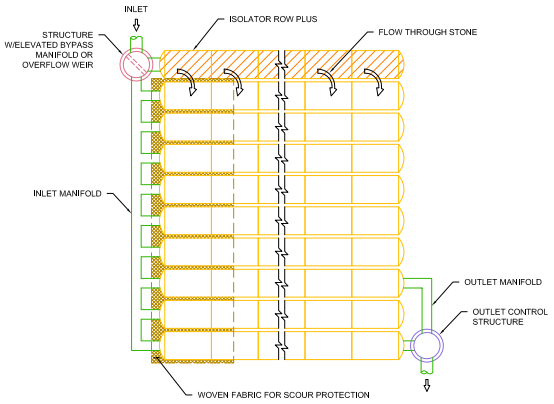
Note: *See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row Plus.*



Looking down the Isolator Row PLUS from the manhole opening, ADS PLUS Fabric is shown between the chamber and stone base.



StormTech Isolator Row PLUS with Overflow Spillway (not to scale)



Isolator Row Plus Inspection/Maintenance

Inspection

The frequency of inspection and maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row Plus should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

The Isolator Row Plus incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row Plus, clean-out should be performed.

Maintenance

The Isolator Row Plus was designed to reduce the cost of periodic maintenance. By "isolating" sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entries.

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row Plus while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45" are best. StormTech recommends a maximum nozzle pressure of 2000 psi be utilized during cleaning. JetVac reels can vary in length. For ease of maintenance, ADS recommends Isolator Row Plus lengths up to 200' (61 m). **The JetVac process shall only be performed on StormTech Isolator Row Plus that have ADS Plus Fabric (as specified by StormTech) over their angular base stone.**

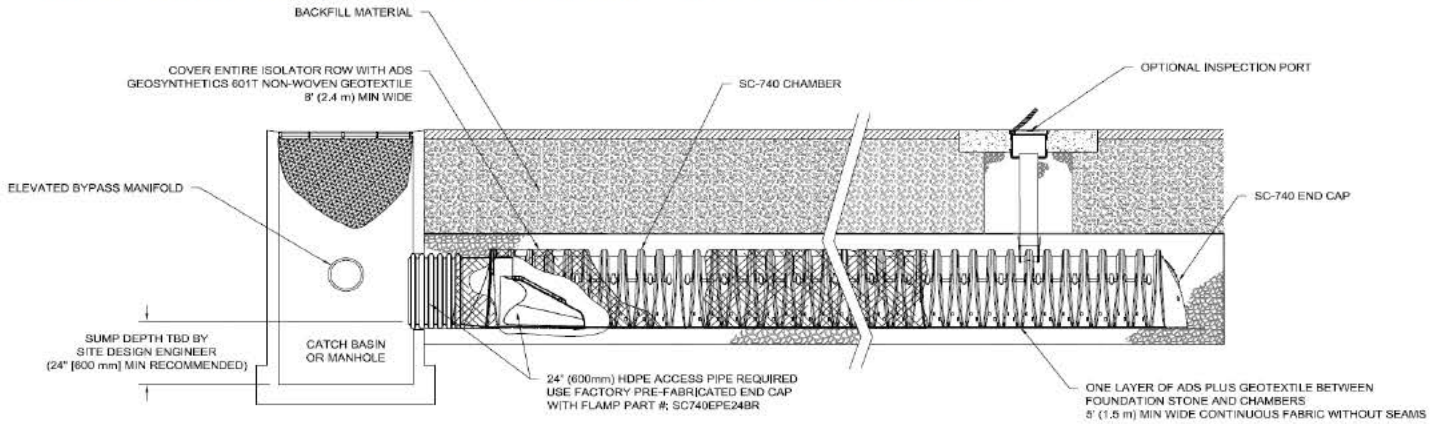






StormTech Isolator Row PLUS (*not to scale*)

Note: *Non-woven fabric is only required over the inlet pipe connection into the end cap for SC-160LP, DC-780, MC-3500 and MC-7200 chamber models and is not required over the entire Isolator Row PLUS.*



Isolator Row Plus Step By Step Maintenance Procedures

Step 1

Inspect Isolator Row Plus for sediment.

A) Inspection ports (if present)
   i. Remove lid from floor box frame
   ii. Remove cap from inspection riser
   iii. Using a flashlight and stadia rod,measure depth of sediment and record results on maintenance log.
   iv. If sediment is at or above 3 inch depth, proceed to Step 2. If not, proceed to Step 3.

B) All Isolator Row Plus
   i. Remove cover from manhole at upstream end of Isolator Row Plus
   ii. Using a flashlight, inspect down Isolator Row Plus through outlet pipe
      1. Mirrors on poles or cameras may be used to avoid a confined space entry
      2. Follow OSHA regulations for confined space entry if entering manhole
   iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches), proceed to Step 2.
   If not, proceed to Step 3.

Step 2

Clean out Isolator Row Plus using the JetVac process.

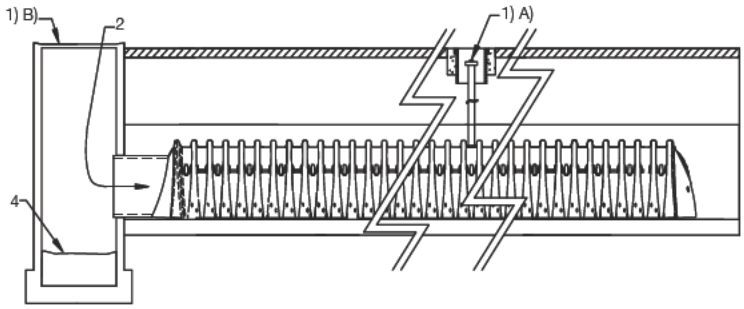
A) A fixed floor cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
B) Apply multiple passes of JetVac until backflush water is clean
C) Vacuum manhole sump as required

Step 3

Replace all caps, lids and covers, record observations and actions.

Step 4

Inspect & clean catch basins and manholes upstream of the StormTech system.



Sample Maintenance Log

Date	Stadia Rod Readings		Sedi-ment Depth (1)–(2)	Observations/Actions	Inspector
	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)			
3/15/11	6.3 ft	none		New installation. Fixed point is CI frame at grade	DJM
9/24/11		6.2	0.1 ft	Some grit felt	SM
6/20/13		5.8	0.5 ft	Mucky feel, debris visible in manhole and in Isolator Row PLUS, maintenance due	NV
7/7/13	6.3 ft		0	System jetted and vacuumed	DJM

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ADS StormTech® Installation Guide

SC-160LP

StormTech
Installation Video

Required Materials and Equipment List

- Acceptable fill materials per Table 1
- ADS Plus and non-woven geotextile fabrics
- StormTech solid end caps and pre-cored end caps
- StormTech chambers
- StormTech manifolds and fittings

Important Notes:

A. This installation guide provides the minimum requirements for proper installation of chambers. Non-adherence to this guide may result in damage to chambers during installation. Replacement of damaged chambers during or after backfilling is costly and very time consuming. It is recommended that all installers are familiar with this guide, and that the contractor inspects the chambers for distortion, damage and joint integrity as work progresses.

B. Care should be taken in the handling of chambers and end caps. Avoid dropping, prying or excessive force on chambers during removal from pallet and initial placement.

Requirements for System Installation



Excavate bed and prepare subgrade per engineer's plans.

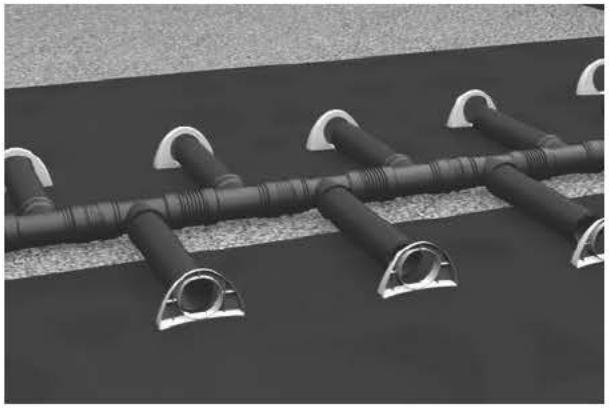


Place non-woven geotextile over prepared soils and up excavation walls. Install underdrains if required.



Place clean, crushed, angular stone foundation 6" (150 mm) or 4" (100 mm) with a single layer of Geogrid BX124GG. See plans for foundation stone design.Compact to achieve a flat surface.

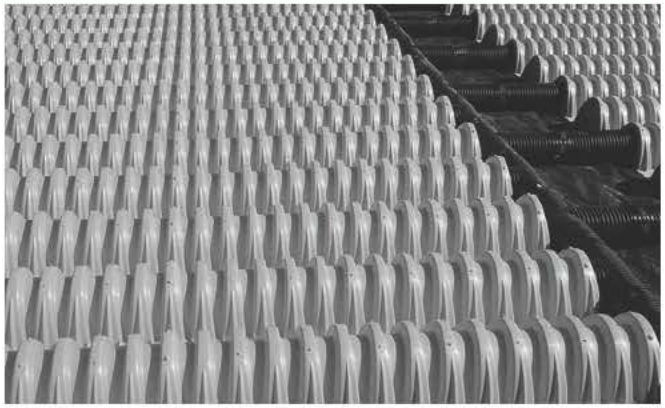
Manifold, Scour Fabric and Chamber Assembly



Install manifolds and lay out ADS Plus fabric at inlet rows [min. 12.5 ft (3.8 m)] at each inlet end cap. Place a continuous piece (no seams, single layer) along entire length of Isolator® Plus Row(s).



Align the first chamber and end cap of each row with inlet pipes. Contractor may choose to postpone stone placement around end chambers and leave ends of rows open for easy inspection of chambers during the backfill process.



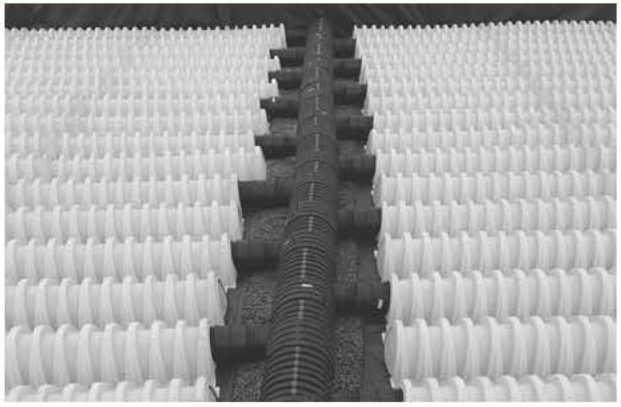
Continue installing chambers by overlapping chamber end corrugations. Chamber joints are labeled "Lower Joint – Overlap Here" and "Build this direction – Upper Joint" Be sure that the chamber placement does not exceed the reach of the construction equipment used to place the stone. No spacing is required between chambers.

Attaching the End Caps



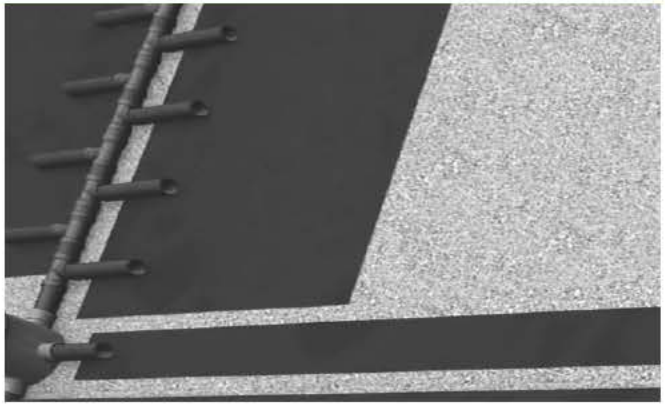
Lift the end of the chamber a few inches off the ground. With the curved face of the end cap facing outward, place the end cap into the chamber's end corrugation.

Prefabricated End Caps



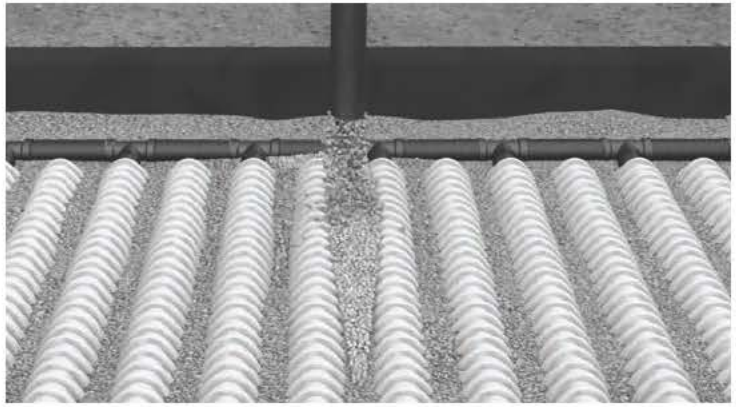
SC-160LP end caps can accept 8" (200mm) or 6" (150mm) manifold inlets. End caps can be ordered as an 8" (200mm) open hole or can be cored in the field.

Isolator Row Plus



Place one continuous layers of ADS Plus fabric between the foundation stone and the Isolator Row Plus chambers, making sure the fabric lays flat and extends the entire width of the chamber feet.

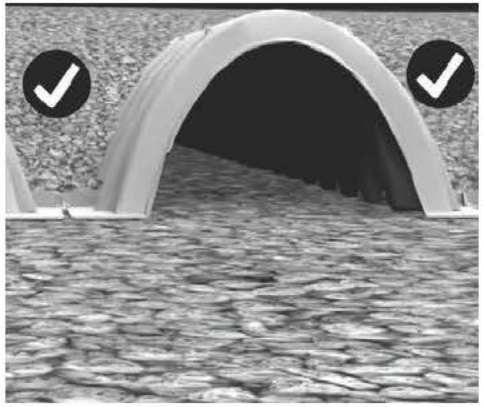
Initial Anchoring of Chambers – Embedment Stone





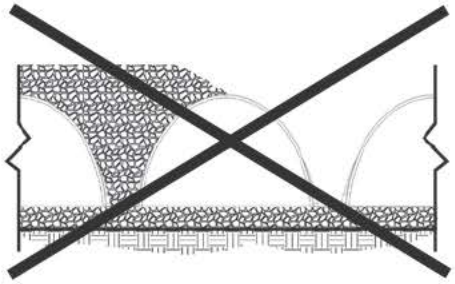
Initial embedment shall be spotted along the centerline of the chamber evenly anchoring the lower portion of the chamber. This is best accomplished with a stone conveyor or excavator reaching along the row.



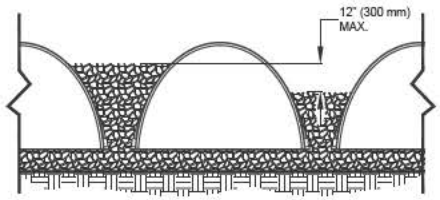


Care should be taken when backfilling not to damage the chambers. Please refer to the allowable construction vehicle loads on page 6.

Backfill of Chambers – Embedment Stone

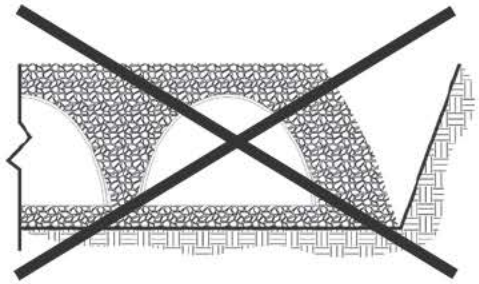


Uneven Backfill

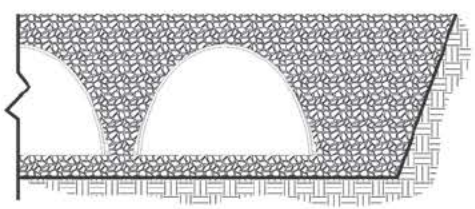


Even Backfill

Backfill chambers evenly. Stone column height should never differ by more than 12" (300 mm) between adjacent chamber rows or between chamber rows and perimeter.



Perimeter Not Backfilled



Perimeter Fully Backfilled

Perimeter stone must be brought up evenly with chamber rows. Perimeter must be fully backfilled, with stone extended horizontally to the excavation wall.

Backfill - Embedment Stone & Cover Stone





Continue evenly backfilling between rows and around perimeter until embedment stone reaches tops of chambers. Perimeter stone must extend horizontally to the excavation wall for both straight or sloped sidewalls.

Final Backfill of Chambers – Fill Material





Small dozers and skid loaders may be used to finish grading stone backfill in accordance with ground pressure limits in Table 2. They must push material parallel to rows only. Never push perpendicular to rows. StormTech recommends that the contractor inspect chambers before placing final backfill. Any chambers damaged by construction shall be removed and replaced.

Final Backfill of Chambers – Fill Material





Install non-woven geotextile over stone. Geotextile must overlap 24" (600 mm) min. where edges meet. Compact each lift of backfill as specified in the site design engineer's drawings. Roller to travel parallel with rows.

StormTech Isolator Row Plus Detail

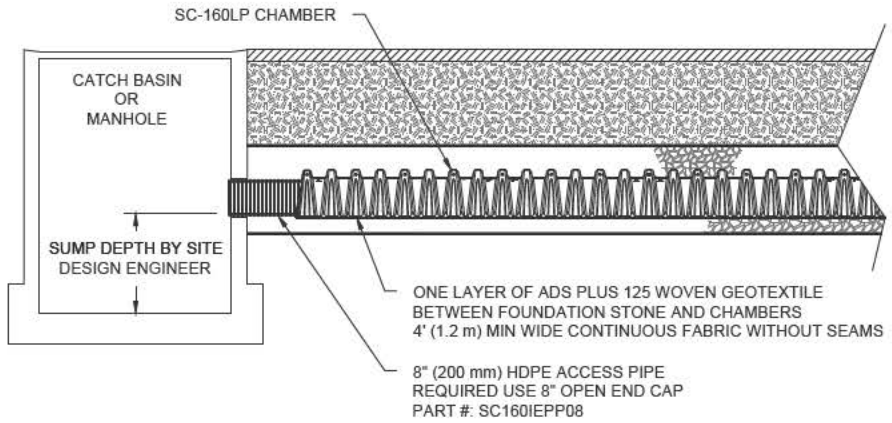


Table 1- Acceptable Fill Materials

Material Location	Description	AASHTO M43 Designation[1]	Compaction/Density Requirement
(D) **Final Fill:** Fill Material for layer 'D' starts from the top of the 'C' layer to the bottom of flexible pavement or unpaved finished grade above. Note that the pavement subbase may be part of the 'D' layer.	Any soil/rock materials, native soils or per engineer's plans. Check plans for pavement subgrade requirements.	N/A	Prepare per site design engineer's plans. Paved installations may have stringent material and preparation requirements.
(C) **Initial Fill:** Fill Material for layer 'C' starts from the top of the embedment stone ('B' layer) to 18" (450 mm) above the top of the chamber. Note that pavement subbase may be part of the 'C' layer.	Granular well-graded soil/aggregate mixtures, <35% fines or processed aggregate. Most pavement subbase materials can be used in lieu of this layer.	AASHTO M45 A-1, A-2-4, A-3 or AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	Begin compaction after min. 12" (300 mm) of material over the chambers is reached. Compact additional layers in 6" (150 mm) max. lifts to a min. 95% Proctor density for well-graded material and 95% relative density for processed aggregate materials. Roller gross vehicle weight not to exceed 12,000 lbs (53 kN). Dynamic force not to exceed 20,000 lbs (89 kN)
(B) **Embedment Stone:** Embedment Stone surrounding chambers from the foundation stone to the 'C' layer above.	Clean, crushed, angular stone	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	No compaction required.
(A) **Foundation Stone:** Foundation Stone below the chambers from the subgrade up to the foot (bottom) of the chamber.	Clean, crushed, angular stone,	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	Place and compact in 6" (150 mm) lifts using two full coverages with a vibratory compactor.[2,3]

Please Note:

1. The listed AASHTO designations are for gradations only. The stone must also be clean, crushed, angular. For example, a specification for #4 stone would state: "clean, crushed, angular no. 4 (AASHTO M43) stone".
2. StormTech compaction requirements are met for 'A' location materials when placed and compacted in 6" (150 mm) (max) lifts using two full coverages with a vibratory compactor.
3. Where infiltration surfaces may be comprised by compaction, for standard installations and standard design load conditions, a flat surface may be achieved by raking or dragging without compaction equipment. For special load designs, contact StormTech for compaction requirements.

Figure 1- Inspection Port Detail

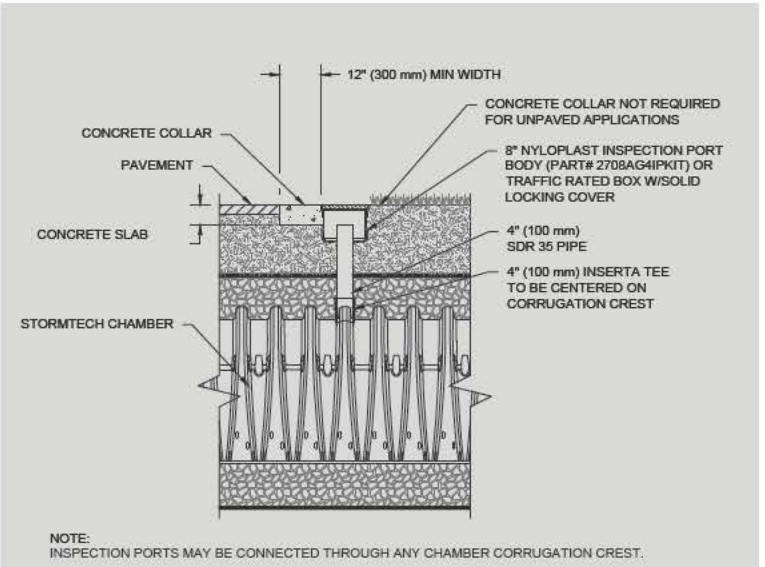
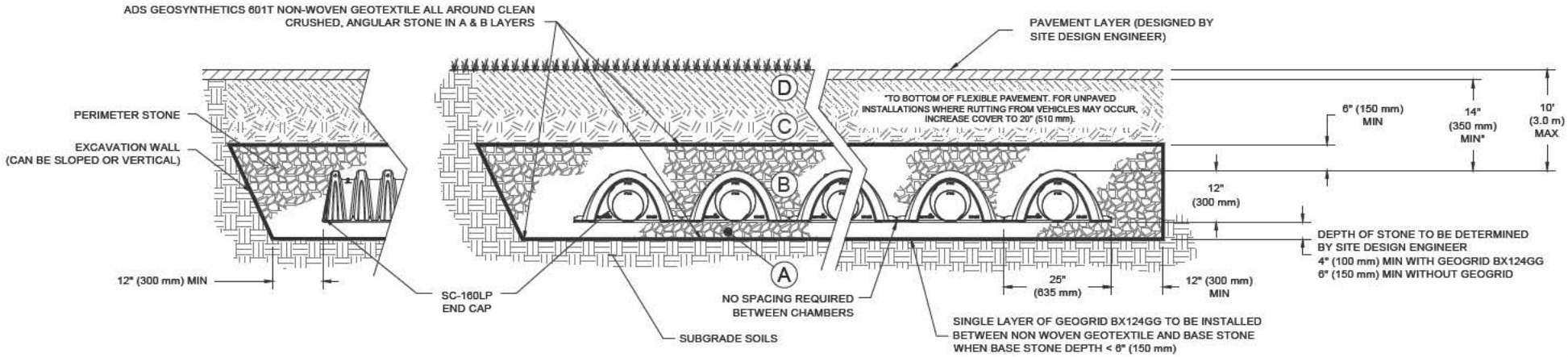


Figure 2 - Fill Material Locations



Notes:

1. 36” (900 mm) of stabilized cover materials over the chambers is recommended during the construction phase if general construction activities, such as full dump truck travel and dumping, are to occur over the bed.
2. During paving operations, dump truck axle loads on 14” (350 mm) of cover may be necessary. Precautions should be taken to avoid rutting of the road base layer, to ensure that compaction requirements have been met, and that a minimum of 14” (350 mm) of cover exists over the chambers. Contact StormTech for additional guidance on allowable axle loads during paving.
3. Ground pressure for track dozers is the vehicle operating weight divided by total ground contact area for both tracks. Excavators will exert higher ground pressures based on loaded bucket weight and boom extension.
4. Mini-excavators (< 8,000lbs/3,628 kg) can be used with at least 12” (300 mm) of stone over the chambers and are limited by the maximum ground pressures in Table 2 based on a full bucket at maximum boom extension.
5. Storage of materials such as construction materials, equipment, spoils, etc. should not be located over the StormTech system. The use of equipment over the StormTech system not covered in Table 2 (ex. soil mixing equipment, cranes, etc) is limited. Please contact StormTech for more information.
6. Allowable track loads based on vehicle travel only. Excavators shall not operate on chamber beds until the total backfill reaches 3 feet (900 mm) over the entire bed.

Table 2 - Maximum Allowable Construction Vehicle Loads[6]

Material Location	Fill Depth over Chambers in. (mm)	Maximum Allowable Wheel Loads		Maximum Allowable Track Loads[6]		Maximum Allowable Roller Loads
		Max Axle Load for Trucks lbs (kN)	Max Wheel Load for Loaders lbs (kN)	Track Width in. (mm)	Max Ground Pressure psf (kPa)	Max Drum Weight or Dynamic Force lbs (kN)
Ⓓ Final Fill Material	36” (900) Compacted	32,000 (142)	16,000 (71)	12” (305) 18” (457) 24” (610) 30” (762) 36” (914)	3880 (186) 2640 (126) 2040 (97) 1690 (81) 1470 (70)	38,000 (169)
Ⓒ Initial Fill Material	24” (600) Compacted	32,000 (142)	16,000 (71)	12” (305) 18” (457) 24” (610) 30” (762) 36” (914)	2690 (128) 1880 (90) 1490 (71) 1280 (61) 1150 (55)	20,000 (89)
	24” (600) Loose/ Dumped	32,000 (142)	16,000 (71)	12” (305) 18” (457) 24” (610) 30” (762) 36” (914)	2390 (114) 1700 (81) 1370 (65) 1190 (57) 1080 (51)	20,000 (89) Roller gross vehicle weight not toexceed 12,000 lbs. (53 kN)
	18” (450)	32,000 (142)	16,000 (71)	12” (305) 18” (457) 24” (610) 30” (762) 36” (914)	2110 (101) 1510 (72) 1250 (59) 1100 (52) 1020 (48)	20,000 (89) Roller gross vehicle weight not to exceed 12,000 lbs. (53 kN)
Ⓑ Embedment Stone	12” (300)	16,000 (71)	NOT ALLOWED	12” (305) 18” (457) 24” (610) 30” (762) 36” (914)	1540 (74) 1190 (57) 1010 (48) 910 (43) 840 (40)	20,000 (89) Roller gross vehicle weight not to exceed 12,000 lbs. (53 kN)
	6” (150)	8,000 (35)	NOT ALLOWED	12” (305) 18” (457) 24” (610) 30” (762) 36” (914)	1070 (51) 900 (43) 800 (38) 760 (36) 720 (34)	NOT ALLOWED

Table 3 - Placement Methods and Descriptions

Material Location	Placement Methods/ Restrictions	Wheel Load Restrictions	Track Load Restrictions	Roller Load Restrictions
		See Table 2 for Maximum Construction Loads		
Ⓓ Final Fill Material	A variety of placement methods may be used. All construction loads must not exceed the maximum limits in Table 2.	36” (900 mm) minimum cover required for dump trucks to dump over chambers.	Dozers to push parallel to rows until 36” (900mm) compaced cover is reached.[4]	Roller travel parallel to rows only until 36” (900 mm) compacted cover is reached.
Ⓒ Initial Fill Material	Excavator positioned off bed recommended. Small excavator allowed over chambers. Small dozer allowed.	Asphalt can be dumped into paver when compacted pavement subbase reaches 18” (450 mm) above top of chambers.	Small LGP track dozers & skid loaders allowed to grade cover stone with at least 6” (150 mm) stone under tracks at all times. Equipment must push parallel to rows at all times.	Use dynamic force of roller only after compacted fill depth reaches 12” (300 mm) over chambers. Roller travel parallel to chamber rows only.
Ⓑ Embedment Stone	No equipment allowed on bare chambers. Use excavator or stone conveyor positioned off bed or on foundation stone to evenly fill around all chambers to at least the top of chambers.	No wheel loads allowed. Material must be placed outside the limits of the chamber bed.	No tracked equipment is allowed on chambers until a min. 6” (150 mm) cover stone is in place.	No rollers allowed.
Ⓐ Foundation Stone	No StormTech restrictions. Contractor responsible for any conditions or requirements by others relative to subgrade bearing capacity, dewatering or protection of subgrade.			

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StormTech® Standard Limited Warranty

STANDARD LIMITED WARRANTY OF STORMTECH LLC ("STORMTECH"): PRODUCTS

(A) This Limited Warranty applies solely to the StormTech chambers and end plates manufactured by StormTech and sold to the original purchaser (the "Purchaser"). The chambers and end plates are collectively referred to as the "Products."

(B) The structural integrity of the Products, when installed strictly in accordance with StormTech's written installation instructions at the time of installation, are warranted to the Purchaser against defective materials and workmanship for one (1) year from the date of purchase. Should a defect appear in the Limited Warranty period, the Purchaser shall provide StormTech with written notice of the alleged defect at StormTech's corporate headquarters within ten (10) days of the discovery of the defect. The notice shall describe the alleged defect in reasonable detail. StormTech agrees to supply replacements for those Products determined by StormTech to be defective and covered by this Limited Warranty. The supply of replacement products is the sole remedy of the Purchaser for breaches of this Limited Warranty. StormTech's liability specifically excludes the cost of removal and/or installation of the Products.

(C) THIS LIMITED WARRANTY IS EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE PRODUCTS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.

(D) This Limited Warranty only applies to the Products when the Products are installed in a single layer. UNDER NO CIRCUMSTANCES, SHALL THE PRODUCTS BE INSTALLED IN A MULTI-LAYER CONFIGURATION.

(E) No representative of StormTech has the authority to change this Limited Warranty in any manner or to extend this Limited Warranty. This Limited Warranty does not apply to any person other than to the Purchaser.

(F) Under no circumstances shall StormTech be liable to the Purchaser or to any third party for product liability claims; claims arising from the design, shipment, or installation of the Products, or the cost of other goods or services related to the purchase and installation of the Products. For this Limited Warranty to apply, the Products must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and StormTech's written installation instructions.

(G) THE LIMITED WARRANTY DOES NOT EXTEND TO INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES. STORMTECH SHALL NOT BE LIABLE FOR PENALTIES OR LIQUIDATED DAMAGES, INCLUDING LOSS OF PRODUCTION AND PROFITS; LABOR AND MATERIALS; OVERHEAD COSTS; OR OTHER LOSS OR EXPENSE INCURRED BY THE PURCHASER OR ANY THIRD PARTY. SPECIFICALLY EXCLUDED FROM LIMITED WARRANTY COVERAGE ARE DAMAGE TO THE PRODUCTS ARISING FROM ORDINARY WEAR AND TEAR; ALTERATION, ACCIDENT, MISUSE, ABUSE OR NEGLECT; THE PRODUCTS BEING SUBJECTED TO VEHICLE TRAFFIC OR OTHER CONDITIONS WHICH ARE NOT PERMITTED BY STORMTECH'S WRITTEN SPECIFICATIONS OR INSTALLATION INSTRUCTIONS; FAILURE TO MAINTAIN THE MINIMUM GROUND COVERS SET FORTH IN THE INSTALLATION INSTRUCTIONS; THE PLACEMENT OF IMPROPER MATERIALS INTO THE PRODUCTS; FAILURE OF THE PRODUCTS DUE TO IMPROPER SITING OR IMPROPER SIZING; OR ANY OTHER EVENT NOT CAUSED BY STORMTECH. A PRODUCT ALSO IS EXCLUDED FROM LIMITED WARRANTY COVERAGE IF SUCH PRODUCT IS USED IN A PROJECT OR SYSTEM IN WHICH ANY GEOTEXTILE PRODUCTS OTHER THAN THOSE PROVIDED BY ADVANCED DRAINAGE SYSTEMS ARE USED. THIS LIMITED WARRANTY REPRESENTS STORMTECH'S SOLE LIABILITY TO THE PURCHASER FOR CLAIMS RELATED TO THE PRODUCTS, WHETHER THE CLAIM IS BASED UPON CONTRACT, TORT, OR OTHER LEGAL THEORY.

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adspipe.com
800-821-6710



ADS 0601T/O NONWOVEN GEOTEXTILE SPECIFICATION

Scope

This specification describes ADS 0601T/O nonwoven geotextile.

Filter Fabric Requirements

ADS 0601T/O is an orange nonwoven geotextile composed of polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position. ADS 0601T/O is inert to biological degradation and resists naturally encountered chemicals, alkali and acids. ADS 0601T/O conforms to the physical property values listed below:

Filter Fabric Properties

Property	Test Method	Unit	Typical Value[1] MD	Typical Value[1] CD
Grab Tensile Strength	ASTM D4632	lbs (N)	175 (779)	175 (779)
Grab Tensile Elongation	ASTM D4632	%	75	75
Trapezoid Tear Strength	ASTM D4533	lbs (N)	85 (378)	85 (378)
CBR Puncture Strength	ASTM D6241	lbs (N)	480 (2136)	480 (2136)
Permittivity	ASTM D4491	sec^{-1}	1.5	1.5
Flow Rate	ASTM D4491	gal/min/ft^2 (l/min/m^2)	105 (4278)	105 (4278)
UV Resistance (at 500 hours)[1]	ASTM D4355	% strength retained	80	80

Physical Properties

Property	Test Method	Unit	Typical Value[2]
Weight	ASTM D5161	oz/yd^2 (g/m^2)	6.5 (220)
Thickness	ASTM D5199	mils (mm)	65 (1.7)
Roll Dimensions (W x L)	-	ft (m)	15 x 300 (4.5 x 91)
Roll Area	-	yd^2 (m^2)	500 (418)
Estimated Roll Weight	-	lb (kg)	220 (100)

1 Modified, Minimum Test Value
2 ASTM D4439 Standard Terminology for Geosynthetics: typical value, n-*for geosynthetics*, the mean value calculated from documented manufacturing quality control test results for a defined population obtained from one test method associated with on specific property.

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Separation

ADS 315W WOVEN GEOTEXTILE SPECIFICATION

Scope

This specification describes ADS 315W woven geotextile.

Filter Fabric Requirements

ADS 315W is manufactured using high-tenacity polypropylene yarns that are woven to form a dimensionally stable network, which allows the yarns to maintain their relative position. ADS 315W resists ultraviolet deterioration, rotting and biological degradation and is inert to commonly encountered soil chemicals. ADS 315W conforms to the physical property values listed below:

Filter Fabric Properties

Property	Test Method	Unit	M.A.R.V. (Minimum Average Roll Value)[2]
Tensile Strength (Grab)	ASTM D4632	lbs (N)	315 (1400)
Elongation	ASTM D4632	%	15
CBR Puncture	ASTM D6241	lbs (N)	900 (4005)
Puncture	ASTM D4833	lbs (N)	150 (667)
Mullen Burst	ASTM D3786	psi (kPa)	600 (4134)
Trapezoidal Tear	ASTM D4533	lbs (N)	120 (533)
UV Resistance (at 500 hours)	ASTM D4355	%	70
Apparent Opening Size (AOS)*	ASTM D4751	U.S. Sieve (mm)	40 (.425)
Permittivity	ASTM D4491	sec^{-1}	.05
Water Flow Rate	ASTM D4491	gpm/ft^2 ($l/min/m^2$)	4 (163)

* Maximum average roll value.

Packaging

Roll Dimensions (W x L) - ft. (m)	12.5 x 360/ 15 x 300 / 17.5 x 258 (3.81 x 109.8/ 4.57 x 91.5 / 5.33 x 78.6)

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400 Harvey Road, Manchester, NH 03103 | T (603) 627-5500 | F (603) 627-5501
allenmajor.com

ALLEN & MAJOR ASSOCIATES, INC.

October 8, 2024

To: Donna Benton, AICP
Director of Planning and Community Development
City of Dover, NH
288 Central Avenue
Dover, NH 03820-4169

Copy:

A&M Project #: 3347-01

Re: Site Plan
114 Silver Street
(Assessor's Map 12, Lot 148)

Dear Ms. Benton:

On behalf of 114 Silver Street Group, LLC, Allen & Major Associates, Inc. (A&M) conducted an on the ground observation of the existing structure to confirm that tie in locations or discharge points for all sump pumps and roof leaders for existing structures on the property are not connected to the municipal system.

Based on our observations on July 18, 2024 there were no observed sump pumps within any of the existing structures to remain. Additionally, observations on August 15, 2024 confirmed that gutters and down spouts were not present on the existing structures.

We trust that this letter will certify that no illicit discharges to the municipal drainage system are present at the property at the time of the observations mentioned above.

Very Truly Yours,
ALLEN & MAJOR ASSOCIATES, INC.

Michael A. Malynowski, PE
Senior Project Manager

STATE OF NEW HAMPSHIRE
MICHAEL A. MALYNOWSKI No. 12205
LICENSED PROFESSIONAL ENGINEER

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ARTHUR THOMAS
PROPERTIES
A Real Estate Services Company

10 Durham Road
Dover, NH 03820

Ph: 603.413.6175

17 December 2024

Chairperson
City of Dover Planning Board
288 Central Avenue
Dover, NH 03820

Re: Architectural Narrative for Proposed 4-Unit Apartment Building in the Heritage Residential Zoning District located at 114 Silver Street, Dover NH

Dear Chairperson,

I am pleased to present this architectural narrative in support of my proposal to develop a 4-unit apartment building within the Heritage Residential (HR) Zoning District. As the developer, I am collaborating with Art Form Architecture, LLC of North Hampton, NH, to create a design that seamlessly integrates with the unique character of Dover historic Silver Street neighborhood. The proposed design is elegant, respectful, and balances both the guidelines set forth in the June 1991 Dover Historic Preservation Guide and the zoning ordinance requirement that the building present from the street as if it were a single-family residence.

The HR district's emphasis on preserving the historic charm of the neighborhood is a principle we have embraced wholeheartedly in this project. Our proposed building has been thoughtfully designed to reflect the architectural language of traditional single-family homes in Dover, ensuring it complements the surrounding streetscape.

Key design features include:

1. **Single-Family Home Aesthetic**:
   The structure is articulated to mimic the scale, massing, and detailing of a New Englander style single-family home. The building's façade is proportioned into balanced sections with varying rooflines and gables to break up its mass and create the impression of a single dwelling. These elements align with the architectural forms prevalent in the district.
2. **Traditional Materials and Detailing**:
   The exterior materials will include clapboard siding, accentuated trim around windows, at the corner boards, rake boards, and includes Gable Returns. The roofing material will be architectural shingles, selected to match the textures and colors found in the district's historic homes. Window styles, trim details, and a grand front entrance are inspired by examples featured in the Historic Preservation Guide, ensuring consistency with the neighborhood's established character.
3. **Discrete Unit Access**:
   Entrances to the four residential apartments are accessed through an interior corridor, which further promotes the exterior aesthetic of a single-family dwelling.

This design approach is intended to meet the spirit and intent of the HR district while balancing the Cities stated need to add rental housing and also respecting unique architectural appeal of the Silver Street neighborhood. I believe this project will add value to the community while respecting its historical and cultural identity.

Thank you for considering this proposal. We look forward to the opportunity to present our plans to the Planning Board and welcome any feedback to ensure the project aligns with the city's vision for the Heritage Residential district.

Sincerely,

Thomas A. Toye IV
Owner/Broker/Member: Arthur Thomas Properties, LLC
Managing Member: 114 Silver Street Group, LLC



Art Form Architecture, LLC

Streetscape View
114 Silver Street - Dover, NH

ALLEN & MAJOR
ASSOCIATES, INC.



Art Form Architecture, LLC

Streetscape View
114 Silver Street - Dover, NH

ALLEN & MAJOR
ASSOCIATES, INC.



Art Form Architecture, LLC

Streetscape View
114 Silver Street - Dover, NH

Allen & Major Associates, Inc.



Art Form Architecture, LLC

Streetscape View
114 Silver Street - Dover, NH

Allen & Major Associates, Inc.

12/4/2024

Catherine

1183.500.v1 EL (12/4/2024)

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Art Form Architecture, LLC

603-431-9559



View from Silver Street & Rutland



View from Parking Lot & Rutland



Interior View from Parking Lot

Dear Builders and Home Buyers,

In addition to our Terms and Conditions (the "Terms"), please be aware of the following:

This design may not yet have Construction Drawings (as defined in the Terms), and is, therefore, only available as a Design Drawing (as defined in the Terms and together with Construction Drawings, "Drawings'). It is possible that during the conversion of a Design Drawing to a final Construction Drawing, changes may be necessary including, but not limited to, dimensional changes. Please see Plan Data Explained on www.artform.us to understand room sizes, dimensions and other data provided. We are not responsible for typographical errors.

Art Form Architecture ("Art Form") requires that our home designs be built substantially as designed. Art Form will not be obligated by or liable for use of this design with markups as part of any builder agreement. While we attempt to accommodate where possible and reasonable, and where the changes do not denigrate our design, any and all changes to Drawings must be approved in writing by Art Form. It is recommended that you have your Drawing updated by Art Form prior to attaching any Drawing to any builder agreement. Art Form shall not be responsible for the misuse of or unauthorized alterations to any of its Drawings.

Facade Changes:
• To maintain design integrity, we pay particular attention to features on the front facade, including but not limited to door surrounds, window casings, finished porch column sizes, and roof friezes. While we may allow builders to add their own flare to aesthetic elements, we don't allow our designs to be stripped of critical details. Any such alterations require the express written consent of Art Form.
• Increasing ceiling heights usually requires adjustments to window sizes and other exterior elements.
Floor plan layout and/or Structural Changes:
• Structural changes always require the express written consent of Art Form
• If you wish to move or remove walls or structural elements (such as removal of posts, increases in house size, ceiling height changes, addition of dormers, etc), please do not assume it can be done without other additional changes (even if the builder or lumber yard says you can).

12/4/2024

Catherine

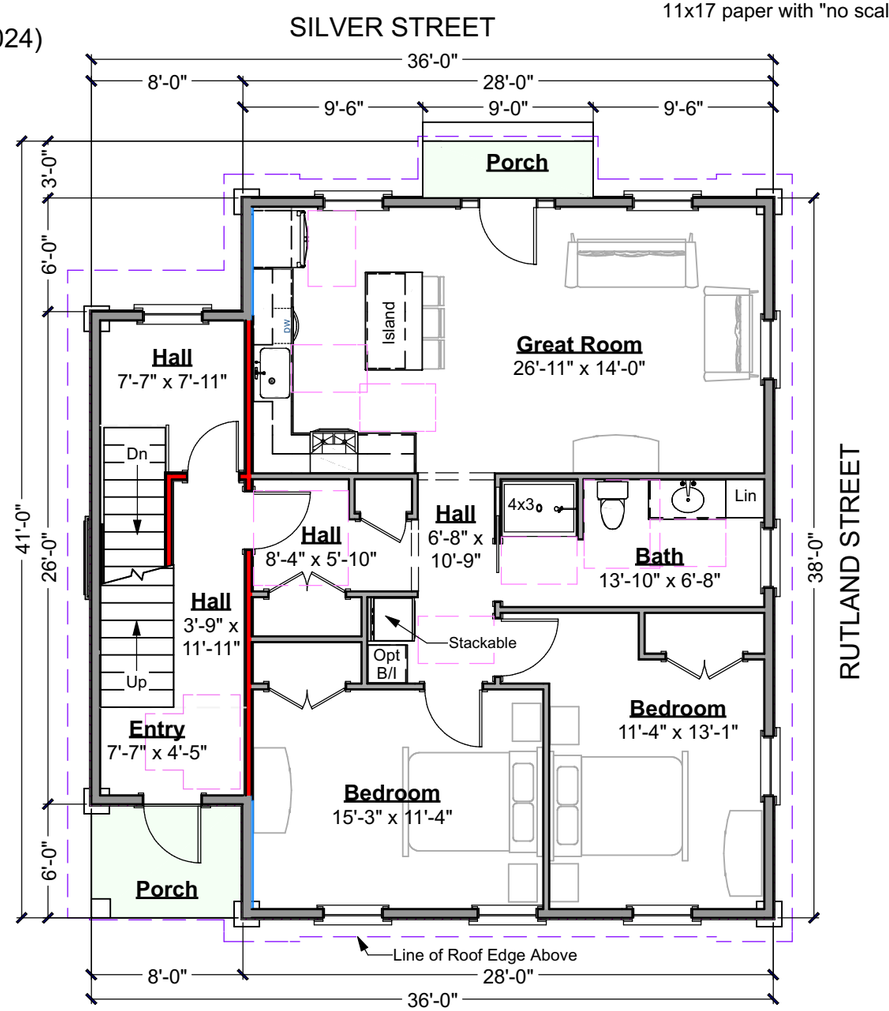
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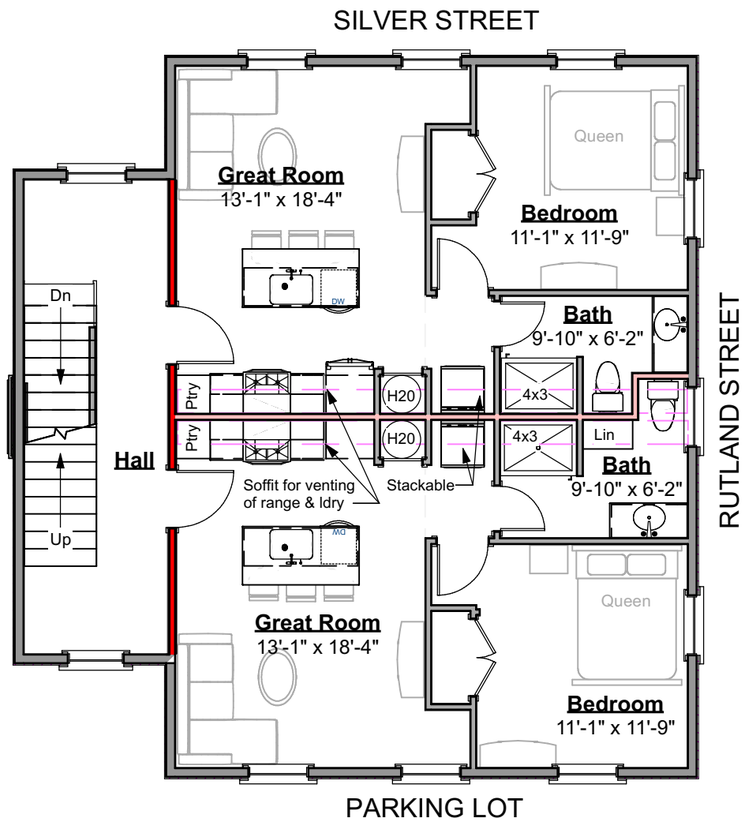
603-431-9559



Total Living Area this Floor: 1272 sq ft
Unit Living Area (excluding entry halls & stair): 1060 sq ft
8'-0" Ceilings

First Floor Plan

Scale: 1/8" = 1'-0"



Total Living Area this Floor: 1272 sq ft
8'-0" Ceilings

Front Unit: 537 sq ft
Rear Unit: 523 sq ft

Second Floor Plan

Scale: 1/8" = 1'-0"

12/4/2024

Catherine

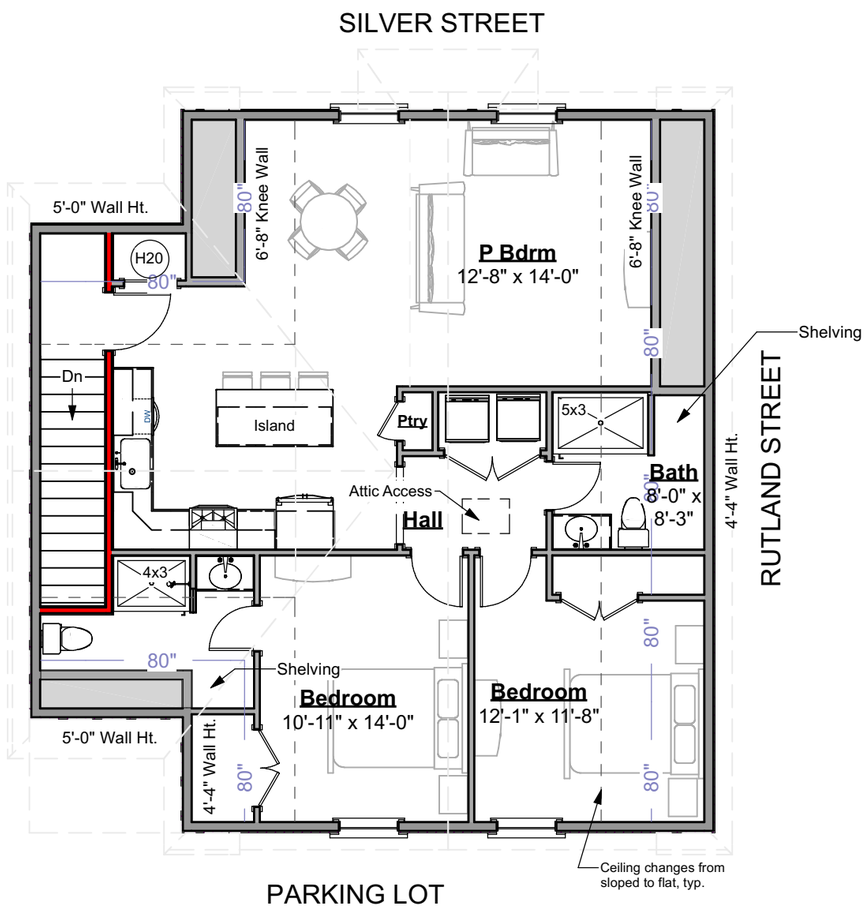
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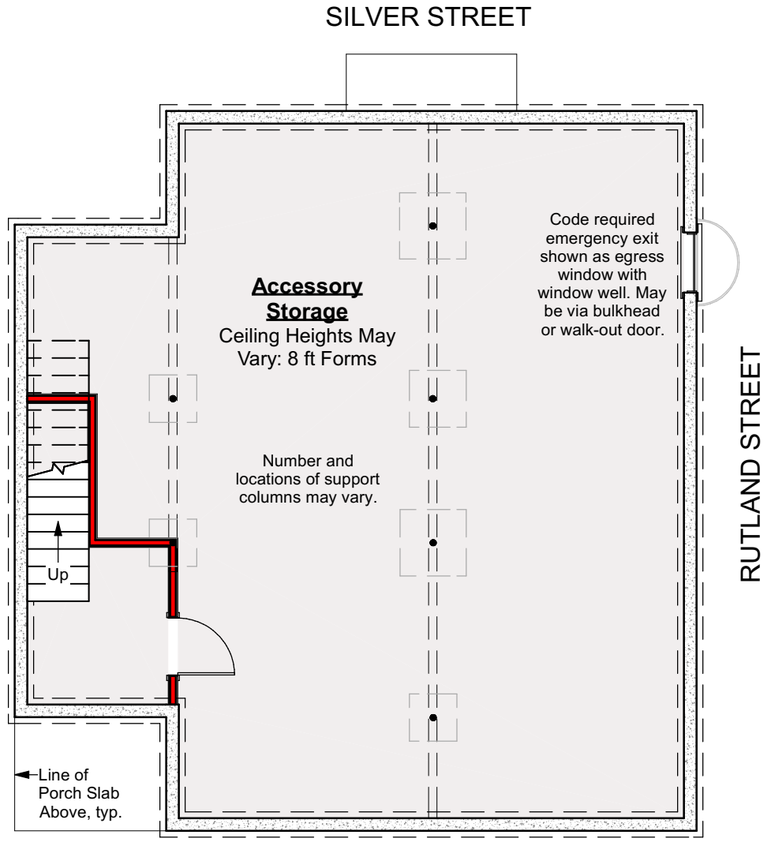
603-431-9559



Total Living Area this Floor: 1192 sq ft
Unit Living Area (excluding stair & landing): 1106 sq ft
9'-0" Ceilings

Third Floor Plan

Scale: 1/8" = 1'-0"



Foundation Plan

Scale: 1/8" = 1'-0"

12/4/2024

Catherine

1183.500.v1 EL (12/4/2024)

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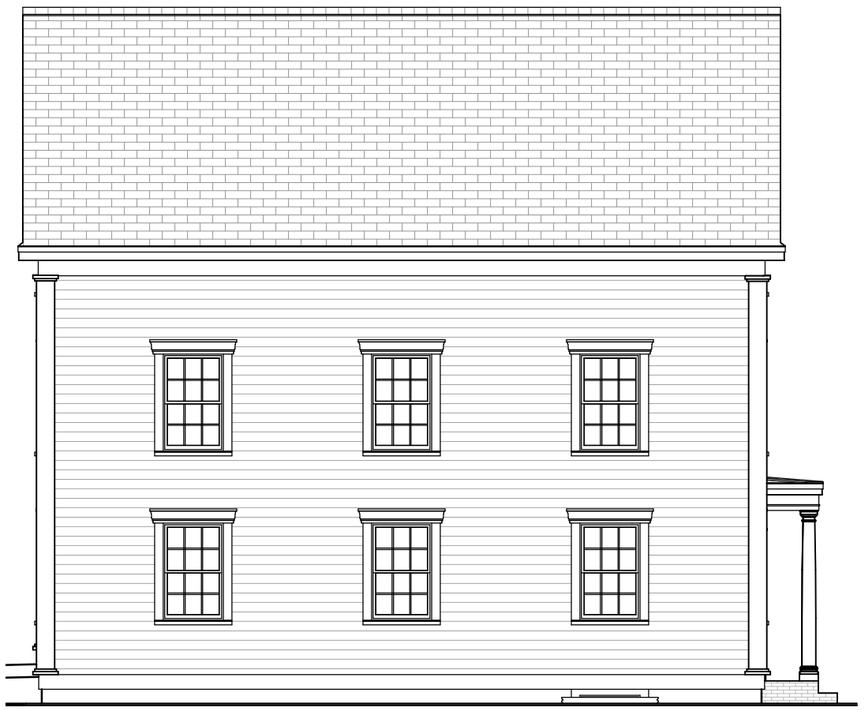
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603-431-9559



Parking Lot Elevation



Rutland Street Elevation

Elevations

Scale: 1/8" = 1'-0"

12/4/2024

Catherine

1183.500.v1 EL (12/4/2024)

NOTE: To scale as noted only if printed on 11x17 paper with "no scaling" (do not "Fit").

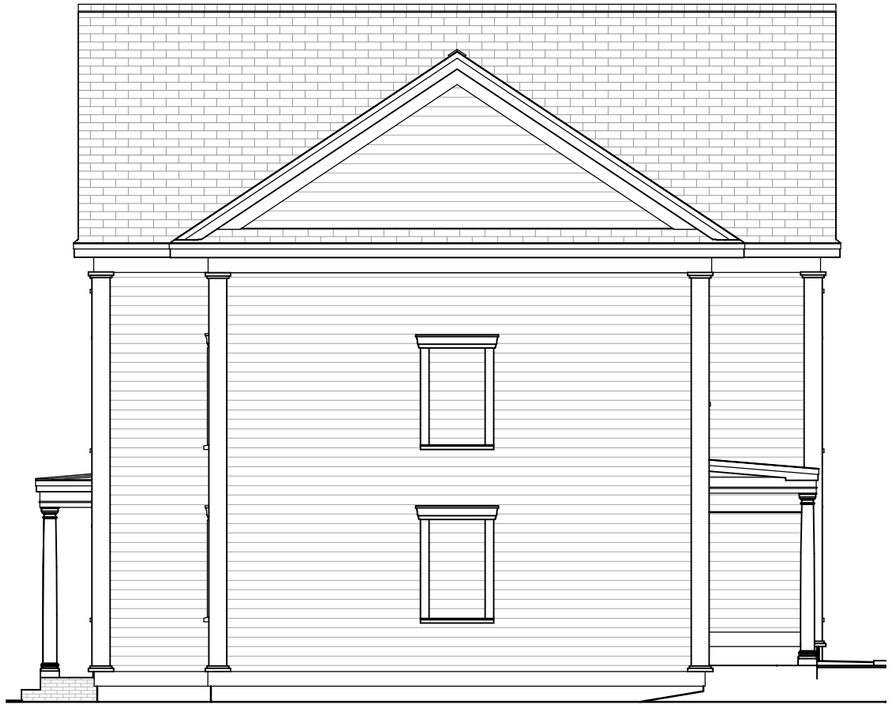
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Silver Street Elevation



Interior Lot Elevation

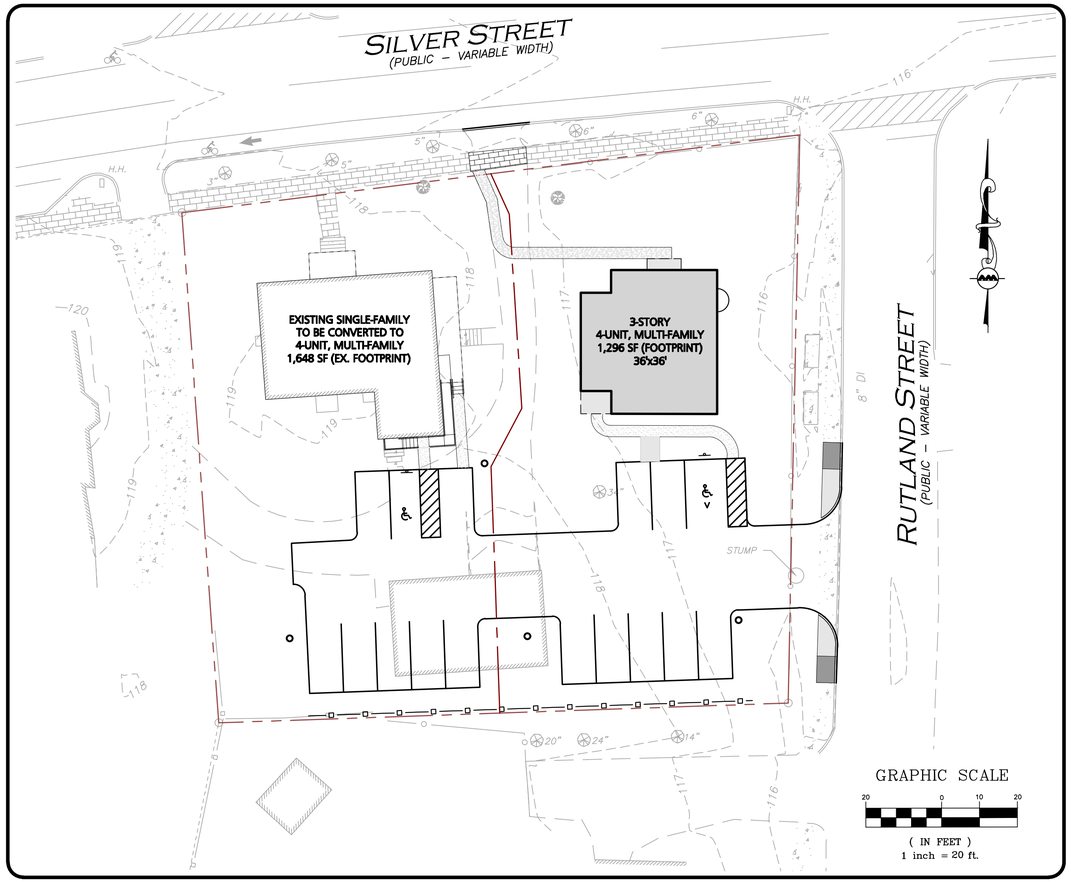
Elevations

Scale: 1/8" = 1'-0"



LOCUS MAP
NOT TO SCALE

SITE DEVELOPMENT PLANS FOR
114 SILVER STREET
(MAP 12, LOT 148)
DOVER, NEW HAMPSHIRE 03820



APPLICANT/OWNER:
114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820
(603) 412-6175

CIVIL ENGINEER / SURVEYOR / LANDSCAPE ARCHITECT:
ALLEN & MAJOR ASSOCIATES, INC.
400 HARVEY ROAD
MANCHESTER, NH 03103
(603) 627-5500

ARCHITECT:
ART FORM ARCHITECTURE, INC.
PO BOX 535
NORTH HAMPTON, NH 03862

LIST OF DRAWINGS

DRAWING TITLE	SHEET NO.	ISSUED	REV
EXISTING CONDITIONS	1	06/20/24	08/20/24
SUBDIVISION & EASEMENT PLAN	2	10/04/24	12/16/24
SITE PREPARATION PLAN	C-101	06/20/24	12/16/24
LAYOUT & MATERIALS PLAN	C-102	06/20/24	12/16/24
GRADING & DRAINAGE PLAN	C-103	06/20/24	12/16/24
UTILITIES PLAN	C-104	06/20/24	12/16/24
SITE LIGHTING PLAN	C-105	08/20/24	12/16/24
NEIGHBORHOOD PLAN	C-106	08/20/24	12/16/24
ZONING CALCULATIONS PLAN	C-107	10/04/24	12/16/24
DETAILS	C-501	06/20/24	12/16/24
DETAILS	C-502	06/20/24	12/16/24
DETAILS	C-503	06/20/24	12/16/24
DETAILS	C-504	08/20/24	12/16/24
LANDSCAPE PLAN	L-101	06/20/24	12/16/24
LANDSCAPE NOTES	L-102	06/20/24	12/16/24
LANDSCAPE NOTES & DETAILS	L-501	06/20/24	12/16/24

ISSUED FOR T.R.C. REVIEW: JUNE 20, 2024
REISSUED FOR T.R.C. REVIEW: AUGUST 20, 2024
REISSUED FOR T.R.C. REVIEW: OCTOBER 4, 2024
REISSUED FOR T.R.C. REVIEW: NOVEMBER 18, 2024
ISSUED FOR PLANNING BOARD REVIEW: DECEMBER 18

STATE OF NEW HAMPSHIRE – MICHAEL A. MALYNOWSKI No. 12205 – LICENSED PROFESSIONAL ENGINEER
12-16-2024
PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
5	12-16-24	MISC. REVS. PER T.R.C. COMMENTS
4	11-18-24	MISC. REVS. PER T.R.C. COMMENTS
3	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
2	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
1	08-30-24	MISC. REVS. PER T.R.C. COMMENTS

APPLICANT\OWNER:
114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:
114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	06/20/24
SCALE:	AS SHOWN	DWG. NAME:	C3347-01
DESIGNED BY:	JRG/SM	CHECKED BY:	MAM

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501
WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE: COVER
SHEET No. C

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PLANNING FILE # SITE-2024-0006

R:\PROJECTS\3347-01\CIVIL\DRAWINGS\CURRENT\C-3347-01_COVER.DWG

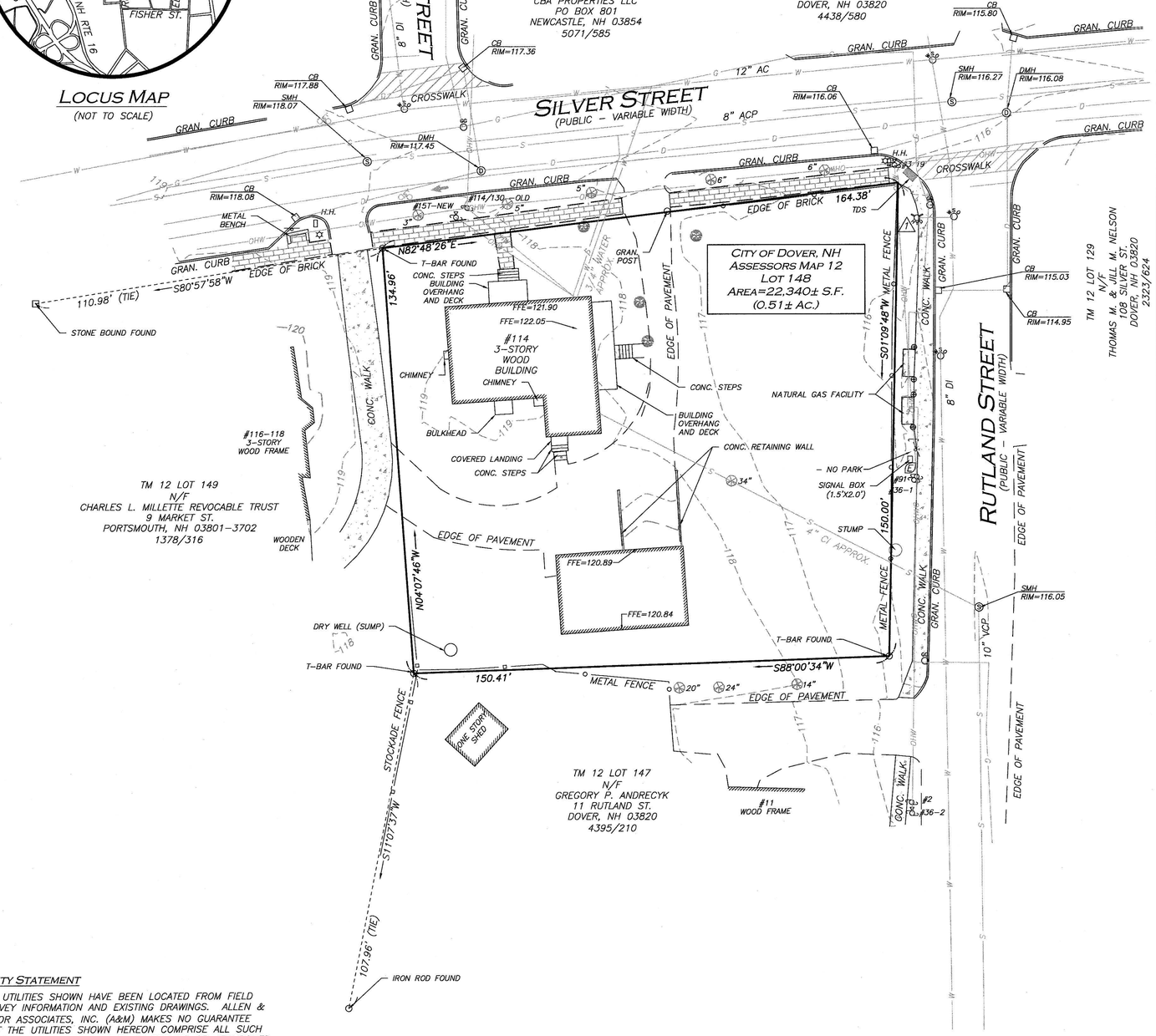


LOCUS MAP
(NOT TO SCALE)

BENCHMARK SUMMARY

TBM #	DESCRIPTION	ELEV.
1	HYDRANT FLANGE BOLT HYDRANT	118.30'

NEW HAMPSHIRE GRID (NAD 83)



LEGEND

STONE BOUND (SB)	⊡	5' CONTOUR	—55—
IRON PIPE (IP)	o	PROPERTY LINE	
IRON ROD (IR)	○	ABUTTERS LINE	
DRAIN MANHOLE (DMH)	Ⓓ	CONCRETE RETAINING WALL	
SEWER MANHOLE (SMH)	Ⓢ	EDGE OF PAVEMENT	
CATCH BASIN (CB)	□	EDGE OF BRICK	
UTILITY POLE		CURB	
UTILITY POLE W/LIGHT		STOCKADE FENCE	
GUY WIRE		METAL FENCE	
FIRE HYDRANT		OVERHEAD WIRES	OHW
WATER SERVICE		FINISHED FLOOR ELEVATION	FFE
WATER GATE		CONCRETE	CONC.
GAS GATE		GRANITE	GRAN.
BOLLARD		BOTTOM CENTER	(BC)
INVERT (INV)		REINFORCED CONCRETE PIPE	RCP
LIGHT		POLYVINYL CHLORIDE PIPE	PVC
TREE		CORRUGATED METAL PIPE	CMP
BUSH / SHRUB		CAST IRON PIPE	CI
AREA DRAIN		DUCTILE IRON PIPE	DI
SIGN		HIGH DENSITY POLYETHYLENE PIPE	HDPE
HAND HOLE	H.H.	FOUND	FND
ELECTRIC METER	E	NOW OR FORMERLY	N/F
PAINTED ARROW		BOOK	BK.
PAINTED BIKING ZONE		PAGE	PG.
CONCRETE			
BRICK			
BUILDING			
BUILDING OVERHANG			
1' CONTOUR	—53—		

LOCUS REFERENCES
–CITY OF DOVER TAX MAP 12, LOT 148
–S.C.R.D. BOOK 5161, PAGE 948

PLAN REFERENCES
–PLAN ENTITLED, "MINOR SUBDIVISION PLAN PREPARED FOR PROLIN DEVELOPMENT TRUST DOVER, N.H.", SCALE 1"=20', DATED FEBRUARY 3, 1986, PREPARED BY THOMAS E. MORAN, INC, AND ON FILE AT THE S.C.R.D. AS PLAN BOOK 29 PAGE 26.
–PLAN ENTITLED, "PLAN OF SUBDIVISION FOR IRENE R. CARRIER RUTLAND STREET DOVER, NEW HAMPSHIRE", SCALE 1"=40', DATED OCTOBER 1978, PREPARED BY K.E. MOORE & B.G. STAPLES, AND ON FILE AT THE S.C.R.D AS PLAN #17C–89.
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–PLAN ENTITLED, "PLAN OF LAND HARRY L. FARNHAM DOVER, NEW HAMPSHIRE", DATED OCTOBER 1955, AND ON FILE AT THE S.C.R.D AS PLAN BOOK 655 PAGE 305.

NOTES
1. NORTH ARROW IS BASED ON NEW HAMPSHIRE GRID COORDINATE SYSTEM (NAD 83).
2. BOOK/PAGE AND PLAN REFERENCES ARE TAKEN FROM THE STRAFFORD COUNTY REGISTRY OF DEEDS IN DOVER, NH
3. VERTICAL DATUM IS NAVD 88.
4. CONTOUR INTERVAL IS ONE FOOT (1').
5. THE INTENT OF THIS PLAN IS TO SHOW THE LOCATION OF BOUNDARIES IN ACCORDANCE WITH CURRENT LEGAL DESCRIPTIONS. IT IS NOT AN ATTEMPT TO DEFINE UNWRITTEN RIGHTS, DETERMINE THE EXTENT OF OWNERSHIP OR DEFINE THE LIMITS OF TITLE.

UTILITY STATEMENT
THE UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. ALLEN & MAJOR ASSOCIATES, INC. (A&M) MAKES NO GUARANTEE THAT THE UTILITIES SHOWN HEREON COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. A&M FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. A&M HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

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

R:\PROJECTS\3347–01\SURVEY\DRAWINGS\CURRENT\S–3347–01–EC.DWG

THIS PLAN IS THE RESULT OF AN ACTUAL ON THE GROUND SURVEY PERFORMED ON OR BETWEEN APRIL 17, 2024 AND APRIL 18, 2024 AND HAD AN ERROR OF CLOSURE OF NO GREATER THAN 1/10,000.

ALLEN & MAJOR ASSOCIATES, INC.

STATE OF NEW HAMPSHIRE · No. 908 · JAMES P. SMITH · LICENSED LAND SURVEYOR

JAMES P. SMITH NH LLS #908 — 8-6-24 DATE

REV	DATE	DESCRIPTION
1	08/06/24	MISC. REVS. PER T.R.C. COMMENTS

APPLICANT\OWNER:
114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:
TAX MAP 12 LOT 148
114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	06/20/24
SCALE:	1" = 20'	DWG. NAME:	S-3347-01-EC
DRAFTED BY:	KMT	CHECKED BY:	JPS

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
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MANCHESTER, NH 03103
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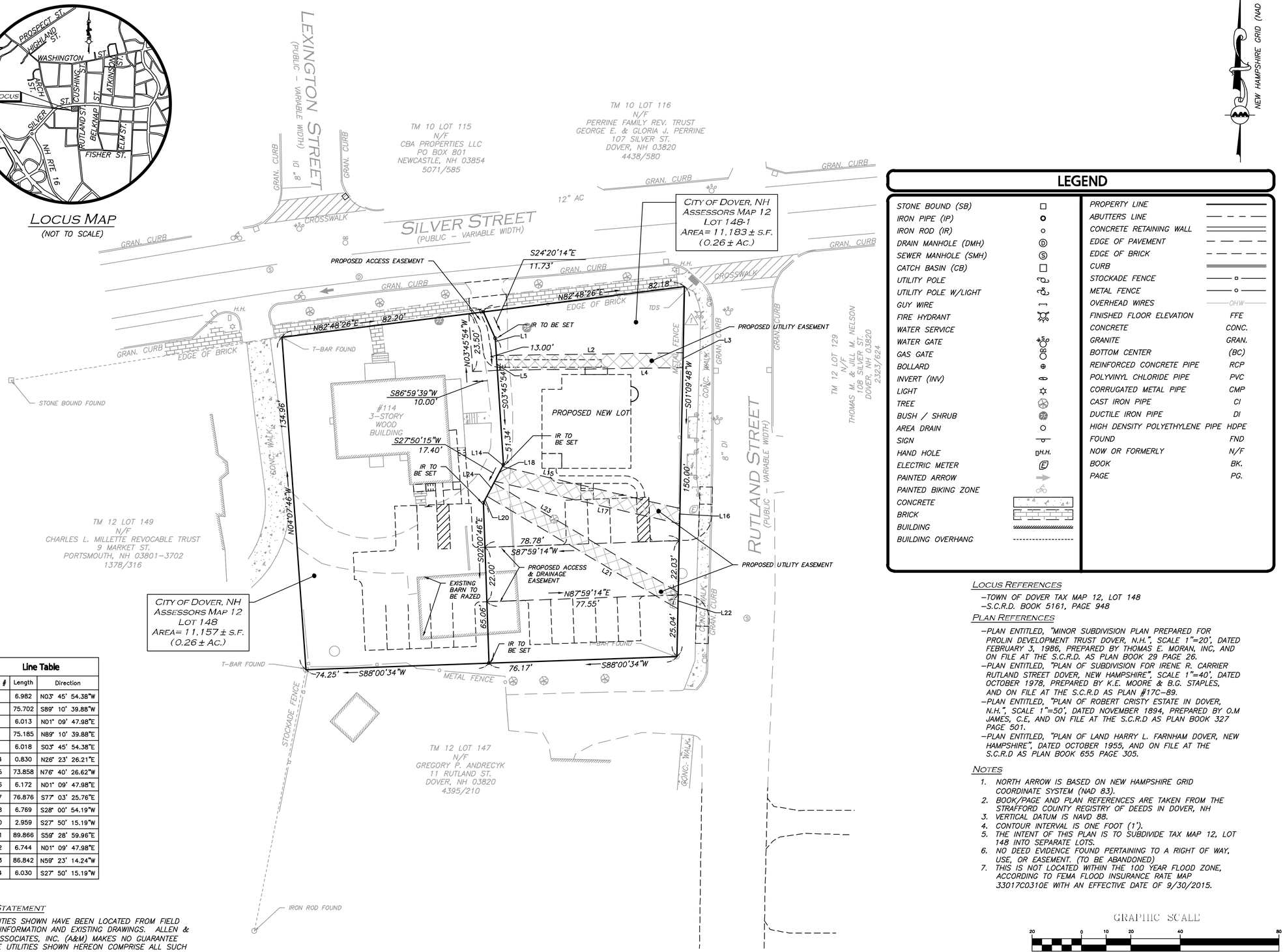
DRAWING TITLE:
RESIDENTIAL SITE PLAN

SHEET No.
1

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LOCUS MAP
(NOT TO SCALE)



Line Table		
Line #	Length	Direction
L1	6.982	N03° 45' 54.38"W
L2	75.702	S89° 10' 39.88"W
L3	6.013	N01° 09' 47.98"E
L4	75.185	N89° 10' 39.88"E
L5	6.018	S03° 45' 54.38"E
L14	0.830	N26° 23' 26.21"E
L15	73.858	N76° 40' 26.62"W
L16	6.172	N01° 09' 47.98"E
L17	76.876	S77° 03' 25.76"E
L18	6.769	S28° 00' 54.19"W
L20	2.959	S27° 50' 15.19"W
L21	89.866	S59° 28' 59.96"E
L22	6.744	N01° 09' 47.98"E
L23	86.842	N59° 23' 14.24"W
L24	6.030	S27° 50' 15.19"W

UTILITY STATEMENT

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LEGEND

STONE BOUND (SB)	□	PROPERTY LINE	———
IRON PIPE (IP)	○	ABUTTERS LINE	— — —
IRON ROD (IR)	◦	CONCRETE RETAINING WALL	═══
DRAIN MANHOLE (DMH)	Ⓓ	EDGE OF PAVEMENT	— — —
SEWER MANHOLE (SMH)	Ⓢ	EDGE OF BRICK	— — —
CATCH BASIN (CB)	□	CURB	═══
UTILITY POLE		STOCKADE FENCE	——▫——
UTILITY POLE W/LIGHT		METAL FENCE	——○——
GUY WIRE		OVERHEAD WIRES	OHW
FIRE HYDRANT		FINISHED FLOOR ELEVATION	FFE
WATER SERVICE		CONCRETE	CONC.
WATER GATE		GRANITE	GRAN.
GAS GATE		BOTTOM CENTER	(BC)
BOLLARD		REINFORCED CONCRETE PIPE	RCP
INVERT (INV)		POLYVINYL CHLORIDE PIPE	PVC
LIGHT		CORRUGATED METAL PIPE	CMP
TREE		CAST IRON PIPE	CI
BUSH / SHRUB		DUCTILE IRON PIPE	DI
AREA DRAIN		HIGH DENSITY POLYETHYLENE PIPE	HDPE
SIGN		FOUND	FND
HAND HOLE	H.H.	NOW OR FORMERLY	N/F
ELECTRIC METER	Ⓔ	BOOK	BK.
PAINTED ARROW		PAGE	PG.
PAINTED BIKING ZONE			
CONCRETE			
BRICK			
BUILDING			
BUILDING OVERHANG			

LOCUS REFERENCES

–TOWN OF DOVER TAX MAP 12, LOT 148
–S.C.R.D. BOOK 5161, PAGE 948

PLAN REFERENCES

–PLAN ENTITLED, "MINOR SUBDIVISION PLAN PREPARED FOR PROLIN DEVELOPMENT TRUST DOVER, N.H.", SCALE 1"=20', DATED FEBRUARY 3, 1986, PREPARED BY THOMAS E. MORAN, INC, AND ON FILE AT THE S.C.R.D. AS PLAN BOOK 29 PAGE 26.
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NOTES

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2. BOOK/PAGE AND PLAN REFERENCES ARE TAKEN FROM THE STRAFFORD COUNTY REGISTRY OF DEEDS IN DOVER, NH
3. VERTICAL DATUM IS NAVD 88.
4. CONTOUR INTERVAL IS ONE FOOT (1').
5. THE INTENT OF THIS PLAN IS TO SUBDIVIDE TAX MAP 12, LOT 148 INTO SEPARATE LOTS.
6. NO DEED EVIDENCE FOUND PERTAINING TO A RIGHT OF WAY, USE, OR EASEMENT. (TO BE ABANDONED)
7. THIS IS NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE, ACCORDING TO FEMA FLOOD INSURANCE RATE MAP 33017C0310E WITH AN EFFECTIVE DATE OF 9/30/2015.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 25 ft.

R:\PROJECTS\3347-01\SURVEY\DRAWINGS\CURRENT\S-3347-01-SUB_MAM.DWG

NEW HAMPSHIRE GRID (NAD 83)

THIS PLAN IS THE RESULT OF AN ACTUAL ON THE GROUND SURVEY PERFORMED ON OR BETWEEN APRIL 17, 2024 AND APRIL 18, 2024 AND HAD AN ERROR OF CLOSURE OF NO GREATER THAN 1/10,000.

ALLEN & MAJOR ASSOCIATES, INC.

ISSUED FOR REVIEW TO PLANNING BOARD
DECEMBER 13, 2024

JAMES P. SMITH NH LLS #908 — DATE

REV	DATE	DESCRIPTION

APPLICANT\OWNER:
114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:
TAX MAP 12 LOT 148
114 SILVER STREET
DOVER, NH

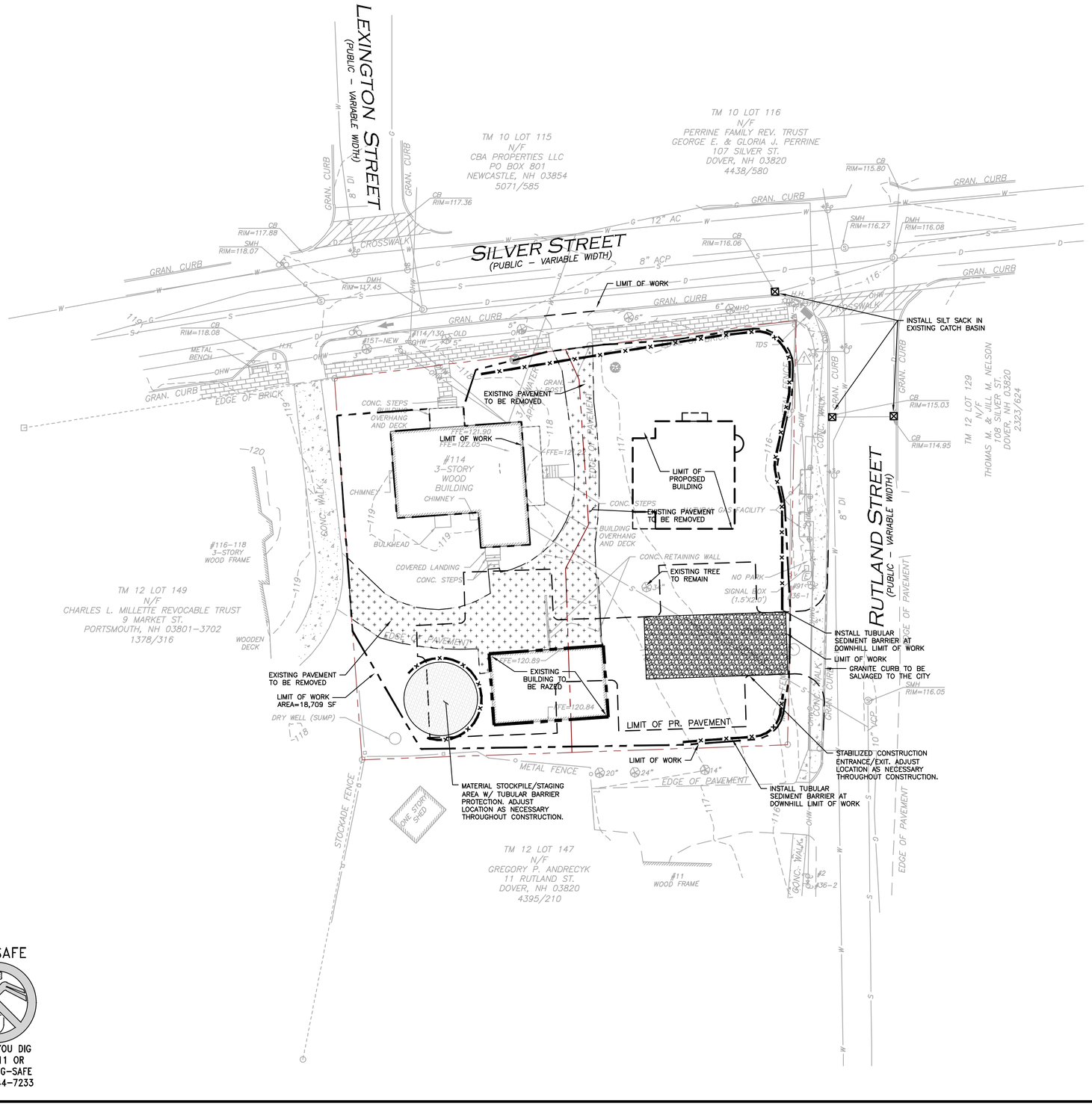
PROJECT NO.	3347-01	DATE:	10/04/24
SCALE:	1" = 20'	DWG. NAME:	S-3347-01-SUB
DRAFTED BY:	KMT	CHECKED BY:	JPS

PREPARED BY:
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environmental consulting ◆ landscape architecture
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DRAWING TITLE:	SHEET No.
SUBDIVISION PLAN OF LAND	2

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LEGEND

- LIMIT OF DISTURBANCE
- TUBULAR BARRIER
- CATCH BASIN FILTER
- BUILDING TO BE REMOVED
- PAVEMENT TO BE REMOVED
- STABILIZED ENTRANCE
- TEMPORARY FENCE
- STOCKPILE/STAGING AREA

GENERAL NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
2. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
3. IF, DURING CONSTRUCTION, IT BECOMES APPARENT THAT ADDITIONAL EROSION CONTROL MEASURES ARE REQUIRED TO STOP ANY EROSION ON THE CONSTRUCTION SITE, THE PROPERTY OWNER SHALL BE REQUIRED TO INSTALL THE NECESSARY EROSION PROTECTION AT NO EXPENSE TO THE CITY.
4. GRADING / DEMOLITION OUTSIDE OF THE PROJECT BOUNDARIES (IF ANY) REQUIRES A TEMPORARY CONSTRUCTION/GRADING EASEMENT FROM THE LANDOWNER (BY OTHERS).
5. ALTHOUGH CERTAIN ITEMS HAVE BEEN NOTED ON THIS DRAWING FOR DEMOLITION, NO ATTEMPT HAS BEEN MADE TO DELINEATE EACH AND EVERY ITEM THAT REQUIRES DEMOLITION FOR THE COMPLETION OF THE PROJECT. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL NECESSARY DEMOLITION WORK TO COMPLETE THE PROJECT. ALLEN & MAJOR ASSOCIATES, INC. IS NOT RESPONSIBLE FOR SITE DEMOLITION ITEMS NOT SHOWN ON THE SURVEY, OR SPECIFICALLY NOTED. THE DEMOLITION NOTES AND ARROWS ON THIS PLAN ARE TYPICAL AND DO NOT REFLECT QUANTITY.
6. WRITTEN DIMENSIONS ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS OR CONDITIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR.
7. THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. ITS INTENDED USE IS TO PROVIDE INFORMATION. ANY ALTERATION, MISUSE, OR RECALCULATION OF INFORMATION OR DATA WITHOUT THE EXPRESSED, WRITTEN CONSENT OF ALLEN & MAJOR ASSOCIATES, INC. IS STRICTLY PROHIBITED.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

DIG SAFE

BEFORE YOU DIG
CALL 811 OR
1-888-DIG-SAFE
1-888-344-7233

R:\PROJECTS\3347-01\CIVIL\DRAWINGS\CURRENT\C-3347-01_SITE-PREP.DWG

STATE OF NEW HAMPSHIRE
MICHAEL A. MALYNOWSKI
No. 12205
LICENSED
PROFESSIONAL ENGINEER
12-16-2024

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
5	12-16-24	MISC. REVS. PER T.R.C. COMMENTS
4	11-18-24	MISC. REVS. PER T.R.C. COMMENTS
3	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
2	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
1	08-30-24	MISC. REVS. PER T.R.C. COMMENTS

APPLICANT\OWNER:

114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:

114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	06/20/24
SCALE:	1" = 20'	DWG. NAME:	C3347-01
DESIGNED BY:	JRG/SM	CHECKED BY:	MAM

PREPARED BY:

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DRAWING TITLE:

SITE PREPARATION PLAN

SHEET No.

C-101

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PLANNING FILE # SITE-2024-0006

CITY OF DOVER HERITAGE RESIDENTIAL (HR) DISTRICT ZONING SUMMARY TABLE

ITEM	REQUIRED/ALLOWED	LOT 1	LOT 2
LOT			
LOT SIZE (MIN)	10,000 SF	11,157 SF	11,183 SF
LOT COVERAGE	40% MAX, *SEE NOTE 2	*SEE NOTE 2	*SEE NOTE 2
OPEN SPACE	57.3% MIN, *SEE NOTE 2	57.5%	57.3%
FRONTAGE	80 FT MIN.	82.2 FT	82.2 FT
PRINCIPAL BUILDING			
FRONT, BUILD TO LINE	*SEE NOTE 1	14.8 FT (EX.)	27.4 FT
ABUT A STREET, BUILD TO LINE	*SEE NOTE 1	N/A	20.3 FT
SIDE, SETBACK	15 FT	15.0 FT	15.4 FT
REAR, SETBACK	30 FT	73.3 FT	78.2 FT
HEIGHT OF BUILDING			
PRINCIPAL BUILDING	24 FT MIN, 40 FT MAX	EXISTING	39.9 FT
OUTBUILDING	40 FT MAX	N/A	N/A

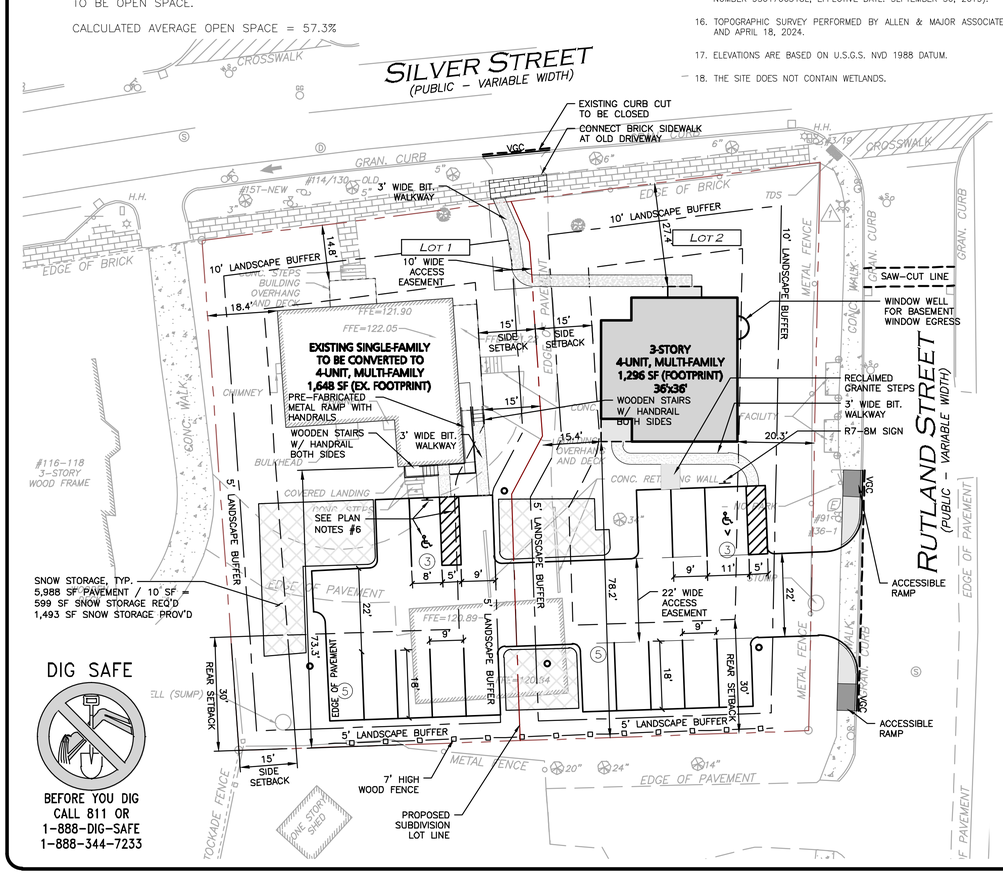
NOTES:

1. THE PROPERTY OWNER SHALL CALCULATE THE AVERAGE FRONT SETBACKS OF ALL LOTS WITHIN THE SAME ZONE LOCATED ON THE SAME SIDE OF THE STREET, 250 FT IN EACH DIRECTION FROM THE CENTER OF THE FRONT LOT LINE. THIS FRONT SETBACK DIMENSION SHALL BE CONSIDERED TO BE A BUILD TO LINE. STRUCTURES MAY BE CONSTRUCTED WITHIN FIVE (5) FT PLUS OR MINUS OF THE AVERAGE. PORCHES OR STEPS MAY BE LOCATED AN ADDITIONAL FIVE (5) FT BEYOND THE FRONT FAÇADE OF THE STRUCTURE. EXPANSIONS TO EXISTING STRUCTURES SHALL BE SUBJECT TO A MINIMUM SETBACK EQUAL TO THE CALCULATED AVERAGE SETBACK MINUS FIVE (5) FEET.

   CALCULATED AVERAGE FRONT SETBACK FROM SILVER STREET = 14.16 FT
   CALCULATED AVERAGE FRONT SETBACK FROM RUTLAND STREET = 20.54 FT

2. THE SPECIFIC SITE MUST HAVE AN AMOUNT OF OPEN SPACE, EITHER LANDSCAPED OR LEFT NATURAL, AT LEAST EQUAL TO THE AVERAGE AMOUNT OF OPEN SPACE ON ALL DEVELOPED LOTS IN THE HR DISTRICT THAT ARE WHOLLY OR PARTLY WITHIN TWO HUNDRED (200) FEET OF THE SUBJECT PARCEL. EXISTING PARKING AREAS, EITHER GRAVEL, PAVED OR UNPAVED, SHALL NOT BE CONSIDERED TO BE OPEN SPACE.

   CALCULATED AVERAGE OPEN SPACE = 57.3%



CITY OF DOVER SITE PLAN COMMON NOTES:

1. THE INTENT OF THIS PLAN IS TO GAIN SITE PLAN REVIEW APPROVAL.
2. OWNERS OF RECORD ARE:
   114 SILVER STREET GROUP, LLC
   10 DURHAM ROAD
   DOVER, NH 03820
   AUTHORIZED SIGNATURE
3. THE PARCEL IS SHOWN AS LOT NO. 148, MAP 12 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS.
4. THE SUBJECT PARCEL(S) CONTAINS 0.51 ACRES OR 22,340 SQ. FT. AREA OF LAND.
5. TITLE REFERENCE FOR THE PROJECT PARCEL(S) IS THE STRAFFORD COUNTY REGISTRY OF DEEDS, BOOK NO. 5161, PAGE NO. 948.
6. REFERENCE PLANS:
   - PLAN ENTITLED, "MINOR SUBDIVISION PLAN PREPARED FOR PROLIN DEVELOPMENT TRUST DOVER, N.H.", SCALE 1"=20', DATED FEBRUARY 3, 1986, PREPARED BY THOMAS E. MORAN, INC, AND ON FILE AT THE S.C.R.D. AS PLAN BOOK 29 PAGE 26.
   - PLAN ENTITLED, "PLAN OF SUBDIVISION FOR IRENE R. CARRIER RUTLAND STREET DOVER, NEW HAMPSHIRE", SCALE 1"=40', DATED OCTOBER 1978, PREPARED BY K.E. MOORE & B.G. STAPLES, AND ON FILE AT THE S.C.R.D AS PLAN #17C-89.
   - PLAN ENTITLED, "PLAN OF ROBERT CRISTY ESTATE IN DOVER, N.H.", SCALE 1"=50', DATED NOVEMBER 1894, PREPARED BY O.M JAMES, C.E, AND ON FILE AT THE S.C.R.D AS PLAN BOOK 327 PAGE 501.
   - PLAN ENTITLED, "PLAN OF LAND HARRY L. FARNHAM DOVER, NEW HAMPSHIRE", DATED OCTOBER 1955, AND ON FILE AT THE S.C.R.D AS PLAN BOOK 655 PAGE 305.
7. THE PROJECT WILL REQUIRE CROSS EASEMENTS FOR ACCESS, DRAINAGE, AND UTILITIES.
8. SEE ZONING SUMMARY TABLE HEREON FOR THE CURRENT ZONING DIMENSIONAL AND DENSITY REQUIREMENTS. THIS PROPERTY FALLS WITHIN THE HERITAGE RESIDENTIAL ZONING DISTRICT.
9. SEE PARKING SUMMARY TABLE HEREON FOR THE PARKING REQUIREMENTS.
10. THE PROJECT DOES NOT INCLUDE RESTRICTED UNITS OR WAIVERS GRANTED BY THE BOARD.
11. THE PROJECT DOES NOT REQUIRE VARIANCES OR SPECIAL EXCEPTIONS GRANTED BY THE ZONING BOARD OF ADJUSTMENT.
12. THIS PROJECT REQUIRES A CONDITIONAL USE PERMIT TO:
    C.U.P. CONDITIONS: ALLOW UP TO FOUR MULTIFAMILY DWELLING UNITS
    CASE NUMBER: NONE ASSIGNED
    DATE OF DECISION: PENDING
13. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY ALLEN & MAJOR ASSOCIATES, INC. ON OR BETWEEN APRIL 17, 2024 AND APRIL 18, 2024.
14. AS-BUILT PLANS OF THE PROJECT SHALL BE SUBMITTED ON PAPER AND IN DIGITAL FORMAT AUTOCAD DWG, AUTOCAD DXF OR ESRI FORMAT TO THE CITY OF DOVER CITY 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.
15. SUBJECT PARCEL IS NOT LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA (COMMUNITY PANEL NUMBER 33017C0310E, EFFECTIVE DATE: SEPTEMBER 30, 2015).
16. TOPOGRAPHIC SURVEY PERFORMED BY ALLEN & MAJOR ASSOCIATES, INC. ON OR BETWEEN APRIL 17, 2024 AND APRIL 18, 2024.
17. ELEVATIONS ARE BASED ON U.S.G.S. NVD 1988 DATUM.
18. THE SITE DOES NOT CONTAIN WETLANDS.
19. THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE FOR WHICH DEVELOPMENT IS PROPOSED.
20. THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER.
21. ALL CONSTRUCTION SHALL CONFORM WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION "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. CONTRACTOR SHALL FOLLOW TO THE CONSTRUCTION SEQUENCING IDENTIFIED WITHIN THE PLANNING BOARD APPROVED PLAN SET. ANY DEVIATION FROM THAT SEQUENCING SHALL BE APPROVED BY THE CITY ENGINEER.
23. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBANCE AND BE PROVIDED FOR CONSTRUCTION SEQUENCING INCLUDING TEMPORARY MEASURES.
24. CONTRACTOR SHALL FOLLOW THE PERMANENT STABILIZATION MEASURES 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 AS NOTED WITHIN THE PLANNING BOARD APPROVED PLANS. ANY DEVIATION FROM THAT SEQUENCING SHALL BE APPROVED BY THE CITY ENGINEER.
25. 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.
26. ANY PERMANENT TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS.
27. A LETTER OF CREDIT FOR THE COST OF REVEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED PRIOR TO COMMENCING EARTH DISTURBANCE.
28. A CITY ENGINEER APPROVED CONSTRUCTION SIGN SHALL BE INSTALLED PRIOR TO COMMENCING EARTH DISTURBANCE. SAID SIGNAGE MUST BE LOCATED AND APPROVED BY THE CITY ENGINEER OR PLANNING DIRECTOR.
29. A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE CITY ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.
30. HOURS OF SITE WORK MUST BE DOCUMENTED ON A SITE CONSTRUCTION SIGN ALONG WITH THE CONTACT INFORMATION FOR THE GENERAL CONTRACTOR. SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY-FRIDAY 7AM-6PM. NO SITE WORK SHALL BE DONE ON FEDERAL HOLIDAYS.
31. BUILDING ADDRESSES, INCLUDING APT AND UNIT NUMBERS, SHALL BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.
32. THE PROPOSED USE FOR THE SITE IS MULTI-FAMILY RESIDENTIAL.
33. NO FEDERAL AND STATE PERMITS ARE REQUIRED FOR THE SUBJECT PROPERTY:
34. COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM TO THE DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR OR THEIR DESIGNEE.
35. ANY RETAINING WALL TALLER THAN FOUR FEET (4') REQUIRES ISSUANCE OF A BUILDING PERMIT FROM THE CITY OF DOVER INSPECTION SERVICES.
36. ANY FENCE TALLER THAN SEVEN FEET (7') REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM THE CITY OF DOVER INSPECTION SERVICES.
37. APPLICANT SHALL COMPLETE LAND USE DEVELOPMENT TRACKING FORM, MOST RECENTLY REVISED VERSION, UTILIZING THE ONLINE POLLUTION TRACKING AND ACCOUNTING PROJECT (PTAP) PORTAL PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY. HTTPS://EXTENSION.UNH.EDU/STORMWATER-CENTER/PTAP
38. 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.
39. FIRE DEPARTMENT ACCESS ROAD(S) SHALL BE INSTALLED AND MAINTAINED, IN ACCORDANCE WITH ALL APPLICABLE CODES, TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS IN ALL WEATHER CONDITIONS AT ALL TIMES.
40. EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 153-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.
41. IF A BUSINESS ESTABLISHMENT OR MULTI-FAMILY DWELLING CONTAINED IN A NEW, ALTERED OR REPAIRED STRUCTURE, A SECURITY SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 45, ARTICLE I, SECTION 45-2 OF THE CODE OF THE CITY OF DOVER.
42. APPROVED BACKFLOW PREVENTERS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.
43. THE EXISTING AND 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.
44. 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 THE CITY OF DOVER INSPECTION SERVICES PRIOR TO CONNECTION OF THE BACKFLOW DEVICE.
45. 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.
46. 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.
47. APPLICANT SHALL SUBMIT A LETTER CERTIFYING THE TIE IN LOCATIONS OR DISCHARGE POINTS FOR ALL SUMP PUMPS AND ROOF LEADERS FOR EXISTING STRUCTURES ON THE PROPERTY PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
48. DESIGN ENGINEER OF RECORD OR SHALL PROVIDE SIGNED LETTER TO CITY ENGINEER CERTIFYING THAT THE STORMWATER MANAGEMENT SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH APPROVED PLANS.
49. THE APPLICANT SHALL PROVIDE THE CITY OF DOVER AN EASEMENT TO ACCESS WATERLINE AND HYDRANTS TO MAINTAIN WATER QUALITY PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
50. TRASH SERVICE TO BE PRIVATE TRASH PICK-UP VIA TOTERS. TOTERS TO BE PICKED UP TO SHOULD NOT BE LEFT ALONG CITY RIGHT-OF-WAY BEFORE 7AM ANY GIVEN DAY OR LEFT OVERNIGHT.

LEGEND

PROP. PROPERTY LINE
SIGN
BOLLARD
BUILDING
BUILDING ARCHITECTURE
CURB
PARKING STRIPING
HEAVY DUTY CONCRETE
SIDEWALK
PERMEABLE BRICK SIDEWALK
ADA ACCESSIBLE RAMP
ADA DET. WARNING SURFACE
SNOW STORAGE
GRAVEL ACCESS
SETBACK LINE
PARKING COUNT (10)
STEEL GUARDRAIL
WOOD GUARDRAIL
CHAIN LINK FENCE
WOOD FENCE
DECORATIVE FENCE
TREE LINE
TRANSFORMER (T)

PLAN NOTES:

1. EXISTING CONDITIONS WERE COMPILED FROM AN ON THE GROUND SURVEY PERFORMED BY ALLEN & MAJOR ASSOCIATES AS WELL AS AVAILABLE RECORD PLANS OBTAINED FROM THE CITY OF DOVER AND OTHER SOURCES.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
3. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK. THE CONTRACTOR SHALL ALSO CONTACT THE CITY DEPARTMENT OF PUBLIC WORKS AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF LOCAL UTILITIES.
4. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
5. SNOW SHALL BE TAKEN OFF-SITE ONCE SNOW STORAGE AREAS ON SITE BECOME INADEQUATE, AND BEGINS TO BLOCK ACCESS TO AND FROM THE SITE OR BLOCKS THE USE OF ON-SITE PARKING. ANY EXCESS WILL BE BE TRUCKED OFF-SITE & DISPOSED OF IN ACCORDANCE WITH CITY OF DOVER AND NHDES GUIDELINES.
6. ACCESSIBILITY REQUIREMENTS FOR EXISTING RESIDENTIAL CONVERSION STIPULATE THAT PROVISIONS BE AVAILABLE TO REASONABLY CONVERT A DWELLING UNIT TO AN ACCESSIBLE UNIT IF REQUIRED TO MEET THE IMMEDIATE NEED OF A RENTER. AS SUCH, THE ACCESSIBLE PARKING SYMBOLS, SIGNAGE AND PAINTED ISLANDS TO ONLY BE INSTALLED IF REQUIRED TO ACCOMMODATE AN IMMEDIATE NEED FOR THE RESIDENTIAL CONVERSION.

PARKING SUMMARY TABLE

CITY OF DOVER: CHAPTER 153, SITE REVIEW, OFF-STREET PARKING	REQUIRED PARKING	PROPOSED PARKING
LOT 1: MULTI-FAMILY DWELLING, 4 UNITS	8	8
2 SPACES PER UNIT → (2 SPACES/UNIT X 4 UNITS) = 8 SPACES		
LOT 2: MULTI-FAMILY DWELLING, 4 UNITS	8	8
2 SPACES PER UNIT → (2 SPACES/UNIT X 4 UNITS) = 8 SPACES		
TOTAL PROVIDED		16

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

STATE OF NEW HAMPSHIRE
MICHAEL A. MALYNOWSKI
No. 12205
LICENSED PROFESSIONAL ENGINEER
12-16-2024
PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
5	12-16-24	MISC. REVS. PER T.R.C. COMMENTS
4	11-18-24	MISC. REVS. PER T.R.C. COMMENTS
3	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
2	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
1	08-30-24	MISC. REVS. PER T.R.C. COMMENTS

APPLICANT\OWNER:
114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:
114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	06/20/24
SCALE:	1" = 20'	DWG. NAME:	C3347-01
DESIGNED BY:	JRG/SM	CHECKED BY:	MAM

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
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DRAWING TITLE: LAYOUT & MATERIALS PLAN
SHEET No. C-102

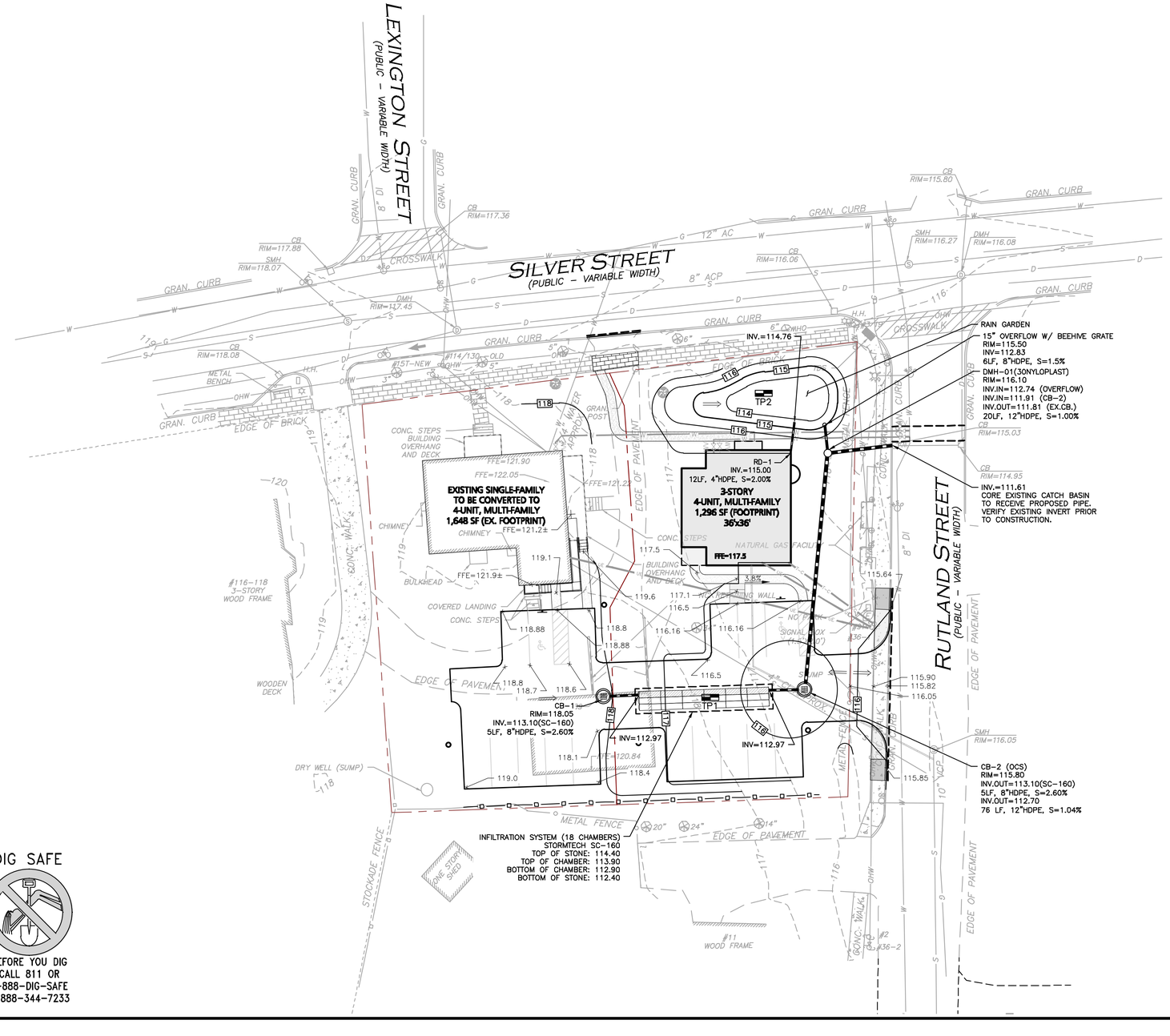
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PLANNING FILE # SITE-2024-0006

R:\PROJECTS\3347-01\CIVIL\DRAWINGS\CURRENT\C-3347-01_LAYOUT & MATERIALS.DWG

TP-1 EXISTING GROUND ELEVATION: 117.6± PERFORMED BY A&M: MICHAEL MALYNOWSKI, PE DATE: 08-15-24		
DEPTH	CLASS	NOTES
0-14"	–	TOP SOIL 10TR 3/3
14-31"	CLAYEY LOAM	10YR 5/4 MANY ROOTS
31-88"	FINE LOAMY SAND	10YR 6/4 MANY ROOTS
ESHWT: NONE WEEP: NONE BEDROCK/REFUSAL: NONE, TERMINATED @ 88" BELOW GRADE		

TP-2 EXISTING GROUND ELEVATION: 116.5± PERFORMED BY A&M: MICHAEL MALYNOWSKI, PE DATE: 08-15-24		
DEPTH	CLASS	NOTES
0-9"	–	TOP SOIL 10TR 3/3
9-19"	FINE SANDY LOAM	10YR 5/6 MANY ROOTS
19-24"	TOP SOIL	10YR 3/3
24-84"	FINE LOAMY SAND	10YR 6/4 MANY ROOTS
ESHWT: NONE WEEP: NONE BEDROCK/REFUSAL: NONE, TERMINATED @ 84" BELOW GRADE		



LEGEND

- DRAIN MANHOLE (DMH)
- CATCH BASIN (CB)
- CATCH BASIN – NYLOPLAST
- DRAIN LINE
- RIPRAP OUTFALL
- 5' CONTOUR (115)
- 1' CONTOUR (117)
- SPOT GRADE (115.55)
- INFILTRATION SYSTEM
- ISOLATOR ROW
- INFILTRATION CHAMBER
- FLOW DIRECTION

GRADING & DRAINAGE NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS INCLUDING THE CITY OF DOVER, NHDOT, NHDES, MUTCD, AND AASHTO.
2. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY ALLEN & MAJOR ASSOCIATES DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK, OR THE OWNER'S EMPLOYEES, CUSTOMERS, OR THE GENERAL PUBLIC. THE SEAL OF THE ENGINEER AS INCLUDED IN THE PLAN SET DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PROVIDE THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE US OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
3. ALL ELEVATIONS REFER TO NAVD 88.
4. PIPE DIMENSIONS ARE MEASURED FROM THE INSIDE EDGE OF THE STRUCTURE.
5. THE INFORMATION SHOWN ON THIS PLAN IS THE SOLE PROPERTY OF ALLEN & MAJOR ASSOCIATES, INC. ITS INTENDED USE IS TO PROVIDE INFORMATION. ANY ALTERATION, MISUSE, OR RECALCULATION OF INFORMATION OR DATA WITHOUT THE EXPRESSED, WRITTEN CONSENT OF ALLEN & MAJOR ASSOCIATES, INC. IS STRICTLY PROHIBITED.
6. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
7. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
8. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
9. ALL CATCH BASINS ON-SITE SHALL BE EQUIPPED WITH HOODS AND 4 FOOT SUMPS AND SHALL CONFORM TO LOCAL DRAINAGE REQUIREMENTS.
10. A MINIMUM OF 18" VERTICAL CLEARANCE SHALL BE MAINTAINED WHERE WATER SERVICES CROSS STORM DRAIN LINES. WATER SERVICES SHALL BE ENCASED IN CONCRETE REGARDLESS OF CLEARANCE WHEN PASSING BELOW STORM DRAIN LINES. ENCASEMENT SHALL EXTEND ALONG WATER SERVICE A MINIMUM DISTANCE OF TEN FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
11. ALL DRAINAGE SHALL CONFORM TO LOCAL REQUIREMENTS.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE START OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DRAWINGS, SPECIFICATIONS, OR RELATIVE CODES, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER AND/OR ARCHITECT PRIOR TO START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE ENGINEER AND/OR ARCHITECT SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AND/OR DESIGN INTENT OF THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
13. THE DESIGN ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS, AND/OR THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE GUIDANCE OF THE DESIGN ENGINEER WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES, OR CONFLICTS WHICH ARE DISCOVERED OR ALLEGED.
14. UPON COMPLETION, THE DESIGN ENGINEER SHALL PROVIDE A LETTER TO THE CITY ENGINEER STATING THAT THE STORMWATER MANAGEMENT SYSTEM HAS BEEN INSTALLED IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLANS.

DIG SAFE

BEFORE YOU DIG
CALL 811 OR
1-888-DIG-SAFE
1-888-344-7233

R:\PROJECTS\3347-01\CIVIL\DRAWINGS\CURRENT\C-3347-01_GRADING & DRAINAGE.DWG

STATE OF NEW HAMPSHIRE
MICHAEL A. MALYNOWSKI
No. 12205
LICENSED PROFESSIONAL ENGINEER
12-16-2024

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
5	12-16-24	MISC. REVS. PER T.R.C. COMMENTS
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APPLICANT\OWNER:
114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:
114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	06/20/24
SCALE:	1" = 20'	DWG. NAME:	C3347-01
DESIGNED BY:	JRG/SM	CHECKED BY:	MAM

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
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environmental consulting ◆ landscape architecture
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DRAWING TITLE:
GRADING & DRAINAGE PLAN

SHEET No.
C-103

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PLANNING FILE # SITE-2024-0006

SANITARY SEWER SIZING INFORMATION:

1. CALCULATE SEWERAGE FLOWS TO BE SERVICED BY EXISITNG SEWER LATERAL

Lot 1 - Existing building conversion
Multi-Family Residential Units - 1 bed = 4 x 1 = 4 Beds

Lot 2 - New Construction
Multi-Family Residential Units - 1 bed = 2 x 1 = 2 Beds
Multi-Family Residential Units - 2 bed = 2 x 2 = 4 Beds
Total Units = 8 10 Beds Total

NHDES Env-Wq 704.03(b) Methodology
Metcalf & Eddy "Wastewater Engineering" 4th Edition Table 3-2
(Apartment 100-150 GPD per Bedroom) Design Rate = 120 Rate per Bed

1,200 gpd
(1,200 gpd/(24hrs/day)/60min/hr = 0.8 gpm

THEREFORE USE 1.0 GPM AS AVERAGE DAILY FLOW

PEAKING FACTOR = 5

MOPS = 1 gpm X 5 = 5 gpm

2. CALCULATED SEWER FLOWS
Q = 5.00 gpm / 7.48 cf/g / 60 min/sec = 0.011 cfs

PIPE	Q_{design} (cfs)	n	Type	Diameter (inches)	A (ft^2)	Wp (ft)	R (ft)	S (feet/foot)	Q_{full} (cfs)	Q_{full} > Q_{design}
Exist.	0.011	0.012	CI	4	0.09	1.05	0.09	0.010	0.22	OK

Q_{full} = 0.22 cfs x 7.48 cf/g x 60 sec/min = 98.7 gpm

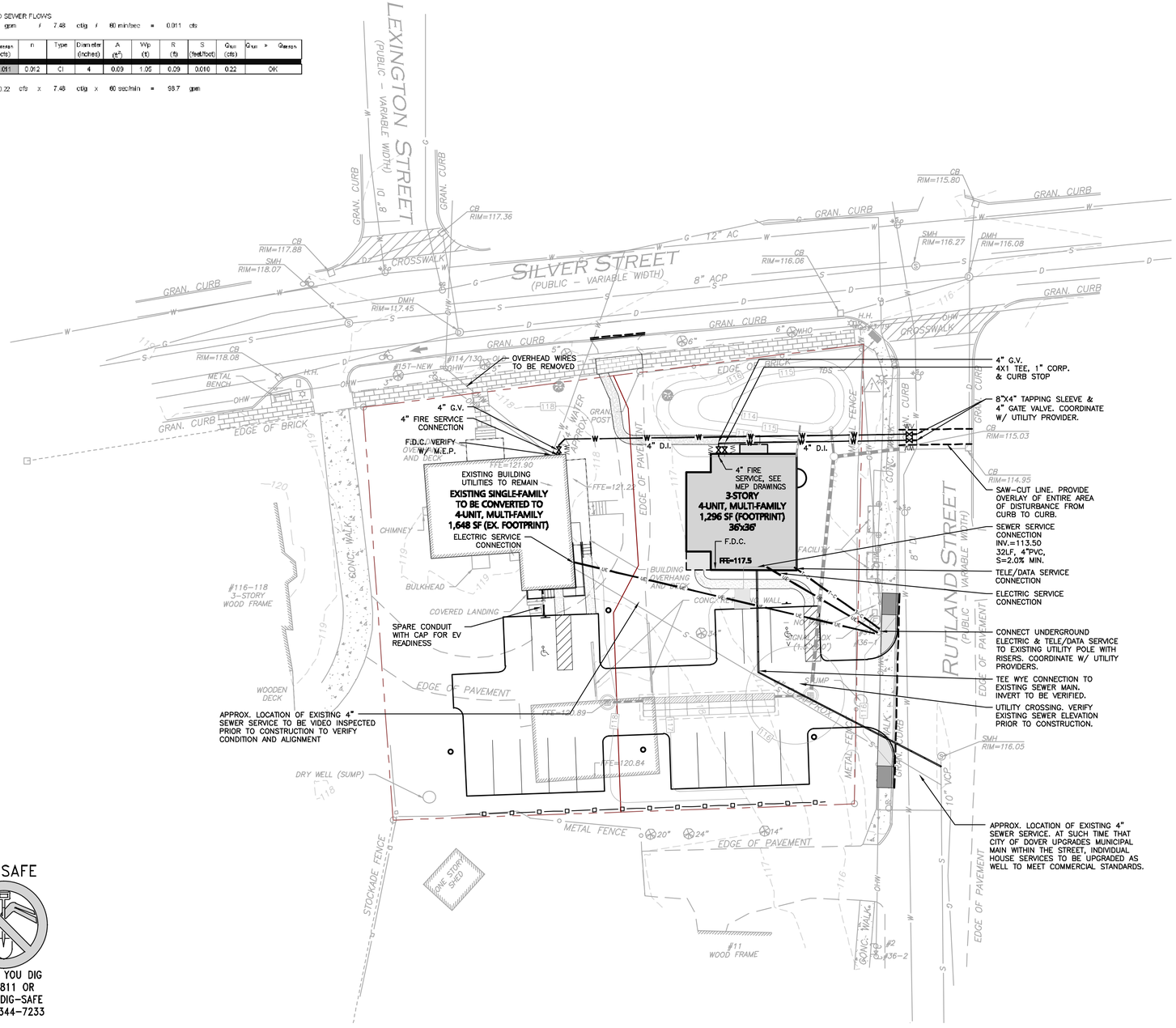
LIST OF WAIVERS

DOVER UTILITIES COMMISSION RULES & REGULATIONS

1. DUCRR SECTION 2-6.2: TO ALLOW THE CONTINUED USE OF THE EXISTING FOUR INCH (4") SEWER SERVICE WHERE AS A MINIMUM SIX (6") IS REQUIRED FOR A SINGLE BUILDING CONTAINING THREE (3) OR MORE DWELLING UNITS. THE HYDRAULIC ANALYSIS SUPPORTS THE CONTINUED USE OF THE EXISTING 4" SERVICE.

DOVER SITE PLAN REGULATIONS

2. SPRR CHAPTER 121, ARTICLE I, SECTION 121-4.D: TO NOT PROVIDE A SEPARATE AND INDEPENDENT BUILDING SEWER FOR EVERY BUILDING ON PROJECT. THE CONDITION OCCURS WHERE THE EXISTING SEWER SERVICE EXTENDS PAST THE PROPOSED NEW BUILDING AND IS CONNECTED TO THE MUNICIPAL MAIN AT SUCH A POINTS WHICH PRECLUDES THE AN ADDITION CONNECTION TO THE MUNICIPAL MAIN WITHIN THE FRONTAGE OF THE PARCEL. THE HYDRAULIC ANALYSIS SUPPORTS THE CONTINUED USE OF THE EXISTING 4" SERVICE FOR ALL NEW DWELLINGS.



LEGEND

SEWER MANHOLE	S
SEWER LINE	S
WATER LINE	W
WATER VALVE	WV
WATER LINE REDUCER	
ELECTRICAL CONDUIT	E E
TELE/CABLE CONDUIT	T-C T-C

UTILITY NOTES:

1. A MINIMUM OF 10 FEET CLEAR HORIZONTALLY SHALL BE MAINTAINED BETWEEN WATER MAINS AND SANITARY SEWER MAINS AND/OR STORM DRAINS. WHENEVER CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET TO A WATER MAIN, THE WATER MAIN SHALL BE LAID IN A SEPARATE TRENCH AND THE DIFFERENCE IN ELEVATION BETWEEN THE WATER MAIN AND THE SEWER MAIN SHALL BE AT LEAST 18 INCHES.
2. IN THE CASE THAT WATER MAINS CROSS SANITARY SEWER MAINS AND ARE SEPARATED BY LESS THAT 18" OF VERTICAL CLEARANCE, THE SEWER MAIN SHALL BE ENCASED IN CONCRETE FOR THE ENTIRE WIDTH OF THE TRENCH AND FOR A DISTANCE OF 8 LINEAR FEET CENTERED ON THE CROSSING.
3. THE LATEST STANDARDS OF THE CITY OF DOVER "CHAPTER 147 – SEWERS" SHALL BE FOLLOWED WHEN PERFORMING ANY SANITARY SEWER WORK. SEWER WORK WILL BE INSPECTED BY CITY OF DOVER PERSONNEL AND ALL COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE LATEST STANDARDS OF THE CITY OF DOVER "CHAPTER 148 – WATER SYSTEMS" SHALL BE FOLLOWED WHEN PERFORMING ANY WATER DISTRIBUTION WORK. WATER WORK WILL BE INSPECTED BY CITY OF DOVER PERSONNEL AND ALL COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL REFER TO ARCHITECTS PLANS AND SPECIFICATIONS FOR ACTUAL LOCATION OF ALL ROOF DRAIN LATERALS AND UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRIC, TELEPHONE, AND GAS SERVICE. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND COORDINATE WITH THE PROPER AGENCY THE LOCATION AND SCHEDULING OF CONNECTIONS WITH THEIR FACILITIES.
6. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION. THE ENGINEER WILL THEN PROVIDE RESOLUTION TO UTILITY CONFLICTS WITHOUT DELAY.
7. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS INCLUDING THE CITY OF DOVER, NHDOT, NHDES, MUTCD, AND AASHTO.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS OF THE SITE. THESE PLANS PREPARED BY ALLEN & MAJOR ASSOCIATES, INC., DO NOT EXTEND TO, NOR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THE EMPLOYEES, AGENTS OF REPRESENTATIVES IN PERFORMANCE OF THE WORK. THE SEAL OF THE ARCHITECT OR ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OF OBTAIN THE APPROPRIATE SAFETY SYSTEMS THAT MAY BE REQUIRED BY THE US OCCUPATIONAL SAFETY AND HEATH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
9. ALL ELEVATIONS REFER TO NAVD 88.
10. PIPE DIMENSIONS ARE MEASURED FROM THE INSIDE FACE OF THE STRUCTURE.
11. SANITARY SEWER PIPE SHALL BE PVC PIPE SDR35.
12. ALL VALVES AND HYDRANTS SHALL BE OPEN LEFT (COUNTERCLOCKWISE).
13. SIZE OF DOMESTIC AND FIRE SERVICE WATER LINES SHALL BE VERIFIED BY THE M.E.P. ENGINEER.
14. LOCATION OF PROPOSED ELECTRICAL/COMMUNICATION SERVICE IS SCHEMATIC IN NATURE AND FOR COORDINATION PURPOSES ONLY. SPECIFIC ALIGNMENTS ARE TO BE DESIGNED BY OTHERS AND REVIEWED BY THE UTILITY PROVIDING SERVICE. PROPOSED ELECTRICAL SERVICE TO BE BURIED IN ACCORDANCE WITH THE CITY OF DOVER REGULATIONS AND ELECTRIC COMPANY.
15. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK SCOPE PRIOR TO THE START OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WITH THE DRAWINGS, SPECIFICATIONS, OR RELATIVE CODES, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER AND/OR ARCHITECT PRIOR TO START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO NOTIFY THE ENGINEER AND/OR ARCHITECT SHALL CONSTITUTE ACCEPTANCE OF FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF WORK AND/OR DESIGN INTENT OF THE DRAWINGS AND IN FULL COMPLIANCE WITH LOCAL REGULATIONS AND CODES.
16. THE DESIGN ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS, AND/OR THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE GUIDANCE OF THE DESIGN ENGINEER WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES, OR CONFLICTS WHICH ARE DISCOVERED OR ALLEGED.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 25 ft.

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R:\PROJECTS\3347-01\CIVIL\DRAWINGS\CURRENT\C-3347-01_UTILITIES.DWG

STATE OF NEW HAMPSHIRE – MICHAEL A. MALYNOWSKI No. 12205 LICENSED PROFESSIONAL ENGINEER – 12-16-2024
PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
5	12-16-24	MISC. REVS. PER T.R.C. COMMENTS
4	11-18-24	MISC. REVS. PER T.R.C. COMMENTS
3	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
2	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
1	08-30-24	MISC. REVS. PER T.R.C. COMMENTS

APPLICANT\OWNER:
114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:
114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	06/20/24
SCALE:	1" = 20'	DWG. NAME:	C3347-01
DESIGNED BY:	JRG/SM	CHECKED BY:	MAM

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
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WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE: UTILITIES PLAN

SHEET No. C-104

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PLANNING FILE # SITE-2024-0006

PROGRESS LIGHTING

SMALL WALL LANTERN

Wall mounted · Wet location listed PROGRESS LED

P560052-020-30

Description:

Calahan draws inspiration from farmhouse decor. Hidden within this vintage frame is a modern LED light source that delivers energy-efficient performance. The inner surface of the shade is accented with a contrasting finish to complete the nostalgic look. Additionally, the full reflector provides illumination that is compliant with Dark Sky requirements for full cutoff lighting.

Specifications:

- Antique Bronze (AZ0) (painted)
- Aluminum Construction
- Antique Bronze aluminum shade
- LED Module is replaceable (part # 18GF4037)
- Features a weathercoat style shade reminiscent of a farmhouse container repurposed into a vintage style lantern.
- Hidden within this vintage frame is a modern LED light source that delivers both energy-efficient performance and maintenance-free service
- The inner surface of the shade is accented with a contrasting finish to complete the nostalgic look
- The full reflector provides illumination that is compliant with Dark Sky requirements for full cutoff lighting
- 624 lumens 66 lumens/watt (source)
- 3000K color temperature, 90+ CRI.
- Dimmable to 10% brightness (See Dimming Notes)
- Back plate covers a standard 4" octagonal recessed outlet box
- Mounting strap for outlet box included
- 6" of wire supplied
- ENERGY STAR® qualified
- Meets California Title 24 JA8-2016

Performance:

Number of Modules	1
Input Power	9w
Input Voltage	120 V
Input Frequency	60 Hz
Lumens/LPW (Source)	624/66 (LM-82)
Lumens/LPW (Delivered)	339/36.5 (LM-79)
CCT	3000 K
CRI	90+
Life (hours)	60,000 (L70/TM-21)
FCC	Meets FCC Title 47, Part 15 Class B
Min. Start Temp	-30°C
Max. Operating Temp	30° C
Warranty	5 year warranty
Labels	cCSAus Wet location listed ENERGY STAR® qualified Meets California Title 24 JA8-2016

Images:



Dimensions:

Diameter: 8-1/2"
Depth: 8-7/8"
Height: 10"
H/CTR: 3-3/4"

Glass
Width: 8-1/2"
Length: 8-1/2"
Height: 5-1/8"

KIM LIGHTING

UR20 - Post Top

ARCHITECTURAL AREA/SITE

Ouro



FEATURES

- 20' size tri-single/dual arm post top, pole and wall mount
- High performance optics up to 16,874 delivered lumens
- Elegant form factor
- Diffusion lens option
- UL/cUL listed for wet locations, IP66 and 4G/1.5G vibration rated

CONTROL TECHNOLOGY

NX LIGHTGRID

SPECIFICATIONS

CONSTRUCTION
- Low copper aluminum alloy die-casting is designed as one-piece.
- Molded silicone gasket throughout insures the sealing between the two compartments and provides ingress protection.
- All external fasteners are stainless steel.
- Cover is secured to Lens frame by the latch and hinge.

OPTICS
- LEDs mount to a metal printed circuit board assembly (MCPCB).
- Optical lenses are clear injection molded PMMA acrylic.
- Optional Backlight Control on each LED module to completely control unwanted backlight.
- Optional fixture finish optical surfaces will not exceed BUG ratings of the standard white finish.

LENS
- Standard lens (CLR) IK08
- Clear Polycarbonate Lens (CP) IK10

INSTALLATION
- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

ELECTRICAL
- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories listed.
- High voltage configurations, 347/480. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories listed.
- "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components
- Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments.
- Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.
- Surge protection: 10,000k in parallel, 20,000k in series
- Wiring: No. 18AWM rated 105°C, wet rating.

CONTROLS

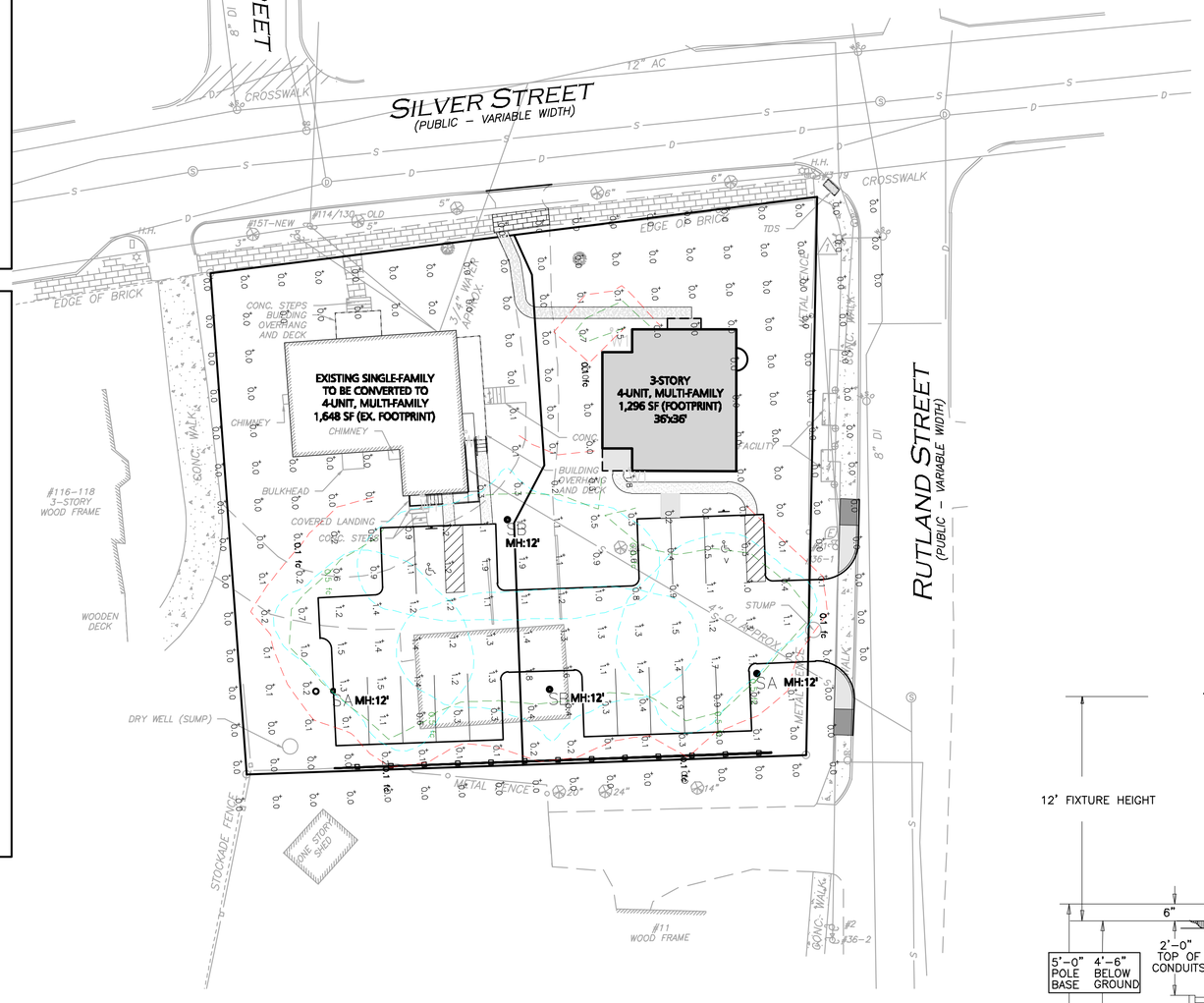
7PR
- Fully gasketed and wired 7-pin receptacle option. Easy access location above the electrical compartment. 7-pin construction allows for a user-defined interface and provides a controlled definition of operational performance. ANSI twist-lock control module by others.

Standard customer operation modes:
- Traditional on/off photoelectric control.
- 5-pin wireless photoelectric control for added dimming feature.
- 7-pin wireless photoelectric control for dimming and additional I/O connections for customer use.

	Weight	EPA
UR20	35 lbs / 15.8 kg	0.512 ft.²

FM33

FM53A33/PT8A23
FM8A34, PT8A24, PT8A34

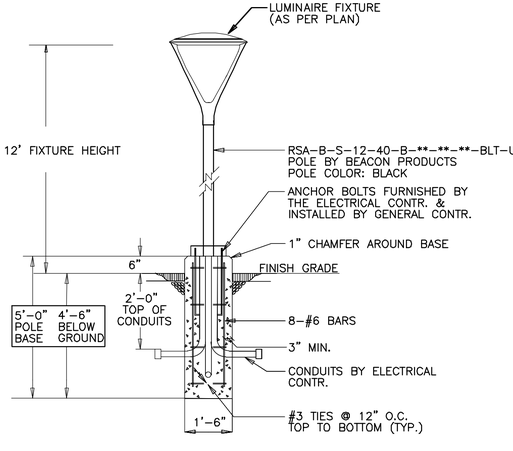


LEGEND

SINGLE POLE LIGHT	○
LIGHTING LEVELS GIVEN IN FOOT–CANDLES	0.0 0.1 0.2 0.4 0.6

NOTES:

1. LIGHTING VENDOR INFORMATION:
   SWANEY LIGHTING ASSOCIATES
   CONTACT: CHRIS PECHALK
   OFFICE: 207–883–7100
   CELL: 603–380–3400
2. LIGHTS WITHIN THE PARKING AREAS AND ACCESS DRIVES SHALL OPERATE ON A PHOTO–CELL & PROGRAMABLE TIMER.
3. SITE LIGHTING SHALL BE EQUIPPED WITH "wiScape" CONNECTIVITY THROUGHOUT.
4. CONTROLS FOR ALL EXTERIOR LIGHTING BY BUILDING CONTRACTOR.
5. WIRING OF BUILDING MOUNTED FIXTURES BY BUILDING CONTRACTOR.
6. SIZING AND LAYOUT OF THE WIRING OF THE SITE LIGHTING FIXTURES SHALL BE BY THE SITE ELECTRICAL CONTRACTOR.
7. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIGSAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK. THE CONTRACTOR SHALL ALSO CONTACT THE CITY DEPARTMENT OF PUBLIC WORKS AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF LOCAL UTILITIES.
8. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.



Luminaire Schedule						
Tag	Qty	Watts	Lumens	LLF	Mounting Height	Description
W1	4	9.32	311	0.900	10	P560052–020–30
SA	2	25	2115	0.820	12	UR20–24L–25–3K8–4–BC–CLR–PT
SB	2	25	2845	0.820	12	UR20–24L–25–3K8–3–CLR–PT

Calculation Summary					
Label	Avg	Max	Min	Avg/Min	Max/Min
SITE	0.34	1.9	0.0	N.A.	N.A.
PARKING	1.13	1.9	0.3	3.77	6.33

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

MICHAEL A. MALYNOWSKI No. 12205 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE 12/16/2024

SWANEY LIGHTING ASSOCIATES, INC.

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1	08-30-24	MISC. REVS. PER T.R.C. COMMENTS

APPLICANT\OWNER:

114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:

114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	08/06/24
SCALE:	1" = ##'	DWG. NAME:	C3347-01
DESIGNED BY:	JRG/SM	CHECKED BY:	MAM

PREPARED BY:

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civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
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DRAWING TITLE:

SITE LIGHTING PLAN

SHEET No.

C-105

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PLANNING FILE # SITE-2024-0006

R:\PROJECTS\3347-01\CIVIL\DRAWINGS\CURRENT\C-3347-01_LIGHTING.DWG

TAX MAP 12 LOT 129
THOMAS M. & JILL M. NELSON
108 SILVER ST.
DOVER, NH 03820
2323/624

TAX MAP 12 LOT 130
CHILD THOMAS L & DEBORAH M
TRUSTEES, THOMAS L CHILD REVOCABLE TRUST &
8 RUTLAND ST.
DOVER, NH 03820
2135/319

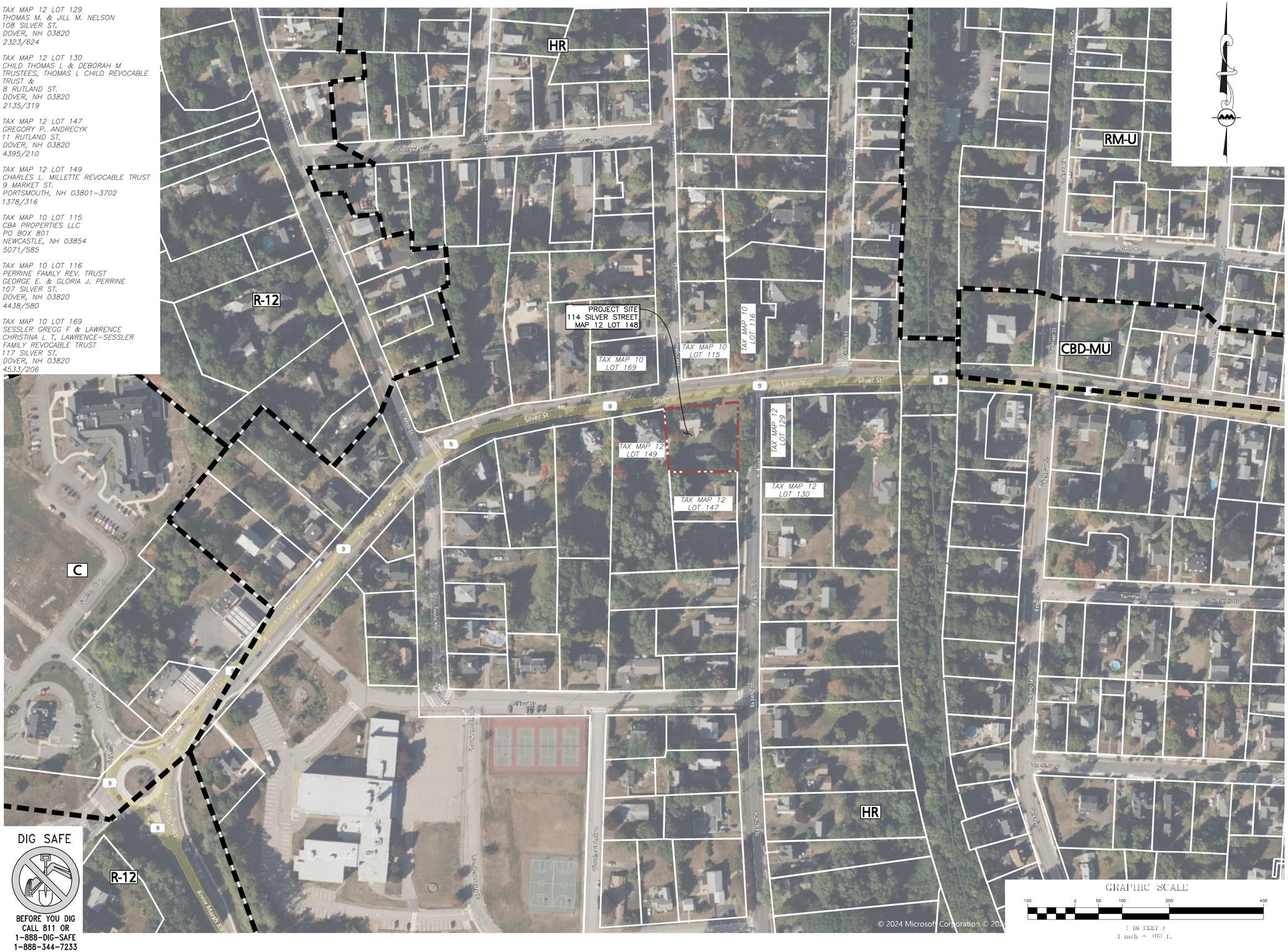
TAX MAP 12 LOT 147
GREGORY P. ANDRECYK
11 RUTLAND ST.
DOVER, NH 03820
4395/210

TAX MAP 12 LOT 149
CHARLES L. MILLETTE REVOCABLE TRUST
9 MARKET ST.
PORTSMOUTH, NH 03801-3702
1378/316

TAX MAP 10 LOT 115
CBA PROPERTIES LLC
PO BOX 801
NEWCASTLE, NH 03854
5071/585

TAX MAP 10 LOT 116
PERRINE FAMILY REV. TRUST
GEORGE E. & GLORIA J. PERRINE
107 SILVER ST.
DOVER, NH 03820
4438/580

TAX MAP 10 LOT 169
SESSLER GREGG F & LAWRENCE CHRISTINA L T, LAWRENCE-SESSLER FAMILY REVOCABLE TRUST
117 SILVER ST.
DOVER, NH 03820
4533/206



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

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CALL 811 OR
1-888-DIG-SAFE
1-888-344-7233

R:\PROJECTS\3347-01\CIVIL\DRAWINGS\CURRENT\C-3347-01_NEIGHBORHOOD PLAN.DWG

STATE OF NEW HAMPSHIRE
MICHAEL A. MALYNOWSKI
No. 12205
LICENSED
PROFESSIONAL ENGINEER
12-16-2024
PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
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APPLICANT\OWNER:
114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:
114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	08/06/24
SCALE:	1" = 100'	DWG. NAME:	C3347-01
DESIGNED BY:	JRG/SM	CHECKED BY:	MAM

PREPARED BY:
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DRAWING TITLE:
NEIGHBORHOOD PLAN

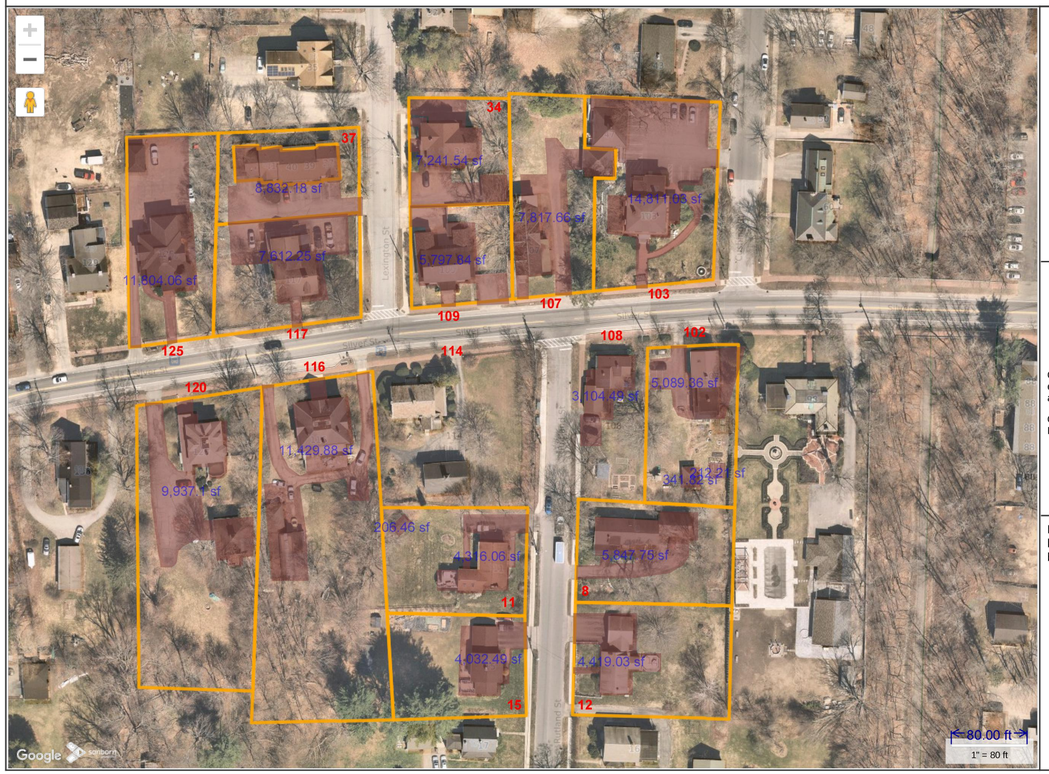
SHEET No.
C-106

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PLANNING FILE # SITE-2024-0006

City of Dover, NH

August 2, 2024



MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Dover, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 10/30/2023
Data updated Daily

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

	Lot Area (Acre)	Lot Area (SF)	Impervious (SF)	Open Space Area	Open Space Percent
37 Lexington St	0.63	27,443	8,832	18,611	67.8%
34 Lexington St	0.24	10,454	7,242	3,213	30.7%
#116 Silver Street	0.78	33,977	11,430	22,547	66.4%
#108 Silver Street	0.22	9,583	3,104	6,479	67.6%
#102 Silver Street	0.33	14,375	4,831	9,544	66.4%
#120 Silver Street	0.79	34,412	9,937	24,475	71.1%
#125 Silver Street	0.39	16,988	11,804	5,184	30.5%
#117 Silver Street	0.36	15,682	7,612	8,069	51.5%
#109 Silver Street	0.23	10,019	5,798	4,221	42.1%
#107 Silver Street	0.38	16,553	7,818	8,735	52.8%
#103 Silver Street	0.49	21,344	14,811	6,533	30.6%
#11 Rutland Street	0.39	16,988	4,523	12,466	73.4%
#15 Rutland Street	0.43	18,731	4,032	14,698	78.5%
#12 Rutland Street	0.34	14,810	4,419	10,391	70.2%
#8 Rutland Street	0.34	14,810	5,848	8,963	60.5%
			Average =		*57.3%*

AVERAGE OPEN SPACE CALCULATION NOTES:

1. THE SPECIFIC SITE MUST HAVE AN AMOUNT OF OPEN SPACE, EITHER LANDSCAPED OR LEFT NATURAL, AT LEAST EQUAL TO THE AVERAGE AMOUNT OF OPEN SPACE ON ALL DEVELOPED LOTS IN THE HR DISTRICT THAT ARE WHOLLY OR PARTLY WITHIN TWO HUNDRED (200) FEET OF THE SUBJECT PARCEL. EXISTING PARKING AREAS, EITHER GRAVEL, PAVED OR UNPAVED, SHALL NOT BE CONSIDERED TO BE OPEN SPACE.

   CALCULATED AVERAGE OPEN SPACE = 57.3%

FRONT SETBACK CALCULATION NOTES:

1. THE PROPERTY OWNER SHALL CALCULATE THE AVERAGE FRONT SETBACKS OF ALL LOTS WITHIN THE SAME ZONE LOCATED ON THE SAME SIDE OF THE STREET, 250 FT IN EACH DIRECTION FROM THE CENTER OF THE FRONT LOT LINE. THIS FRONT SETBACK DIMENSION SHALL BE CONSIDERED TO BE A BUILD TO LINE. STRUCTURES MAY BE CONSTRUCTED WITHIN FIVE (5) FT PLUS OR MINUS OF THE AVERAGE. PORCHES OR STEPS MAY BE LOCATED AN ADDITIONAL FIVE (5) FT BEYOND THE FRONT FAÇADE OF THE STRUCTURE. EXPANSIONS TO EXISTING STRUCTURES SHALL BE SUBJECT TO A MINIMUM SETBACK EQUAL TO THE CALCULATED AVERAGE SETBACK MINUS FIVE (5) FEET.

   CALCULATED AVERAGE FRONT SETBACK FROM SILVER STREET = 14.16 FT
   CALCULATED AVERAGE FRONT SETBACK FROM RUTLAND STREET = 20.54 FT

Silver Street		Rutland Street	
#136	19.40	#11	17.00
#120	14.00	#15	20.00
#116	17.80	#17	28.10
#114	8.60	#16	32.00
#108	4.20	#12	27.60
#102	3.40	#8	16.00
#98	31.70	#108	3.10
Average =	14.16	Average =	20.54

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City of Dover, NH



R:\PROJECTS\3347-01\CIVIL\DRAWINGS\CURRENT\C-3347-01_NEIGHBORHOOD PLAN.DWG

PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
5	12-16-24	MISC. REVS. PER T.R.C. COMMENTS
4	11-18-24	MISC. REVS. PER T.R.C. COMMENTS
3	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
2	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
1	08-30-24	MISC. REVS. PER T.R.C. COMMENTS

APPLICANT\OWNER:

114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:

114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	08/06/24
SCALE:	AS SHOWN	DWG. NAME:	C3347-01
DESIGNED BY:	JRG/SM	CHECKED BY:	MAM

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
FAX: (603) 627-5501

WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE:

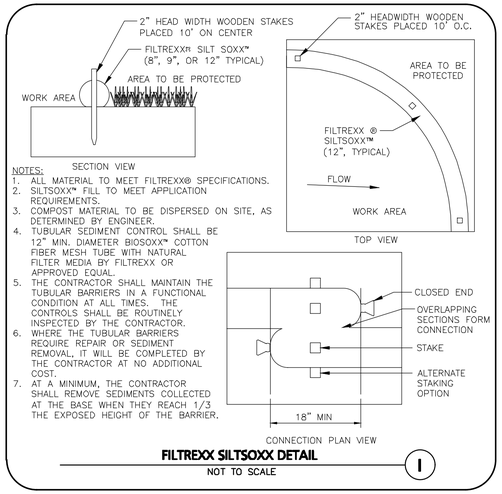
ZONING CALCULATIONS PLAN

SHEET No.

C-107

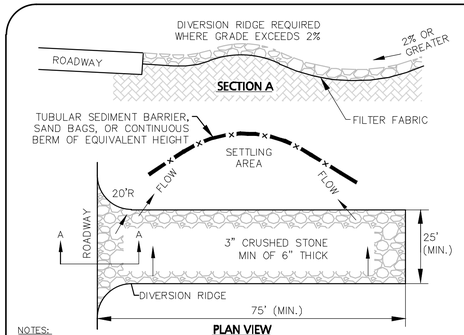
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PLANNING FILE # SITE-2024-0006



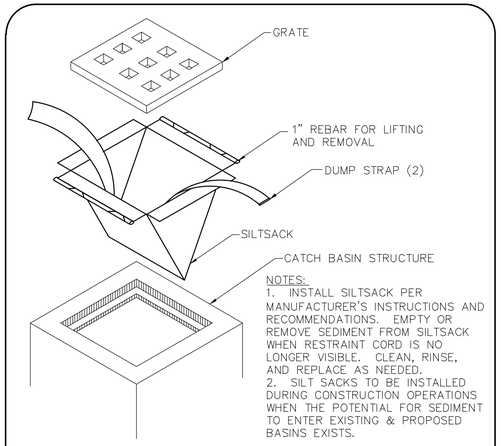
NOTES:
1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. SILTSOXX™ FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.
4. TUBULAR SEDIMENT CONTROL SHALL BE 12" MIN. DIAMETER BIOSOXX™ COTTON FIBER MESH TUBE WITH NATURAL FILTER MEDIA BY FILTREXX OR APPROVED EQUAL.
5. THE CONTRACTOR SHALL MAINTAIN THE TUBULAR BARRIERS IN A FUNCTIONAL CONDITION AT ALL TIMES. THE CONTROLS SHALL BE ROUTINELY INSPECTED BY THE CONTRACTOR.
6. WHERE THE TUBULAR BARRIERS REQUIRE REPAIR OR SEDIMENT REMOVAL, IT WILL BE COMPLETED BY THE CONTRACTOR AT NO ADDITIONAL COST.
7. AT A MINIMUM, THE CONTRACTOR SHALL REMOVE SEDIMENTS COLLECTED AT THE BASE WHEN THEY REACH 1/3 THE EXPOSED HEIGHT OF THE BARRIER.

FILTREXX SILTSOXX DETAIL — NOT TO SCALE — 1



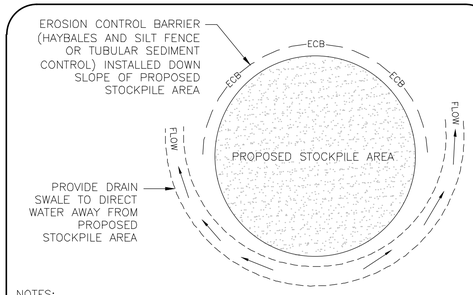
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTERING THE PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

STABILIZED CONSTRUCTION ENTRANCE — NOT TO SCALE — 2



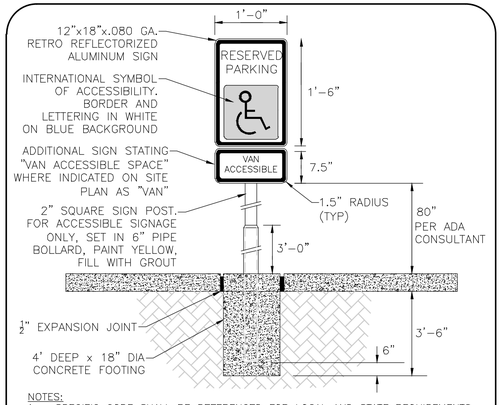
NOTES:
1. INSTALL SILTSACK PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. EMPTY OR REMOVE SEDIMENT FROM SILTSACK WHEN RESTRAINT CORD IS NO LONGER VISIBLE. CLEAN, RINSE, AND REPLACE AS NEEDED.
2. SILT SACKS TO BE INSTALLED DURING CONSTRUCTION OPERATIONS WHEN THE POTENTIAL FOR SEDIMENT TO ENTER EXISTING & PROPOSED BASINS EXISTS.

CATCH BASIN INLET PROTECTION — NOT TO SCALE — 3



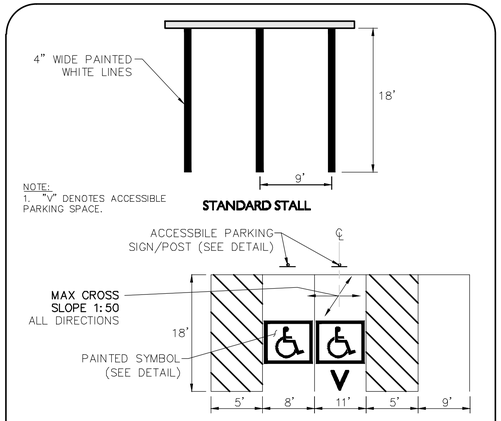
NOTES:
1. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR LESS THAN 90 DAYS SHALL BE COVERED WITH HAY AND MULCH (AT 100LBS/1,000 SF), OR WITH AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.
2. SOIL AND FILL STOCKPILES EXPECTED TO REMAIN IN PLACE FOR 90 DAYS OR MORE SHALL BE SEEDED WITH WINTER RYE (FOR FALL SEEDING AT 3LB/1,000 SF) OR OATS (FOR SUMMER SEEDING AT 2LB/1,000 SF) AND THEN COVERED WITH HAY MULCH (AT 100LB/1,000 SF) OR AN ANCHORED TARP WITHIN 7 DAYS OR PRIOR TO ANY RAINFALL.

STOCKPILE PROTECTION — NOT TO SCALE — 4



NOTES:
1. SPECIFIC CODE SHALL BE REFERENCED FOR LOCAL AND STATE REQUIREMENTS.
2. PROVIDE (1) SIGN PER ACCESSIBLE SPACE. SEE SITE PLAN FOR EXACT LOCATION.
3. EXPANSION JOINT MATERIAL NOT REQUIRED WITH FLEXIBLE PAVEMENT.

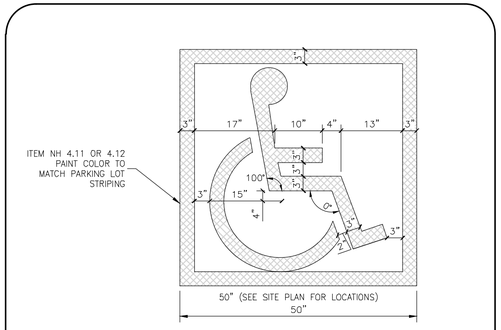
ACCESSIBLE PARKING SIGN POST — NOT TO SCALE — 5



NOTE:
1. "V" DENOTES ACCESSIBLE PARKING SPACE.

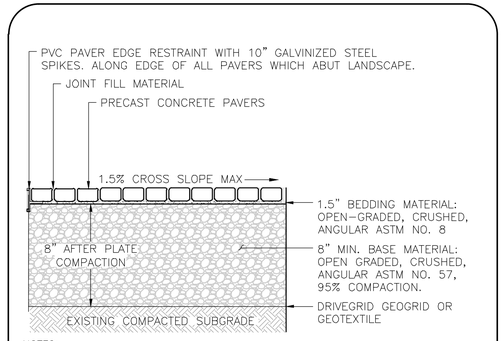
STANDARD AND VAN ACCESSIBLE PARKING SPACE

ACCESSIBLE & STANDARD PARKING STRIPING — NOT TO SCALE — 6



SYMBOL TO BE CENTERED ON WIDTH OF PARKING STALL. SYMBOL IS REQUIRED TO CONTRAST WITH BACKGROUND. USE WHITE ON BLUE (COLOR #105090 IN FEDERAL STANDARD 5952) DOUBLE COAT.

ACCESSIBLE PARKING STALL PAVEMENT MARKING — NOT TO SCALE — 7



NOTES:
1. PAVERS TO BE UNILOCK TOWN HALL RANDOM BUNDLE OR EQUAL.
2. SUBMIT SAMPLES & SHOP DRAWING OF PAVERS AND COLOR CHART FOR APPROVAL PRIOR TO ORDERING.
3. SUBMIT SHOP DRAWING FOR APPROVAL OF BEDDING & BASE MATERIAL SIEVE ANALYSIS PRIOR TO ORDERING.

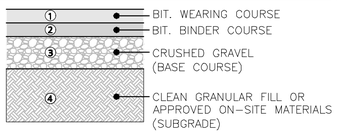
PERMEABLE PAVER SIDEWALK DETAIL — NOT TO SCALE — 8

STANDARD DUTY FLEXIBLE PAVEMENT DESIGN SECTION

LAYER NUMBER	LAYER DESCRIPTION	LAYER THICKNESS (INCHES)
1	BITUMINOUS WEARING COURSE (3/4" AGGREGATE – NHDOT PRE-APPROVED MIX DESIGN)	1"
2	BITUMINOUS BINDER COURSE (3/4" AGGREGATE – NHDOT PRE-APPROVED MIX DESIGN)	2"
3	CRUSHED GRAVEL (BASE COURSE) (NHDOT ITEM 304.3)	12"
4	CLEAN GRANULAR FILL MATERIAL OR APPROVED ON-SITE MATERIALS (SUBGRADE)	AS NECESSARY

NHDOT GRADATION SPECIFICATION

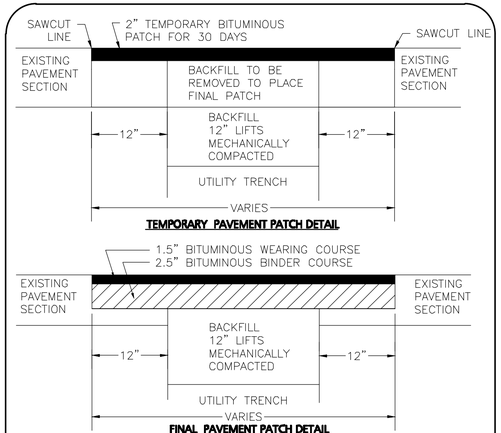
SIEVE SIZE	PERCENT PASSING BY WEIGHT		
	CLEAN GRANULAR FILL	BASE COURSE	SELECT GRANULAR FILL
8"	100	100	100
3"	70-100	100	70-100
1/2"	40-100	40-80	40-90
No. 4	25-100	30-70	25-80
No. 10	15-95	20-60	15-70
No. 40	10-70	10-30	5-40
No. 200	0-15	3-10	0-12



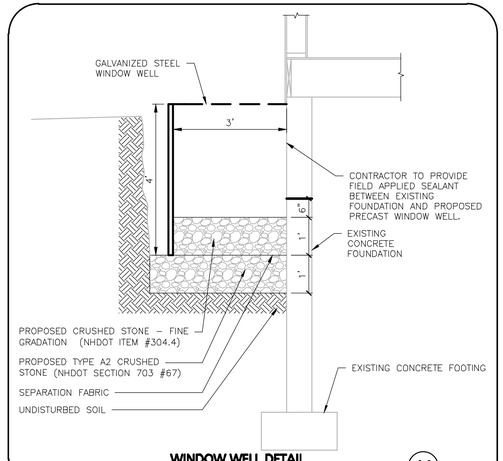
NOTES:
IF A GEOTECHNICAL REPORT IS PREPARED THE RECOMMENDATIONS WITHIN THAT REPORT SHALL SUPERCEDE RECOMMENDATIONS HEREIN. THE CONTRACTOR SHALL HAVE AND REVIEW A COPY OF THE GEOTECHNICAL REPORT AND COMPLY WITH THE RECOMMENDATIONS THEREIN.

1. TOPSOIL SHALL BE REMOVED BENEATH ALL PAVEMENT AREAS TO EXPOSE THE NATURALLY-OCCURRING SOILS OR ACCEPTABLE ON-SITE FILL MATERIALS.
2. THE SUBGRADE SHOULD BE PROOFROLLED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER USING AT LEAST 4 PASSES OF A 10-TON VIBRATORY ROLLER. AREAS OF THE SUBGRADE THAT "WEAVE" OR "ROLL" EXCESSIVELY SHOULD BE OVEREXCAVATED AND REPLACED WITH DRIER CLEAN GRANULAR FILL MATERIAL.
3. THE PAVEMENT SUBGRADE CONSISTING OF THE SPECIFIED CLEAN GRANULAR FILL SHALL BE PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO A DRY DENSITY OF AT LEAST 95 PERCENT OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM DESIGNATION D-1557.

PAVEMENT SECTIONS — NOT TO SCALE — 9



PAVEMENT TRENCH PATCH — NOT TO SCALE — 10



WINDOW WELL DETAIL — NOT TO SCALE — 11

R:\PROJECTS\3347-01\CIVIL\DRAWINGS\CURRENT\C-3347-01_DETAILS.DWG

MICHAEL A. MALYNOWSKI No. 12205 LICENSED PROFESSIONAL ENGINEER — STATE OF NEW HAMPSHIRE
12-16-2024
PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
5	12-16-24	MISC. REVS. PER T.R.C. COMMENTS
4	11-18-24	MISC. REVS. PER T.R.C. COMMENTS
3	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
2	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
1	08-30-24	MISC. REVS. PER T.R.C. COMMENTS

APPLICANT\OWNER:
114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:
114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	06/20/24
SCALE:	AS SHOWN	DWG. NAME:	C3347-01
DESIGNED BY:	JRG/SM	CHECKED BY:	MAM

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
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WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

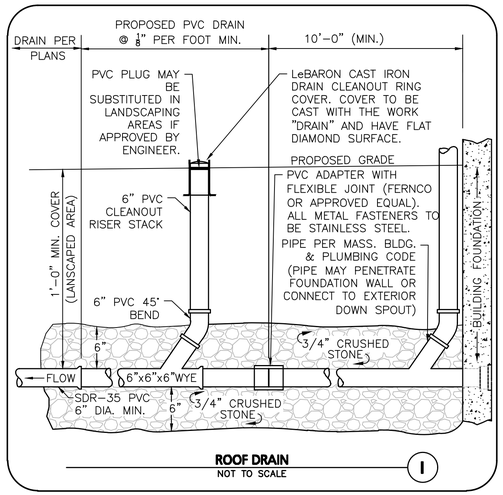
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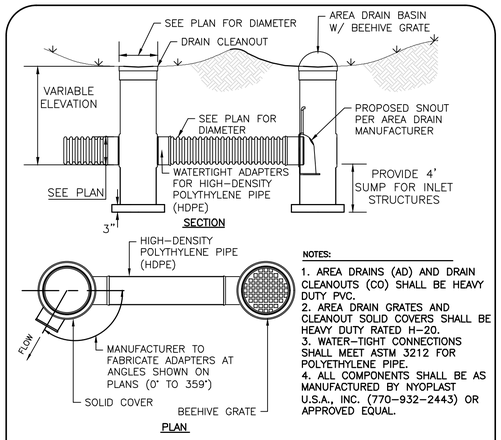
SHEET No. C-501

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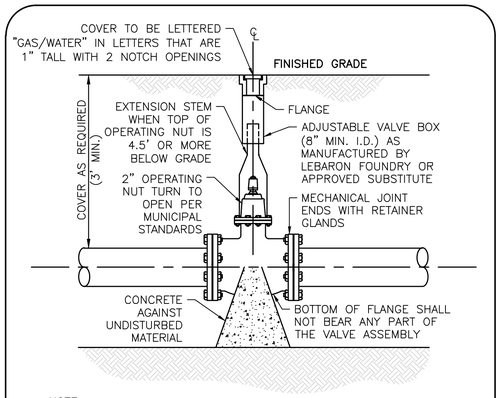


ROOF DRAIN
NOT TO SCALE (1)



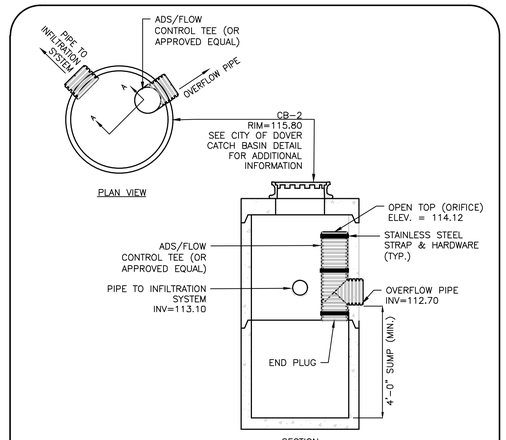
NOTES:
1. AREA DRAINS (AD) AND DRAIN CLEANOUTS (CO) SHALL BE HEAVY DUTY PVC.
2. AREA DRAIN GRATES AND CLEANOUT SOLID COVERS SHALL BE HEAVY DUTY RATED H-20.
3. WATER-TIGHT CONNECTIONS SHALL MEET ASTM 3212 FOR POLYETHYLENE PIPE.
4. ALL COMPONENTS SHALL BE AS MANUFACTURED BY NYOPLAST U.S.A., INC. (770-932-2443) OR APPROVED EQUAL.

AREA DRAIN
NOT TO SCALE (2)



NOTE:
1. CONTRACTOR MAY USE ANCHOR TEES AT HIS OPTION.
2. HYDRANTS AND VALVES TO OPERATE PER MUNICIPAL STANDARDS

GATE VALVE
NOT TO SCALE (3)



CB-2 OUTLET CONTROL STRUCTURE (OCS)
NOT TO SCALE (4)

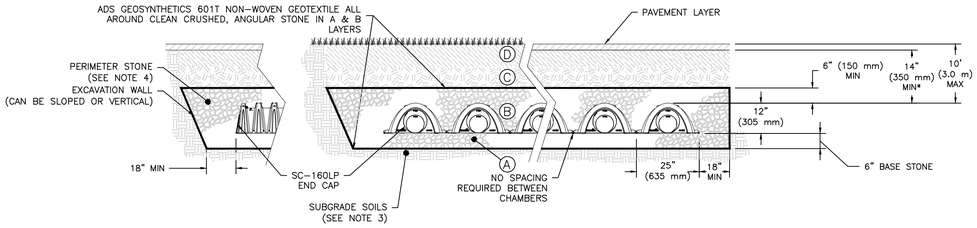
ACCEPTABLE FILL MATERIALS: STORMTECH SC-160LP CHAMBER SYSTEMS

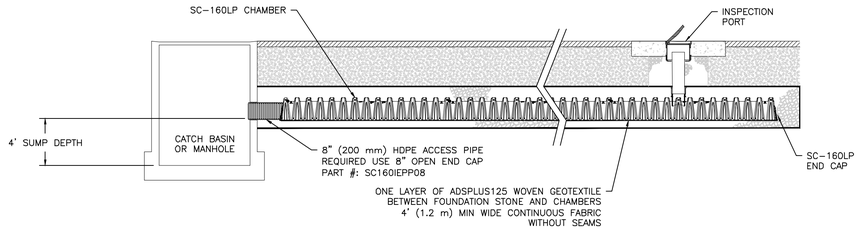
	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	GENERAL BACKFILL. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	SEE FULL DEPTH PAVEMENT SECTION DETAIL
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 14" (355 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

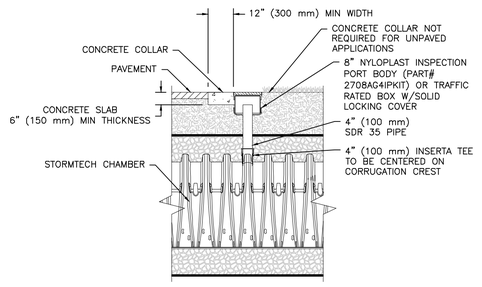
SC-160LP STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-160LP.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 1.5".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT/% THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.





SC-160LP ISOLATOR ROW PLUS DETAIL
NOT TO SCALE



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

INSPECTION PORT DETAIL
NOT TO SCALE

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

STORMTECH SC-160LP DETENTION SYSTEM
NOT TO SCALE (5)

R:\PROJECTS\3347-01\CIVIL\DRAWINGS\CURRENT\C-3347-01_DETAILS.DWG

STATE OF NEW HAMPSHIRE
MICHAEL A. MALYNOWSKI
No. 12205
LICENSED PROFESSIONAL ENGINEER
12-16-2024
PROFESSIONAL ENGINEER FOR
ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
5	12-16-24	MISC. REVS. PER T.R.C. COMMENTS
4	11-18-24	MISC. REVS. PER T.R.C. COMMENTS
3	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
2	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
1	08-30-24	MISC. REVS. PER T.R.C. COMMENTS

APPLICANT\OWNER:
114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:
114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	06/20/24
SCALE:	AS SHOWN	DWG. NAME:	C3347-01
DESIGNED BY:	JRG/SM	CHECKED BY:	MAM

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
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environmental consulting ◆ landscape architecture
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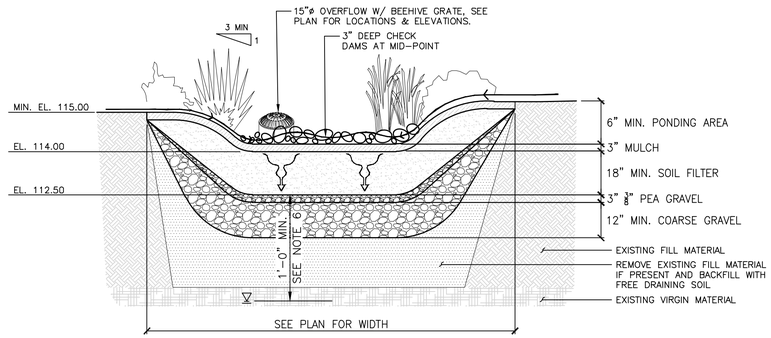
DRAWING TITLE:
DETAILS

SHEET No.
C-502

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PLANNING FILE # SITE-2024-0006

BIORETENTION FILTER MEDIA			
COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL	
		SIEVE NO.	PERCENT BY WEIGHT PASSING STANDARD SIEVE
FILTER MEDIA OPTION A			
ASTM C-22 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



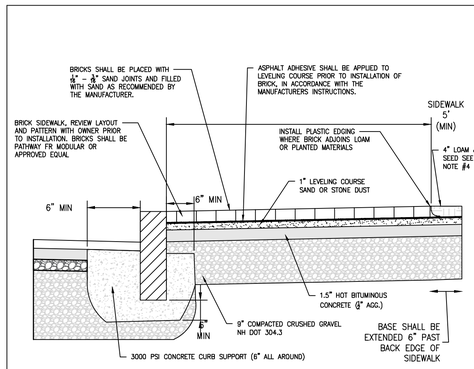
NOTES:

1. SEE LANDSCAPE PLAN FOR PLANT TYPES.
2. GRADING, AND PLANTING OF BIORETENTION SHALL BE COMPLETED IN EARLY PHASES OF CONSTRUCTION. PLANTS AND SEED ON SLOPES AND BOTTOM OF BASIN MUST BE ESTABLISHED PRIOR TO CONNECTING STORM DRAINAGE SYSTEM OUTLETS TO BIORETENTION AREA. PLANTS AND SEED MIX SHALL HAVE A MINIMUM OF 6 MONTHS GROWING, BE ESTABLISHED AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO CONNECTING STORM DRAINAGE SYSTEM OUTLETS TO BIORETENTION AREA.
3. EROSION CONTROL MEASURES AS SHOWN ON THE EROSION CONTROL PLAN, SHALL BE IN PLACE PRIOR TO ANY REGRADING ACTIVITY.
4. EXCAVATION, FILLING AND PLANTING SHALL OCCUR IN THE DRY. WATER LEVELS MUST BE LOWERED IN THE BIORETENTION AREA BY RELYING ON DRY SEASON AND OR DRY SPELLS; OR MAY BE ACCOMPLISHED THROUGH THE USE OF DEWATERING METHODS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ANY DEWATERING METHODS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
5. WATER FROM ANY DEWATERING OPERATION SHALL BE TREATED TO REDUCE TOTAL SUSPENDED SOLIDS AND BE IN COMPLIANCE WITH STATE AND FEDERAL STANDARDS. BEFORE ANY DEWATERING IS PERFORMED, THE CONTRACTOR SHALL FILE AND OBTAIN A TEMPORARY GROUNDWATER DISCHARGE PERMIT FROM NHDES. COORDINATION BETWEEN THE APPLICANT, PDA, NHDES AND THE AIR FORCE IS NECESSARY PRIOR TO FILING THIS APPLICATION.
6. A MINIMUM OF 1 FOOT SEPARATION BETWEEN THE BOTTOM OF THE PRACTICE AND SEASONAL HIGH WATER TABLE SHALL BE PROVIDED. IF SEPARATION CAN NOT BE ACHIEVED, SET UNDERDRAIN AT BOTTOM OF COARSE GRAVEL LAYER AND PROVIDE IMPERMEABLE LINER AT BOTTOM OF PRACTICE.

CONSTRUCTION NOTES:

1. DO NOT PLACE THE BIORETENTION SYSTEM 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 (RUNOFF, 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 POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

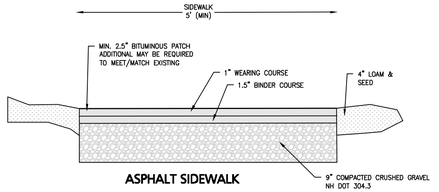
RAIN GARDEN / BIORETENTION SYSTEM DETAIL (1)
NOT TO SCALE



NOTES:

1. MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF DOVER STANDARDS SPECIFICATIONS.
2. SIDEWALK AND DRIVEWAY WIDTHS SHALL BE EQUAL TO EXISTING WIDTHS OR AS APPROVED AND SHALL SLOPE TO MATCH EXISTING ELEVATIONS.
3. BASE FOR THE SIDEWALKS AND DRIVEWAYS SHALL BE 9-INCHES OF CRUSHED GRAVEL.
4. LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.

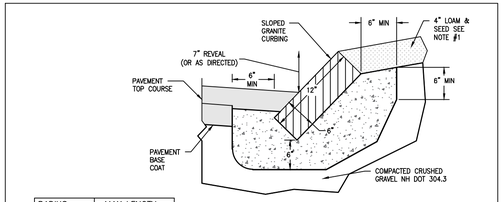
CITY OF DOVER - D-6 ASPHALT & CONCRETE SIDEWALK
NOT TO SCALE



NOTES:

1. MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF DOVER STANDARDS SPECIFICATIONS.
2. SIDEWALK AND DRIVEWAY WIDTHS SHALL BE EQUAL TO EXISTING WIDTHS OR AS APPROVED AND SHALL SLOPE TO MATCH EXISTING ELEVATIONS.
3. BASE FOR THE SIDEWALKS AND DRIVEWAYS SHALL BE 9-INCHES OF CRUSHED GRAVEL.

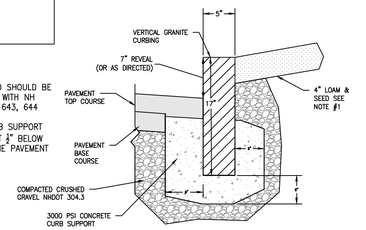
CITY OF DOVER - D-6 ASPHALT & CONCRETE SIDEWALK
NOT TO SCALE



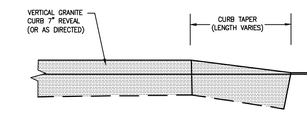
RADIUS	MAX LENGTH
< 21'	USE CURVED CURB
12'	3'
22' - 28'	4'
29' - 35'	5'
36' - 42'	6'
43' - 49'	7'
50' - 56'	8'
57' - 60'	9'
OVER 60'	10'

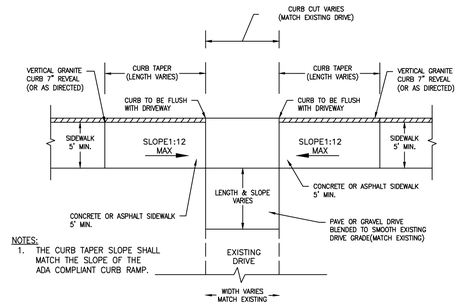
NOTES:

1. LOAM AND SEED SHOULD BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.
2. CONCRETE CURB SUPPORT SHOULD BE SET 1/2" BELOW THE TOP OF THE PAVEMENT BASE COURSE.



CITY OF DOVER - D-8 GRANITE CURB
NOT TO SCALE

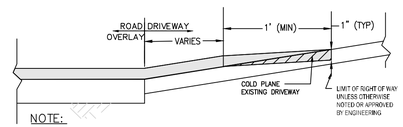




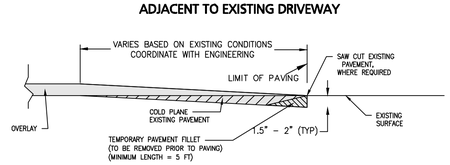
NOTES:

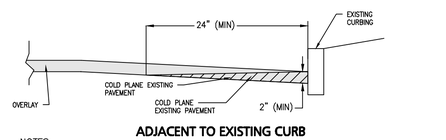
1. THE CURB TAPER SLOPE SHALL MATCH THE SLOPE OF THE ADA COMPLIANT CURB RAMP.

CITY OF DOVER - D-9 SIDEWALK TIP DOWN AT DRIVEWAY
NOT TO SCALE



NOTE:
CONTRACTOR MAY SAWCUT DRIVEWAY TRANSITION AT HIS OPTION. PAVEMENT SHALL BE REMOVED AND REPLACED TO MATCH EXISTING.





NOTES:

1. THE LENGTH OF THE TAPER MAY BE ADJUSTED AS ORDERED TO PROVIDE FOR VARYING FIELD CONDITIONS OR CHANGES IN SINGLE COURSE DEPTH.

CITY OF DOVER - D-12 PAVEMENT OVERLAY DETAILS
NOT TO SCALE

R:\PROJECTS\3347-01\CIVIL\DRAWINGS\CURRENT\C-3347-01_DETAILS.DWG

STATE OF NEW HAMPSHIRE
MICHAEL A. MALYNOWSKI No. 12205 LICENSED PROFESSIONAL ENGINEER
12-16-2024
PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

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1	08-30-24	MISC. REVS. PER T.R.C. COMMENTS

APPLICANT\OWNER:
114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:
114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	06/20/24
SCALE:	AS SHOWN	DWG. NAME:	C3347-01
DESIGNED BY:	JRG/SM	CHECKED BY:	MAM

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
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environmental consulting ◆ landscape architecture
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WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

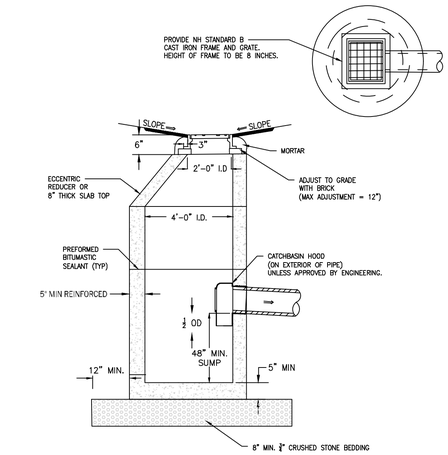
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DRAWING TITLE:
DETAILS

SHEET No.
C-503

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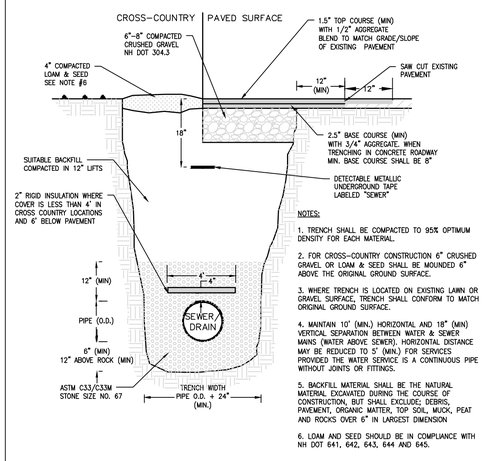
PLANNING FILE # SITE-2024-0006



NOTES:

1. ENTIRE STRUCTURE SHALL BE H-20 LOAD RATED. PROVIDE MANUFACTURER REINFORCEMENT DETAILS TO THE CITY ENGINEER UPON REQUEST.

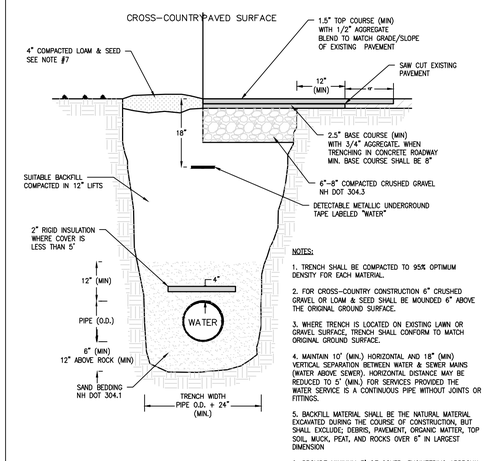
CITY OF DOVER - D-19 CATCHBASIN
NOT TO SCALE



NOTES:

1. TRENCH SHALL BE COMPACTED TO 95% OPTIMUM DENSITY FOR EACH MATERIAL.
2. FOR CROSS-COUNTRY CONSTRUCTION 6" CRUSHED GRAVEL OR LOAM & SEED SHALL BE MOUNDED 6" ABOVE THE ORIGINAL GROUND SURFACE.
3. WHERE TRENCH IS LOCATED ON EXISTING LAWN OR GRAVEL SURFACE, TRENCH SHALL CONFORM TO MATCH ORIGINAL GROUND SURFACE.
4. MAINTAIN 10' (MIN.) HORIZONTAL AND 18" (MIN) VERTICAL SEPARATION BETWEEN WATER & SEWER MAINS (WATER ABOVE SEWER). HORIZONTAL DISTANCE MAY BE REDUCED TO 5' (MIN.) FOR SERVICES PROVIDED THE WATER SERVICE IS A CONTINUOUS PIPE WITHOUT JOINTS OR FITTINGS.
5. BACKFILL MATERIAL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE; DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, MUCK, PEAT AND ROCKS OVER 6" IN LARGEST DIMENSION
6. LOAM AND SEED SHALL BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.

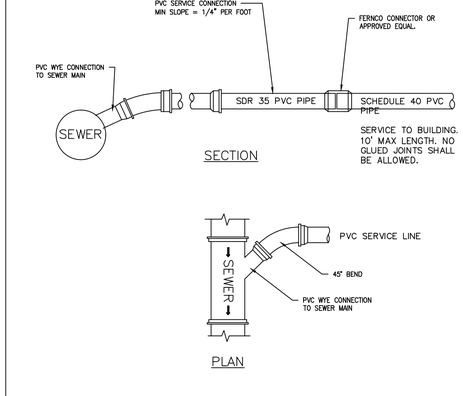
CITY OF DOVER - D-3 SEWER TRENCH
NOT TO SCALE



NOTES:

1. TRENCH SHALL BE COMPACTED TO 95% OPTIMUM DENSITY FOR EACH MATERIAL.
2. FOR CROSS-COUNTRY CONSTRUCTION 6" CRUSHED GRAVEL OR LOAM & SEED SHALL BE MOUNDED 6" ABOVE THE ORIGINAL GROUND SURFACE.
3. WHERE TRENCH IS LOCATED ON EXISTING LAWN OR GRAVEL SURFACE, TRENCH SHALL CONFORM TO MATCH ORIGINAL GROUND SURFACE.
4. MAINTAIN 10' (MIN.) HORIZONTAL AND 18" (MIN) VERTICAL SEPARATION BETWEEN WATER & SEWER MAINS (WATER ABOVE SEWER). HORIZONTAL DISTANCE MAY BE REDUCED TO 5' (MIN.) FOR SERVICES PROVIDED THE WATER SERVICE IS A CONTINUOUS PIPE WITHOUT JOINTS OR FITTINGS.
5. BACKFILL MATERIAL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE; DEBRIS, PAVEMENT, ORGANIC MATTER, TOP SOIL, MUCK, PEAT, AND ROCKS OVER 6" IN LARGEST DIMENSION
6. PROVIDE MINIMUM 5' OF COVER. ENGINEERING APPROVAL REQUIRED FOR LESS THAN 5' OF COVER.
7. LOAM AND SEED SHALL BE IN COMPLIANCE WITH NH DOT 641, 642, 643, 644 AND 645.

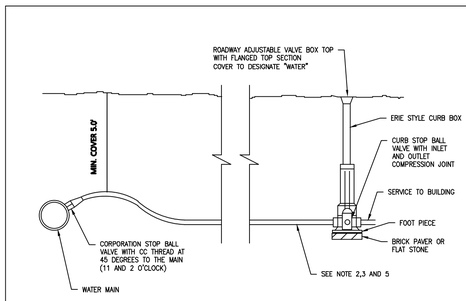
CITY OF DOVER - D-4 WATER TRENCH
NOT TO SCALE



NOTES:

1. TRENCHING AND BEDDING REQUIREMENTS PER CITY SEWER TRENCH DETAIL (D-3).
2. SERVICE LATERAL DIAMETER VARIES PER APPLICATION. REVIEW SIZE WITH CITY ENGINEER PRIOR TO INSTALLATION.
3. SDR 35 SHALL NOT EXTEND INTO THE BUILDING

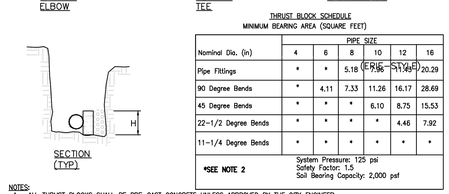
CITY OF DOVER - D-17 SEWER SERVICE
NOT TO SCALE



NOTES:

1. ALL WATER LINES 4" OR GREATER SHALL BE DUCTILE IRON WITH AN 8 MIL POLYETHYLENE WRAP, INCLUDING TEE AND OTHER CONNECTIONS.
2. WATER SERVICE LINES SHALL BE COPPER TUBING (TYPE K) BETWEEN MAIN AND CURB STOP.
3. SERVICE BETWEEN CURB STOP AND BUILDING MAY BE (BLUE OR BLACK) CTS SDR 9 PLASTIC POLYETHYLENE RATED FOR 250 psi.
4. CAM-LOCK REQUIRED FOR CTS OR IPS, MJ ADAPTER REQUIRED FOR HDPE
5. 1"- COPPER, CTS
   1"- COPPER, CTS
   2"- CTS, HDPE, IPS

CITY OF DOVER - D-13 WATER SERVICE CONNECTION
NOT TO SCALE



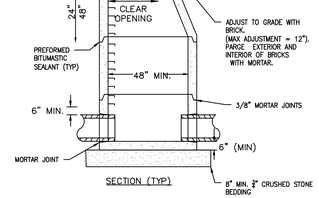
THRUST BLOCK SCHEDULE
MINIMUM BEARING AREA (SQUARE FEET)

	PIPE SIZE					
Nominal Dia. (in)	4	6	8	10 (ERIE STYLE)	12	16
Pipe Fittings	*	*	5.18	7.96	11.45	20.29
90 Degree Bends	*	4.11	7.33	11.26	16.17	28.69
45 Degree Bends	*	*	*	6.10	8.75	15.53
22-1/2 Degree Bends	*	*	*	*	4.46	7.92
11-1/4 Degree Bends	*	*	*	*	*	*
*SEE NOTE 2	System Pressure: 125 psi Safety Factor: 1.5 Soil Bearing Capacity: 2,000 psf					

NOTES:

1. ALL THRUST BLOCKS SHALL BE PRE-CAST CONCRETE UNLESS APPROVED BY THE CITY ENGINEER.
2. 2'X2'X2' MINIMUM THRUST BLOCK REQUIRED, ANY BEARING AREA OVER 4SF REQUIRES THRUST BLOCKS, RESTRAINED JOINTS AND CALCULATIONS ASSOCIATED WITH THE JOINT.
3. THE MINIMUM BEARING AREAS SHOWN IN THE THRUST BLOCK SCHEDULE ARE BASED ON A SYSTEM PRESSURE OF 125 PSI. IF THE SYSTEM PRESSURE IS ABOVE 125 PSI, INCREASE THE NOTED AREAS PROPORTIONALLY TO THE ACTUAL SYSTEM PRESSURE.
4. FOR MINIMUM BEARING AREAS OVER 4 SF, THE LENGTH (L) OF THE BLOCK IS APPROXIMATELY TWICE AS LONG AS THE HEIGHT (H).
5. PLACE CRUSHED STONE BEHIND THRUST BLOCK AGAINST UNDISTURBED SOIL.
6. PLACE THRUST BLOCK ALONG MAXIMUM LENGTH OF THE FITTING TO MAXIMIZE BEARING AREA.
7. CONCRETE COMPRESSIVE STRENGTH: 2,000 PSI MINIMUM.
8. USE OF THRUST BLOCKS DOES NOT ELIMINATE THE REQUIREMENT OF OTHER RESTRAINTS OR VICE VERSA.

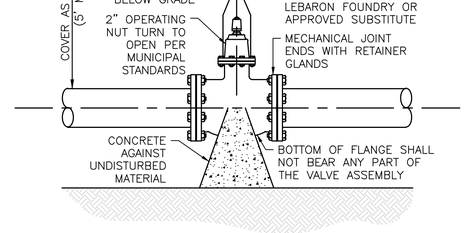
CITY OF DOVER - D-15 THRUST BLOCK
NOT TO SCALE



NOTES:

1. CORINGS TO BE SEPARATED BY 6" (MINIMUM) OF MONOLITHIC SECTION

CITY OF DOVER - D-20 DRAIN MANHOLE
NOT TO SCALE



NOTE:
1. CONTRACTOR MAY USE ANCHOR TEES AT HIS OPTION.
2. HYDRANTS AND VALVES TO OPERATE PER MUNICIPAL STANDARDS

GATE VALVE
NOT TO SCALE (1)

STATE OF NEW HAMPSHIRE
MICHAEL A. MALYNOWSKI No. 12205 LICENSED PROFESSIONAL ENGINEER
12-16-2024
PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
5	12-16-24	MISC. REVS. PER T.R.C. COMMENTS
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1	08-30-24	MISC. REVS. PER T.R.C. COMMENTS

APPLICANT\OWNER:

114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:

114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	08/06/24
SCALE:	AS SHOWN	DWG. NAME:	C3347-01
DESIGNED BY:	JRG/SM	CHECKED BY:	MAM

PREPARED BY:
ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
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TEL: (603) 627-5500
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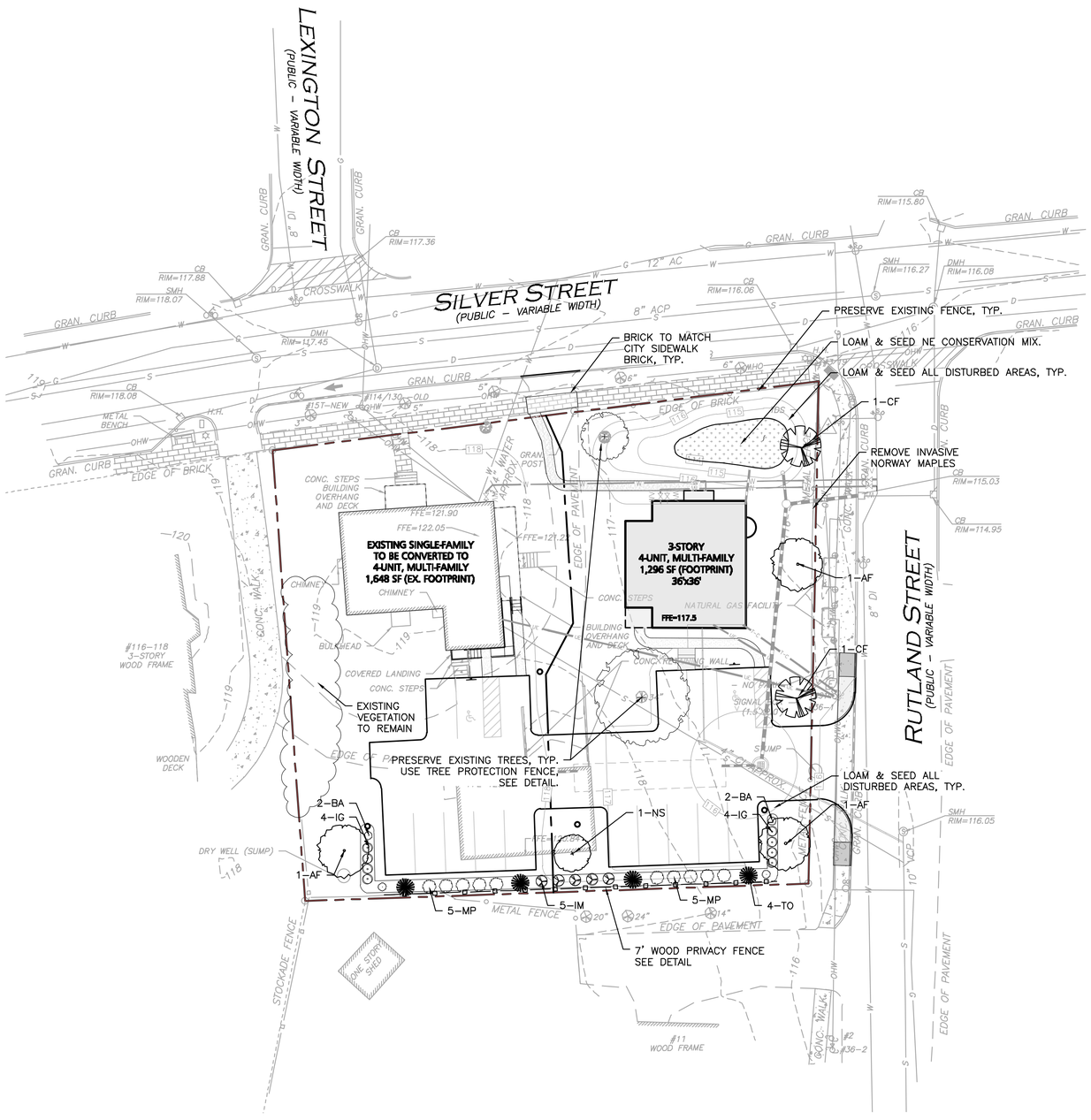
DRAWING TITLE: DETAILS

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PLANNING FILE # SITE-2024-0006

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PLAN NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR IT'S REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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LEGEND

- DECIDUOUS TREE
- EVERGREEN TREE
- FLOWERING TREE
- SHRUBS
- MULCH BED
- PERENNIALS/GROUNDCOVER
- WILDFLOWER SEED MIX
- EROSION CONTROL SEED MIX
- STONE EDGE

PLANTING SCHEDULE-TREES, SHRUBS, GROUNDCOVERS & PERENNIALS

KEY	QTY	BOTANICAL NAME	COMMON NAME	MIN. SIZE	SPACING	COMMENTS
DECIDUOUS/EVERGREEN TREES						
AF	3	ACER FREEMANII "ARMSTRONG"	ARMSTRONG MAPLE	3" CAL.	AS SHOWN	B&B
CF	2	CORNUS FLORIDA 'CHEROKEE PRINCESS'	CHEROKEE PRINCESS DOGWOOD	2.5–3" CAL.	AS SHOWN	B&B
NS	1	NYSSA SYLVATICA 'WILDFIRE'	WILDFIRE TUPELO	3" CAL.	AS SHOWN	B&B
TO	4	THUJA O. 'SMARAGD'	EMERALD GREEN ARBORVITAE	7–8' HT.	AS SHOWN	B&B – 3" CAL.
SHRUBS						
IG	8	ILEX GLABRA COMPACTA	COMPACT INKBERRY	#7	AS SHOWN	POT – 2' MIN. HT.
IM	5	ILEX MESERVE 'BLUE PRINCESS'	BLUE PRINCESS HOLLY	#7	AS SHOWN	POT – 2' MIN. HT.
MP	10	MYRICA PENNSYLVANICA	BAYBERRY	2.5'–3' HT.	5' O.C.	B&B
GRASSES/PERENNIALS						
BA	4	BAPTISIA AUSTRALIS	BLUE FALSE INDIGO	#3	AS SHOWN	POT – 2' MIN HT.

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

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R: \PROJECTS\3347-01\CIVIL\DRAWINGS\CURRENT\L-3347-01_LANDSCAPE.DWG

LICENSED LANDSCAPE ARCHITECT
BETHANY C. DERMODY
006
STATE OF NEW HAMPSHIRE
12.16.24

PROFESSIONAL LANDSCAPE ARCHITECT FOR ALLEN & MAJOR ASSOCIATES, INC.

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10 DURHAM ROAD
DOVER, NH 03820

PROJECT:

114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	06/20/24
SCALE:	1" = 20'	DWG. NAME:	L-3347-01
DESIGNED BY:	BCD	CHECKED BY:	MAM

PREPARED BY:

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DRAWING TITLE:

LANDSCAPE PLAN

SHEET No.

L-101

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PLANNING FILE # SITE-2024-0006

CONSERVATION WILDLIFE SEED MIX:

NEW ENGLAND CONSERVATION / WILDLIFE MIX
(BY NEW ENGLAND WETLAND PLANTS INC. – NEWP.COM)
APPLICATION RATE: 25 LBS/ACRE | 1750 SQ FT/LB

ITEM	BOTANICAL NAME	COMMON NAME	INDICATOR
1.	ELYMUS VIRGINICUS	VIRGINIA WILD RYE	FACW
2.	CHAMAECRISTA FASCICULATA	PARTRIDGE PEA	FACU
3.	FESTUCA RUBRA	RED FESCUE	FACU
4.	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	FACU
5.	ANDROPOGON GERARDII	BIG BLUESTEM	FACU
6.	PANICUM VIRGATUM	SWITCH GRASS	FAC
7.	DESMODIUM PANICULATUM	PANICLEDLEAF TICK TREFOIL	FACU
8.	SORGHASTRUM NUTANS	INDIAN GRASS	FACU
9.	VERBENA HASTATA	BLUE VERVAIN	FACW
10.	ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED	
11.	RUDBECKIA HIRTA	BLACK EYED SUSAN	FACU
12.	HELENIUM AUTUMNALE	FALL SNEEZEWEED	FACW
13.	ASTERPILOSUS/SYMPHYOTRICHUM PILOSUM	HEATH ASTER	FACU
14.	SOLIDAGO JUNCEA	EARLY GOLDENROD	
15.	AGROSTIS PERENNANS	UPLAND BENTGRASS	FACU

THE NEW ENGLAND CONSERVATION/WILDLIFE MIX PROVIDES A PERMANENT COVER OF GRASSES, WILDFLOWERS, AND LEGUMES. FOR BOTH GOOD EROSION CONTROL AND WILDLIFE HABITAT VALUE. THE MIX IS DESIGNED TO BE A NO MAINTENANCE SEEDING, AND IS APPROPRIATE FOR CUT AND FILL SLOPES, DETENTION BASIN SIDE SLOPES, AND DISTURBED AREAS ADJACENT TO COMMERCIAL AND RESIDENTIAL PROJECTS.

LOAM AND SEED NOTES:

CONTRACTOR SHALL SEED ALL DISTURBED AREAS NOT NOTED TO RECEIVE OTHER MATERIALS, AND AT AREAS SHOWN ON THE PLAN PER SPECIFICATIONS BELOW

SCIENTIFIC NAME	COMMON NAME	PROPORTION BY WEIGHT	PERCENT PURITY	PERCENT GERMINATION
FESTUCA RUBRA "RUBRA"	CREEPING RED FESCUE	37%	95%	90%
PAO PRAENTENSIS "BARON"	BARON KENTUCKY BLUEGRASS	40%	85%	90%
LOLIUM PERENNE "PALMER"	PALMER PERENNIAL RYEGRASS	15%	95%	90%
FESTUCA RUBRA COMMUTATA WILMA	WILMA CHEWINGS	8%	95%	80%

1. SEED TO BE SPREAD AT MINIMUM RATE OF 5 LBS. PER 1000 SQ. FT.
2. SEEDING TO BE COMPLETED "IN SEASON" BETWEEN APRIL 1 TO JUNE 15 OR AUGUST 15 TO OCTOBER 1, EXCEPT FOR RESEEDING OF BARE SPOTS. IF UNABLE TO SEED WITHIN THESE TIMEFRAMES, CONTRACTOR TO INSTALL EROSION CONTROL MATS ON ALL SLOPES 3:1 AND OVER, HYDROSEED ALL EXPOSED AREAS, ADD SOIL STABILIZER "FLEXTERRA HP-FGM" AS MANUFACTURED BY "PROFILE" TO HYDROSEED (AT RATE OF 3,000 LBS PER ACRE). CONTRACTOR TO COMPLETE ALL ABOVE "OUT OF SEASON" REQUIREMENTS AND THEN ALSO BE RESPONSIBLE FOR RE-GRADING AND RE-SEEDING ALL DISTURBED, ERODED, OR BARE SPOTS WITHIN NEXT CLOSEST PLANTING SEASON IN FALL OR SPRING.
3. COMMERCIAL FERTILIZER SHALL BE APPLIED AT THE RATE OF 25 POUNDS PER 1000 SQ. FT. OR AS RECOMMENDED BY THE TESTING AGENCY. LIME TO BE SPREAD AT THE RATE OF 100 POUNDS PER 1000 SQ. FT OR AS RECOMMENDED BY THE TESTING AGENCY. COMMERCIAL FERTILIZER SHALL BE A COMPLETE FERTILIZER CONTAINING AT LEAST 50% OF THE NITROGEN OF WHICH IS DERIVED FROM NATURAL ORGANIZE SOURCES OF UREAFORM. IT SHALL CONTAIN THE FOLLOWING PERCENTAGES BY WEIGHT: NITROGEN (N) 10%, PHOSPHORUS (P) 6%, POTASH (K) 4%. LIME SHALL BE AN APPROVED AGRICULTURAL LIMESTONE CONTAINING NOT LESS THAN 85% OF TOTAL CARBONATES. LIMESTONE SHALL BE GROUND TO SUCH FINENESS THAT 50% WILL PASS A 100 MESH SIEVE AND 90% WILL PASS THROUGH A 20 MESH SIEVE.
4. LAWN AREAS TO BE SEEDED BY SOWING EVENLY WITH AN APPROVED MECHANICAL SEEDER AT THE RATE OF TEN POUNDS PER 1000 SQUARE FEET.
5. CONTRACTOR RESPONSIBLE FOR WATERING, MOWING, AND RESEEDING OF LAWN BARE SPOTS UNTIL A UNIFORM, HEALTHY STAND OF GRASS IS ESTABLISHED AND ACCEPTED.

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LANDSCAPE (HR)
§ 153-14 SITE DEVELOPMENT DESIGN CRITERIA.

G. LANDSCAPING	REQUIRED	PROVIDE	NOTES
1.a. EXISTING TREES AND STANDS OF TREES TO BE PROTECTED WITH CONSTRUCTION FENCING.	AS NOTED	PROTECT EXISTING TREES, SEE TREE PROTECTION DETAIL	
1.b. INVASIVE PLANT MATERIAL IS PROHIBITED	AS NOTED	REMOVE INVASIVES	
1.c. SHRUBS AND HEDGES TO BE A MIN. OF 24" IN HEIGHT WHEN PLANTED	AS NOTED	2' HT NOTED IN PLANT SCHEDULE	
1.f. 1 TREE PER 35' NEXT TO ROADWAYS	AS NOTED	150 LF/35=4 TREES NEXT TO RUTLAND ST.; EXISTING TREES ALONG SILVER ST. ROW	
1.g. TREES UNDER POWER LINES TO BE LOW GROWING.	AS NOTED	AS NOTED	
1.h. LANDSCAPE MAINTENANCE AND MANAGEMENT PLAN TO BE PROVIDED. REGULAR LS MAINTENANCE REQUIRED.	AS NOTED	SEE LANDSCAPE MAINTENANCE NOTES	
1.i. SNOW STORAGE ON GRASSED OR NON LIVING AREAS.	AS NOTED	AS NOTED	
3. PARKING PERIMETER LANDSCAPE SHALL HAVE TREES PLANTED 35' ON CENTER 3" CALIPER MIN. SHRUBS BETWEEN THE TREES SHALL BE 5' ON CENTER AND 24" HIGH MIN.	AS NOTED	3" CAL. TREES 35' O.C. AND 2' HT. SHRUBS 5' O.C. AT PERIMETER OF PARKING.	

LANDSCAPE MANAGEMENT NOTES:

LANDSCAPE MANAGEMENT PLAN
IT SHOULD BE RECOGNIZED THAT THIS IS A GENERAL GUIDELINE TOWARDS ACHIEVING HIGH QUALITY AND WELL GROOMED LANDSCAPED AREAS. THE GROUNDS STAFF / LANDSCAPE CONTRACTOR MUST RECOGNIZE THE SHORTCOMINGS OF A GENERAL MAINTENANCE PROGRAM SUCH AS THIS, AND MODIFY AND/OR AUGMENT IT BASED ON WEEKLY, MONTHLY, AND YEARLY OBSERVATIONS. IN ORDER TO ASSURE THE HIGHEST QUALITY CONDITIONS, THE STAFF MUST ALSO RECOGNIZE AND APPRECIATE THE NEED TO BE AWARE OF THE CONSTANTLY CHANGING CONDITIONS OF THE LANDSCAPING AND BE ABLE TO RESPOND TO THEM ON A PROACTIVE BASIS.

FERTILIZER
- MAINTENANCE PRACTICES SHOULD BE AIMED AT REDUCING ENVIRONMENTAL, MECHANICAL AND PEST STRESSES TO PROMOTE HEALTHY AND VIGOROUS GROWTH. WHEN NECESSARY, PEST OUTBREAKS SHOULD BE TREATED WITH THE MOST SENSITIVE CONTROL MEASURE AVAILABLE. SYNTHETIC CHEMICAL CONTROLS SHOULD BE USED ONLY AS A LAST RESORT TO ORGANIC AND BIOLOGICAL CONTROL METHODS. FERTILIZER, SYNTHETIC CHEMICAL CONTROLS AND PEST MANAGEMENT APPLICATIONS (WHEN NECESSARY) SHOULD BE PERFORMED ONLY BY LICENSED APPLICATORS IN ACCORDANCE WITH THE MANUFACTURER'S LABEL INSTRUCTIONS WHEN ENVIRONMENTAL CONDITIONS ARE CONDUCIVE TO CONTROLLED PRODUCT APPLICATION.

- ONLY SLOW-RELEASE ORGANIC FERTILIZERS SHOULD BE USED IN THE LANDSCAPED AREAS TO LIMIT THE AMOUNT OF NUTRIENTS THAT COULD ENTER DOWNSTREAM RESOURCE AREAS. FERTILIZATION OF DEVELOPED AREAS ON SITE WILL BE PERFORMED WITHIN MANUFACTURERS LABELING INSTRUCTIONS AND SHALL NOT EXCEED AN NPK RATIO OF 1:1:1 (I.E. TRIPLE 10 FERTILIZER MIX), CONSIDERED A LOW NITROGEN MIXTURE. ADDITIONALLY, THE FERTILIZER WILL INCLUDE A SLOW RELEASE ELEMENT.

SUGGESTED AERATION
- PROGRAM IN-SEASON AERATION OF LAWN AREAS IS GOOD CULTURAL PRACTICE, AND IS RECOMMENDED WHENEVER FEASIBLE. IT SHOULD BE ACCOMPLISHED WITH A SOLID THIN TINE AERATION METHOD TO REDUCE DISRUPTION TO THE USE OF THE AREA. THE DEPTH OF SOLID TINE AERATION IS SIMILAR TO CORE TYPE, BUT SHOULD BE PERFORMED WHEN THE SOIL IS SOMEWHAT DRIER FOR A GREATER OVERALL EFFECT.

- DEPENDING ON THE INTENSITY OF USE, IT CAN BE EXPECTED THAT ALL LANDSCAPED LAWN AREAS WILL NEED AERATION TO REDUCE COMPACTION AT LEAST ONCE PER YEAR. THE FIRST OPERATION SHOULD OCCUR IN LATE MAY FOLLOWING THE SPRING SEASON. METHODS OF REDUCING COMPACTION WILL VARY BASED ON THE NATURE OF THE COMPACTION. COMPACTION ON NEWLY ESTABLISHED LANDSCAPED AREAS IS GENERALLY LIMITED TO THE TOP 2-3" AND CAN BE ALLEVIATED USING HOLLOW CORE OR THIN TINE AERATION METHODS.

- THE SPRING AERATION SHOULD CONSIST OF TWO PASSES AT OPPOSITE DIRECTIONS WITH 1/4" HOLLOW CORE TINES PENETRATING 3-5" INTO THE SOIL PROFILE. AERATION SHOULD OCCUR WHEN THE SOIL IS MOIST BUT NOT SATURATED. THE CORES SHOULD BE SHATTERED IN PLACE AND DRAGGED OR SWEPT BACK INTO THE TURF TO CONTROL THATCH. IF DESIRED THE CORES MAY ALSO BE REMOVED AND THE AREA TOP-DRESSED WITH SAND OR SANDY LOAM. IF THE AREA DRAINS ON AVERAGE TOO SLOWLY, THE TOPDRESSING SHOULD CONTAIN A HIGHER PERCENTAGE OF SAND. IF IT IS DRAINING ON AVERAGE TOO QUICKLY, THE TOP DRESSING SHOULD CONTAIN A HIGHER PERCENTAGE OF SOIL AND ORGANIC MATTER.

LANDSCAPE MAINTENANCE PROGRAM PRACTICES:

LAWN
- MOW A MINIMUM OF ONCE A WEEK IN SPRING, TO A HEIGHT OF 2" TO 2 1/2" HIGH. MOWING SHOULD BE FREQUENT ENOUGH SO THAT NO MORE THAN 1/3 OF GRASS BLADE IS REMOVED AT EACH MOWING. THE TOP GROWTH SUPPORTS THE ROOTS; THE SHORTER THE GRASS IS CUT, THE LESS THE ROOTS WILL GROW. SHORT CUTTING ALSO DRIES OUT THE SOIL AND ENCOURAGES WEEDS TO GERMINATE.
- MOW APPROXIMATELY ONCE EVERY TWO WEEKS FROM JULY 1ST TO AUGUST 15TH DEPENDING ON LAWN GROWTH.
- MOW ON A TEN-DAY CYCLE IN FALL, WHEN GROWTH IS STIMULATED BY COOLER NIGHTS AND INCREASED MOISTURE.
- DO NOT REMOVE GRASS CLIPPINGS AFTER MOWING.
- KEEP MOWER BLADES SHARP TO PREVENT RAGGED CUTS ON GRASS LEAVES, WHICH CAUSE A BROWNISH APPEARANCE AND INCREASE THE CHANCE FOR DISEASE TO ENTER A LEAF.

SHRUBS
- MULCH NOT MORE THAN 3" DEPTH WITH SHREDDED PINE OR FIR BARK.
- HAND PRUNE ANNUALLY, IMMEDIATELY AFTER BLOOMING, TO REMOVE 1/3 OF THE ABOVE-GROUND BIOMASS (OLDER STEMS). STEM REMOVALS TO OCCUR WITHIN 6" OF THE GROUND TO OPEN UP SHRUB AND MAINTAIN TWO-YEAR WOOD (THE BLOOMING WOOD).
- FERTILIZE WITH ½ LB. SLOW-RELEASE FERTILIZER (SEE ABOVE SECTION ON FERTILIZER) EVERY SECOND YEAR.
- HAND PRUNE EVERGREEN SHRUBS ONLY AS NEEDED TO REMOVE DEAD AND DAMAGED WOOD AND TO MAINTAIN THE NATURALISTIC FORM OF THE SHRUB. NEVER MECHANICALLY SHEAR EVERGREEN SHRUBS.

TREES
- PROVIDE AFTERCARE FOR NEW TREE PLANTINGS FOR THE FIRST THREE YEARS.
- DO NOT FERTILIZE TREES, IT ARTIFICIALLY STIMULATES THEM (UNLESS TREE HEALTH WARRANTS).
- WATER ONCE A WEEK FOR THE FIRST YEAR; TWICE A MONTH THE SECOND, ONCE A MONTH THE THIRD YEAR.
- PRUNE TREES ON A FOUR-YEAR CYCLE.

ORNAMENTAL GRASSES/PERENNIALS
- APPLY LOW- NITROGEN 10-10-10 FERTILIZER AS GROWTH RESUMES IN THE SPRING.
- WATER THOROUGHLY.
- GRASSES/PERENNIALS DO NOT NEED TO BE CUT DOWN BEFORE WINTER. IN FACT, THEY ARE ATTRACTIVE WHEN LEFT STANDING AND THE FOLIAGE HELPS TO INSULATE THE CROWN OF THE PLANT.
- CUT BACK THE FOLIAGE TO ABOUT 4-6 INCHES IN THE SPRING BEFORE GROWTH RESUMES. WHEN FOLIAGE IS REMOVED, SPRING GROWTH WILL BEGIN EARLIER. OLD FOLIAGE LEFT ON THE PLANT CAN DELAY THE CROWN'S WARMING AND SUBSEQUENT GROWTH BY AS MUCH AS 3 WEEKS.

WATERING
- WATERING TREES, SHRUBS AND PERENNIALS SHOULD BE DONE WEEKLY UPON ESTABLISHMENT FOR 6 MONTHS.

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1-888-344-7233

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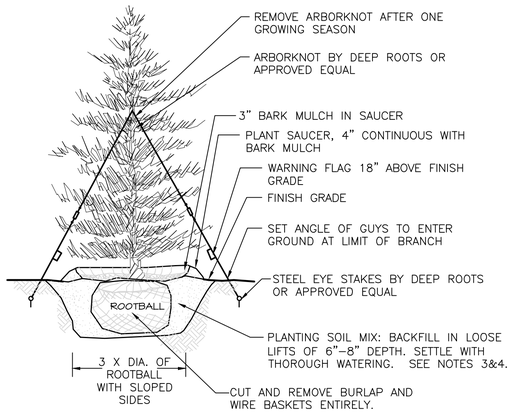
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LANDSCAPE NOTES

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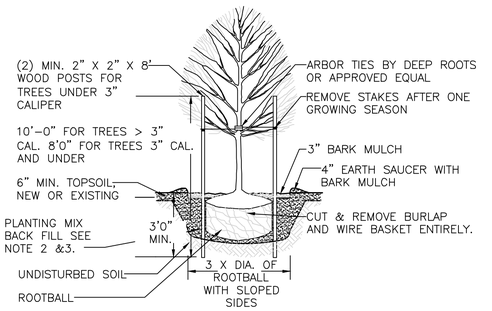
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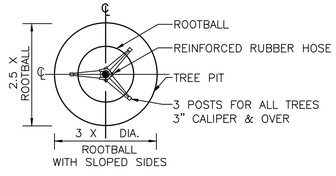
1. TREES SHALL BEAR SAME RELATIONSHIP TO FINISH GRADE AS IT BORE TO NURSERY OR FIELD GRADE. ROOT FLARE SHALL BE 2" ABOVE FINISH GRADE. REMOVE SOIL FROM TRUNK FLARE OF TREE TO DETERMINE ACTUAL TOP OF ROOTBALL AREA.
2. INSTALL THREE GUYS PER TREE; EQUALLY SPACED AROUND BALL.
3. ATTACH GUYS AT 2/3 HEIGHT OF TREE.
4. BACKFILL WITH PLANTING MIX. PLANT MIX TO BE: 50% NATIVE TOPSOIL, 20% COMPOST (LEAVES & ORGANIC MATERIAL, NO ASH) 20% PEAT MOSS, 10% SAND.
5. ADD MYCORRAIZA SOIL ADDITIVES AND SLOW RELEASE FERTILIZER WHEN PLANT HOLES ARE 50% FILLED AND WATER THOROUGHLY AT COMPLETION.

EVERGREEN TREE DETAIL — NOT TO SCALE — 1

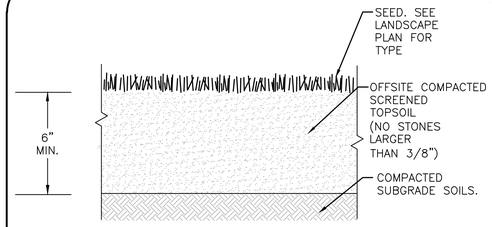


NOTES:

1. ALL TREES SHALL HAVE THE SAME RELATIONSHIP TO FINISH GRADE AFTER PLANTING AS THEY HAD AT THE ORIGINAL NURSERY SETTING. ROOT FLARE SHALL BE 2" ABOVE FINISH GRADE. REMOVE SOIL FROM TRUNK FLARE OF TREE TO DETERMINE ACTUAL ROOTBALL AREA.
2. BACKFILL WITH PLANTING MIX. PLANT MIX TO BE: 50% NATIVE TOPSOIL, 20% COMPOST (LEAVES & ORGANIC MATERIAL, NO ASH) 20% PEAT MOSS, 10% SAND.
3. ADD MYCORRAIZA SOIL ADDITIVES AND SLOW RELEASE FERTILIZER WHEN PLANT HOLES ARE 50% FILLED AND WATER THOROUGHLY AT COMPLETION.



DECIDUOUS TREE PLANTING DETAIL — NOT TO SCALE — 2



TEXTURE CLASS	% OF TOTAL WEIGHT
SAND	45% – 65%
SILT	15% – 35%
CLAY	5% – 20%

SIEVE	% PASSING
3/8"	100
NO. 4	85–100
NO. 40	60–85
NO. 100	38–60
NO. 200	10–35
20 um	LESS THAN 5%

NOTES:

1. TOP OF LOAM (TOPSOIL) IS FINISH GRADE.
2. ALL TOPSOIL (BOTH ONSITE AND OFFSITE SOURCES) SHALL BE COMPOSED OF A NATURAL, FERTILE, FRIABLE SOIL TYPICAL OF CULTIVATED TOPSOILS OF THE LOCALITY. OFFSITE SOIL SHALL BE SUITABLE FOR THE GERMINATION OF SEEDS AND SUPPORT OF VEGETATIVE GROWTH, WITH ADDITIVES, IF REQUIRED, TO ACHIEVE PARTICLE DISTRIBUTION AND ORGANIC CONTENT BELOW. TOPSOIL SHALL BE TAKEN FROM A WELL-DRAINED, ARIABLE SITE, FREE OF SUBSOIL, LARGE STONES, EARTH CLODS, STICKS, STUMPS, CLAY LUMPS, ROOTS, OTHER OBJECTIONABLE, EXTRANEOUS MATTER OR DEBRIS NOR CONTAIN TOXIC SUBSTANCES.
3. THE CONTRACTOR SHALL PROVIDE THE OWNER / LANDSCAPE ARCHITECT WITH TOPSOIL TEST RESULTS (RECOMMEND UMASS AMHERST SOIL TESTING LAB) FOR APPROVAL PRIOR TO OBTAINING AND PLACING THE SOIL. IF ANY TOPSOIL IS PURCHASED OR PLACED PRIOR TO APPROVAL BY OWNER / LANDSCAPE ARCHITECT, IT IS AT CONTRACTORS RISK, AND IT CAN BE REMOVED AT NO ADDITIONAL COST TO THE OWNER. IF THE PLANTING SOIL (BOTH ONSITE AND OFFSITE SOURCES) DOES NOT FALL WITHIN THE REQUIRED SIEVE ANALYSIS, TEXTURAL CLASS, ORGANIC CONTENT, OR PH RANGE, IT SHALL BE ADJUSTED TO MEET THE SPECIFICATIONS THROUGH THE ADDITION OF SAND, COMPOST, LIMESTONE, OR ALUMINUM SULFATE TO BRING IT WITHIN THE SPECIFIED LIMITS AT NO ADDITIONAL COST TO THE OWNER.
4. TOPSOIL SHALL HAVE A PH VALUE BETWEEN 5.5 AND 6.5. TOPSOIL SHALL CONTAIN BETWEEN 4% AND 8% ORGANIC MATTER OF TOTAL DRY WEIGHT AND SHALL CONFORM TO THE FOLLOWING GRADATION AND TEXTURE CLASS ABOVE.

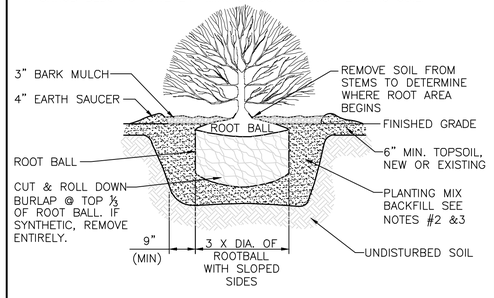
TOPSOIL FOR LAWN, TREES, SHRUBS, & PERENNIALS — NOT TO SCALE — 3

LANDSCAPE NOTES

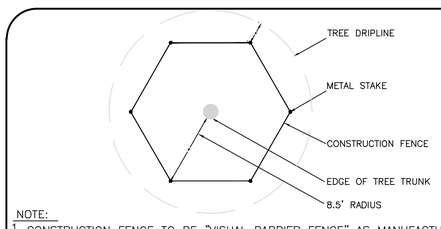
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF DOVER, NH.
2. PLANTING PLAN IS DIAGRAMMATIC IN NATURE. FINAL PLACEMENT OF PLANTS TO BE APPROVED BY THE LANDSCAPE ARCHITECT IN THE FIELD.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES, ANY PERMITTING AGENCIES, AND "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS IN ADVANCE OF ANY WORK THAT WILL REQUIRE EXCAVATION. CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE OF NAY CONFLICTS IN WRITING.
4. NO PLANT MATERIAL SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA, ANY TREES NOTED AS "SEAL OR SELECTED SPECIMEN" SHALL BE TAGGED AND SEALED BY THE LANDSCAPE ARCHITECT.
5. ALL TREES SHALL BE BALLED AND BURLAPPED (B&B) UNLESS OTHERWISE NOTED OR APPROVED BY THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
6. CONTRACTOR SHALL VERIFY QUANTITIES SHOWN ON PLANT LIST. QUANTITIES SHOWN ON PLANS SHALL GOVERN OVER PLANT LIST.
7. ANY PROPOSED PLANT SUBSTITUTIONS MUST BE APPROVED IN WRITING BY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
8. ALL PLANT MATERIALS INSTALLED SHALL MEET THE GUIDELINES ESTABLISHED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY AMERICANHORT (LATEST EDITION).
9. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF ACCEPTANCE.
10. ALL DISTURBED AREAS NOT OTHERWISE NOTED SHALL RECEIVE 6" OF SUITABLE LOAM & SEED LAWNS WITH 3:1 OR GREATER SLOPES SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET.
11. ANY FALL TRANSPLANTING HAZARD PLANTS SHALL BE DUG IN THE SPRING AND STORED FOR FALL PLANTING.
12. TREES SHALL HAVE A MINIMUM CALIPER AS INDICATED ON THE PLANTING SCHEDULE TAKEN ONE FOOT ABOVE THE ROOT CROWN.
13. ALL PLANT BEDS AND TREE SAUCERS TO RECEIVE 3" OF PINE BARK MULCH. GROUND COVER AREAS SHALL RECEIVE 1" OF PINE BARK MULCH
14. ALL DECIDUOUS TREES ADJACENT TO WALKWAYS AND ROADWAYS SHALL HAVE A BRANCHING PATTERN TO ALLOW FOR A MINIMUM OF 7' OF CLEARANCE BETWEEN THE GROUND AND THE LOWEST BRANCH.
15. ALL TREE STAKES SHALL BE STAINED DARK BROWN.
16. CONTRACTOR RESPONSIBLE FOR WATERING, AND RESEEDING OF BARE SPOTS UNTIL A UNIFORM STAND OF VEGETATION IS ESTABLISHED AND ACCEPTED.
17. ALL PARKING ISLANDS PLANTED WITH SHRUBS SHALL HAVE 24" OF TOP SOIL. FINISH GRADE SHALL BE EQUAL TO THE TOP OF CURB.
18. SOIL SAMPLES, TESTS, AND SHOP DRAWINGS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT OR THE OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.
19. DESIGN AND INSTALLATION OF IRRIGATION SYSTEM TO BE PERFORMED BY AN APPROVED IRRIGATION DESIGN BUILD CONTRACTOR OR BY AN APPROVED EQUAL, TO BE DETERMINED BY THE OWNERS REPRESENTATIVE AND LANDSCAPE ARCHITECT. IRRIGATION SYSTEM IS TO BE DESIGNED FOR EFFICIENT WATER USAGE INCLUDING: USE OF DRIP IRRIGATION FOR SHRUBS AND PERENNIALS, IRRIGATION SYSTEM WITH HEAD-TO-HEAD COVERAGE, A CENTRAL SHUT-OFF VALVE, SEPARATE ZONES FOR EACH TYPE OF BEDDING AREA BASED ON WATERING NEEDS, AND A RAIN SENSOR TO SHUT OFF IRRIGATION DURING RAIN EVENTS.
19. ALL PROPOSED LANDSCAPE AREAS THAT ARE NOT IRRIGATED SHALL BE PROVIDED WITH TEMPORARY WATER EFFICIENT IRRIGATION. TEMPORARY IRRIGATION TO BE PROVIDED FOR AN ESTABLISHMENT PERIOD OF 3 MONTHS. THIS CAN INCLUDE BUT IS NOT LIMITED TO: GATOR BAGS, PORTABLE IRRIGATION AND WEEKLY WATERING OF ALL LANDSCAPE AREAS.

NOTES:

1. ALL SHRUBS SHALL HAVE THE SAME RELATIONSHIP TO FINISH GRADE AFTER PLANTING AS THEY HAD AT THE ORIGINAL NURSERY SETTING. SET SHRUB 1"-2" ABOVE FINISH GRADE.
2. BACKFILL WITH PLANTING MIX. PLANT MIX TO BE: 50% NATIVE TOPSOIL, 20% COMPOST (LEAVES & ORGANIC MATERIAL, NO ASH) 20% PEAT MOSS, 10% SAND.
3. ADD MYCORRAIZA SOIL ADDITIVES AND SLOW RELEASE FERTILIZER WHEN PLANT HOLES ARE 50% FILLED AND WATER THOROUGHLY AT COMPLETION.
4. SHRUB BEDS TO HAVE 24" MIN. OF CONTINUOUS PLANTING SOIL.

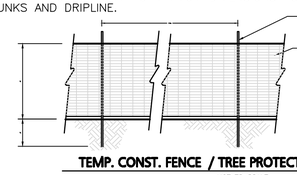


SHRUB PLANTING DETAIL — NOT TO SCALE — 4

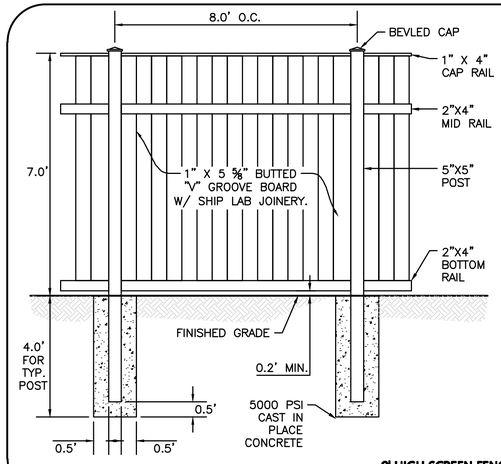


NOTE:

1. CONSTRUCTION FENCE TO BE "VISUAL BARRIER FENCE" AS MANUFACTURED BY EXXON CHEMICAL COMPANY ATLANTA, GA; "KONTROL SAFETY FENCE" AS MANUFACTURED BY MIRAFI, CHARLOTTE, N.C. OR APPROVED EQUAL.
2. IF GROUPS OF TREES ARE TO BE PROTECTED, EXTEND FENCE AROUND PERIMETER TO CONFORM TO MINIMUM DIMENSIONS FOR TREE TRUNKS AND DRIPLINE.



TEMP. CONST. FENCE / TREE PROTECTION — NOT TO SCALE — 5



NOTES:

1. CEDAR FENCE WOOD FENCE WITH SEALANT
2. SEALER: THOMPSON'S WATERSEAL TRANSPARENT WATERPROOFING SEALANT IN CHESTNUT BROWN OR APPROVED EQUAL.
3. PROVIDE SHOP DRAWING FOR APPROVAL PRIOR TO PURCHASE.
4. CONTRACTOR TO PROVIDE 4'-0" SECTION MOCK-UP ON SITE FOR APPROVAL.

8' HIGH SCREEN FENCE DETAIL — NOT TO SCALE — 6

R:\PROJECTS\3347-01\CIVIL\DRAWINGS\CURRENT\L-3347-01_LANDSCAPE.DWG

LICENSED LANDSCAPE ARCHITECT · BETHANY C. DERMODY · 006 · STATE OF NEW HAMPSHIRE · 12.16.24

PROFESSIONAL LANDSCAPE ARCHITECT FOR ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION
5	12-16-24	MISC. REVS. PER T.R.C. COMMENTS
4	11-18-24	MISC. REVS. PER T.R.C. COMMENTS
3	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
2	10-04-24	MISC. REVS. PER T.R.C. COMMENTS
1	08-30-24	MISC. REVS. PER T.R.C. COMMENTS

APPLICANT\OWNER:

114 SILVER STREET GROUP, LLC
10 DURHAM ROAD
DOVER, NH 03820

PROJECT:

114 SILVER STREET
DOVER, NH

PROJECT NO.	3347-01	DATE:	06/20/24
SCALE:	AS SHOWN	DWG. NAME:	L-3347-01
DESIGNED BY:	BCD	CHECKED BY:	MAM

PREPARED BY:

ALLEN & MAJOR ASSOCIATES, INC.
civil engineering ◆ land surveying
environmental consulting ◆ landscape architecture
www.allenmajor.com
400 HARVEY ROAD
MANCHESTER, NH 03103
TEL: (603) 627-5500
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WOBURN, MA ◆ LAKEVILLE, MA ◆ MANCHESTER, NH

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DRAWING TITLE:

LANDSCAPE NOTES & DETAILS

SHEET No.

L-501

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PLANNING FILE # SITE-2024-0006

SITE-2024-0004

July 14, 2024

Dear Ms Benton,

As residents of the Heritage District we wish to register our objection to the proposed development of two multi-family housing units. The proposed units are located at 135 Locust Street and at 114 Silver Street.

Our concerns include changing what has been touted as "gateways" to the city to logjams in and out of the city, drastic removal of yet more tree cover to provide more paved parking spaces and multi-story buildings out of scale and design in relation to surrounding homes.

There are other impactful housing projects in various stages in this neighborhood, including 20+ units behind Fisher Street and 150+ units at the former McIntosh College location. Current morning commutes during the school year are already nightmarish; none of this proposed development will ease that problem.

Developing every square inch of vacant space in Dover has a cost. While we recognize the need for housing, the density of the proposed units at 135 Locust Street and 114 Silver Street is excessive. We urge the Planning Board to not grant variances to allow these projects to proceed as proposed.

Respectfully,

Laura and Patrick Horan
104 Belknap Street
Dover, NH
03820

cc Planning Board

To: Planning Board
From: Anthony McManus, 3 Renaud Ave. Dover, NH

I would like to offer a few comments regarding the proposed development on Locust St. south of 19 Summer St.

The first relates to the question of variances. The ordinance requires a 5-foot setback for any paved area. As I understand it, a variance has been granted for the proposed new building on Locust to pave right to the designated boundary line, but no similar variance was requested for the adjacent Summer St. lot, even though the proposal shows the entire setback area on that property to be paved (in effect, eliminating the boundary between the two).

I understand the Planning Department feels the second requirement is not required since the area behind 19 Summer is already used for parking. The issue, however, is not parking, but paving, and it is my understanding of the law that any expansion of an existing non-conforming use requires a variance. Beyond that, and this should apply to both properties, a self-created "hardship" does not justify the granting of a variance.

The second issue involves the proper consideration and application of the provisions of the Heritage District ordinance. Although a 4-unit building may be approved, the basic standard is for two units, and I'm not aware that the present application has offered any compelling argument for doubling the size of the new building. I believe the intent of the ordinance is to maintain, whenever possible, the integrity of the existing structures and the surrounding neighborhood. In this case, with an already existing 4-unit next door, and given the relatively small size of the lot under consideration, an additional 4-units within that limited area will be very much out of character with the existing neighborhood---for the most part single or double family dwellings.

I am concerned also because approval of this application will undoubtedly be used by future developers to demand approvals for more 4-unit buildings, regardless of the location or size of the lot. A denial of the request in this case...still leaving the applicant with the ability to construct an attractive duplex...would send an important message that Dover's designation of this area to be a Heritage District has some meaning.

Thank you for your consideration.

7/21/24

To: Donna Benton and the Planning Board

From: Laurie Smith, 36 Fisher St.

RE: Proposed Development at 135 Locust St.

I am requesting that the Planning Board deny the development of a 4 unit building and 12 parking spaces at 135 Locust St.

This property is in the Heritage District, which honors some of the oldest and most historically valuable homes in Dover. The six homes most closely abutting this lot were built between 1723 and 1888 and each is uniquely impressive (see page 2 for details and dates). No matter how carefully designed to "fit into the aesthetic of the neighborhood", I strongly disagree with this request. Squeezing a brand new 4 unit building and 12 parking spaces that cover a significant portion of this lot up to 15' from abutting historic homes, with removal of all the mature trees on this lot will NOT be a "true win/win whereby the neighborhood, the City and the Applicant all benefit" as stated on page 4 of Exhibit B of the Variance Application, nor will it "enhance the value of the surrounding properties" as stated on page 5.

The only benefit is to the developer, to the detriment of the abutters.

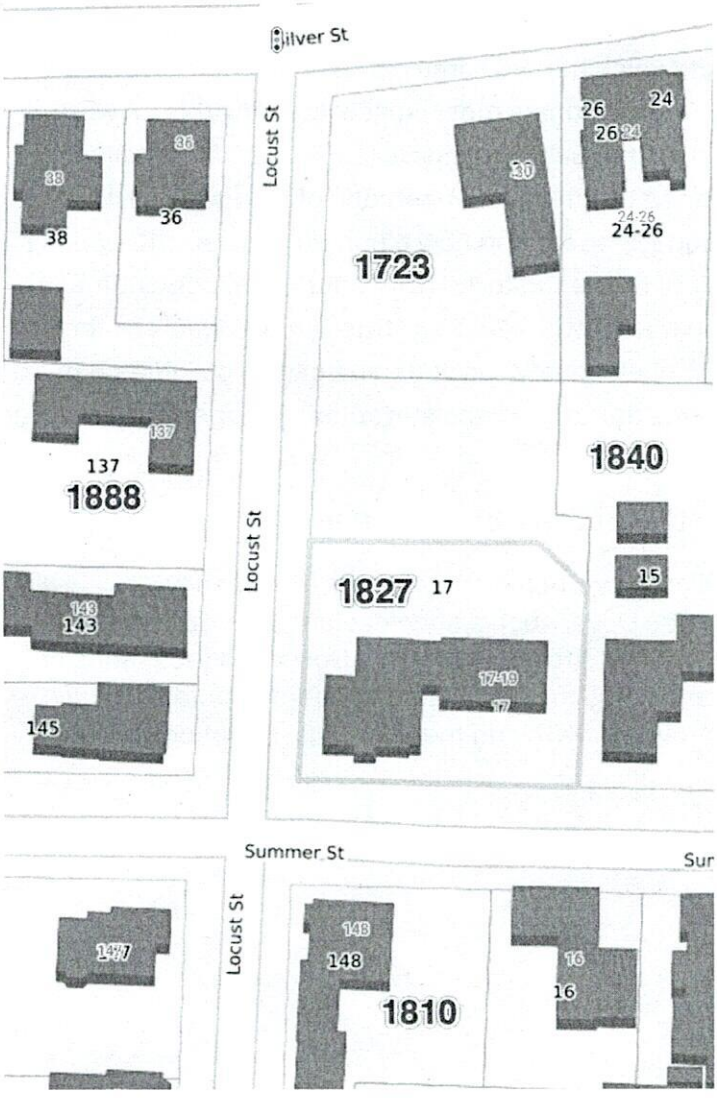
We just celebrated the Dover 400 and our city's rich history, yet we are steadily undermining the character that has made Dover such a special place. I understand that growth is necessary, but thoughtfully planned growth is crucial. Dover has thousands of new units either in construction or in planning, and the Planning Board should carefully consider locations and density of approved growth and the resulting impact on existing neighborhoods and residents.

Sincerely,

Laurie and Greg Smith

Laurie.smith36@comcast.net

CONSTRUCTION DATES OF ABUTTING PROPERTIES NOTED IN RED:



RECEIVED
Planning Office
JUL 18 2024
Dover, New Hampshire

To: TAC
From: Anthony McManus
Re: Silver Street project

Several weeks ago I was pleased to see that the building I've always called the Christensen House was undergoing some upgrades. I was hoping that meant that there was going to be a new owner for what has been one of the more attractive and historically significant single-family houses on Silver St. Recently I was appalled to read about the proposal to turn the building into four apartments with a separate four-unit apartment building adjacent. I believe this to be completely out of character to the surrounding area, and I am in hopes that the plan will be rejected.

Many years ago I was the owner of the home diagonally across the street at 117 Silver, a long-term single family dwelling dating from the 1870s. A number of years later a local developer was given permission by the City to build a line of town houses in the rear yard, a totally inappropriate use of the property, given its size and location. My memory may be off, but I believe that the regulations were changed in response to neighborhood opposition, to prevent any similar development taking place in the future. I would hope that the City would reject any attempt by the present application to rely on the 117 Silver project as a proper example of housing in the neighborhood. Two wrongs do not make a right.

Several years ago the City spent a considerable sum of money to upgrade the length of Silver Street. This was done, I believe, in recognition of the fact that this is one of the main approaches to the downtown and is a showcase of Dover's historical and architectural past. Streetscape is important in such areas and every attempt should be made to preserve what we have. The best acknowledgement of this is the adoption of the Heritage District, which includes the property now under review.

The overwhelming majority of residences in the immediate area are single family. I would expect that people who have purchased homes close by have relied on that, and what appeared to be the City's commitment to preserving the historical character of the neighborhood. You are looking not only at the potential of 8 residential units a relatively small area, but also a fairly substantial paved area to provide for at least 16 vehicles, with an entrance and exit very close to what is already a relatively dangerous intersection. Even though there is a demonstrated near for additional housing in Dover there are numerous areas properly zoned for multi-family development; this portion of Silver Street is not one of them. At the same time, I read of the ready market for upscale and/or older distinguished residences, and I believe the property in question would fall within that category.

I would ask you to consider the above, to listen carefully to the comments of the people who will be most affected by the proposal, and then act to preserve an important part of Dover's past and present.

From: Jillmarie Nelson <jillmarienelson@yahoo.com>
Sent: Thursday, August 15, 2024 9:35 AM
To: City of Dover - Planning <Dover-Planning@dover.nh.gov>
Cc: Tommy Nelson <tom_nelson23@yahoo.com>; Warach, Robert <R.Warach@dover.nh.gov>
Subject: Regarding the proposal for 114 Silver St.

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

8/15/2024

To the Planning Commission:

We are the Nelsons who live at 108 Silver St. and I'm writing to you today about the proposed building project at 114 Silver St., which we abut. We, and our neighbors, have concerns about the traffic and general impact of the project.

The proposed development of the current house into 4 apartments as well as the building of a new structure in the yard area with an additional 4 apartments (totaling 8) will include a parking area of 16 spots. This new parking area includes a proposed new exit onto Rutland St. in between the Unitil boxes and the abutting neighbor's driveway, and exiting across the street from our own and our neighbor's on Rutland. At this corner, Rutland is narrow and the turning radius is tight for fast-moving or larger vehicles.

As I'm sure you are all aware and have experienced, the corner can become quite congested. The traffic on Silver between Cushing and Rutland can build up as motorists await an opportunity to turn. Additionally, motorists travelling east on Silver and turning onto Rutland can be travelling at a speed in which the turn is surprisingly sharp, and then feels like a blind turn. Should that motorist, encounter a vehicle entering or exiting a driveway (potentially anyone in my family as we are the first driveway), the situation becomes more problematic as the motorist stops for us, but therefore puts traffic at an unexpected stop for those behind the motorist also blindly rounding the corner. We have lived on this corner for 23 years and have learned to use caution for these situations. And, truthfully, we have learned not to enter or exit our driveway at certain times of the day, unless we absolutely have to. Adding 16 vehicles needing to be aware of someone "coming around hot" seems ill-advised.

The residents of this corner are also concerned about accessing our own driveways. For us in particular, it is not that easy during the times of drop off and dismissal for the local schools as we experience a line of traffic on Rutland, waiting to turn onto Silver. This line of traffic blocks our driveway. When DHS dismisses, it is not uncommon to wait 5-10 minutes for traffic to allow us to exit our driveway.

It is our understanding that this project is in the early stages and that there is to be a traffic study done. We feel that it is of the utmost of importance that the study is done during the school year and over a span of time that can accurately represent the busy-ness of the corner. To study the corner during the summer or any other school break is to have a serious misunderstanding of the traffic congestion of the corner. And, I think it is worth noting that many of the drivers going to Dover High are teenagers, so not the most skilled drivers. There already exist in Dover several intersections that experience more traffic than they were designed for. We strongly feel that this development will create another one, and we should all be remiss to let it happen knowingly. Please take your considerations seriously, as I haven't even mentioned pedestrians, who are many and part of the equation as well.

Lastly, we are the Heritage District. Our old houses help keep Dover rooted in its long history. We ourselves live in house erected on our property in 1800. We understand that our houses can be costly to maintain and repair and that not all can remain single family homes, but those multi-family homes that maintain our neighborhood feel are those that limit the number of residences to what fit in the old buildings already in existence (perhaps with an addition). Those properties maintain yards and other types of outdoor spaces, fostering our neighborhood feel. We would like to see this neighborhood protected by you.

As you consider the impact of the proposed property, please carefully consider the traffic, the neighborhood, and whether a project of this size is the safest and best plan for this corner property.

Thank you,

Jill and Tom Nelson

From: deborah child <deborahmchild@gmail.com>
Sent: Tuesday, January 21, 2025 12:24 PM
To: City of Dover - Planning <Dover-Planning@dover.nh.gov>
Subject: Fwd: 114 Silver St. Dover

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

To the Planning Board of Dover

In anticipation of the pending meeting on Tuesday, Jan. 28th, for 114 Silver Street, we have some serious objections we would like to bring to your attention. Aside from losing a key landmark in our Heritage District (the carriage house) as discussed in my letter to the editor (shown below)



seacoastonline.com | fosters.com ▮ THURSDAY, DECEMBER 19, 2024 ▮ 9A

LETTERS

Growth hurting Dover; NH giving C&J a sweet deal

Explosive growth of housing developments damaging neighborhoods

Dec. 17 – To the Editor:

A Nov. 19, 2024, letter to the Editor from Hilary Hamer, describing her alarm at the explosive growth of housing projects going on in this city (1500 units by recent count) really resonated with me. Plans for one of the few remaining double lots on Silver Street, the gateway to our city, are now well underway to subdivide it into two lots, convert what was once an early single-family residence into four rental units, and then demolish its magnificent carriage house (a truly inspiring sight), to make way for a four-unit three-story square box and sixteen parking spaces (details earlier outlined in Foster's July 2, 2024). As no provisions have been made for outside storage, this will undoubtedly result in a similar eyesore to what can be seen on the next block at 84 Silver St.

This latest development in conjunction with others already afoot on Fisher Street at the foot of Elm Street and to the south at MacIntosh Commons, may well be the death knell for what had been until now a tranquil single-family residential historic neighborhood.

Deb Child
Dover

A developer is proposing to offer eight housing units at 114 Silver Street in Dover, if a proposal set to appear before the city's Technical Review Committee is eventually given the necessary land-use permits. PROVIDED/CITY OF DOVER DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

my husband and I heartily object to the developer's current plans. The idea of creating eight rental units at this location will not only be highly disruptive to what has been essentially a single-family historic neighborhood, it will

also lower our property values. The developer is already pushing the limits of the Heritage Residential District by asking for a conditional permit to convert the main house to accommodate 4 units. By dividing the lot into two to create an additional four-unit building is simply pushing things just too far for this locale. What had been an early homestead with ample green space will become essentially two buildings with a sixteen-car parking lot and some token foliage. Has not the planning board permitted the creation of more than enough rental units elsewhere in the city?

But the developer's proposal to create access to the rear parking lot by creating a cut-out to Rutland St. is what we find to be most objectionable. As Anthony McManus, in his letter to the planning board of July 18, noted this is already a relatively dangerous intersection. More serious still is the fact the sightline from the driveway looking north does not meet the NHDOT standard. The corner is already tight at Silver and Rutland and motorists (especially Dover High School students) continuously disregard the posted 30 mph limit. In 2012, a speeding motorist crashed into the front of our house seriously damaging our front yard, hitting one of our trees as well as destroying the front of his car. If not for our tree and hedge, our next-door neighbor's garage at 12 Rutland St. would have been seriously damaged. Fortunately, there were no pedestrians on the sidewalk at the time the accident occurred.





Moreover, permitting cars to exit onto Rutland St. just a few feet south of the two high-pressure gas distribution units positioned there may be a recipe for an even greater disaster. These gas utility units are so sensitive to movement that a jackhammer cannot even be utilized to remove the

unsightly stumps created by the clear cutting of foliage on the Rutland property line.

We have also reviewed the traffic study that was submitted July 9, 2024. It makes no reference whatsoever to these gas units. It also in no way represents the hectic conditions that occur on this street when Woodman Park School, Dover Middle School and Dover High School are in full session. Nor does it make any sense for the study to compare any anticipated traffic exiting from the proposed Rutland to that of the chiropractic clinic that previously operated at 114 Silver St. The practice was only accessed from Silver St. and has not been operational for over a year. Nor was any consideration given to the potential impact of traffic from the new developments further down Rutland, on Fisher and Cataract Streets, which are currently under construction and have already been approved.

We would also demand that provisions be made for outside storage for bicycles, garbage, and recycling bins, etc. If the use of rolling bins is permitted for eight units in lieu of a dumpster, the parking lot will undoubtedly end up looking like this at 84 Silver Street:





Finally, if the carriage house cannot remain on site, would the board consider moving it to say the waterfront of Dover? This would at least introduce some historic character to what looks like a very generic development. Tom Toye, the developer, had earlier offered to sell us the carriage house for $1 and I am sure that offer would hold to the city of Dover as well.

In closing, we want to thank you for your service to the city which has been our home for over thirty years.

Sincerely

Thomas & Deborah Child
8 Rutland St.
Dover, NH 03820
603.742.4606

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