

Findings of Fact | Site Plan Review

City of Portsmouth Planning Board

Date: July 17, 2025

Property Address: 294 Lincoln Ave.

Application #: LU-24-225

Decision: ☐ Approve ☐ Deny ☐ Approve with Conditions

Findings of Fact:

Per RSA 676:3, I: The local land use board shall issue a final written decision which either approves or disapproves an application for a local permit and make a copy of the decision available to the applicant. **The decision shall include specific written findings of fact that support the decision. Failure of the board to make specific written findings of fact supporting a disapproval shall be grounds for automatic reversal and remand by the superior court upon appeal, in accordance with the time periods set forth in RSA 677:5 or RSA 677:15, unless the court determines that there are other factors warranting the disapproval.** If the application is not approved, the board shall provide the applicant with written reasons for the disapproval. If the application is approved with conditions, the board shall include in the written decision a detailed description of the all conditions necessary to obtain final approval.

Site Plan Regulations Section 2.9 Evaluation Criteria - in order to grant site plan review approval, the TAC and the Planning Board shall find that the application satisfies evaluation criteria pursuant to NH State Law and listed herein. In making a finding, the TAC and the Planning Board shall consider all standards provided in Articles 3 through 11 of these regulations.

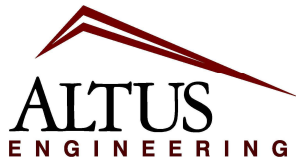
	Site Plan Review Regulations Section 2.9 Evaluation Criteria	Finding (Meets Standard/Criteria)	Supporting Information
1	Compliance with all City Ordinances and Codes and these regulations. <u>Applicable standards:</u>	Meets Does Not Meet	<u>Applicable standards:</u> The project meets all of the applicable Ordinances, Codes and regulations with the exception where Zoning relief was granted on 1-28-25.
2	Provision for the safe development, change or expansion of use of the site.	Meets Does Not Meet	The project has been vetted by TAC. They found no unsafe elements with the design approach.
3	Adequate erosion control and stormwater management practices and other mitigative measures, if needed, to prevent adverse effects on downstream water quality and flooding of the property or that of another.	Meets Does Not Meet	The project includes provisions for adequate temporary and permanent erosion control measures for use during and post construction. The stormwater management design improves the off-site runoff by providing on-site treatment and infiltration where the runoff freely discharges from the site today.

	Site Plan Review Regulations Section 2.9 Evaluation Criteria	Finding (Meets Standard/Criteria)	Supporting Information
4	Adequate protection for the quality of groundwater.	Meets Does Not Meet	The project does not propose any uses with high pollutant loads that could impact the groundwater supply. Storage of vehicles indoors will reduce the potential pollutants entering the environment.
5	Adequate and reliable water supply sources.	Meets Does Not Meet	The property is connected to the municipal water system. No deficiencies were reported by TAC reported to Altus in the system in the project vicinity.
6	Adequate and reliable sewage disposal facilities, lines, and connections.	Meets Does Not Meet	The property is connected to the municipal sanitary collection system. No deficiencies were reported by TAC to Altus in the system in the project vicinity.
7	Absence of undesirable and preventable elements of pollution such as smoke, soot, particulates, odor, wastewater, stormwater, sedimentation or any other discharge into the environment which might prove harmful to persons, structures, or adjacent properties.	Meets Does Not Meet	The construction of a 4-bay garage and access improvements with a small office space will not create any undesirable and preventable elements of pollution such as smoke, soot, particulates, odor, wastewater, stormwater, sedimentation, or any other discharge into the environment which might prove harmful to persons, structures, or adjacent properties.
8	Adequate provision for fire safety, prevention and control.	Meets Does Not Meet	As part of the TAC review, the Portsmouth Fire Department supported the project.
9	Adequate protection of natural features such as, but not limited to, wetlands.	Meets Does Not Meet	There are no wetlands on the site in the general vicinity of the project. The area is a mature suburban neighborhood with street trees that will remain.
10	Adequate protection of historical features on the site.	Meets Does Not Meet	The project will not impact any known historical resources.
11	Adequate management of the volume and flow of traffic on the site and adequate traffic controls to protect public safety and prevent traffic congestion.	Meets Does Not Meet	The construction of the garage will not change or alter the traffic patterns or intensity of traffic. The existing residential use will not be intensified.
12	Adequate traffic controls and traffic management measures to prevent an unacceptable increase in safety hazards and	Meets Does Not Meet	There will be no changes in the traffic safety as a result of the garage construction.

	Site Plan Review Regulations Section 2.9 Evaluation Criteria	Finding (Meets Standard/Criteria)	Supporting Information
	traffic congestion off-site.		
13	Adequate insulation from external noise sources.	Meets Does Not Meet	The existing residential use will create any new noise. The Owner is obligated to comply with all applicable codes relating to noise during construction.
14	Existing municipal solid waste disposal, police, emergency medical, and other municipal services and facilities adequate to handle any new demands on infrastructure or services created by the project.	Meets Does Not Meet	The project has been reviewed and approved by TAC which found that the project will not create an unreasonable demand on City infrastructure or services.
15	Provision of usable and functional open spaces of adequate proportions, including needed recreational facilities that can reasonably be provided on the site	Meets Does Not Meet	No public recreation spaces are provided. Adequate open space meeting the City codes has been provided for the residents to enjoy.
16	Adequate layout and coordination of on-site accessways and sidewalks in relationship to off-site existing or planned streets, accessways, bicycle paths, and sidewalks.	Meets Does Not Meet	The City sidewalk is located on the subject parcel. The Owner is committed to providing the City with an easement or licensing agreement to continue utilize the sidewalk.
17	Demonstration that the land indicated on plans submitted with the application shall be of such character that it can be used for building purposes without danger to health.	Meets Does Not Meet	No wetlands or wetland buffers will be impacted. The development will improve stormwater quality and will not be a detriment to health. The project is consistent with other developments in the vicinity.
18	Adequate quantities, type or arrangement of landscaping and open space for the provision of visual, noise and air pollution buffers.	Meets Does Not Meet	A landscape plan has been provided to supplement the mature vegetation on the property.
19	Compliance with applicable City approved design standards.	Meets Does Not Meet	The project meets or exceeds all applicable City design standards.
	Other Board Findings:		

	Site Plan Review Regulations Section 2.9 Evaluation Criteria	Finding (Meets Standard/Criteria)	Supporting Information

DRAFT



**Civil
Site Planning
Environmental
Engineering**

133 Court Street
Portsmouth, NH
03801-4413

June 25, 2025

Peter Stith, Planning Manager
City of Portsmouth Municipal Complex
1 Junkins Avenue
Portsmouth, New Hampshire 03801

**Re: Site Plan Review – Response to TAC
Assessor's Map 130, Lot 24
294 Lincoln Avenue
Portsmouth, New Hampshire
Altus Project No. 5548
LU-24-225**

Dear Peter,

On behalf of the Applicant, Gary B. Dodds Revocable Trust, Altus Engineering respectfully submits revised plans and supporting documents addressing the conditions requested by the Technical Advisory Committee (TAC) for the site improvements at 294 Lincoln Avenue. Below are the conditions requested by TAC and our responses on how each condition is being met.

1. “Prior to submission to the Planning Board, applicant shall share the test pit results with DPW to confirm that the drainage study is accurate.”

Two test pits were completed in the area intended for the new drainage system, test pit locations and results are provided on sheet C-3. Test pits confirmed that the ground is suitable for an infiltration drainage system however the location of the system has been changed. The revised location and system is also presented on sheet C-3 and the drainage analysis has been revised accordingly.

2. “An easement be provided to the City for the sidewalk on Lincoln Avenue prior to the issuance of a Certificate of Completion.”

An easement will be provided to the City for the sidewalk on Lincoln Avenue. The owner will work with the legal department to draft the easement.

Supporting documents included with this response:

- Site Plans and Details
- Drainage Analysis
- Waivers

We hope the Board sees fit to approve our request and are always available if you have any questions or need any additional information.

Sincerely,
ALTUS ENGINEERING, LLC

A handwritten signature in black ink, appearing to read "EDW", is positioned above the printed name.

Eric D. Weinrieb, PE
President

eCopy: Gary B. Dodds

pmj/5548-TAC Response Memo

GARAGE CONSTRUCTION

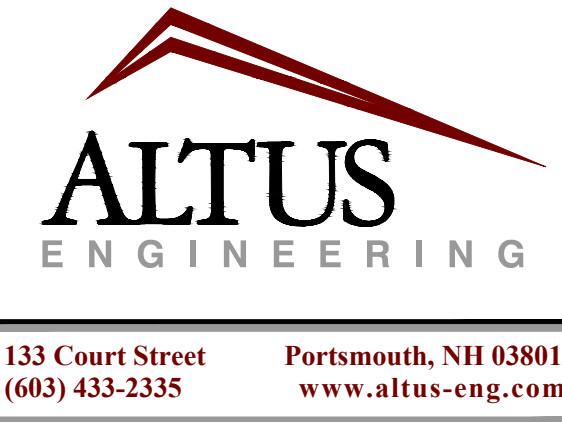
294 Lincoln Avenue
Portsmouth, NH

Tax Map 130, Lot 024
ISSUED FOR PLANNING BOARD

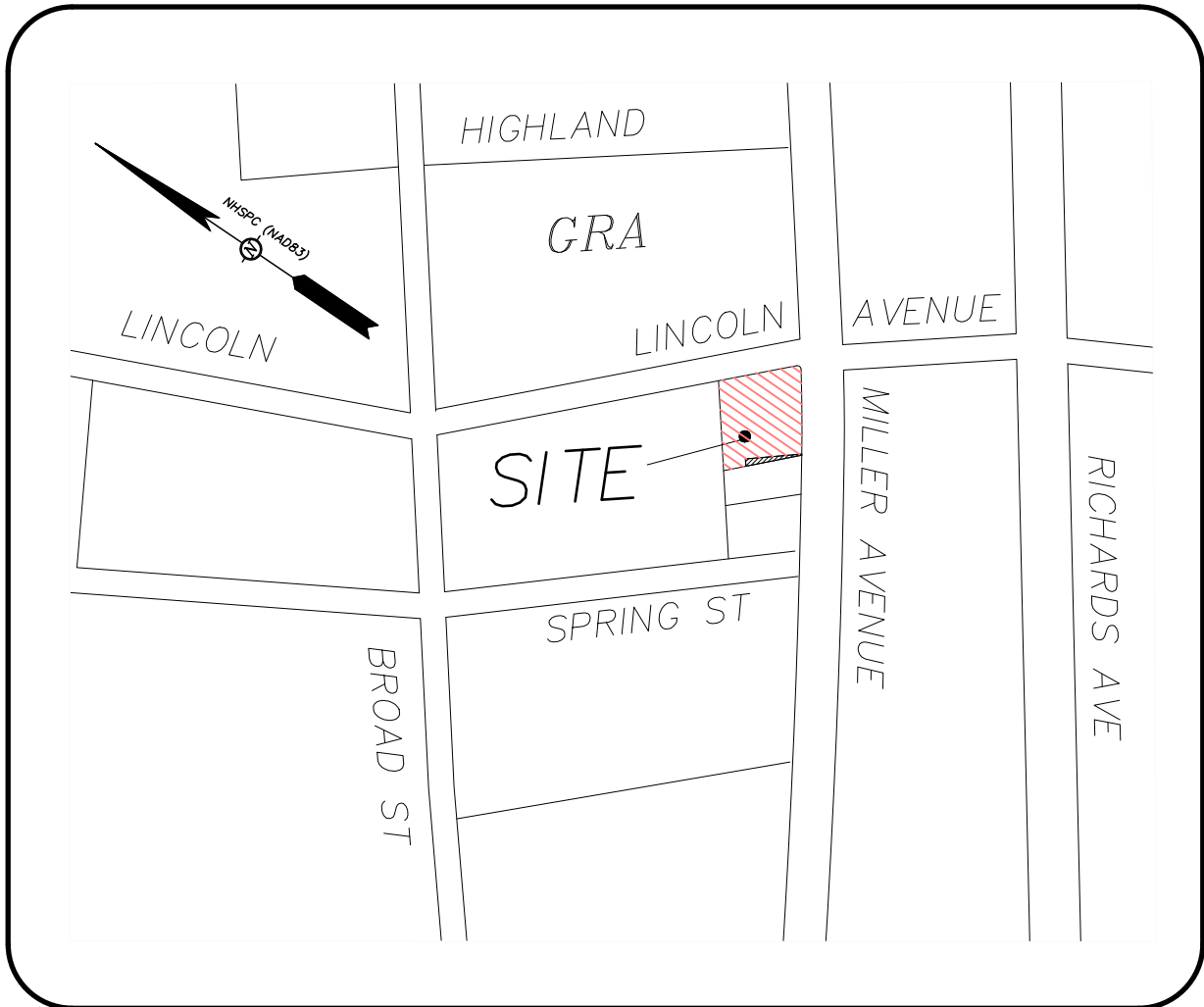
Plan Issue Date:
June 25, 2025

Owner/Applicant:
Gary B. Dodds Revocable Trust
Gary B. Dodds Trustee
300 Sagamore Road
Rye, NH 03870

Civil Engineer:



Surveyor:

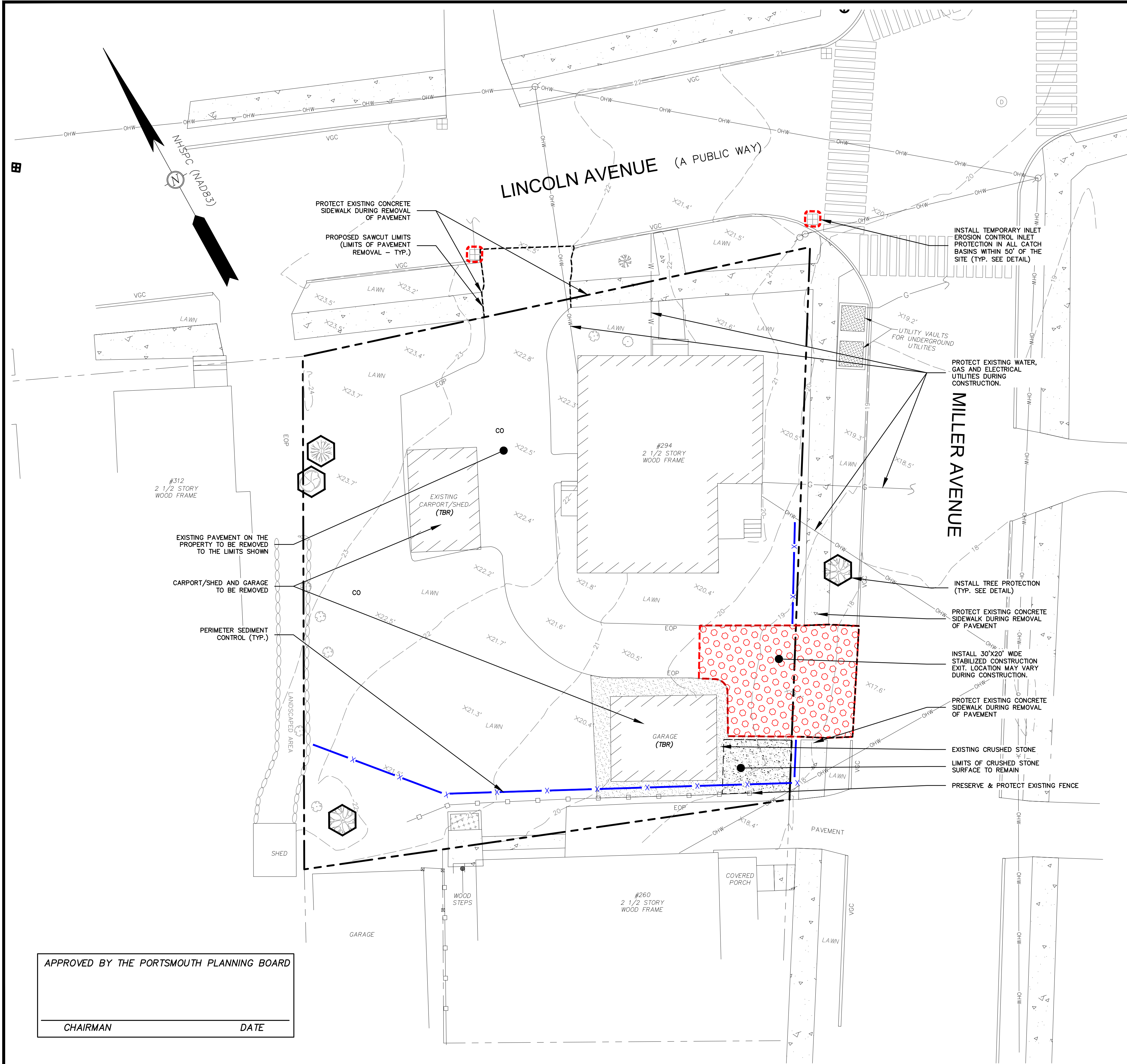


LOCUS NOT TO SCALE

Sheet Index			
Title	Sheet No.:	Rev.	Date
Existing Conditions Plan (by JVA)	S-1	0	04/18/25
Site Preparation & Erosion Control Plan	C-1	1	06/25/25
Site Plan	C-2	1	06/25/25
Grading & Drainage Plan	C-3	1	06/25/25
Landscape Plan (by Homeowner)	L-1	0	05/19/25
Detail Sheet	D-1	1	06/25/25
Detail Sheet	D-2	1	06/25/25
Detail Sheet	D-3	1	06/25/25
Entry Level Plan (REEDesign)	1 of 4	0	12/16/24
Upper Level Plan (REEDesign)	2 of 4	0	12/16/24
South and East Exterior Elevations (REEDesign)	3 of 4	0	12/16/24
North and West Exterior Elevations (REEDesign)	4 of 4	0	12/16/24

Permit Summary	Submitted	Received
Portsmouth Zoning Board of Adjustment	12/23/24	01/28/25
Portsmouth Site Plan Review	05/19/25	Pending

ALTIS : JOB#

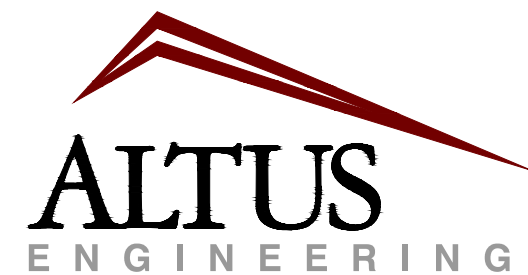
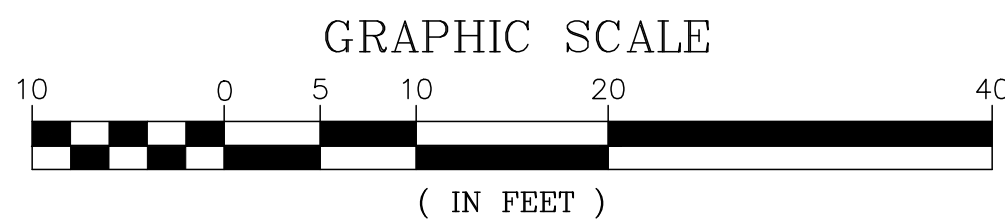


DEMOLITION NOTES

- CITY DEMOLITION PERMIT REQUIRED PRIOR TO ANY DEMOLITION ACTIVITIES. CONTRACTOR IS NOTIFIED THAT THIS PERMIT PROCESS MAY REQUIRE A 30-DAY LEAD TIME.
- CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES SCHEDULED TO REMAIN
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TIMELY NOTIFICATION OF ALL PARTIES, CORPORATIONS, COMPANIES, INDIVIDUALS AND STATE AND LOCAL AUTHORITIES OWNING AND/OR HAVING JURISDICTION OVER ANY UTILITIES RUNNING TO, THROUGH OR ACROSS AREAS TO BE DISTURBED BY DEMOLITION AND/OR CONSTRUCTION ACTIVITIES WHETHER OR NOT SAID UTILITIES ARE SUBJECT TO DEMOLITION, RELOCATION, MODIFICATION AND/OR CONSTRUCTION.
- ALL UTILITY DISCONNECTIONS, DEMOLITIONS AND RELOCATIONS SHALL BE COORDINATED BETWEEN THE CONTRACTOR, ALL APPROPRIATE UTILITY COMPANIES, PORTSMOUTH DPW AND ADJUTING PROPERTY OWNERS. UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELATED EXCAVATION, TRENCHING AND BACKFILLING.
- WHERE SPECIFIED TO REMAIN, MANHOLE RIMS, CATCH BASIN GRATES, VALVE COVERS, HANDHOLES, ECT. SHALL BE ADJUSTED TO FINISH GRADE UNLESS OTHERWISE SPECIFIED.
- SEE EROSION CONTROL PLANS FOR EROSION AND SEDIMENT CONTROL MEASURES THAT SHALL BE IN PLACE PRIOR TO DEMOLITION ACTIVITIES. SEE GRADING PLAN AND DETAIL SHEETS FOR ADDITIONAL NOTES ON EROSION CONTROL.
- ALL MATERIALS SCHEDULED FOR DEMOLITION REMOVAL ON PRIVATE PROPERTY SHALL BECOME PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED.
- ALL MATERIAL SCHEDULED TO BE REMOVED SHALL BE LEGALLY DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS AND CODES.
- WATER: PORTSMOUTH DPW WATER DIVISION, DOUG SPARKS, (603) 427-1409.
- SEWER: PORTSMOUTH DPW SEWER DIVISION, DOUG SPARKS, (603) 427-1409.
- TELECOMMUNICATIONS: CONSOLIDATED, JOE CONSIDINE, (603) 427-5525.
- CABLE: COMCAST, MIKE COLLINS, (603) 679-5695, EXT. 1037.
- ELECTRICAL: EVERSOURCE, JOSHUA LAHAIE, (603) 332-7551.
- GAS: UNITIL, DAVID BEAULIEU, (603) 294-5144
- NO BURNING SHALL BE PERMITTED PER LOCAL REGULATIONS.
- HAZARDOUS MATERIALS ENCOUNTERED DURING DEMOLITION AND CONSTRUCTION ACTIVITIES SHALL BE ABATED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS.
- SHOULD GROUNDWATER BE ENCOUNTERED DURING EXCAVATION, APPROPRIATE BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED TO ENSURE SEDIMENT LADEN WATER IS NOT DISCHARGED INTO THE CITY DRAINAGE SYSTEM. A DISCHARGE PERMIT SHALL BE OBTAINED PRIOR TO DISCHARGING GROUNDWATER IF GROUNDWATER IS ENCOUNTERED.
- THIS PLAN IS INTENDED TO PROVIDE MINIMUM GUIDELINES FOR THE DEMOLITION OF EXISTING SITE FEATURES. UNLESS OTHERWISE NOTED TO REMAIN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL BUILDINGS, PAVEMENT, CONCRETE, CURBING, SIGNS, POLES, UTILITIES, FENCES, VEGETATION AND OTHER EXISTING FEATURES AS NECESSARY TO FULLY CONSTRUCT THE PROJECT.
- CONTRACTOR SHALL SAFELY SECURE THE SITE AND WORK LIMITS.
- TREES TO REMAIN SHALL BE CLEARLY MARKED TO BE PROTECTED PRIOR TO COMMENCING SITEWORK.

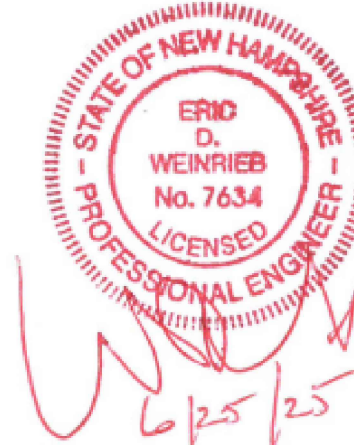
LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- EXISTING PAVEMENT/CURB
- PROP. PAVEMENT/VERTICAL OR SLOPED GRANITE CURB
- EXISTING/PROPOSED STOCKADE FENCE
- EXISTING/PROPOSED CHAINLINK FENCE
- EXISTING CONTOUR
- PROPOSED CONTOUR/INTERMEDIATE CONTOUR
- PROPOSED SPOT GRADE/TOP & BOTTOM OF WALL
- EXISTING WATER/CURB STOP/VALVE/HYDRANT
- EXISTING SEWER/MANHOLE
- EXISTING GAS/VALVE
- EXIST. OVERHEAD/UNDERGROUND UTILITIES/POLE
- EXISTING DRAINAGE/CB/DMH
- PROPOSED DRAINAGE (HARD PIPE)/CB/DCB/DMH/FES
- PROPOSED CATCH BASIN INLET PROTECTION
- PROPOSED DRAINAGE (PERFORATED PIPE)/CLEANOUT
- CORRUGATED PLASTIC PIPE/FLARED END SECTION/HEADWALL
- PROPOSED GROUND SLOPE/APPROX. GRADE/STONE CHECK DAM
- SILT/FENCE/SEDIMENT BARRIER/CONST. FENCE
- STABILIZED CONSTRUCTION EXIT
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED SAWCUT
- PROPOSED STONE DRIPEDGE
- PROPOSED OVERHEAD UTILITY
- TESTPIT OR BORING/PERC. TEST/BENCHMARK



133 Court Street
(603) 433-2335

Portsmouth, NH 03801
www.altus-eng.com



NOT FOR CONSTRUCTION

ISSUED FOR:

PLANNING BOARD

ISSUE DATE:

JUNE 25, 2025

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL	PMJ	05/19/25
1	REV. PER TAC	PMJ	06/25/25

DRAWN BY: _____ PMJ

APPROVED BY: _____ EDW

DRAWING FILE: _____ 5548-SITE.dwg

SCALE:

22" x 34" - 1" = 10'

11" x 17" - 1" = 20'

OWNER:

GARY B. DODDS
REVOCABLE TRUST
GARY B. DODDS TRUSTEE
300 SAGAMORE ROAD
RYE, NH 03870

APPLICANT:

GARY B. DODDS
REVOCABLE TRUST
GARY B. DODDS TRUSTEE
300 SAGAMORE ROAD
RYE, NH 03870

PROJECT:

**GARAGE
CONSTRUCTION**
TAX MAP 130 LOT 024

294 LINCOLN AVENUE
PORTSMOUTH, NH
03801

TITLE:

**SITE PREPARATION &
EROSION CONTROL
PLAN**

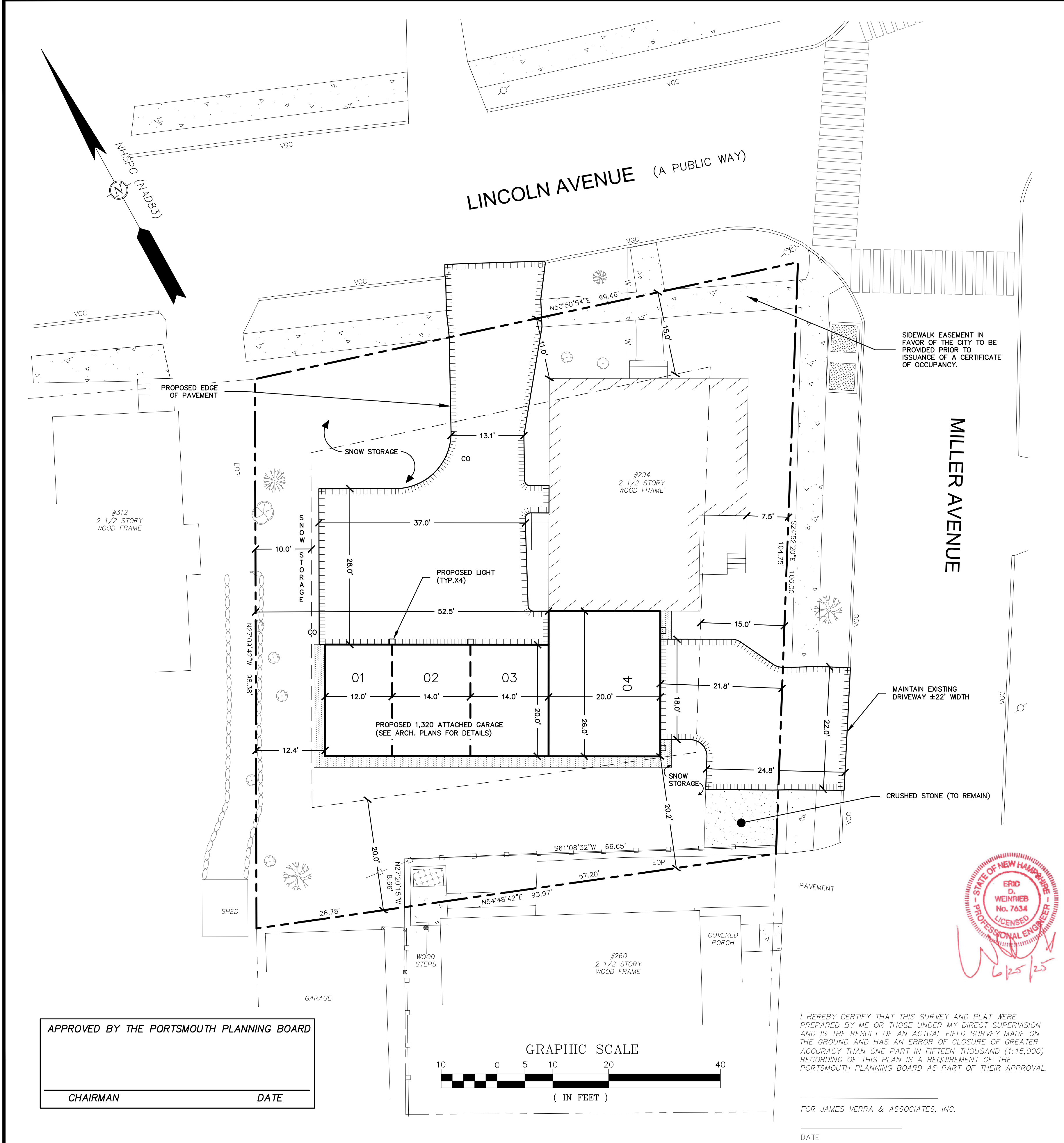
SHEET NUMBER:

C-1

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN

DATE



SITE NOTES

DESIGN INTENT – THIS PLAN SET IS INTENDED TO DEPICT THE CONSTRUCTION OF A 4–BAY GARAGE ATTACHED TO A MULTI–FAMILY RESIDENCE.

1. APPROXIMATE LOT AREA: 9,685 S.F.± (0.22 AC.±)
2. ZONE: (GRA) GENERAL RESIDENCE A
3. DIMENSIONAL REQUIREMENTS – (GRA) GENERAL RESIDENCE A

MIN. LOT AREA:	REQUIRED 7,500 S.F.	EXISTING ±9,685 SF	PROVIDED ±9,685 SF
MIN. STREET FRONTAGE:	100'	106'(MILLER)/96'(LINCOLN)	±106'/±96'
FRONT SETBACK:	15'		
LINCOLN AVE.		±11.0'	±11.0'
MILLER AVENUE:		±7.5'	±7.5'
RIGHT SIDE SETBACK:	10'	±52.4'	±12.4'
REAR SETBACK:	20'	±5.6'	±20.3'
MAX. BUILDING HEIGHT:	35'		
MAIN BUILDING		<35'	<35'
GARAGE		<20' (EX.)	<35' (PROP.) *
MAX. BUILDING COVERAGE:	25%	±2,070 SF (21.3%)	±2,715 SF (28.0%) *
MIN. OPEN SPACE:	30%	±5,287 SF (54.6%)	±4,667 SF (48.2%)**

* VARIANCE GRANTED
** INCLUDES ABUTTERS ENCROACHMENTS

4. VARIANCE APPROVED ON JANUARY 28, 2025
VARIANCE FROM SECTION 10.521 TO ALLOW 28% BUILDING COVERAGE WHERE 25% IS THE MAXIMUM ALLOWED.
5. PARCEL IS NOT IN A SPECIAL FLOOD HAZARD AREA PER FEMA FIRM MAP NUMBER 33015C0259F, MAP REVISED 1/29/21.
6. ALL CONSTRUCTION SHALL MEET THE MINIMUM STANDARDS OF THE CITY OF PORTSMOUTH & NHDOT'S STANDARD SPECIFICATION FOR ROAD & BRIDGE CONSTRUCTION, LATEST EDITIONS. THE MORE STRINGENT SPECIFICATION SHALL GOVERN.
7. PARKING SPACES REQUIREMENTS:
- 1.3 SPACES/UNIT X 3 UNITS = 3.9 SPACES REQUIRED
- 4 SPACES PROVIDED

8. BASE PLAN: "EXISTING CONDITIONS PLAN" BY JAMES VERRA & ASSOCIATES, INC., 4/18/25.
9. BUILDING COVERAGE COMPUTATIONS:
EXISTING COVERAGE:
HOUSE (±1,340 S.F.) + PORCH/STEPS (±90 S.F.) + DECK (±20 S.F.) + STEPS (±25 S.F.) + GARAGE (±335 S.F.) + TEMPORARY STORAGE (±260 S.F.) = ±2,070 S.F. / 9,685 S.F. = ±21.3%

PROPOSED COVERAGE:
HOUSE (±1,340 S.F.) + PORCH/STEPS (±90 S.F.) + DECK (±20 S.F.) + STEPS (±25 S.F.) + NEW GARAGE (±1,240 S.F.) = ±2,715 S.F. (±28.0%) *

10. OPEN SPACE COMPUTATIONS:
EXISTING OPEN SPACE:
TOTAL AREA (9,685 S.F.) – EX. APT. BLDG. & GARAGE (±1,810 S.F.) – PAVED DRIVE/PKING (±1,976 S.F.) – PAVED EASEMENT AREA (±225 S.F.) – STONE (±125 S.F.) – TEMPORARY STORAGE (±260 S.F.) = OPEN SPACE OF ±5,289 S.F. (±54.6%)

PROPOSED OPEN SPACE:
TOTAL AREA (9,685 S.F.) – EX. APT. BLDG. & PROP. GARAGE (±2,682 S.F.) – PAVED DRIVE (±1,986 S.F.) – PAVED EASEMENT AREA (±225 S.F.) – STONE (±125 S.F.) = OPEN SPACE = ±4,667 S.F. (±48.2%)**

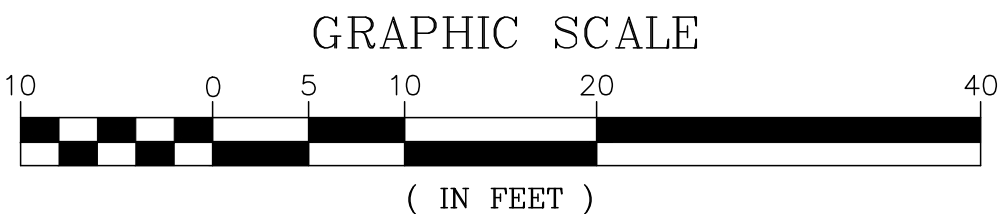
NOTE: OPEN SPACE INCLUDES WALKS OF 5' WIDTH OR MORE

11. THERE SHALL BE NO VISION OBSTRUCTIONS LOCATED IN THE AREA CREATED BY MEASURING 20' IN EACH DIRECTION FROM A CORNER LOT STREET PROPERTY LINE CORNER.
12. SNOW SHALL BE STORED AT THE EDGE OF PAVEMENT, IN AREAS SHOWN HEREON, AND/OR TRUCKED OFF SITE AS APPROPRIATE.
13. NO SAND SHALL BE USED FOR WINTER PARKING AREA MAINTENANCE. WINTER MAINTENANCE CONTRACTOR SHALL BE NHDES GREEN SNOWPRO CERTIFIED.
14. THE CONTRACTOR SHALL VERIFY ALL BENCHMARKS AND TOPOGRAPHY IN THE FIELD PRIOR TO CONSTRUCTION.
15. THE CONTRACTOR SHALL VERIFY ALL BUILDING DIMENSIONS WITH THE ARCHITECTURAL AND STRUCTURAL PLANS PRIOR TO CONSTRUCTION. ALL DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER FOR RESOLUTION.
16. ALL LIGHTS SHALL BE BUILDING MOUNTED & "DARK SKY COMPLIANT".
17. VERIFY LATEST ARCHITECTURAL DRAWINGS PRIOR TO ANY CONSTRUCTION ACTIVITIES.
18. ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.
19. ALL IMPROVEMENTS SHOWN ON THIS PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THIS PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.
20. TRASH & RECYCLING TOTES SHALL BE STORED INSIDE THE BUILDING.
21. PARCEL IS NOT IN A FLOOD HAZARD ZONE.
22. EXTERIOR SALT STORAGE IS PROHIBITED.
23. THE CONTRACTOR SHALL HAVE A SITE SURVEY CONDUCTED BY A RADIO COMMUNICATION CARRIER APPROVED BY THE FIRE DEPARTMENT. THE RADIO COMMUNICATION CARRIER MUST BE FAMILIAR WITH THE POLICE & FIRE DEPARTMENT'S RADIO CONFIGURATION. IF SURVEY DETERMINES SIGNAL REPEATERS ARE NECESSARY, THE CONTRACTOR SHALL INSTALL REPEATERS AS NECESSARY.
24. SEE THE ENTIRE APPROVED SET OF PLANS ASSOCIATED WITH THE PROJECT ON FILE AT THE CITY OF PORTSMOUTH PLANNING DEPARTMENT.
25. THERE ARE NO WETLANDS ON THE LOT OR WITHIN 100' OF THE LOT LINES.
26. ALL SOLID WASTE AND RECYCLING SHALL BE STORED INSIDE THE BUILDING.
27. BICYCLES SHALL BE STORED INSIDE THE GARAGE.

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN

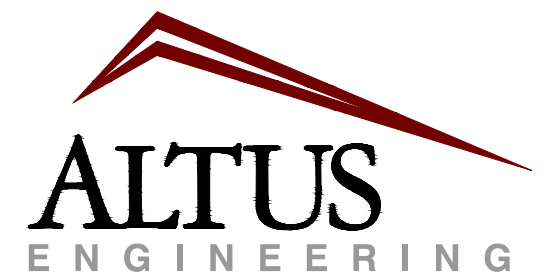
DATE



I HEREBY CERTIFY THAT THIS SURVEY AND PLAT WERE PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND AND HAS AN ERROR OF CLOSURE OF GREATER ACCURACY THAN ONE PART IN FIFTEEN THOUSAND (1:15,000) RECORDING OF THIS PLAN IS A REQUIREMENT OF THE PORTSMOUTH PLANNING BOARD AS PART OF THEIR APPROVAL.

FOR JAMES VERRA & ASSOCIATES, INC.

DATE



133 Court Street
(603) 433-2335

Portsmouth, NH 03801
www.altus-eng.com



NOT FOR CONSTRUCTION

ISSUED FOR:

PLANNING BOARD

ISSUE DATE:

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REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL	PMJ	05/19/25
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DRAWN BY: _____ PMJ

APPROVED BY: _____ EDW

DRAWING FILE: _____ 5548–SITE.dwg

SCALE:

22" x 34" - 1" = 10'

11" x 17" - 1" = 20'

OWNER:

GARY B. DODDS
REVOCABLE TRUST
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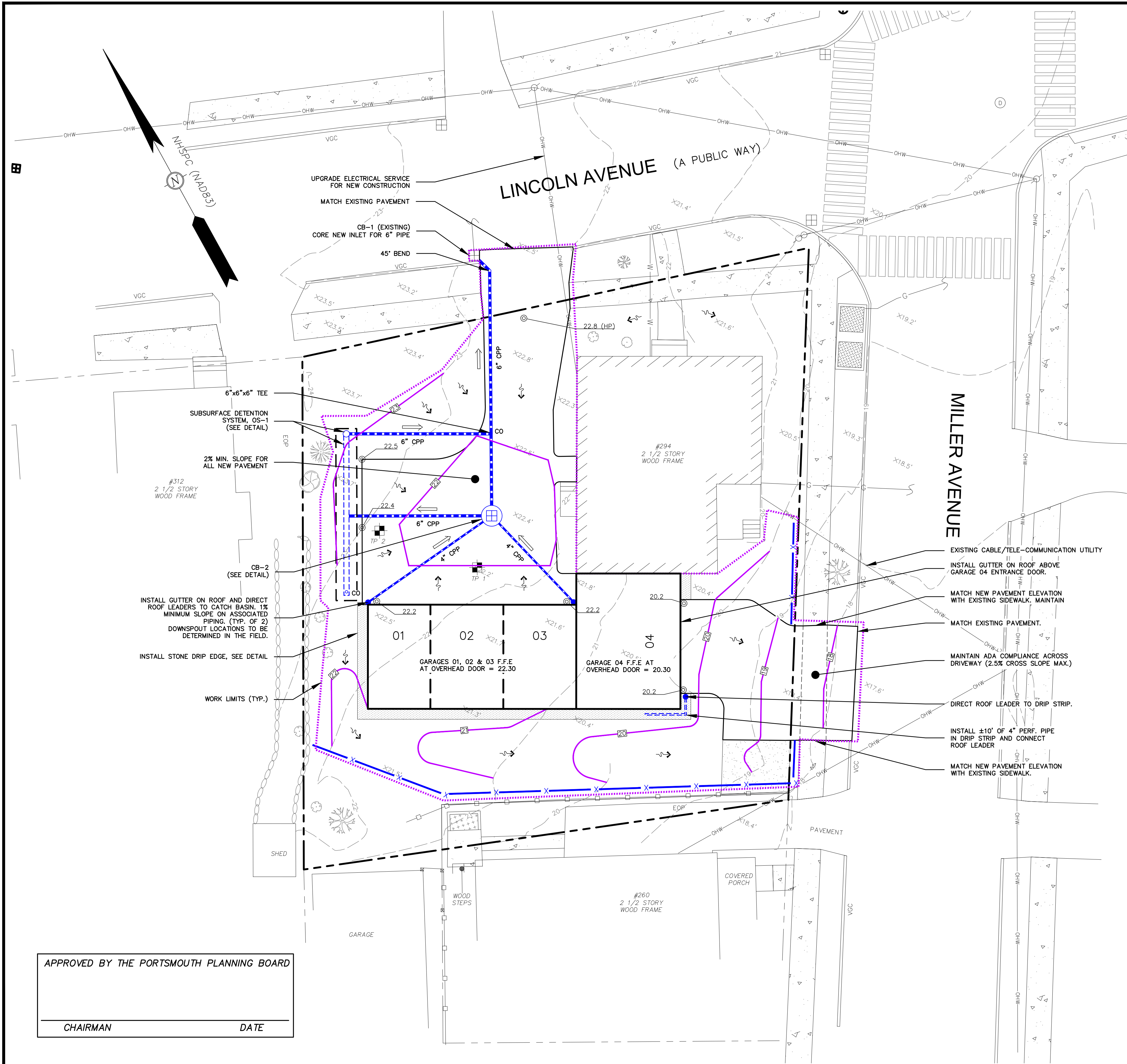
294 LINCOLN AVENUE
PORTSMOUTH, NH
03801

TITLE:

SITE PLAN

SHEET NUMBER:

C-2



DRAINAGE SCHEDULE

OS-1
15" YARD DRAIN (SEE DETAIL)
RIM: 23.00 (V.I.F.)
IN: 18.65 (6" CPP FROM SUBSURFACE DRAINAGE SYSTEM)
OUT: 19.60 (6" CPP TO 6" TEE)
L=±28' S=0.011 '/'

CB-1
4" DIA. EXISTING CITY OWNED CATCH BASIN
RIM: 22.48
IN: 18.50 (CORE NEW 6" CONNECTION FROM CB-2)
OUT: 17.80 (EXISTING) (V.I.F.)

CB-2
4" DIA. CATCH BASIN (SEE DETAIL)
RIM: 21.60 (V.I.F.)
OUT: 19.10 (6" CPP PRIMARY OUTLET TO SUBSURFACE DRAINAGE SYSTEM)
L=±26' S=0.0077 '/'
OUT: 19.60 (6" CPP SECONDARY OUTLET TO CB-1)
L=±50' S=0.022 '/'

NOTES

- THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHOWN HEREON AREA APPROXIMATE AND ARE BASED ON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (IE. CATCH BASINS, MANHOLES, WATER GATES, ETC.) AND INFORMATION COMPILED FROM PLANS PROVIDED BY UTILITY PROVIDERS AND GOVERNMENTAL AGENCIES. AS SUCH, THEY ARE NOT INCLUSIVE AS OTHER UTILITIES AND UNDERGROUND STRUCTURES THAT ARE NOT SHOWN ON THE PLANS MAY EXIST. THE ENGINEER, SURVEYOR AND OWNER ACCEPT NO RESPONSIBILITY FOR POTENTIAL INACCURACIES IN THE PLAN AND/OR UNFORESEEN CONDITIONS. THE CONTRACTOR SHALL NOTIFY, IN WRITING, SAID AGENCIES, UTILITY PROVIDERS, CITY OF PORTSMOUTH DPW AND OWNER'S AUTHORIZED REPRESENTATIVE AND CALL DIG SAFE AT 1 (800) DIG-SAFE AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION WORK.
- PRIOR TO CONSTRUCTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND FIELD VERIFY JUNCTIONS, LOCATIONS AND ELEVATIONS/INVERTS OF ALL EXISTING AND PROPOSED STORMWATER AND UTILITY LINES. CONFLICTS SHALL BE ANTICIPATED AND ALL EXISTING LINES TO BE RETAINED SHALL BE PROTECTED. ANY DAMAGE DONE TO EXISTING UTILITIES SHALL BE REPAIRED AND, IF CONFLICTS SHALL BE RESOLVED WITH THE INVOLVEMENT OF THE ENGINEER, DPW AND APPROPRIATE UTILITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE POSTING OF ALL BONDS AND PAYMENT OF ALL TAP, TIE-IN AND CONNECTION FEES.
- ALL ROAD/LANE CLOSURES OR OTHER TRAFFIC INTERRUPTIONS SHALL BE COORDINATED WITH THE PORTSMOUTH POLICE DEPARTMENT AND DPW AT LEAST TWO WEEKS PRIOR TO COMMENCING RELATED CONSTRUCTION.
- ALL CONSTRUCTION SHALL MEET THE MINIMUM CONSTRUCTION STANDARDS OF THE CITY OF PORTSMOUTH AND NHDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, LATEST EDITION. THE MORE STRINGENT SPECIFICATION SHALL GOVERN.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCHING, BEDDING, BACKFILL & COMPACTION FOR ALL UTILITY TRENCHING IN ADDITION TO ALL CONDUIT INSTALLATION AND COORDINATION OF ALL REQUIRED INSPECTIONS.
- ALL TRENCHING, PIPE LAYING AND BACKFILLING SHALL CONFORM TO FEDERAL OSHA AND CITY REGULATIONS.
- FINAL UTILITY LOCATIONS TO BE COORDINATED BETWEEN THE ARCHITECT, CONTRACTOR, APPROPRIATE UTILITY COMPANIES AND THE PORTSMOUTH DPW.
- WATER: PORTSMOUTH DPW WATER DIVISION, DOUG SPARKS, (603) 427-1409.
- SEWER: PORTSMOUTH DPW SEWER DIVISION, DOUG SPARKS, (603) 427-1409.
- TELECOMMUNICATIONS: CONSOLIDATED, JOE CONSIDINE, (603) 427-5525.
- CABLE: COMCAST, MIKE COLLINS, (603) 679-5695, EXT. 1037.
- ELECTRICAL: EVERSOURCE, JOSHUA LAHAIE, (603) 332-7551.
- GAS: UNITIL, DAVID BEAULIEU, (603) 294-5144
- DETECTABLE WARNING TAPE SHALL BE PLACED OVER THE ENTIRE LENGTH OF ALL BURIED UTILITIES, COLORS PER THE RESPECTIVE UTILITY PROVIDERS.
- WHERE WATER LINES CROSS, RUN ADJACENT TO OR ARE WITHIN 5' OF STORM DRAINAGE PIPES OR STRUCTURES, 2"-THICK CLOSED CELL RIGID BOARD INSULATION SHALL BE INSTALLED FOR FROST PROTECTION.
- CONTRACTOR SHALL PROVIDE DPW WITH DETAILS OF TEMPORARY & PERMANENT GROUNDWATER DEWATERING DESIGN IF NECESSARY.
- SEE SHEET C-1 FOR LEGEND.
- ALL UTILITIES FOR THE PROPOSED GARAGE WILL BE CONNECTED TO THE EXISTING BUILDING INTERNALLY.

TEST PIT LOGS

JUNE 12, 2025
LOGGED BY ERIC WEINRIEB, PE, SEPTIC DESIGNER 809

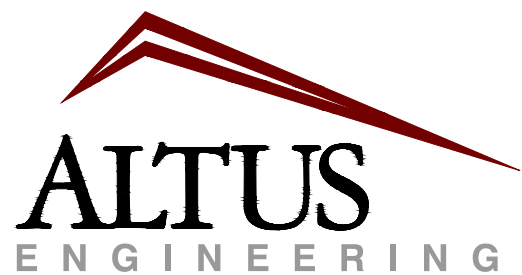
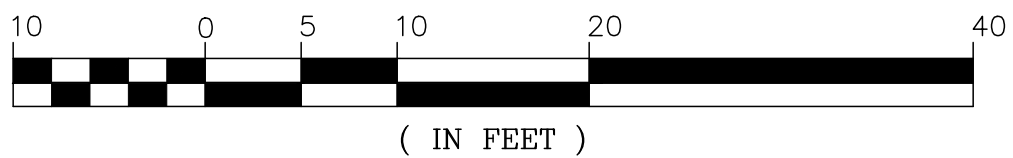
TEST PIT 1
0 - 12" GRASS MATT AND FINE SANDY LOAM
12 - 44" MIXED SAND AND GRAVEL, STONES TO 6" DIAMETER
FIRM, FRIABLE, SINGLE GRAIN

44" REFUSAL
NO OBSERVED WATER,
NO SEASONAL HIGH WATER TABLE

TEST PIT 2
0 - 8" GRASS MATT AND FINE SANDY LOAM
8 - 89" MIXED SAND AND GRAVEL, STONES TO 12" DIAMETER
FIRM, FRIABLE, SINGLE GRAIN

89" REFUSAL
NO OBSERVED WATER,
NO SEASONAL HIGH WATER TABLE

GRAPHIC SCALE



133 Court Street
(603) 433-2335
Portsmouth, NH 03801
www.altus-eng.com



NOT FOR CONSTRUCTION

ISSUED FOR:

PLANNING BOARD

ISSUE DATE:

JUNE 25, 2025

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL	PMJ	05/19/25
0	REV. PER TAC	PMJ	06/25/25

DRAWN BY: _____ PMJ

APPROVED BY: _____ EDW

DRAWING FILE: _____ 5548-SITE.dwg

SCALE:

22" x 34" - 1" = 10'

11" x 17" - 1" = 20'

OWNER:

GARY B. DODDS
REVOCABLE TRUST
GARY B. DODDS TRUSTEE
300 SAGAMORE ROAD
RYE, NH 03870

APPLICANT:

GARY B. DODDS
REVOCABLE TRUST
GARY B. DODDS TRUSTEE
300 SAGAMORE ROAD
RYE, NH 03870

PROJECT:

**GARAGE
CONSTRUCTION**
TAX MAP 130 LOT 024

294 LINCOLN AVENUE
PORTSMOUTH, NH
03801

TITLE:

**GRADING & DRAINAGE
PLAN**

SHEET NUMBER:

C-3

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN

DATE

SEDIMENT AND EROSION CONTROL NOTES

PROJECT NAME AND LOCATION

PROPOSED GARAGE CONSTRUCTION
294 LINCOLN AVENUE
PORTSMOUTH, NEW HAMPSHIRE
TAX MAP 130 LOT 24

LONGITUDE: 70°45'39" W
LATITUDE: 43°04'05" N

OWNER / APPLICANT:

GARY B. DODDS REVOCABLE TRUST
300 SAGAMORE ROAD
RYE, NH 03870

DESCRIPTION

The project consists of the construction of a 4-bay garage along with associated site improvements.

DISTURBED AREA

The total area to be disturbed for the redevelopment improvements is approximately 6,400 S.F. (±0.15 acres).

PROJECT PHASING

The proposed project will be completed in one phase.

NAME OF RECEIVING WATER

The site drains overland to the municipal drainage system and eventually to the South Mill Pond

SEQUENCE OF MAJOR ACTIVITIES

1. Install temporary erosion control measures including perimeter sediment controls, stabilized construction exit and inlet sediment filters as noted on the plan. All temporary erosion control measures shall be maintained in good working condition for the duration of the project.
2. Remove temporary shed & raze existing garage structure,
3. Strip loam and stockpile.
4. Rough grade site including placement of borrow materials.
5. Construct garage addition.
6. Construct drainage structures, culverts, utilities, swales & pavement base course materials.
7. Loam (6" min) and seed all disturbed areas not paved or otherwise stabilized.
8. Install final pavement course.
9. When all construction activity is complete and site is stabilized, remove all temporary erosion control measures and any sediment that has been trapped by these devices.

TEMPORARY EROSION & SEDIMENT CONTROL AND STABILIZATION PRACTICES

All work shall be in accordance with state and local permits. Work shall conform to the practices described in the "New Hampshire Stormwater Manual, Volumes 1 – 3", issued February 2025, as amended. As indicated in the sequence of Major Activities, the silt fences shall be installed prior to commencing any clearing or grading of the site. Structural controls shall be installed concurrently with the applicable activity. Once construction activity ceases permanently in an area, silt fences and any earth/dikes will be removed once permanent measures are established.

During construction, runoff will be diverted around the site with stabilized channels where possible. Sheet runoff from the site shall be filtered through hay bale barriers, stone check dams, and silt fences. All storm drain inlets shall be provided with hay bale filters or stone check dams. Stone rip rap shall be provided at the outlets of drain pipes and culverts where shown on the drawings.

Stabilize all ditches, swales, & level spreaders prior to directing flow to them.

Temporary and permanent vegetation and mulching is an integral component of the erosion and sedimentation control plan. All areas shall be inspected and maintained until vegetative cover is established. These control measures are essential to erosion prevention and also reduce costly rework of graded and shaped areas.

Temporary vegetation shall be maintained in these areas until permanent seeding is applied. Additionally, erosion and sediment control measures shall be maintained until permanent vegetation is established.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

A. GENERAL

These are general inspection and maintenance practices that shall be used to implement the plan:

1. The smallest practical portion of the site shall be denuded at one time.
2. All control measures shall be inspected at least once each week and following any storm event of 0.25 inches or greater.
3. All measures shall be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours.
4. Built-up sediment shall be removed from silt fence or other barriers when it has reached one-third the height of the fence or bale, or when "bulges" occur.
5. All diversion dikes shall be inspected and any breaches promptly repaired.
6. Temporary seeding and planting shall be inspected for bare spots, washouts, and unhealthy growth.
7. The owner's authorized engineer shall inspect the site on a periodic basis to review compliance with the Plans.
8. An area shall be considered stable if one of the following has occurred:
 - a. Base coarse gravels have been installed in areas to be paved;
 - b. A minimum of 85% vegetated growth as been established;
 - c. A minimum of 3 inches of non-erosive material such as stone of riprap has been installed; or
 - d. Erosion control blankets have been properly installed.
9. The length of time of exposure of area disturbed during construction shall not exceed 45 days.

B. MULCHING

Mulch shall be used on highly erodible soils, on critically eroding areas, on areas where conservation of moisture will facilitate plant establishment, and where shown on the plans.

1. Timing – In order for mulch to be effective, it must be in place prior to major storm events. There are two (2) types of standards which shall be used to assure this:
 - a. Apply mulch prior to any storm event. This is applicable when working within 100 feet of wetlands. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Concord, to have adequate warning of significant storms.
 - b. Required Mulching within a specified time period. The time period can range from 21 to 28 days of inactivity on a area, the length of time varying with site conditions. Professional judgment shall be used to evaluate the interaction of site conditions (soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc.) and the potential impact of erosion on adjacent areas to choose an appropriate time restriction.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (CON'T)

2. Guidelines for Winter Mulch Application –

Type	Rate per 1,000 s.f.	Use and Comments
Hay or Straw	70 to 90 lbs.	Must be dry and free from mold. May be used with plantings.
Wood Chips or Bark Mulch	460 to 920 lbs.	Used mostly with trees and shrub plantings.
Jute and Fibrous Matting (Erosion Blanket	As per manufacturer Specifications	Used in slope areas, water courses and other Control areas.
Crushed Stone 1/4" to 1-1/2" dia.	Spread more than 1/2" thick	Effective in controlling wind and water erosion.
Erosion Control Mix	2" thick (min)	<ul style="list-style-type: none">* The organic matter content is between 80 and 100% dry weight basis.* Particle size by weight is 100% passing a #6 screen and a minimum of 70 % maximum of 85% passing a #75' screen.* The organic portion needs to be fibrous and elongated.* Large portions of silts, clays or fine sands are not acceptable in the mix.* Soluble salts content is less than 4.0 mmhos/cm.* The pH should fall between 5.0 and 8.0.

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

C. TEMPORARY GRASS COVER

1. Seedbed Preparation – Apply fertilizer at the rate of 600 pounds per acre of 10-10-10. Apply limestone (equivalent to 50 percent calcium plus magnesium oxide) at a rate of three (3) tons per acre.
2. Seeding –
 - a. Utilize annual rye grass at a rate of 40 lbs./acre.
 - b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.
 - c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer). Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.
3. Maintenance – Temporary seedings shall be periodically inspected. At a minimum, 95% of the soil surface should be covered by vegetation. If any evidence of erosion or sedimentation is apparent, repairs shall be made and other temporary measures used in the interim (mulch, filter barriers, check dams, etc.).

D. FILTERS

1. Sequence of Installation – Sediment barriers shall be installed prior to any soil disturbance of the contributing upslope drainage area.
2. Maintenance –
 - a. Silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired if there are any signs of erosion or sedimentation below them. Any required repairs shall be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water, the sediment barriers shall be replaced with a temporary stone check dam.
 - b. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier still is necessary, the fabric shall be replaced promptly.
 - c. Sediment deposits must be removed when deposits reach approximately one-third (1/3) the height of the barrier.
 - d. Any sediment deposits remaining in place after the silt fence or other barrier is no longer required shall be removed. The area shall be prepared and seeded.
 - e. Additional stone may have to be added to the construction entrance, rock barrier and riprap lined swales, etc., periodically to maintain proper function of the erosion control structure.
2. PERMANENT SEEDING –
 1. Bedding – stones larger than 1 1/2", trash, roots, and other debris that will interfere with seeding and future maintenance of the area should be removed. Where feasible, the soil should be tilled to a depth of 5" to prepare a seedbed and mix fertilizer into the soil.
 2. Fertilizer – lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds and amounts of lime and fertilizer should be based on an evaluation of soil tests. When a soil test is not available, the following minimum amounts should be applied:

Agricultural Limestone @ 100 lbs. per 1,000 s.f.	
10-20-20 fertilizer @ 12 lbs. per 1,000 s.f.	
 3. Seed Mixture (recommended):

Type	Lbs. / Acre	Lbs. / 1,000 sf
Tall Fescue	24	0.55
Creeping Red Fescue	24	0.55
Total	48	1.10

Seed Mixture (For slope embankments): Grass Seed: Provide fresh, clean, new-crop seed complying with tolerance for purity and germination established by Official Seed Analysts of North America. Provide seed mixture composed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified:			
Type	Min. Purity (%)	Min. Germination (%)	Kg./Hectare (Lbs./Acre)
Creeping Red Fescue (c)	96	85	45 (40)
Perennial Rye Grass (a)	98	90	35 (30)
Redtop	95	80	5 (5)
Alsike Clover	97	90(e)	5 (5)
Total			90 (80)

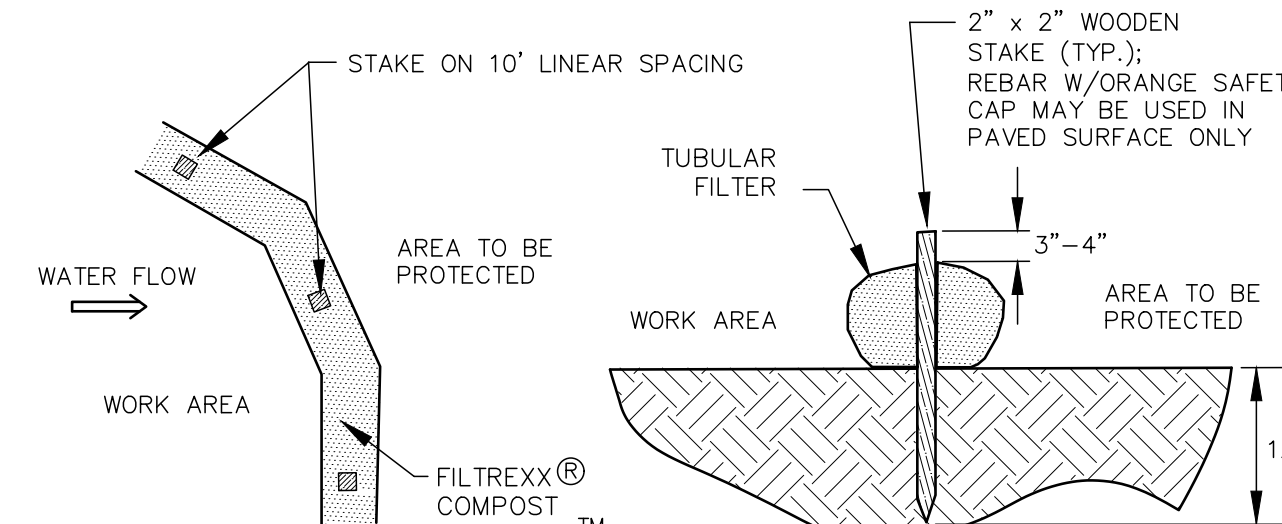
- a. Ryegrass shall be a certified fine-textured variety such as Pennfine, Fiesta, Yorktown, Diplomat, or equal.
- b. Fescue varieties shall include – Creeping Red and/or Hard Reliant, Scaldis, Koket, or Jamestown.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (CON'T)

4. Sodding – sodding is done where it is desirable to rapidly establish cover on a disturbed area. Sodding an area may be substituted for permanent seeding procedures anywhere on site. Bed preparation, fertilizing, and placement of sod shall be performed according to the S.C.S. Handbook. Sodding is recommended for steep sloped areas, areas immediately adjacent to sensitive water courses, easily erodible soils (fine sand/silt), etc.

WINTER CONSTRUCTION NOTES

1. All proposed vegetated areas which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and elsewhere seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting. The installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt events;
2. All ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions; and
3. After November 15th, incomplete road or parking surfaces where work has stopped for the winter season shall be protected with a minimum of 3 inches of crushed gravel per NHDOT Item 304.3.



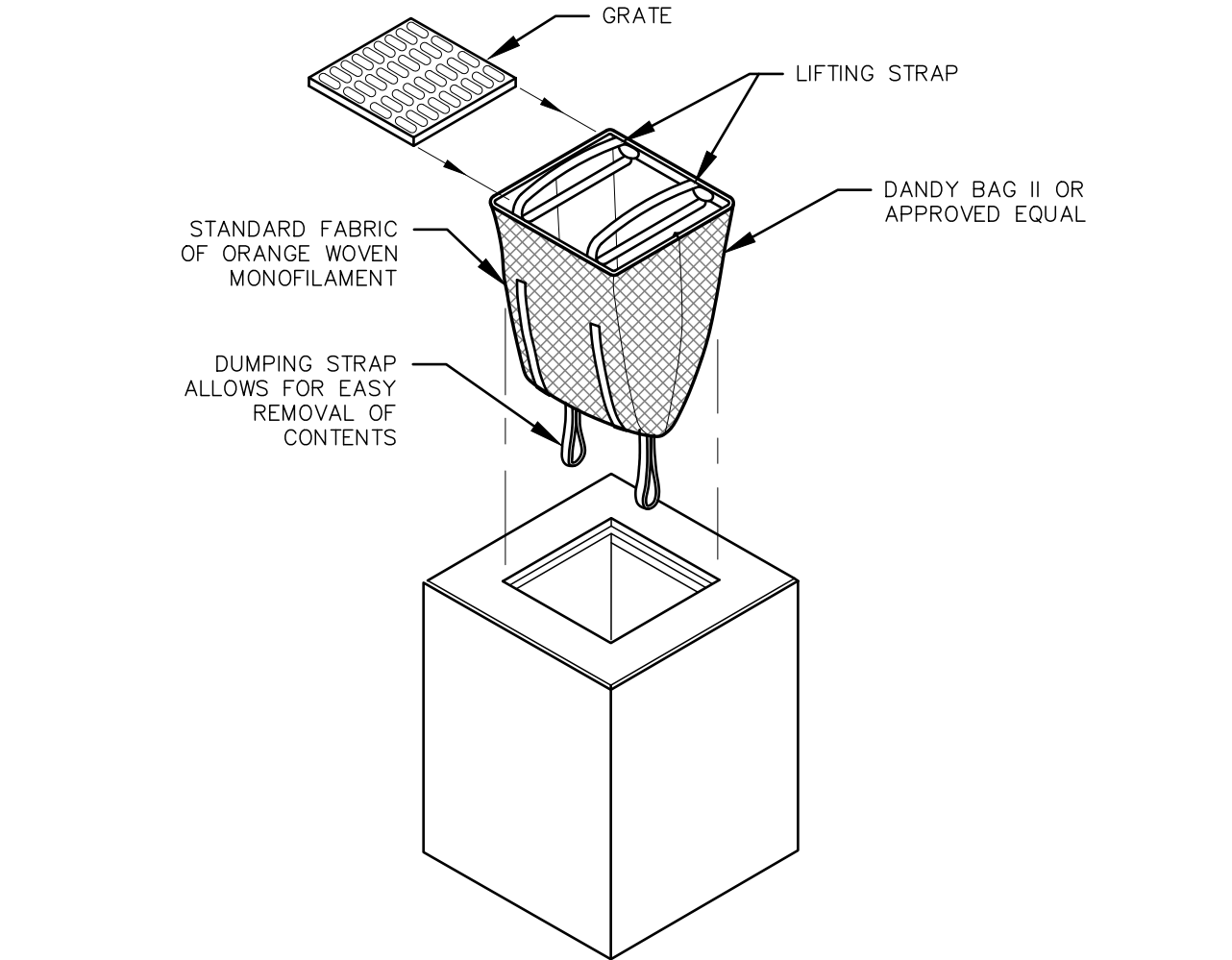
PLAN VIEW

SECTION

NOTES:

1. SILT SOXX OR APPROVED EQUAL SHALL BE USED FOR TUBULAR SEDIMENT BARRIERS.
2. ALL MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS.
3. COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIREMENTS OF THE SPECIFIC APPLICATION.
4. ALL SEDIMENT TRAPPED BY BARRIER SHALL BE DISPOSED OF PROPERLY.

TUBULAR SEDIMENT BARRIER DETAIL NOT TO SCALE



INSTALLATION AND MAINTENANCE:

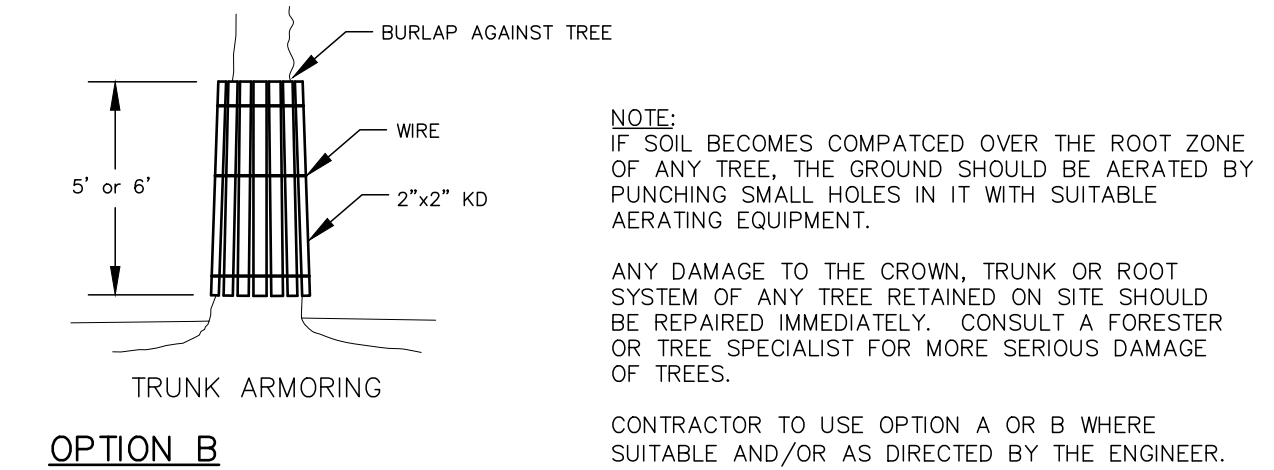
INSTALLATION: REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS; PLACE ABSORBENT PILLOW IN UNIT. STAND GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO CATCH BASIN. IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY THE UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL ABSORBENTS; REPLACE ABSORBENT WHEN NEAR SATURATION.

MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF THE UNIT AFTER EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE CATCH BASIN INSERT. IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY THE UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL ABSORBENTS; REPLACE ABSORBENT WHEN NEAR SATURATION.

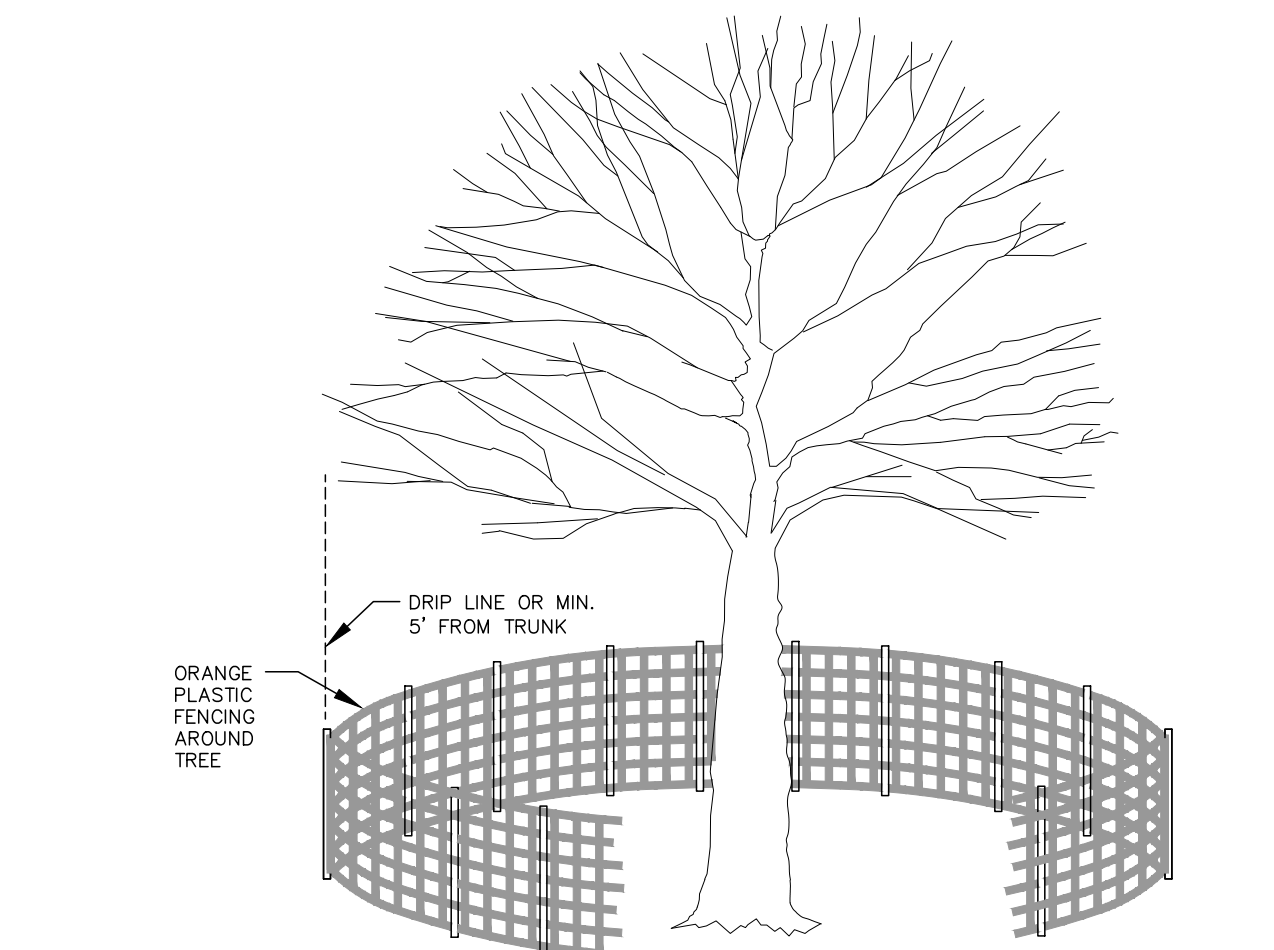
UNACCEPTABLE INLET PROTECTION METHOD:

A SIMPLE SHEET OF GEOTEXTILE UNDER THE GRATE IS NOT ACCEPTABLE.

STORM DRAIN INLET PROTECTION NOT TO SCALE

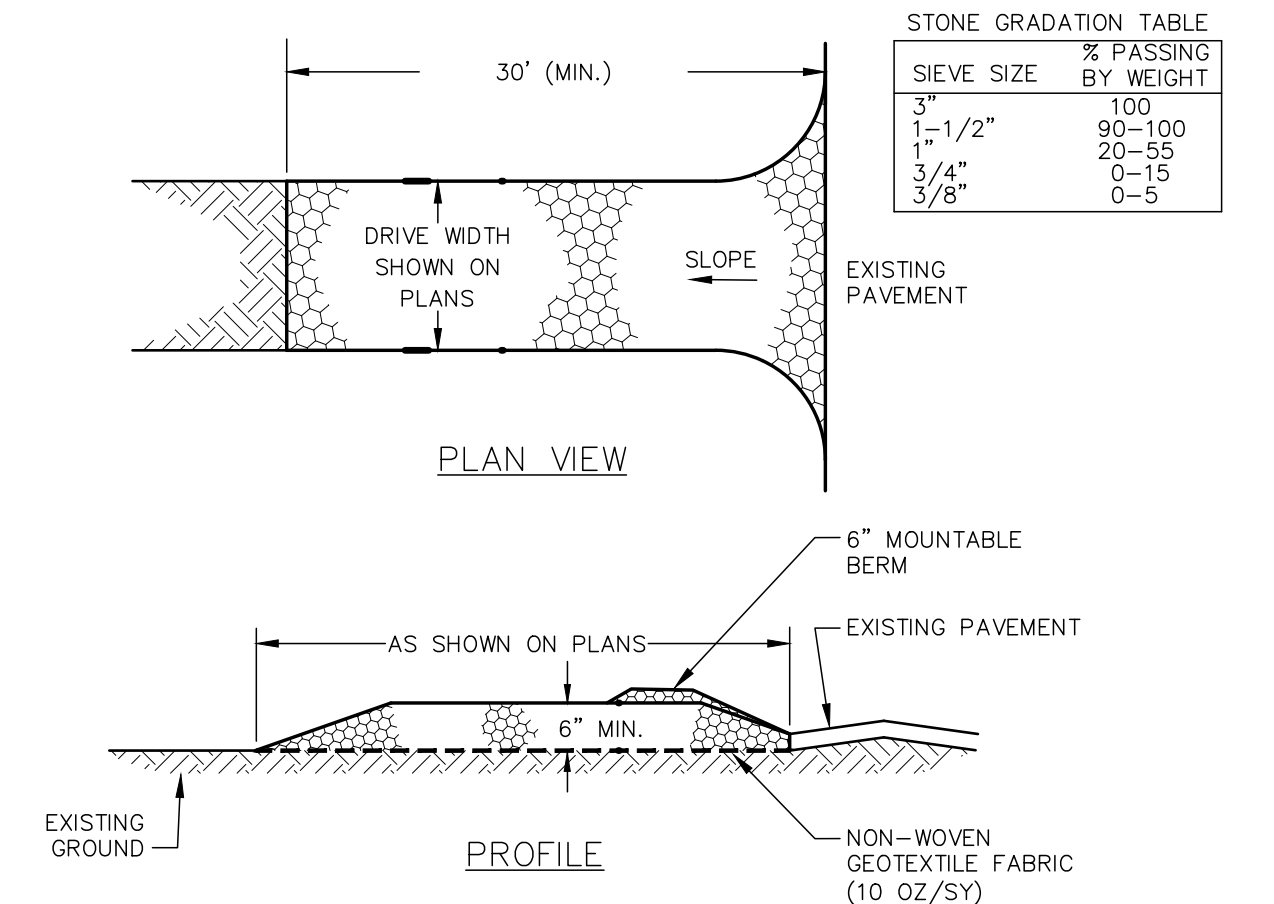


OPTION B



OPTION A

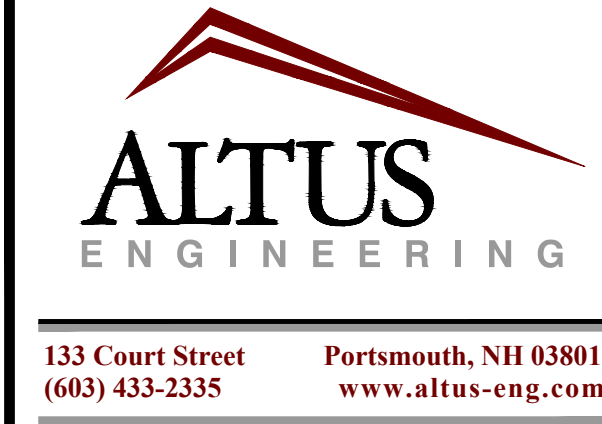
TREE PROTECTION DETAILS NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. **STONE SIZE** – NHDOT STANDARD STONE SIZE #4 – SECTION 703 OF NHDOT STANDARD.
2. **LENGTH** – DETAILED ON PLANS (50 FOOT MINIMUM) OR AS SHOWN ON PLANS.
3. **THICKNESS** – SIX (6) INCHES (MINIMUM).
4. **WIDTH** – FULL DRIVE WIDTH UNLESS OTHERWISE SPECIFIED.
5. **FILTER FABRIC** – MIRAFI 600X OR EQUAL APPROVED BY ENGINEER.
6. **SURFACE WATER CONTROL** – ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. **MAINTENANCE** – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. **WHEELS** SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. STABILIZED CONSTRUCTION EXITS SHALL BE INSTALLED AT ALL ENTRANCES TO PUBLIC RIGHTS-OF-WAY, AT LOCATIONS SHOWN ON THE PLANS, AND/OR WHERE AS DIRECTED BY THE ENGINEER.

STABILIZED CONSTRUCTION EXIT NOT TO SCALE



NOT FOR CONSTRUCTION

ISSUED FOR:

PLANNING BOARD

ISSUE DATE:

JUNE 25, 2025

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	EDW	05/19/25
1	REV. PER TAC	PMJ	06/25/25

DRAWN BY: _____ RLH

APPROVED BY: _____ EDW

DRAWING FILE: 5548-DETAILS.DWG

SCALE:

22" x 34" – N.T.S.
11" x 17" – N.T.S.

OWNER:

GARY B. DODDS
REVOCABLE TRUST
GARY B. DODDS TRUSTEE
300 SAGAMORE ROAD
RYE, NH 03870

APPLICANT:

GARY B. DODDS
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300 SAGAMORE ROAD
RYE, NH 03870

PROJECT:

**GARAGE
CONSTRUCTION**
TAX MAP 130 LOT 024

294 LINCOLN AVENUE
PORTSMOUTH, NH
03801

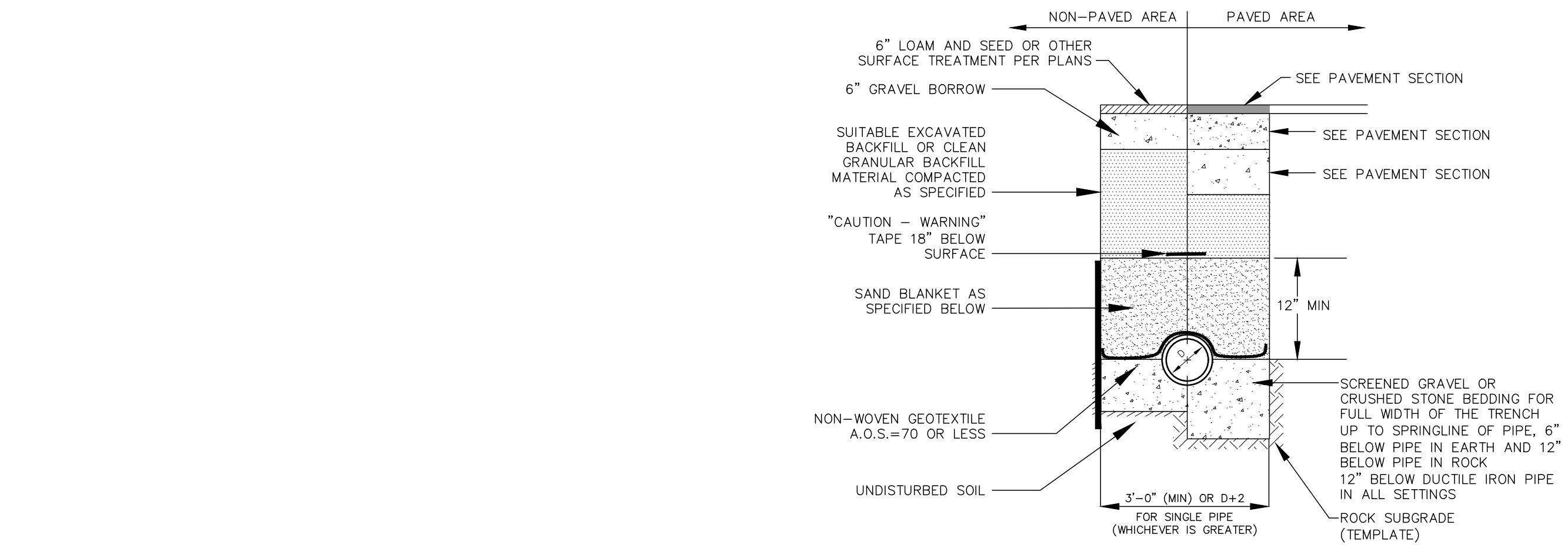
TITLE:

DETAIL SHEET

SHEET NUMBER:

D-1

P-5548



NOTES

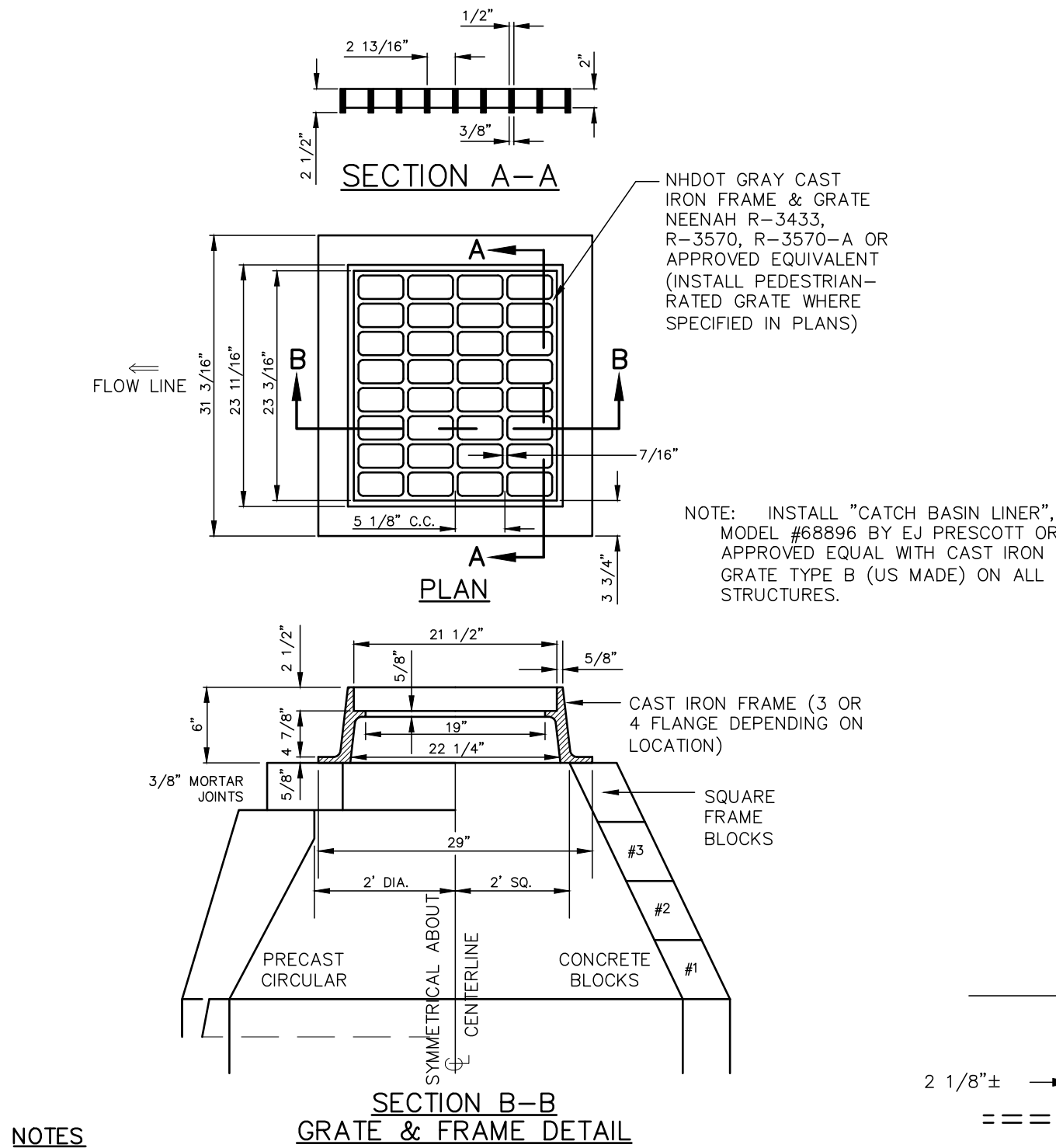
- BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.
- INSULATE GRAVITY SEWER AND FORCEMAINS WHERE THERE IS LESS THAN 5'-0" OF COVER WITH 2" THICK CLOSED CELL RIGID BOARD INSULATION, 18" ON EACH SIDE OF PIPE.
- MAINTAIN 12" MINIMUM HORIZONTAL SEPARATION AND WIDEN TRENCH ACCORDINGLY IF MULTIPLE PIPES ARE IN TRENCH.

SAND BLANKET/BARRIER		SCREENED GRAVEL OR CRUSHED STONE BEDDING*	
SIEVE SIZE	% FINER BY WEIGHT	SIEVE SIZE	% PASSING BY WEIGHT
1/2"	90 - 100	1"	100
200	0 - 15	3/4"	90 - 100
		3/8"	20 - 55
		# 4	0 - 10
		# 8	0 - 5

* EQUIVALENT TO STANDARD STONE SIZE #67 - SECTION 703 OF NHDOT STANDARD SPECIFICATIONS

CATCH BASIN SLAB TOP DETAIL

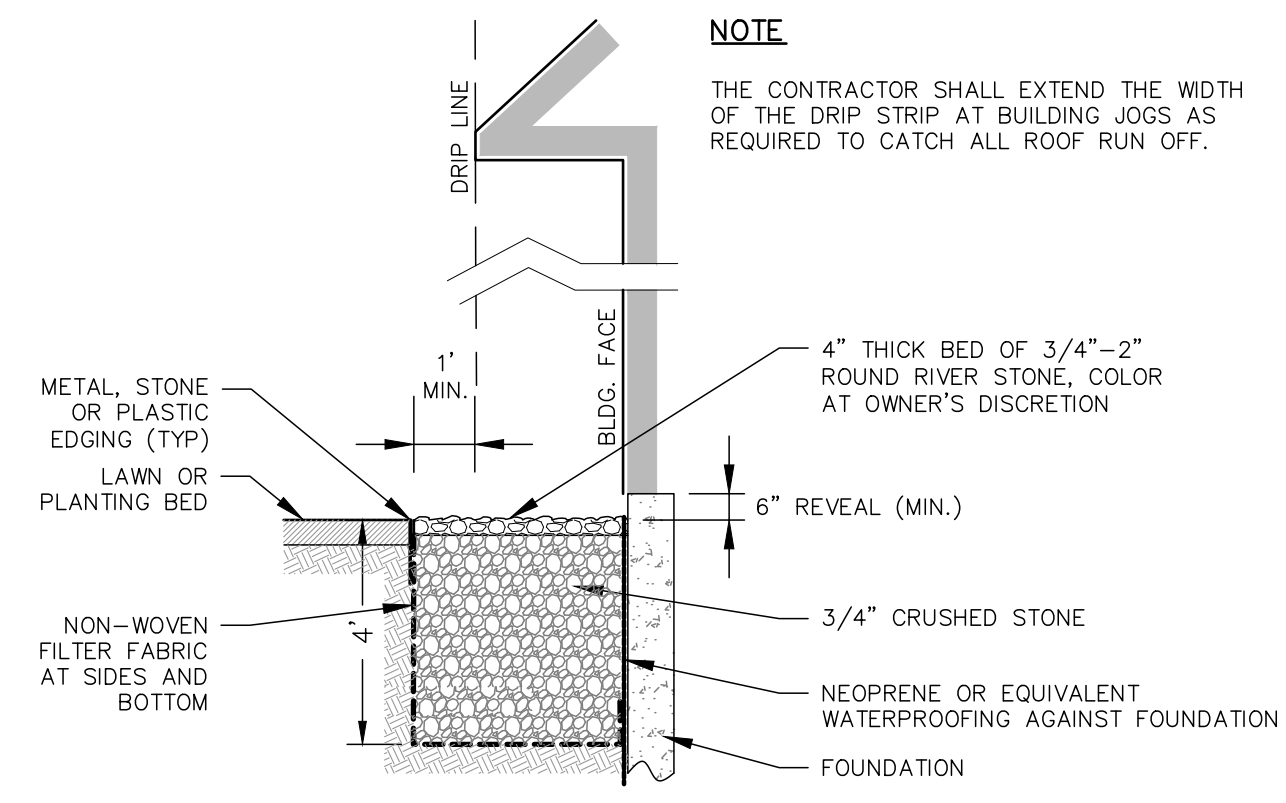
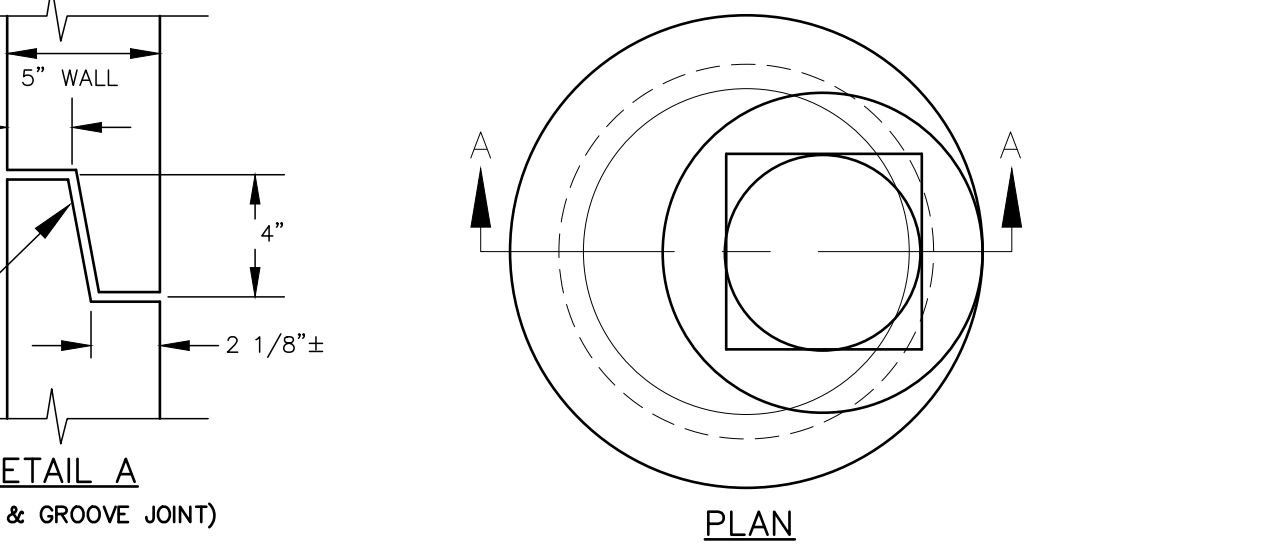
DRAINAGE TRENCH



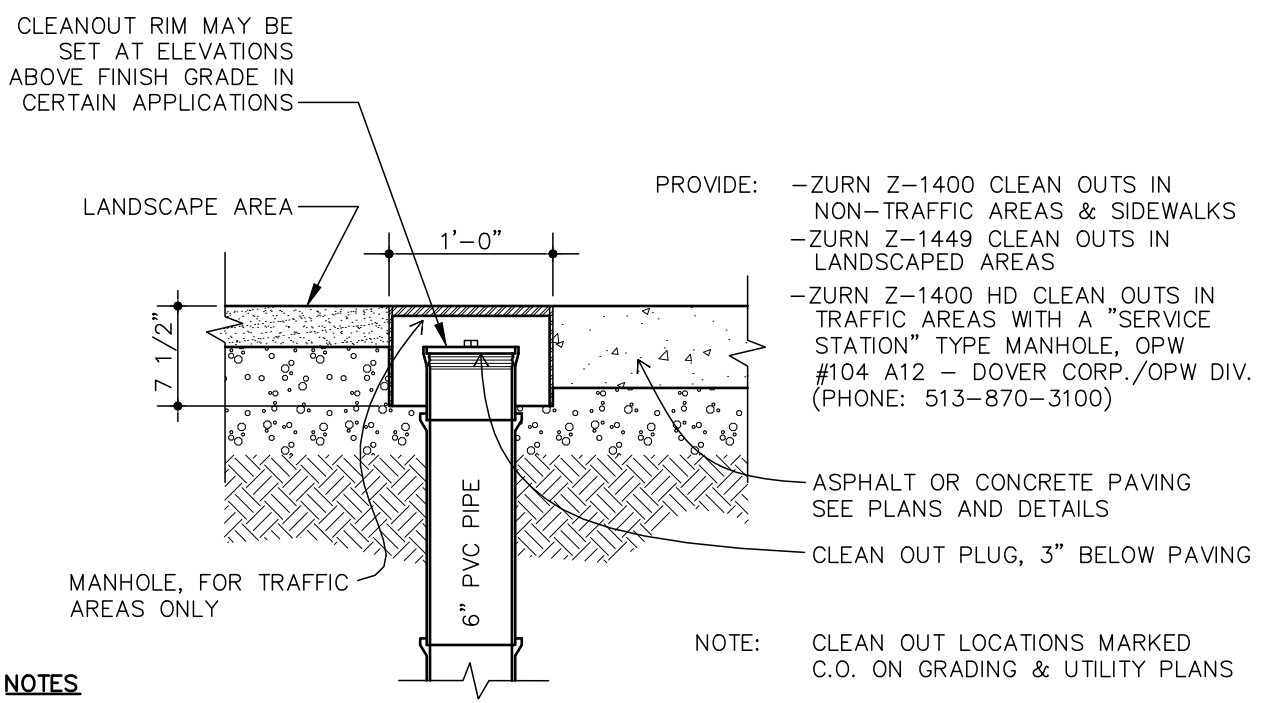
NOTES

- ALL SECTIONS SHALL BE CONCRETE CLASS AA (4000 PSI).
- CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
- THE TONGUE OR GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
- RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
- THE STRUCTURES SHALL BE DESIGNED FOR H2O LOADING.
- USE H2O LOADING SLAB TOP SECTION IN LIEU OF ECCENTRIC TOP WHERE PIPE INVERT IS WITHIN 4' OF FINISH GRADE.
- FRAME AND GRATE DIMENSIONS ARE TYPICAL BUT MAY VARY BASED ON PRODUCT SELECTED OR EQUIVALENT APPROVED BY THE ENGINEER.

DEEP SUMP CATCH BASIN ("CB")



STONE DRIP STRIP



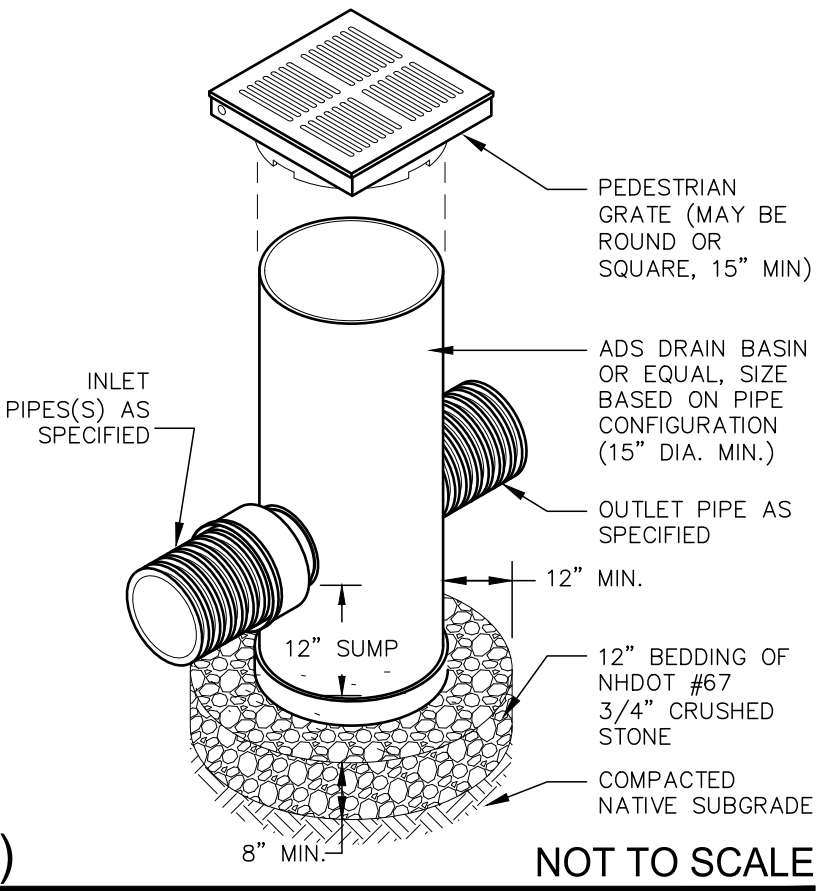
NOTES

- THIS DETAIL IS NOT INTENDED FOR USE WITH BIORETENTION POND UNDERDRAINS.
- CLEANOUT LOCATIONS ARE MARKED "CO" ON STORMWATER MANAGEMENT PLANS.

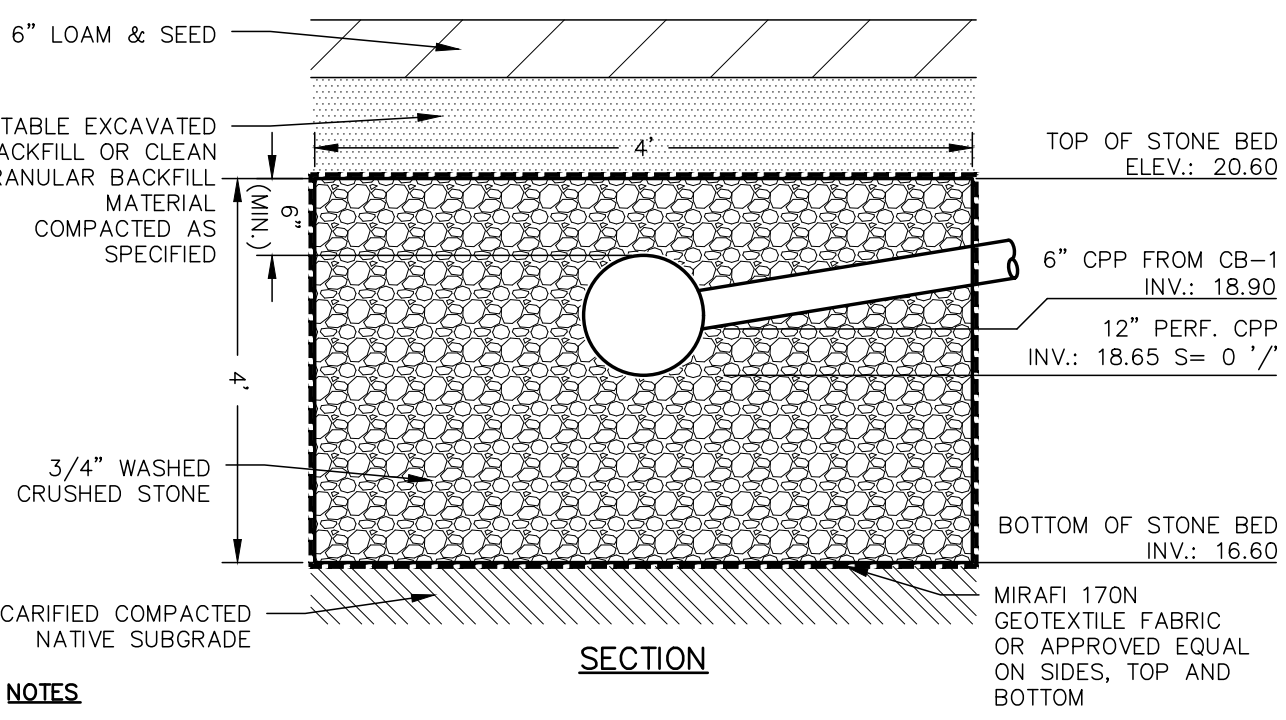
STORMWATER CLEANOUT ("CO")

NOTES:

- FRAMES AND GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN AND DETAILS.
- DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE, N-12HP AND PVC SEWER.
- INLINE DRAIN TO BE PVC, DIAMETER AS SPECIFIED AND AS MANUFACTURED BY ADS OR APPROVED EQUAL.
- THE CONTRACTOR SHALL INSTALL THE DRAIN BASIN PER THE MANUFACTURER'S RECOMMENDATIONS AND AS SHOWN ON THE DRAWINGS.
- FOR INSTALLATION IN PEDESTRIAN AND LANDSCAPE AREAS ONLY.



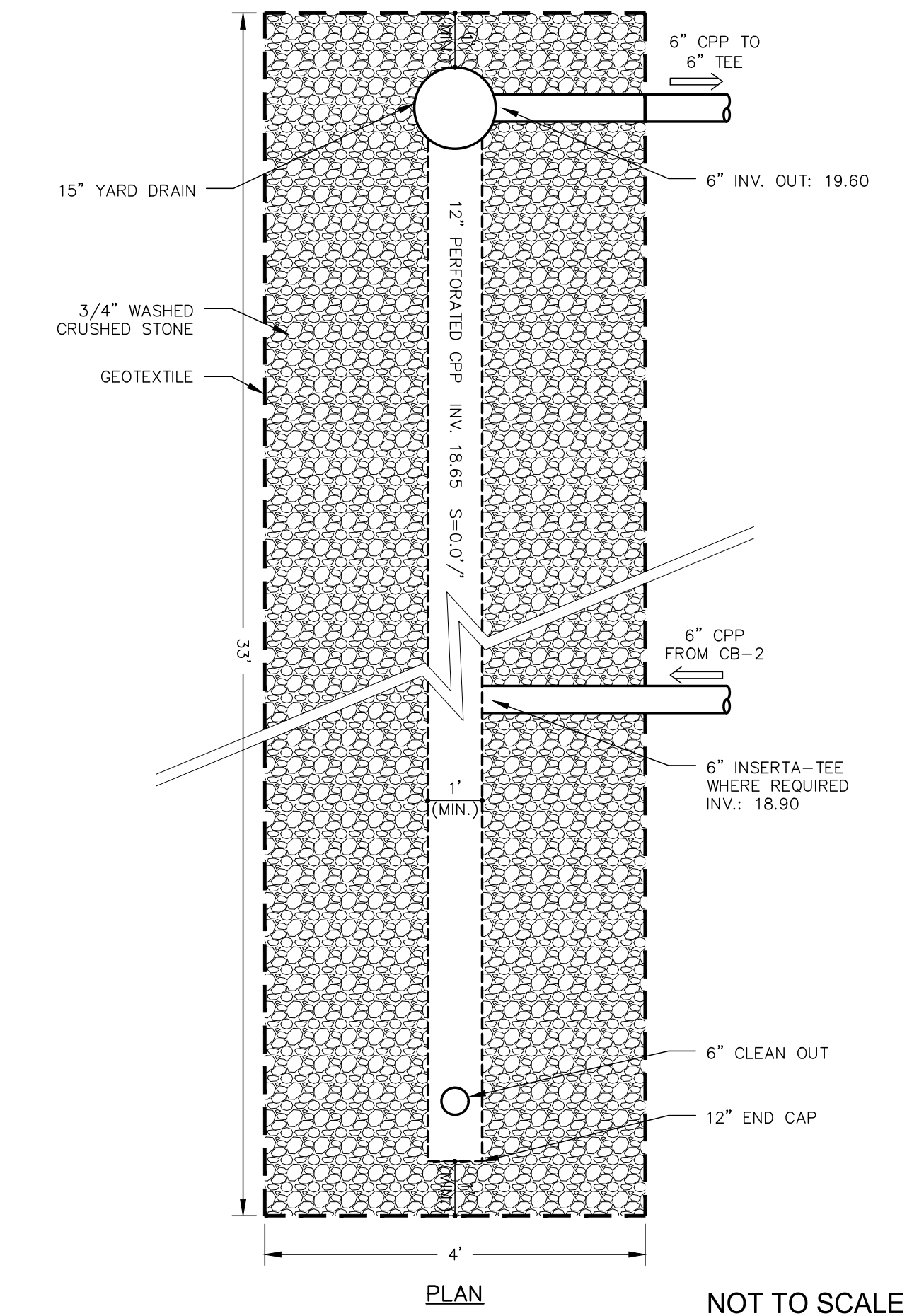
YARD DRAIN ("YD")



NOTES

- CIVIL ENGINEER SHALL INSPECT SUBGRADE OF INFILTRATION BASIN PRIOR TO INSTALLATION OF STONE.

SUBSURFACE DETENTION SYSTEM



NOT FOR CONSTRUCTION

ISSUED FOR: PLANNING BOARD

ISSUE DATE: JUNE 25, 2025

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	EDW	05/19/25
1	REV. PER TAC	PMJ	06/25/25

DRAWN BY: _____ RLH
APPROVED BY: _____ EDW
DRAWING FILE: 5548-DETAILS.DWG

SCALE:
22" x 34" - N.T.S.
11" x 17" - N.T.S.

OWNER:
GARY B. DODDS
REVOCABLE TRUST
GARY B. DODDS TRUSTEE
300 SAGAMORE ROAD
RYE, NH 03870

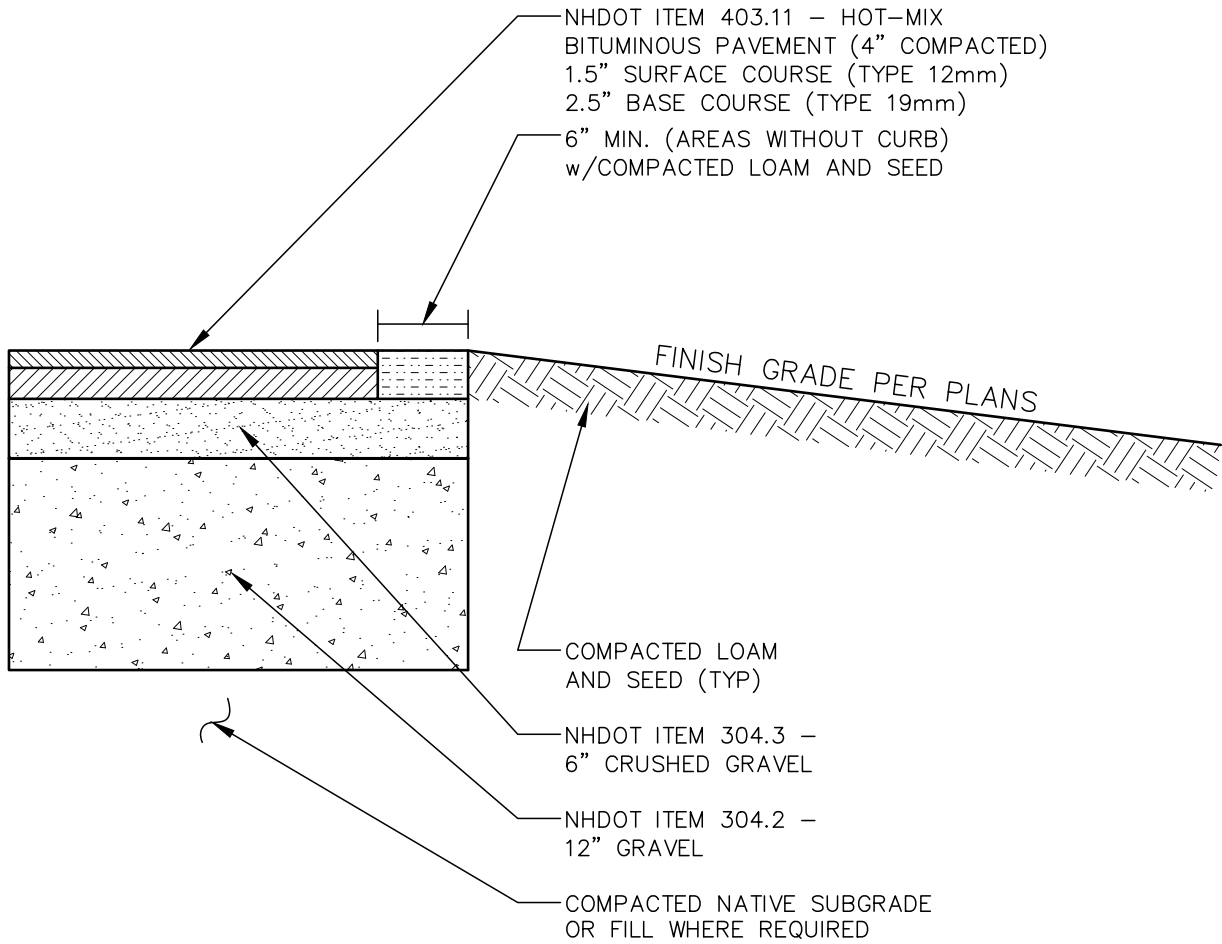
APPLICANT:
GARY B. DODDS
REVOCABLE TRUST
GARY B. DODDS TRUSTEE
300 SAGAMORE ROAD
RYE, NH 03870

PROJECT:
GARAGE
CONSTRUCTION
TAX MAP 130 LOT 024
294 LINCOLN AVENUE
PORTSMOUTH, NH
03801

TITLE:

DETAIL SHEET

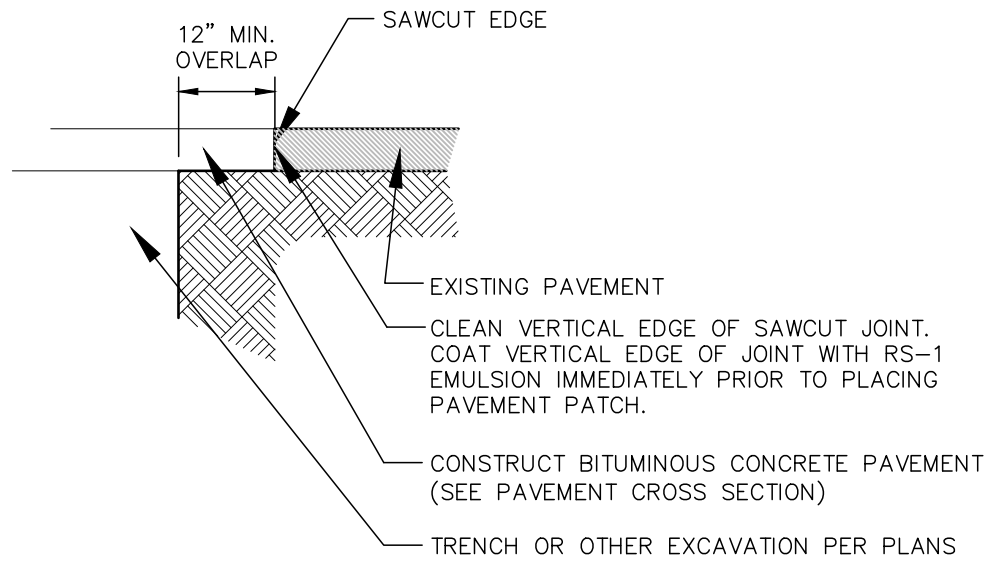
SHEET NUMBER:



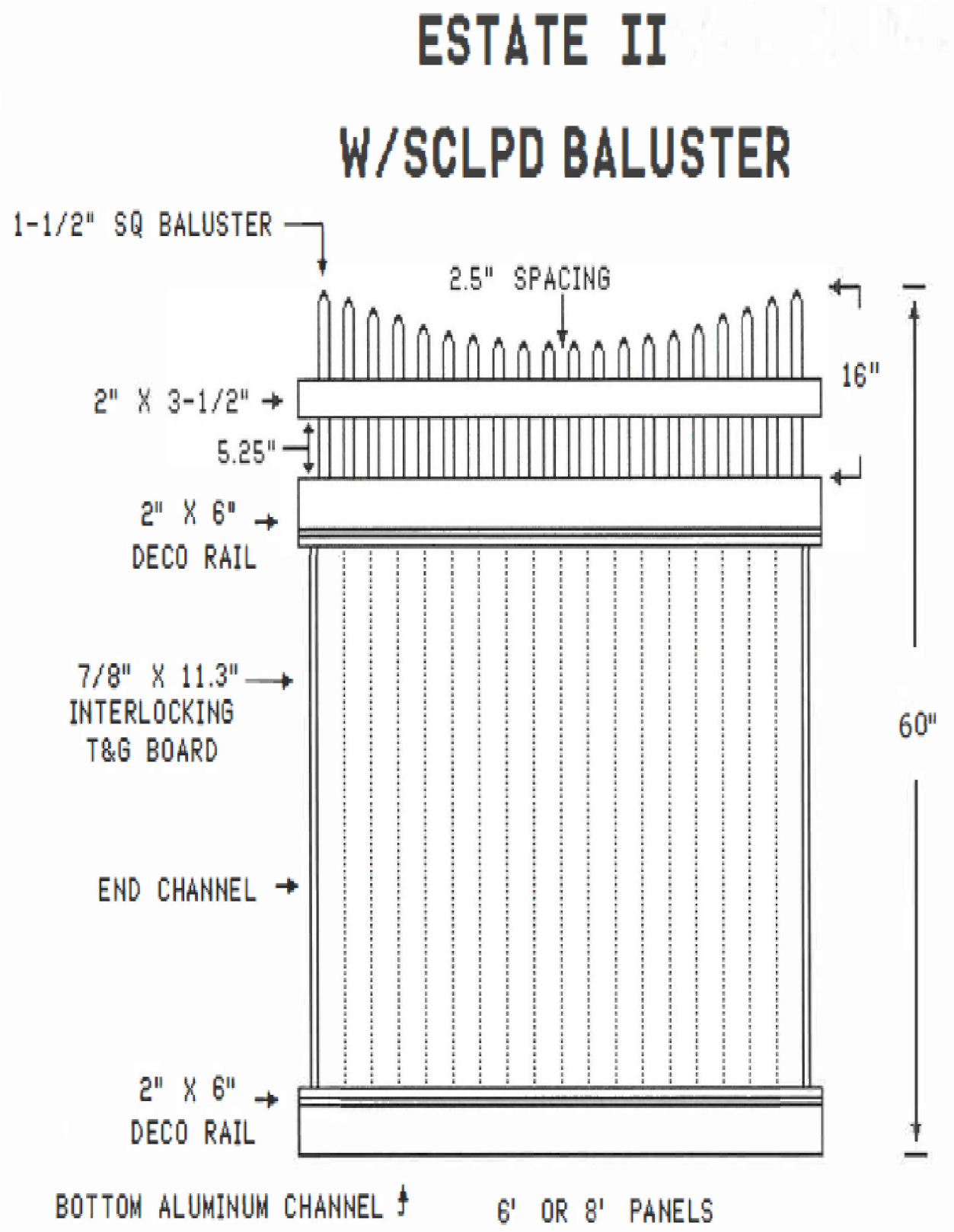
NOTES

- PROJECT GEOTECHNICAL REPORT MAY REQUIRE A DIFFERENT PAVEMENT CROSS SECTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR READING AND FOLLOWING ALL RECOMMENDATIONS IN THE GEOTECHNICAL REPORT. IN THE EVENT THAT THE REPORT AND CIVIL PLANS DIFFER, THE MORE STRINGENT SPECIFICATION SHALL APPLY.
- ALL EXISTING FILL, BURIED ORGANIC MATTER, CLAY, LOAM, MUCK, AND/OR OTHER QUESTIONABLE MATERIAL SHALL BE REMOVED FROM BELOW ALL PAVEMENT, SHOULDERS AND UNDERGROUND PIPING/UTILITIES TO DEPTHS RECOMMENDED IN GEOTECHNICAL REPORT.
- SUBGRADE SHALL BE PROOFROLLED A MINIMUM OF 6 PASSES WITH A 10-TON VIBRATORY COMPACTOR OPERATING AT PEAK RATED FREQUENCY OR BY MEANS APPROVED BY THE ENGINEER.
- FILL BELOW PAVEMENT GRADES SHALL BE GRANULAR BORROW COMPACTED PER NHDOT REQUIREMENTS.
- SITEWORK CONTRACTOR SHALL COORDINATE GEOTECHNICAL ENGINEERING INSPECTIONS WITH THE CONSTRUCTION MANAGER PRIOR TO PLACING GRAVELS.
- TACK COAT SHALL BE APPLIED BETWEEN SUCCESSIVE LIFTS OF ASPHALT.
- THE BITUMINOUS PAVEMENT SHALL BE COMPACTED TO 92 TO 97 PERCENT OF ITS THEORETICAL MAXIMUM DENSITY AS DETERMINED BY ASTM D-2041. THE BASE AND SUBBASE MATERIALS SHOULD BE COMPACTED TO AT LEAST 95 PERCENT OF THEIR MAXIMUM DRY DENSITIES AS DETERMINED BY ASTM D-1557.

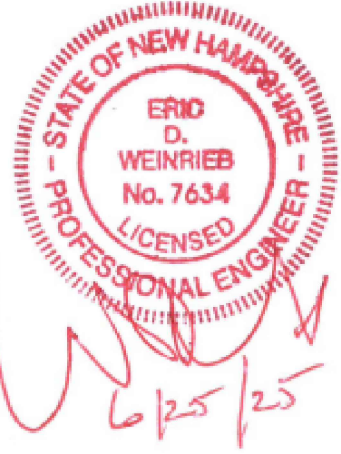
SITE PAVEMENT CROSS SECTION NOT TO SCALE



TYPICAL PAVEMENT SAWCUT NOT TO SCALE



FENCE DETAIL NOT TO SCALE



NOT FOR CONSTRUCTION

ISSUED FOR:

PLANNING BOARD

ISSUE DATE:

JUNE 25, 2025

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	EDW	05/19/25
1	REV. PER TAC	PMJ	06/25/25

DRAWN BY: _____ RLH

APPROVED BY: _____ EDW

DRAWING FILE: 5548-DETAILS.DWG

SCALE:

22" x 34" - N.T.S.
11" x 17" - N.T.S.

OWNER:

GARY B. DODDS
REVOCABLE TRUST
GARY B. DODDS TRUSTEE
300 SAGAMORE ROAD
RYE, NH 03870

APPLICANT:

GARY B. DODDS
REVOCABLE TRUST
GARY B. DODDS TRUSTEE
300 SAGAMORE ROAD
RYE, NH 03870

PROJECT:

**GARAGE
CONSTRUCTION**
TAX MAP 130 LOT 024

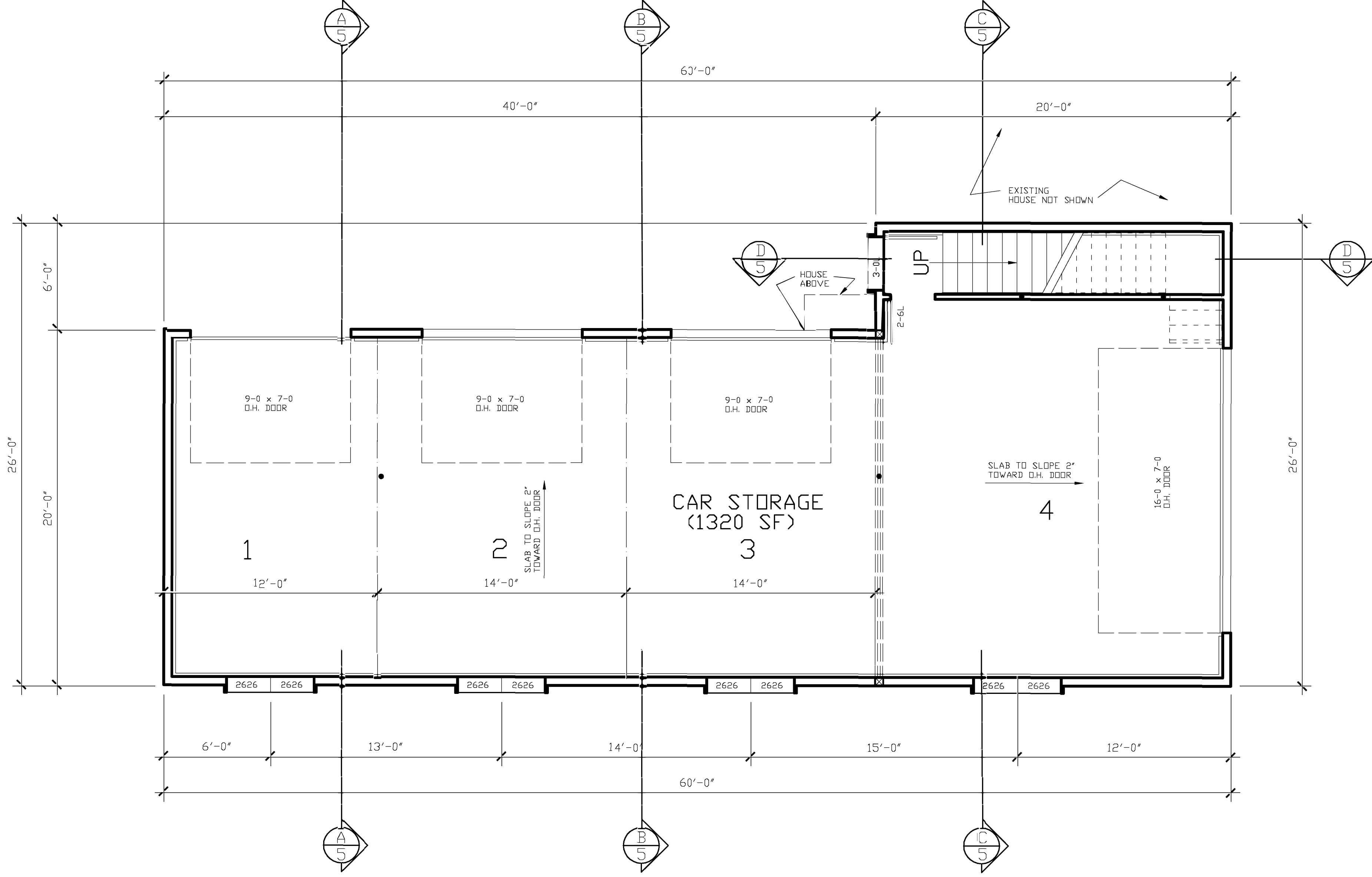
294 LINCOLN AVENUE
PORTSMOUTH, NH
03801

TITLE:

DETAIL SHEET

SHEET NUMBER:

D-3



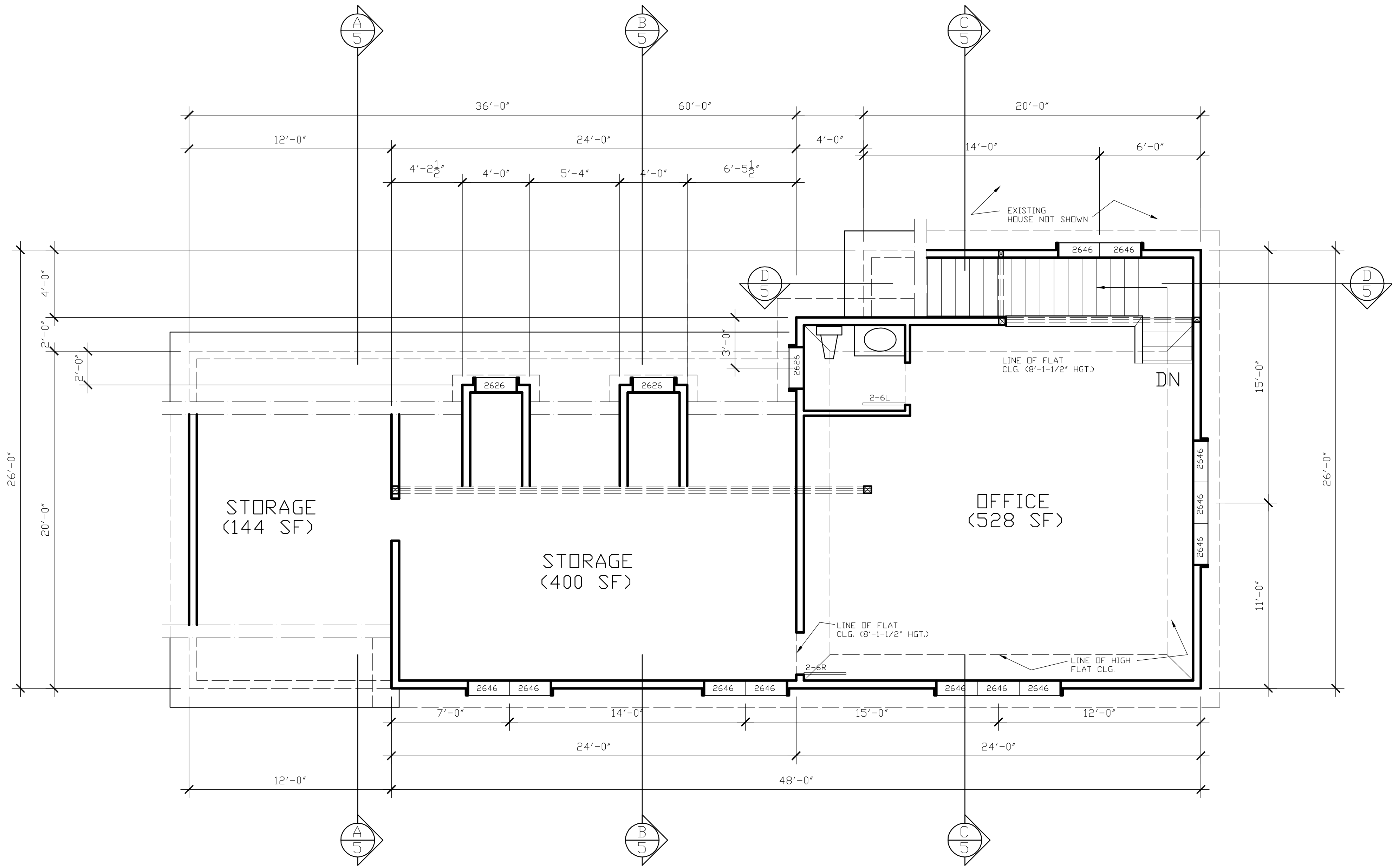
REEDSIGN
3 SHARON ST
TEWKSBURY, MA 01876
(617) 462-5189

CAR STORAGE ADDITION
294 LINCOLN AVENUE
PORTSMOUTH, NH 03801
ROCKINGHAM COUNTY

ENTRY LEVEL PLAN
SCALE: 1/4" = 1'-0" (22X34)
SCALE: 1/8" = 1'-0" (11X17)

10/29/24 MR
10/30/24 MR
11/22/24 MR
11/26/24 MR
12/02/24 MR
12/16/24 MR

1 DF 4



REEDesign
3 SHARON ST
TEWKSBURY, MA 01876
(617) 462-5189

CAR STORAGE ADDITION
294 LINCOLN AVENUE
PORTSMOUTH, NH 03801
ROCKINGHAM COUNTY

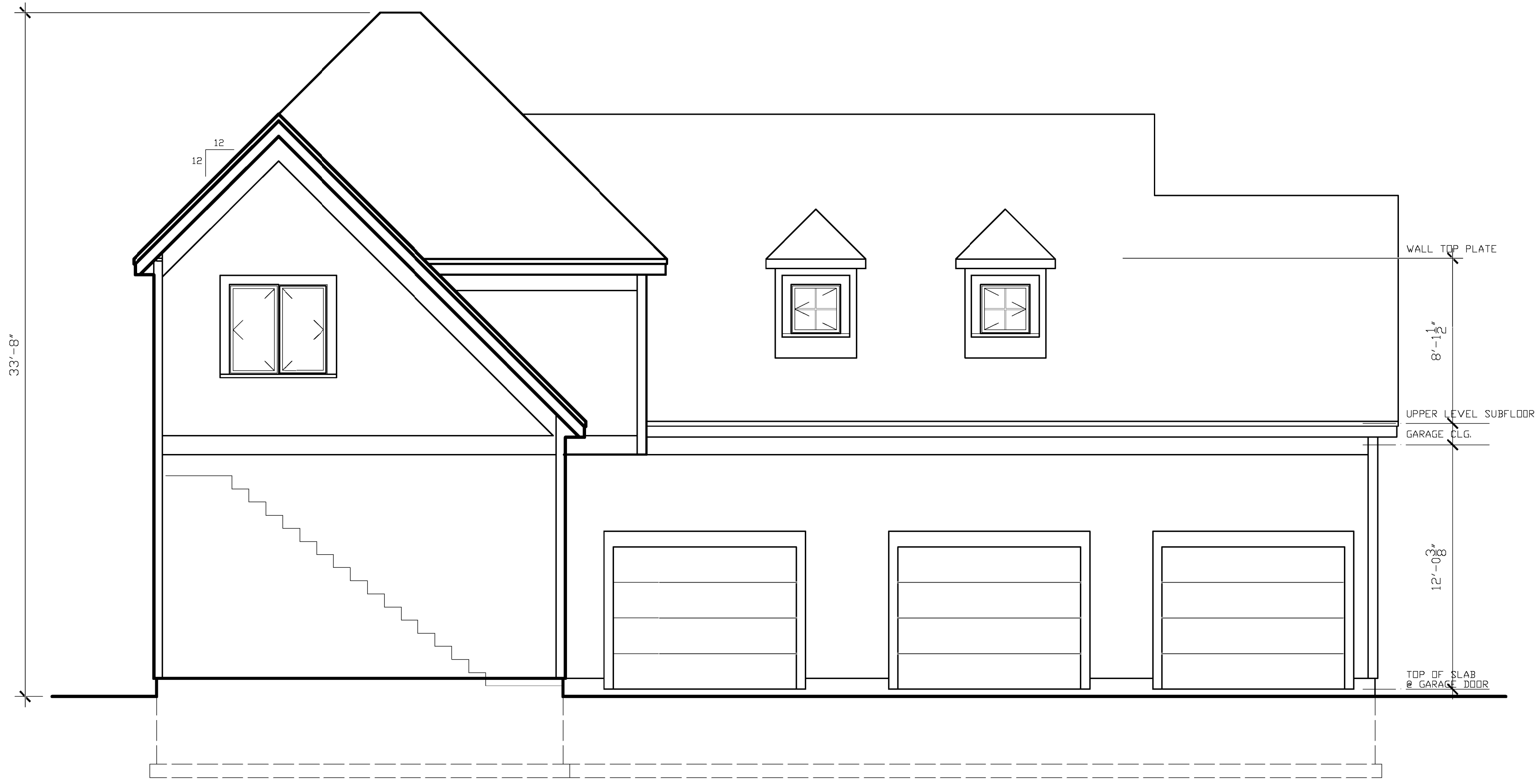
UPPER LEVEL PLAN

SCALE: 1/4" = 1'-0" (22X34)
SCALE: 1/8" = 1'-0" (11X17)

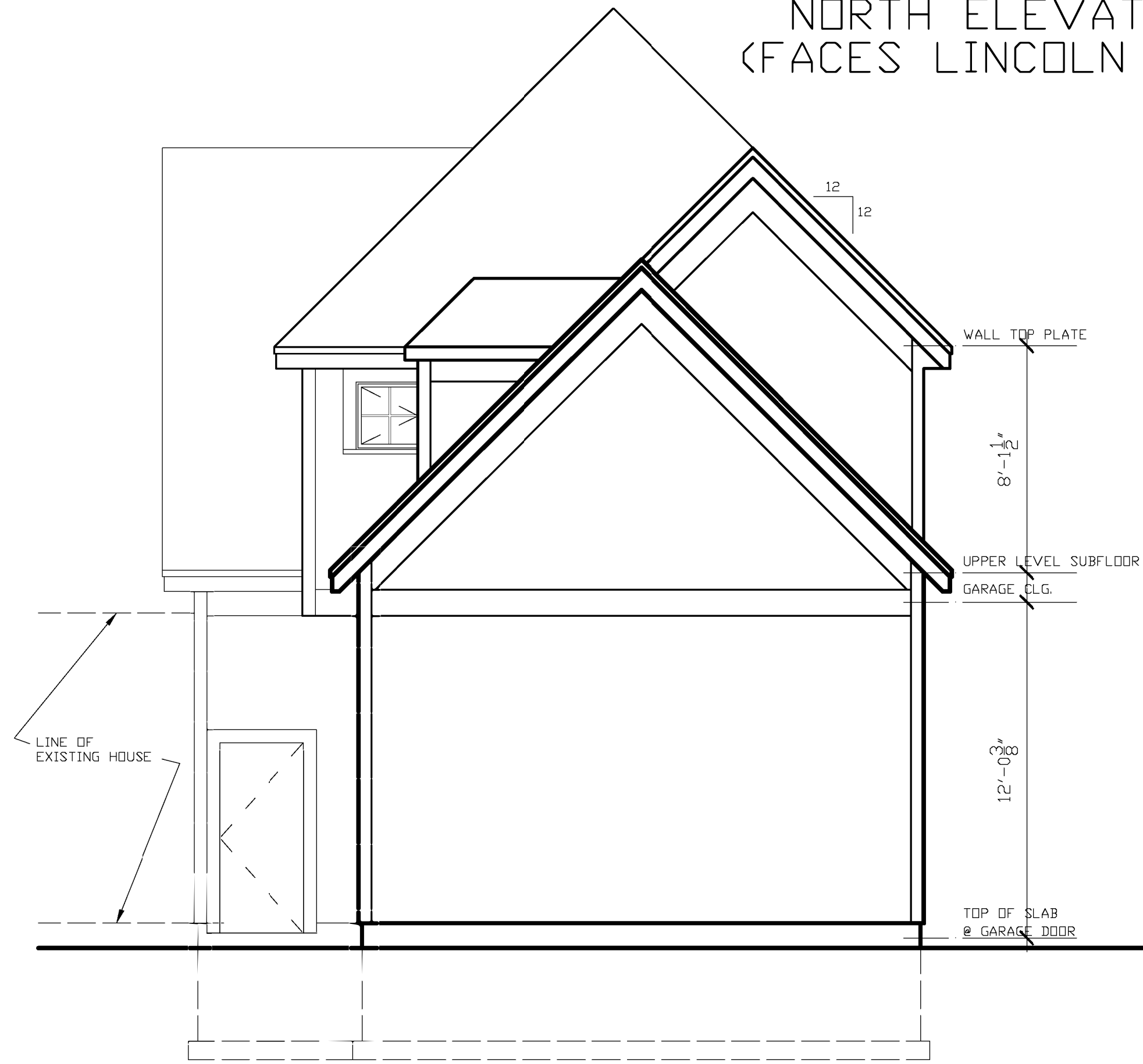
10/29/24 MR
10/30/24 MR
12/02/24 MR
12/16/24 MR



REEDesign 3 SHARON ST TEWKSBURY, MA 01876 (617) 462-5189	CAR STORAGE ADDITION 294 LINCOLN AVENUE PORTSMOUTH, NH 03801 ROCKINGHAM COUNTY	SOUTH AND EAST EXTERIOR ELEVATIONS SCALE: 1/4" = 1'-0" (22X34) SCALE: 1/8" = 1'-0" (11X17)	10/30/24 MR 12/02/24 MR 12/16/24 MR	3 OF 4
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NORTH ELEVATION
(FACES LINCOLN AVE)



WEST ELEVATION

REEDesign

3 SHARON ST
TEWKSBURY, MA 01876
(617) 462-5189

CAR STORAGE ADDITION

294 LINCOLN AVENUE
PORTSMOUTH, NH 03801
ROCKINGHAM COUNTY

NORTH AND WEST
EXTERIOR ELEVATIONS

SCALE: 1/4" = 1'-0" (22X34)
SCALE: 1/8" = 1'-0" (11X17)

10/30/24 MR
12/02/24 MR
12/16/24 MR

4 OF 4

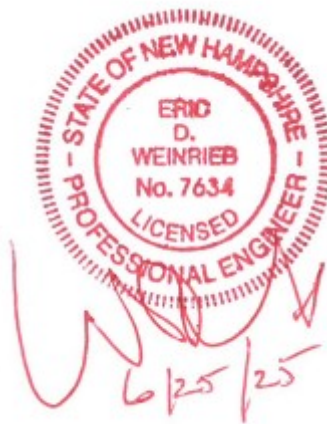
DRAINAGE ANALYSIS

FOR

GARAGE CONSTRUCTION

**294 Lincoln Avenue
Portsmouth, NH**

June 25, 2025



Prepared For:

Gary B. Dodds Revocable Trust

300 Sagamore Road
Rye, NH 03870

Prepared By:

Altus Engineering

133 Court Street
Portsmouth, NH 03801
Phone: (603) 433-2335



Table of Contents

Section 1	Narrative
	Project Description
	Site Overview
	Site Soils
	Proposed Site Design
	Calculation Methods
	Disclaimer
	Drainage Analysis
	Conclusions
Section 2	Aerial Photo
	USGS Location Map
Section 3	Drainage Analysis, Pre-Development
Section 4	Drainage Analysis, Post-Development
Section 5	Precipitation Table
Section 6	NRCS Soils Report
Section 7	Stormwater Operations and Maintenance Plan
	Inspection Form
	Stormwater Management Plan
Section 8	Watershed Plans
	Pre-Development Watershed and Soils Plan
	Post-Development Watershed and Soils Plan

Section 1

Narrative

PROJECT DESCRIPTION

The Gary B. Dodds Revocable Trust is proposing to construct an attached garage at the property located at 294 Lincoln Avenue. The ± 0.22 -acre parcel is identified as Tax Map 130, Lot 024 and is located in the General Residence A (GRA) zone. The lot is located at the corner of Lincoln Avenue and Miller Avenue Access to the property is located on both Lincoln Avenue and Miller Avenue. The existing property consists of a 2.5 story wood framed house, a carport/shed and a detached garage.

The proposal includes the construction of a new 4-bay attached garage ($\pm 1,320$ S.F.) and new driveways.

The new stormwater infrastructure will include one new 4' diameter deep sump catch basin that will have two outlets: the first outlet will discharge to a subsurface detention/infiltration system, the second outlet will be an overflow to the City's existing drainage system on Lincoln Avenue. The subsurface detention/infiltration system will also have an overflow to the same overflow pipe as the catch basin.

Additionally, a drip strip will be installed around most of the proposed garage to capture runoff from the roof. Gutters and roof leaders will be installed to capture and direct runoff to the catch basin and drip strip. This proposed stormwater management system will reduce peak flows leaving the site.

Site Soils

A site-specific soil survey (SSSS) was not required for the project. The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) web soil survey indicates that soil is uniformly urban-land across the entirety of the site, hydrologic soil group A.

Pre-Development (Existing Conditions)

All runoff from the property flows in a southeasterly direction toward Miller Avenue. The property is bounded by Lincoln Avenue to the north, Miller Avenue to the east, and residential properties to the south and west. The southern portion of the lot is encumbered with an access easement for the abutter's driveway. There is no existing stormwater infrastructure located on the property. Approximately half of the existing property is developed, consisting of the house, detached garage, carport/shed and the driveway. The remainder of the property is mostly lawn with some small areas of gravel and sidewalk.

The site hydrology is characterized by one sub-catchments as delineated on the accompanying “Pre-Development Watershed and Soils Plan”. Site runoff was analyzed at one point of analysis (POA). POA 1 captures the entire site and is located at the southeasterly corner of the parcel.

Post-Development (Proposed Conditions)

The post-development conditions were analyzed at the same discharge point as the pre-development conditions. The post-development watersheds are delineated on the accompanying “Post-Development Watershed and Soils Plan”. Modifications to the delineated areas and associated ground cover were made to sub-catchments to account for the improvements to the property.

As shown on the attached Post-Development Watershed and Soils Plan, the site was divided into three post-development sub-catchment areas, identified as sub-catchments 1.1, 1.2 and 1R.

Site topography, existing features, proposed site improvements, proposed grading, drainage and erosion control measures are shown on the accompanying plan set. Recommended erosion control measures are based upon the December 2008 edition of the “*New Hampshire Stormwater Manual Volumes 1 through 3*” prepared by NHDES and Comprehensive Environmental, Inc. as amended.

CALCULATION METHODS

The drainage study was completed using the USDA SCS TR-20 Method within the HydroCAD Stormwater Modeling System. Reservoir routing was performed with the Dynamic Storage Indication method with automated calculation of tailwater conditions. A Type III 24-hour rainfall distribution was utilized in analyzing the data for the 2, 10, 25 and 50 year - 24-hour storm events using rainfall data provided by the Northeast Regional Climate Center (NRCC). As the project site lies within a Coastal and Great Bay Community identified by NHDES Alteration of Terrain, all rainfall amounts were increased by 15% to account for potential future increases in rainfall due to climate change. A time span of 0 to 30 hours was analyzed at 0.05-hour increments. Design infiltration rates used in the analysis were calculated from the SSSNNE publication *Ksat for New Hampshire Soils* using the average of the lowest rates in the C-horizon of the soil subtypes comprising the in-situ material divided by two.

Disclaimer

Altus Engineering notes that stormwater modeling is limited in its capacity to precisely predict peak rates of runoff and flood elevations. Results should not be considered to represent actual storm events due to the number of variables and assumptions involved in the modeling effort. Surface roughness coefficients (n), entrance loss coefficients (ke), velocity factors (kv) and times of concentration (Tc) are based on subjective field observations and engineering judgment using available data. For design purposes, curve numbers (Cn) describe the average conditions. However, curve numbers will vary from storm to storm depending on the antecedent runoff conditions (ARC) including saturation and frozen ground. Also, higher water elevations than predicted by modeling could occur if drainage channels, closed drain systems or culverts are not maintained and/or become blocked by debris before and/or during a storm event as this will impact flow capacity of the structures. Structures should be re-evaluated if future changes occur within relevant drainage areas in order to assess any required design modifications.

Drainage Analysis

A complete summary of the drainage model is included in the appendix of this report. **Table 1** below compares pre- and post-development peak rates at the Point of Analysis identified on the plans for the 2, 10, 25 and 50-year storm events:

**Table 1 - Stormwater Modeling Summary
Peak Q (cfs) for Type III 24-Hour Storm Events**

	2-Year Storm	10-Year Storm	25-Year Storm	50-Year Storm
	(3.21-inch)	(4.87-inch)	(6.17-inch)	(7.39-inch)
POA 1				
PRE	0.20	0.54	0.83	1.13
POST	0.06	0.53	0.78	1.02
CHANGE	-0.14	-0.01	-0.05	-0.11

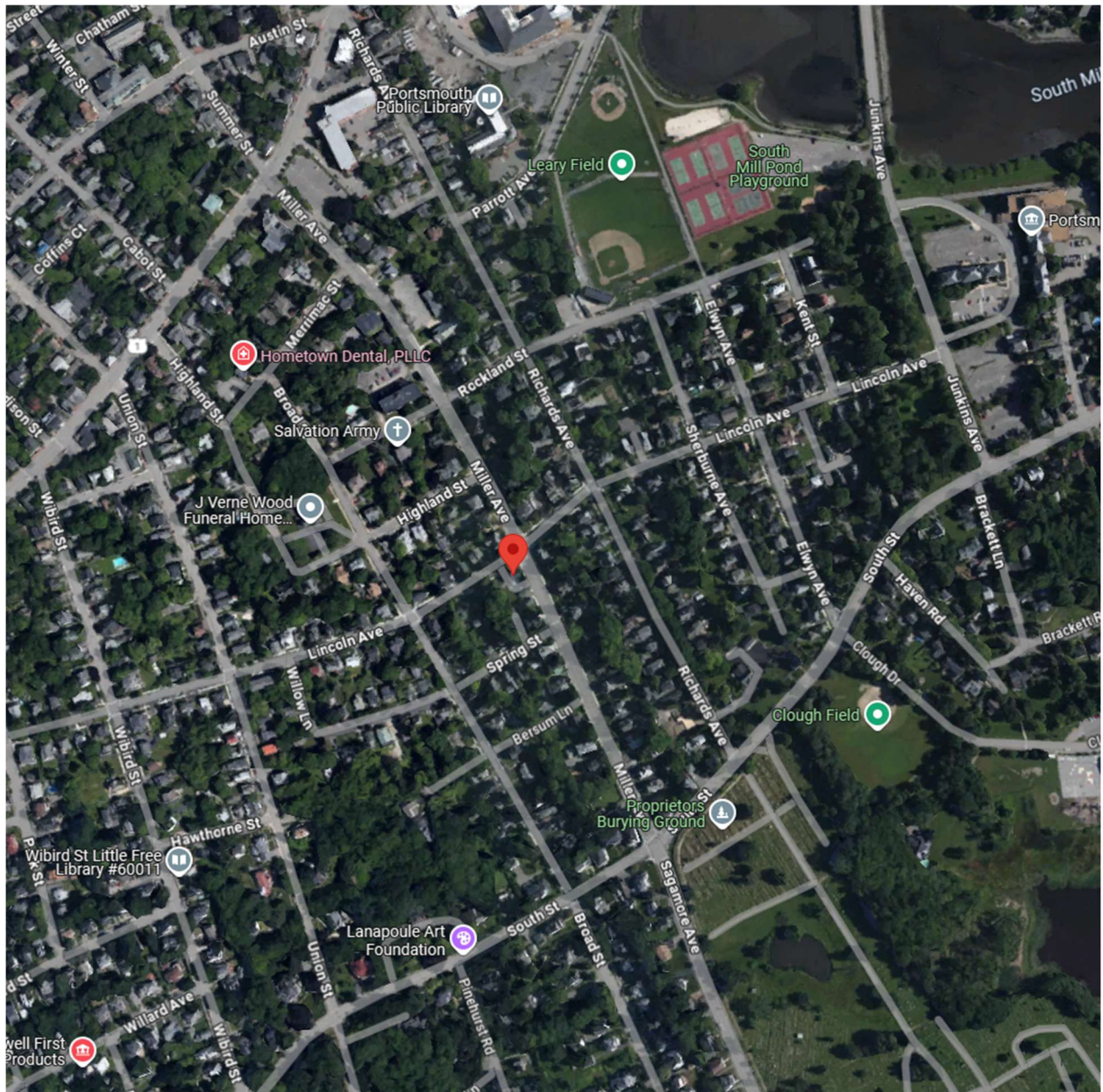
As the above table demonstrates, the proposed peak rates of runoff at the point of analysis will match or be decreased from the existing conditions for all analyzed storm events.

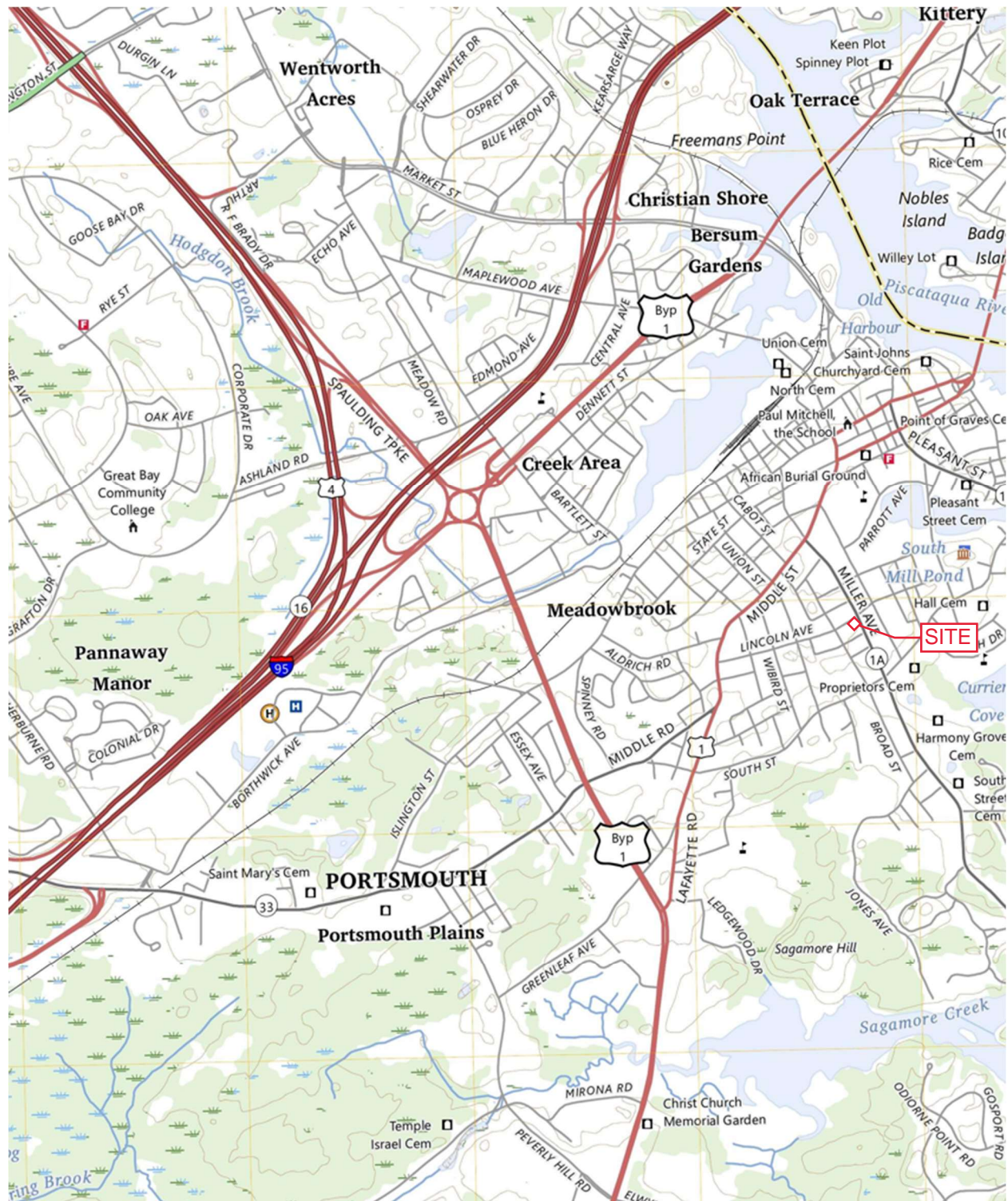
CONCLUSION

This proposed site development of property located at 294 Lincoln Avenue in Portsmouth, New Hampshire will not have adverse effect on abutting properties and infrastructure as a result of stormwater runoff or siltation. Post-construction peak rates of runoff from the site will be at or lower than the existing conditions for all analyzed storm events. Additionally, runoff from impervious surfaces will be treated using infiltration to improve the quality of runoff leaving the site. Appropriate steps will be taken to properly mitigate erosion and sedimentation through the use of temporary and permanent Best Management Practices for sediment and erosion control.

Section 2

Aerial Photo and USGS Map





Section 3

Drainage Calculations

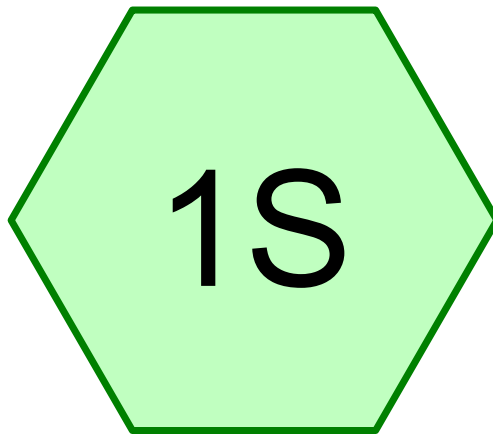
Pre-Development

2-Year, 24-Hour Summary

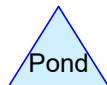
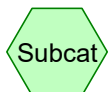
10-Year, 24-Hour Complete

25-Year, 24-Hour Summary

50-Year, 24-Hour Summary



294 Lincoln Avenue



Routing Diagram for 5548-PRE

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5548-PRE*Type III 24-hr 2-YEAR Rainfall=3.69"*

Prepared by Altus Engineering

Printed 6/20/2025

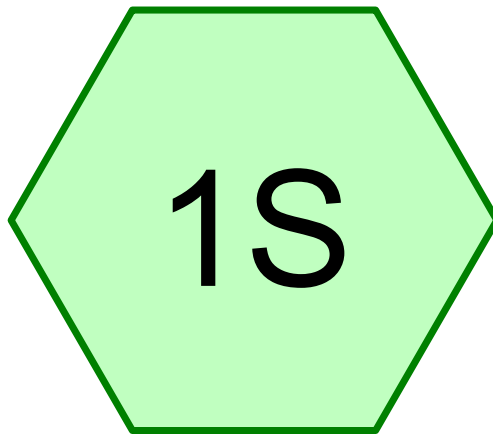
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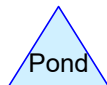
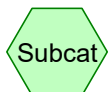
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

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

Subcatchment 1S: 294 Lincoln AvenueRunoff Area=9,686 sf 46.41% Impervious Runoff Depth=0.91"
Flow Length=119' Tc=6.0 min CN=66 Runoff=0.20 cfs 0.017 af**Total Runoff Area = 0.222 ac Runoff Volume = 0.017 af Average Runoff Depth = 0.91"**
53.59% Pervious = 0.119 ac 46.41% Impervious = 0.103 ac



294 Lincoln Avenue



Routing Diagram for 5548-PRE

Prepared by Altus Engineering, Printed 6/20/2025
HydroCAD® 10.00-26 s/n 01222 © 2020 HydroCAD Software Solutions LLC

5548-PRE

Prepared by Altus Engineering

Printed 6/20/2025

HydroCAD® 10.00-26 s/n 01222 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.119	39	>75% Grass cover, Good, HSG A (1S)
0.056	98	Paved parking, HSG A (1S)
0.047	98	Roofs, HSG A (1S)
0.222	66	TOTAL AREA

5548-PRE

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.222	HSG A	1S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
0.222		TOTAL AREA

5548-PRE*Type III 24-hr 10-YEAR Rainfall=5.60"*

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Printed 6/20/2025

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

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

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

Subcatchment 1S: 294 Lincoln AvenueRunoff Area=9,686 sf 46.41% Impervious Runoff Depth=2.15"
Flow Length=119' Tc=6.0 min CN=66 Runoff=0.54 cfs 0.040 af**Total Runoff Area = 0.222 ac Runoff Volume = 0.040 af Average Runoff Depth = 2.15"**
53.59% Pervious = 0.119 ac 46.41% Impervious = 0.103 ac

5548-PRE

Prepared by Altus Engineering

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Type III 24-hr 10-YEAR Rainfall=5.60"

Printed 6/20/2025

Summary for Subcatchment 1S: 294 Lincoln Avenue

Runoff = 0.54 cfs @ 12.10 hrs, Volume= 0.040 af, Depth= 2.15"

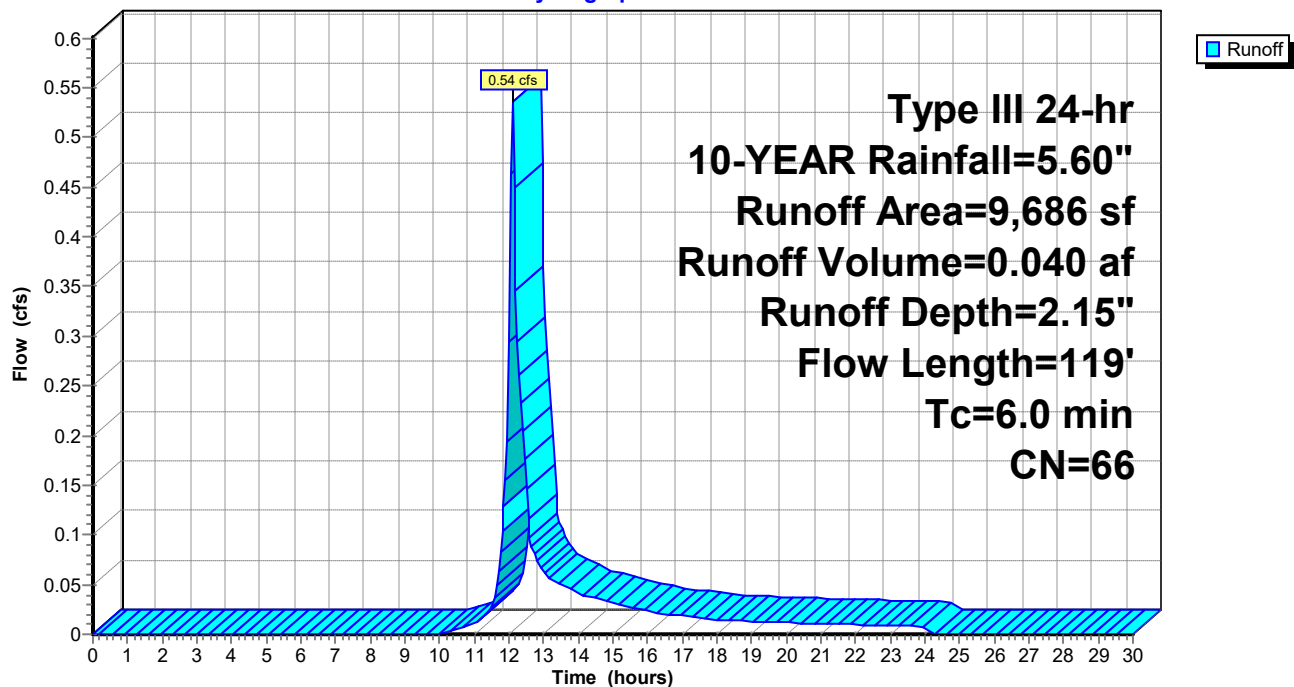
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YEAR Rainfall=5.60"

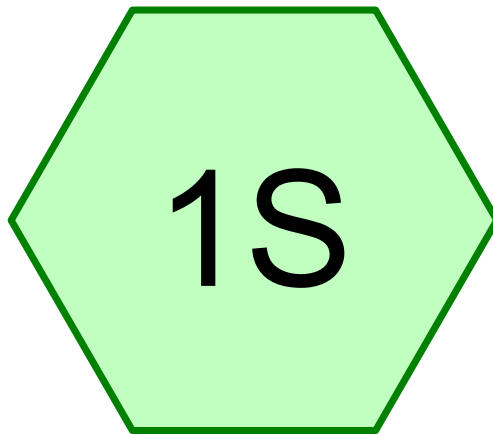
Area (sf)	CN	Description
2,057	98	Roofs, HSG A
2,438	98	Paved parking, HSG A
5,191	39	>75% Grass cover, Good, HSG A
9,686	66	Weighted Average
5,191		53.59% Pervious Area
4,495		46.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	21	0.0476	0.18		Sheet Flow, Grass: Short n= 0.150 P2= 3.21"
0.7	58	0.0345	1.30		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.1	26	0.0577	3.87		Shallow Concentrated Flow, Unpaved Kv= 16.1 fps
0.0	14	0.0714	5.42		Shallow Concentrated Flow, Paved Kv= 20.3 fps
2.8	119	Total, Increased to minimum Tc = 6.0 min			

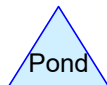
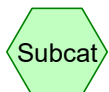
Subcatchment 1S: 294 Lincoln Avenue

Hydrograph





294 Lincoln Avenue



Routing Diagram for 5548-PRE

Prepared by Altus Engineering, Printed 6/20/2025
HydroCAD® 10.00-26 s/n 01222 © 2020 HydroCAD Software Solutions LLC

5548-PRE*Type III 24-hr 25-YEAR Rainfall=7.10"*

Prepared by Altus Engineering

Printed 6/20/2025

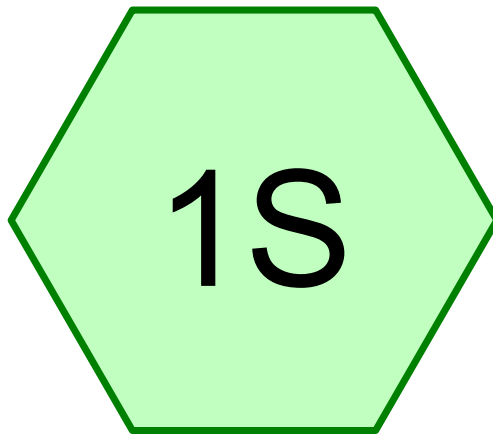
HydroCAD® 10.00-26 s/n 01222 © 2020 HydroCAD Software Solutions LLC

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

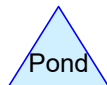
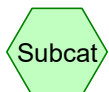
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

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

Subcatchment 1S: 294 Lincoln AvenueRunoff Area=9,686 sf 46.41% Impervious Runoff Depth=3.28"
Flow Length=119' Tc=6.0 min CN=66 Runoff=0.83 cfs 0.061 af**Total Runoff Area = 0.222 ac Runoff Volume = 0.061 af Average Runoff Depth = 3.28"**
53.59% Pervious = 0.119 ac 46.41% Impervious = 0.103 ac



294 Lincoln Avenue



Routing Diagram for 5548-PRE

Prepared by Altus Engineering, Printed 6/20/2025
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5548-PRE*Type III 24-hr 50-YEAR Rainfall=8.50"*

Prepared by Altus Engineering

Printed 6/20/2025

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points

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

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

Subcatchment 1S: 294 Lincoln AvenueRunoff Area=9,686 sf 46.41% Impervious Runoff Depth=4.42"
Flow Length=119' Tc=6.0 min CN=66 Runoff=1.13 cfs 0.082 af**Total Runoff Area = 0.222 ac Runoff Volume = 0.082 af Average Runoff Depth = 4.42"**
53.59% Pervious = 0.119 ac 46.41% Impervious = 0.103 ac

Section 4

Drainage Calculations

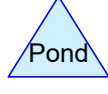
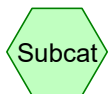
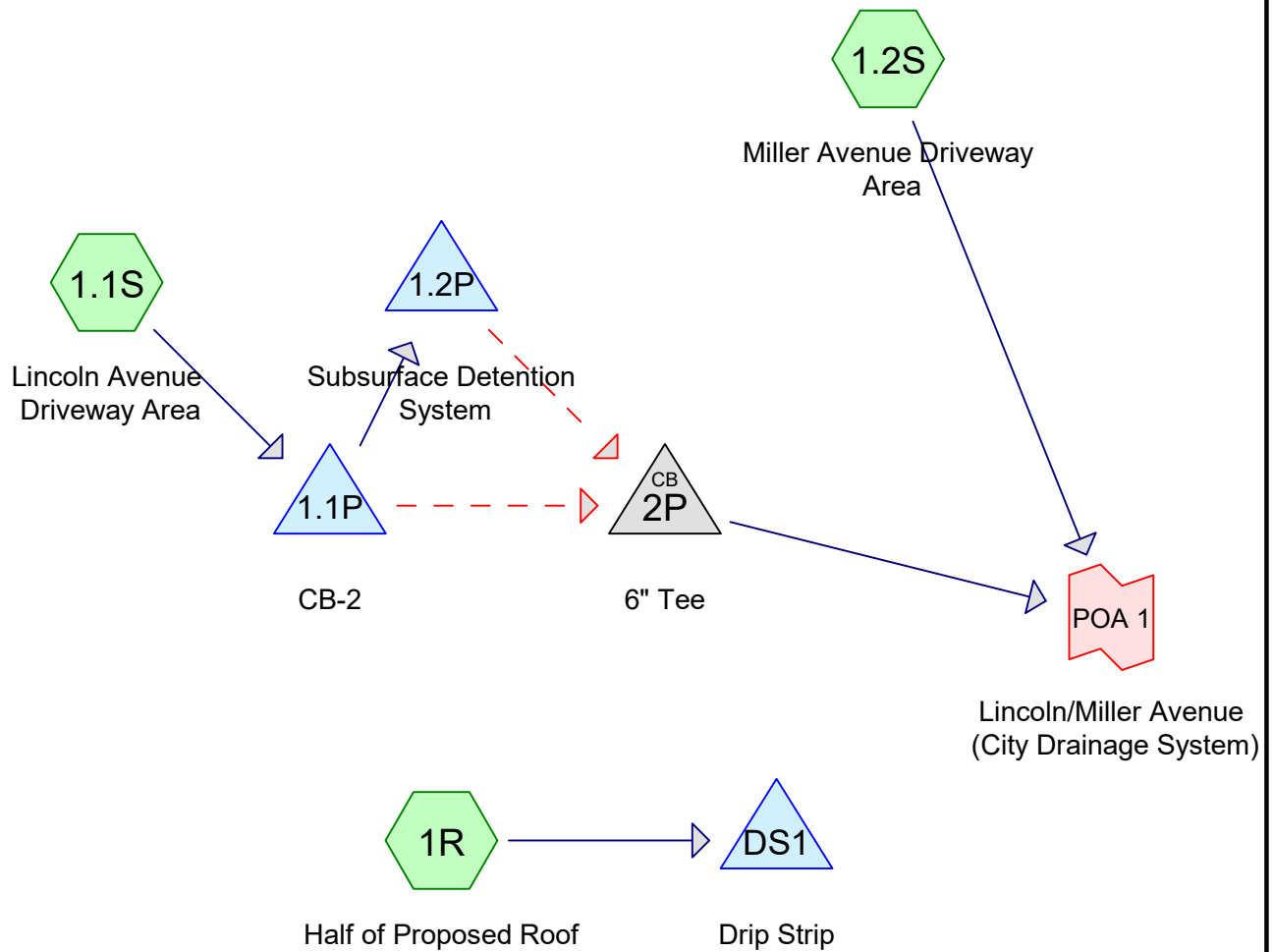
Post-Development

2-Year, 24-Hour Summary

10-Year, 24-Hour Complete

25-Year, 24-Hour Summary

50-Year, 24-Hour Summary



Routing Diagram for 5548-POST

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5548-POST*Type III 24-hr 2-YEAR Rainfall=3.69"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1.1S: Lincoln Avenue Runoff Area=4,231 sf 66.56% Impervious Runoff Depth=1.64"
Flow Length=42' Tc=6.0 min CN=78 Runoff=0.18 cfs 0.013 af

Subcatchment 1.2S: Miller Avenue Runoff Area=4,511 sf 37.35% Impervious Runoff Depth=0.66"
Flow Length=116' Tc=6.0 min CN=61 Runoff=0.06 cfs 0.006 af

Subcatchment 1R: Half of Proposed Roof Runoff Area=944 sf 80.51% Impervious Runoff Depth=2.35"
Tc=6.0 min CN=87 Runoff=0.06 cfs 0.004 af

Pond 1.1P: CB-2 Peak Elev=19.59' Storage=6 cf Inflow=0.18 cfs 0.013 af
Primary=0.18 cfs 0.013 af Secondary=0.00 cfs 0.000 af Outflow=0.18 cfs 0.013 af

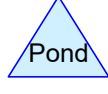
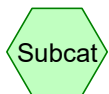
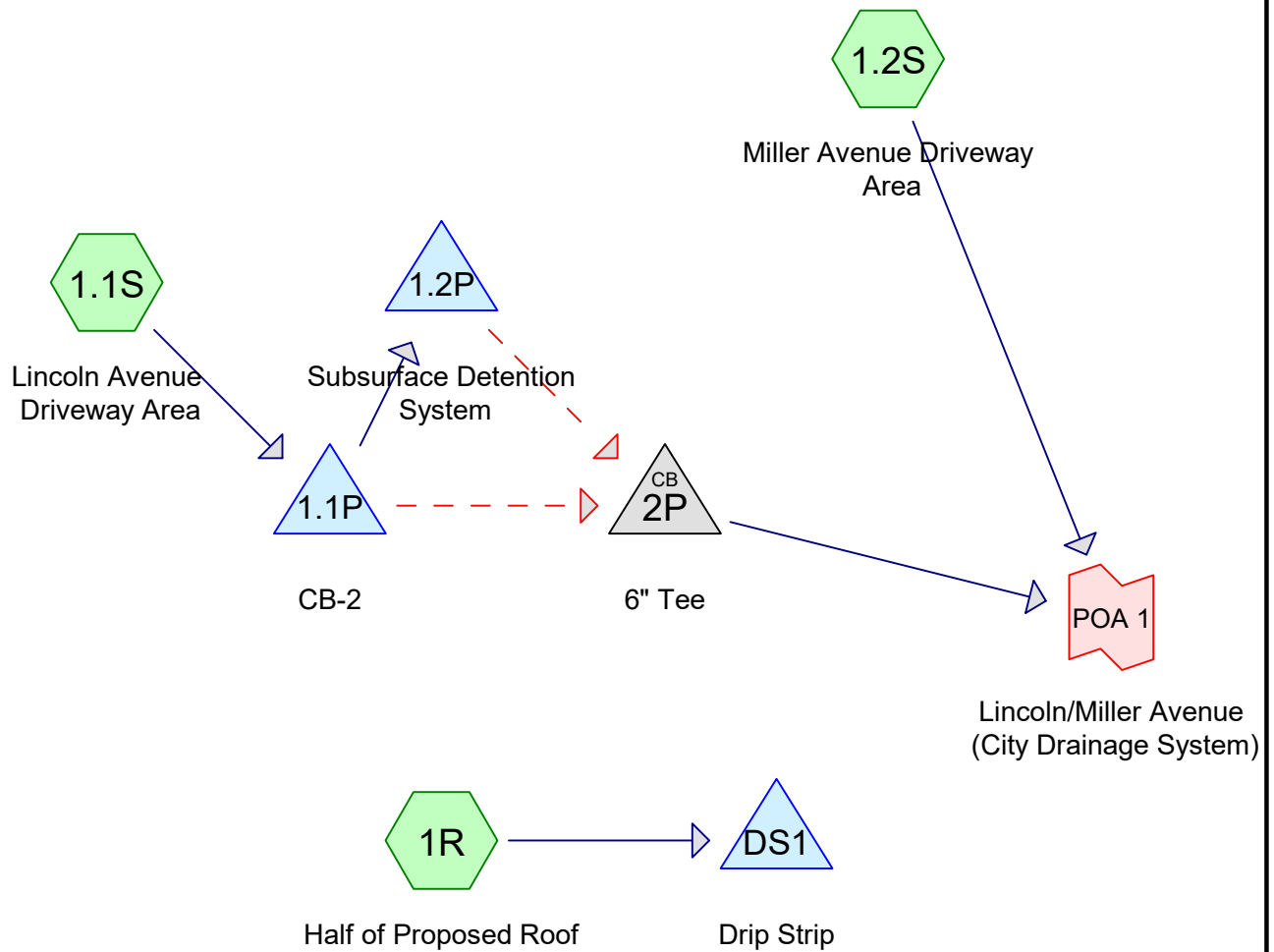
Pond 1.2P: Subsurface Detention System Peak Elev=19.58' Storage=168 cf Inflow=0.18 cfs 0.013 af
Discarded=0.03 cfs 0.013 af Secondary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.013 af

Pond 2P: 6" Tee Peak Elev=19.30' Inflow=0.00 cfs 0.000 af
6.0" Round Culvert n=0.012 L=36.0' S=0.0222 '/' Outflow=0.00 cfs 0.000 af

Pond DS1: Drip Strip Peak Elev=18.17' Storage=86 cf Inflow=0.06 cfs 0.004 af
Outflow=0.01 cfs 0.004 af

Link POA 1: Lincoln/Miller Avenue (City Drainage System) Inflow=0.06 cfs 0.006 af
Primary=0.06 cfs 0.006 af

Total Runoff Area = 0.222 ac Runoff Volume = 0.023 af Average Runoff Depth = 1.25"
45.68% Pervious = 0.102 ac 54.32% Impervious = 0.121 ac



Routing Diagram for 5548-POST

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.102	39	>75% Grass cover, Good, HSG A (1.1S, 1.2S, 1R)
0.057	98	Paved parking, HSG A (1.1S, 1.2S)
0.064	98	Roofs, HSG A (1.1S, 1.2S, 1R)
0.222	71	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.222	HSG A	1.1S, 1.2S, 1R
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
0.222		TOTAL AREA

5548-POST*Type III 24-hr 10-YEAR Rainfall=5.60"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1.1S: Lincoln Avenue Runoff Area=4,231 sf 66.56% Impervious Runoff Depth=3.23"
Flow Length=42' Tc=6.0 min CN=78 Runoff=0.36 cfs 0.026 af

Subcatchment 1.2S: Miller Avenue Runoff Area=4,511 sf 37.35% Impervious Runoff Depth=1.74"
Flow Length=116' Tc=6.0 min CN=61 Runoff=0.20 cfs 0.015 af

Subcatchment 1R: Half of Proposed Roof Runoff Area=944 sf 80.51% Impervious Runoff Depth=4.14"
Tc=6.0 min CN=87 Runoff=0.10 cfs 0.007 af

Pond 1.1P: CB-2 Peak Elev=19.96' Storage=11 cf Inflow=0.36 cfs 0.026 af
Primary=0.31 cfs 0.022 af Secondary=0.28 cfs 0.004 af Outflow=0.35 cfs 0.026 af

Pond 1.2P: Subsurface Detention System Peak Elev=19.78' Storage=179 cf Inflow=0.31 cfs 0.022 af
Discarded=0.04 cfs 0.020 af Secondary=0.07 cfs 0.002 af Outflow=0.10 cfs 0.022 af

Pond 2P: 6" Tee Peak Elev=19.69' Inflow=0.34 cfs 0.006 af
6.0" Round Culvert n=0.012 L=36.0' S=0.0222 '/' Outflow=0.34 cfs 0.006 af

Pond DS1: Drip Strip Peak Elev=19.09' Storage=154 cf Inflow=0.10 cfs 0.007 af
Outflow=0.01 cfs 0.007 af

Link POA 1: Lincoln/Miller Avenue (City Drainage System) Inflow=0.53 cfs 0.021 af
Primary=0.53 cfs 0.021 af

Total Runoff Area = 0.222 ac Runoff Volume = 0.049 af Average Runoff Depth = 2.62"
45.68% Pervious = 0.102 ac 54.32% Impervious = 0.121 ac

5548-POST

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Type III 24-hr 10-YEAR Rainfall=5.60"

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Summary for Subcatchment 1.1S: Lincoln Avenue Driveway Area

Runoff = 0.36 cfs @ 12.09 hrs, Volume= 0.026 af, Depth= 3.23"

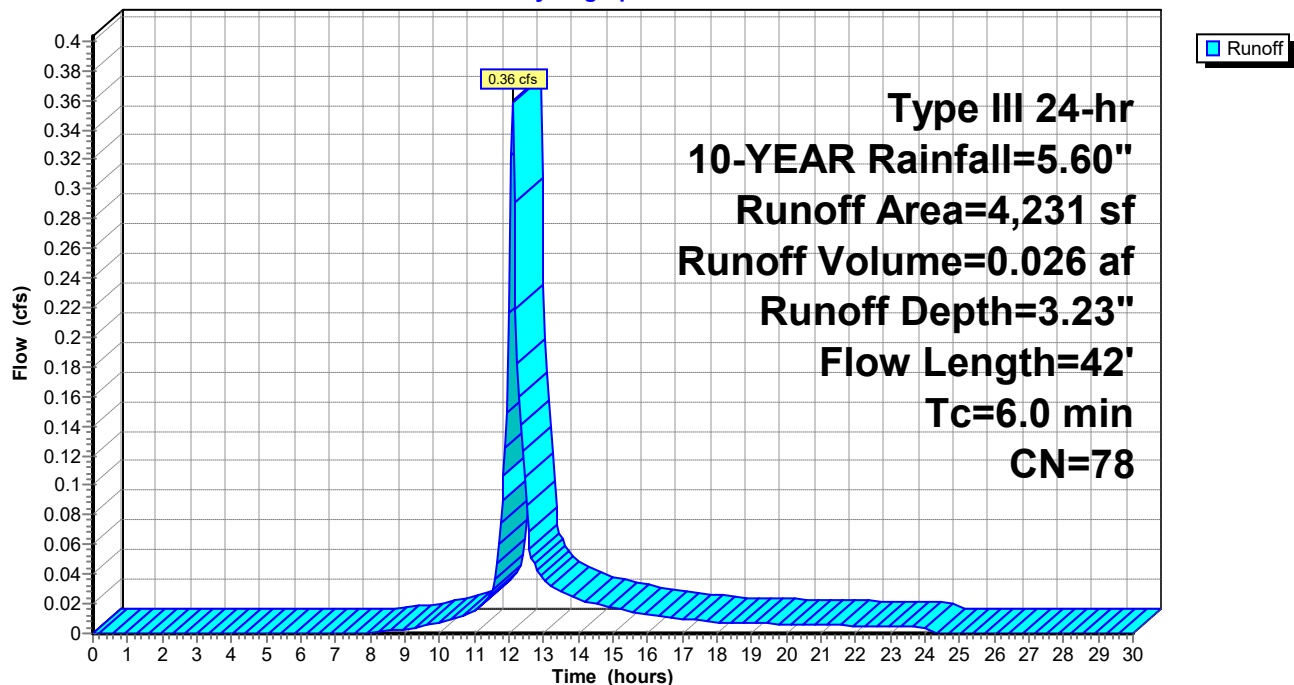
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YEAR Rainfall=5.60"

Area (sf)	CN	Description
1,262	98	Roofs, HSG A
1,554	98	Paved parking, HSG A
1,415	39	>75% Grass cover, Good, HSG A
4,231	78	Weighted Average
1,415		33.44% Pervious Area
2,816		66.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	15	0.1000	0.22		Sheet Flow, Grass: Short n= 0.150 P2= 3.21"
0.1	27	0.0259	3.27		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.2	42	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 1.1S: Lincoln Avenue Driveway Area

Hydrograph



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Type III 24-hr 10-YEAR Rainfall=5.60"

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Summary for Subcatchment 1.2S: Miller Avenue Driveway Area

Runoff = 0.20 cfs @ 12.10 hrs, Volume= 0.015 af, Depth= 1.74"

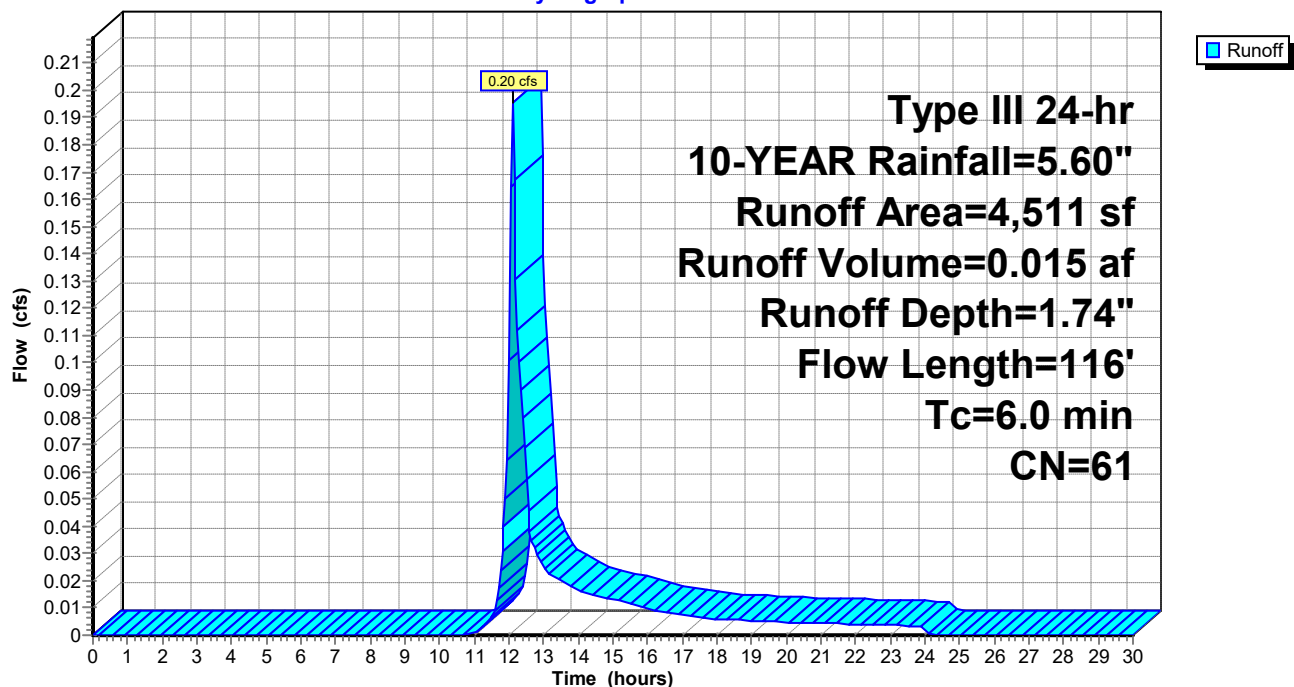
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YEAR Rainfall=5.60"

Area (sf)	CN	Description
762	98	Roofs, HSG A
923	98	Paved parking, HSG A
2,826	39	>75% Grass cover, Good, HSG A
4,511	61	Weighted Average
2,826		62.65% Pervious Area
1,685		37.35% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.3	32	0.0156	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 3.21"
0.5	47	0.0489	1.55		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.1	37	0.0595	4.95		Shallow Concentrated Flow, Paved Kv= 20.3 fps
4.9	116	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 1.2S: Miller Avenue Driveway Area

Hydrograph



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Type III 24-hr 10-YEAR Rainfall=5.60"

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Summary for Subcatchment 1R: Half of Proposed Roof

Runoff = 0.10 cfs @ 12.09 hrs, Volume= 0.007 af, Depth= 4.14"

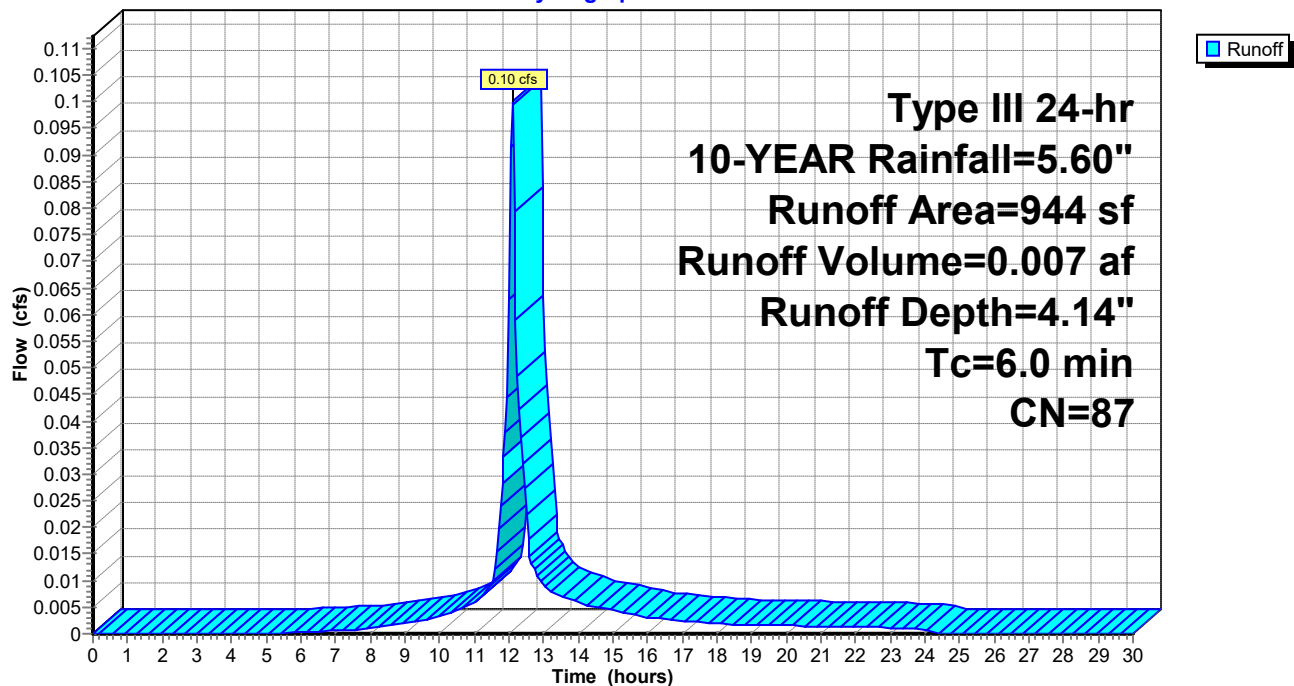
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-YEAR Rainfall=5.60"

Area (sf)	CN	Description
760	98	Roofs, HSG A
184	39	>75% Grass cover, Good, HSG A
944	87	Weighted Average
184		19.49% Pervious Area
760		80.51% Impervious Area

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

Subcatchment 1R: Half of Proposed Roof

Hydrograph



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Type III 24-hr 10-YEAR Rainfall=5.60"

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Summary for Pond 1.1P: CB-2

Inflow Area = 0.097 ac, 66.56% Impervious, Inflow Depth = 3.23" for 10-YEAR event
 Inflow = 0.36 cfs @ 12.09 hrs, Volume= 0.026 af
 Outflow = 0.35 cfs @ 12.13 hrs, Volume= 0.026 af, Atten= 3%, Lag= 2.1 min
 Primary = 0.31 cfs @ 12.04 hrs, Volume= 0.022 af
 Secondary = 0.28 cfs @ 12.11 hrs, Volume= 0.004 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 19.96' @ 12.12 hrs Surf.Area= 13 sf Storage= 11 cf

Flood Elev= 21.60' Surf.Area= 8 sf Storage= 27 cf

Plug-Flow detention time= 1.3 min calculated for 0.026 af (100% of inflow)

Center-of-Mass det. time= 1.3 min (823.4 - 822.1)

Volume	Invert	Avail.Storage	Storage Description
#1	19.10'	27 cf	4' CB Structure (Conic) Listed below (Recalc)
#2	21.60'	57 cf	Storage Above Rim of CB (Conic) Listed below (Recalc)
		84 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
19.10	13	0	0	13
20.50	13	18	18	31
21.60	4	9	27	45

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
21.60	4	0	0	4
22.00	384	57	57	384

Device	Routing	Invert	Outlet Devices
#1	Primary	19.10'	6.0" Round 6" Pipe to Infiltration L= 26.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 19.10' / 18.90' S= 0.0077 ' / S= 0.0077 ' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.20 sf
#2	Secondary	19.60'	6.0" Round 6" Overflow to Tee L= 14.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 19.60' / 19.30' S= 0.0214 ' / S= 0.0214 ' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.20 sf

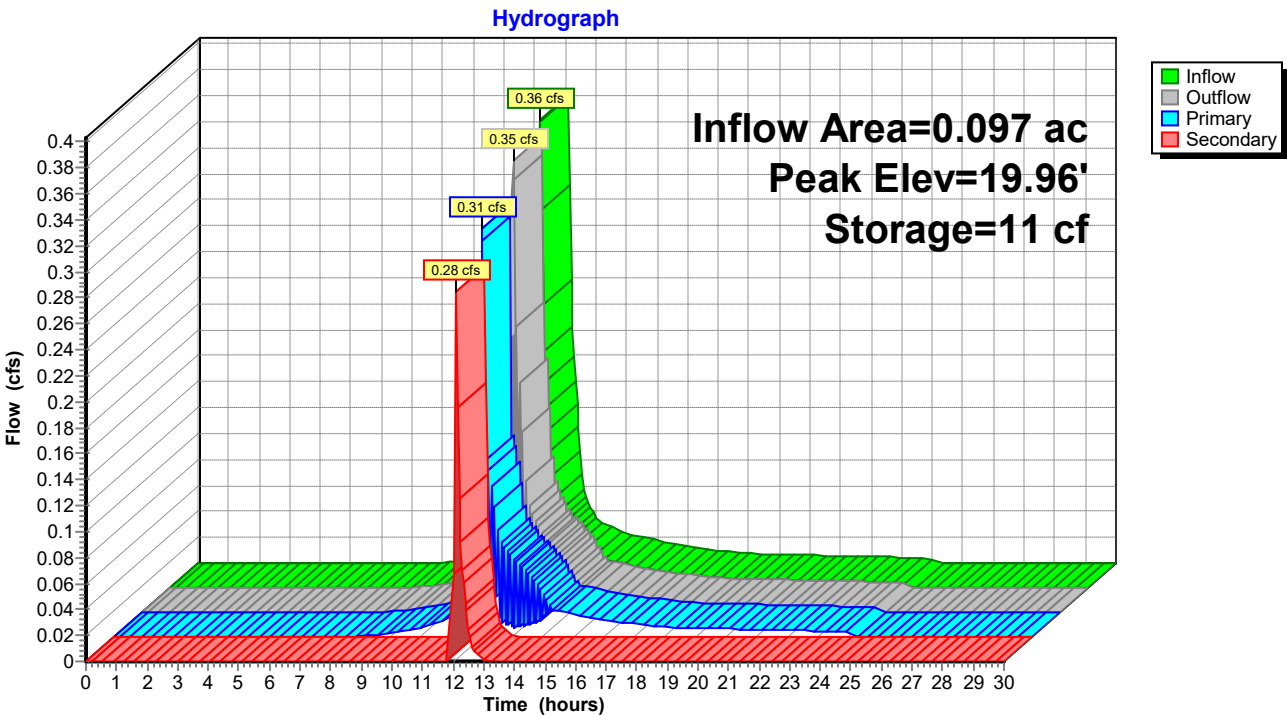
Primary OutFlow Max=0.35 cfs @ 12.04 hrs HW=19.54' TW=19.25' (Dynamic Tailwater)

↑1=6" Pipe to Infiltration (Outlet Controls 0.35 cfs @ 2.53 fps)

Secondary OutFlow Max=0.24 cfs @ 12.11 hrs HW=19.91' TW=19.65' (Dynamic Tailwater)

↑2=6" Overflow to Tee (Outlet Controls 0.24 cfs @ 2.61 fps)

Pond 1.1P: CB-2



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Type III 24-hr 10-YEAR Rainfall=5.60"

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Summary for Pond 1.2P: Subsurface Detention System

Inflow Area = 0.097 ac, 66.56% Impervious, Inflow Depth = 2.72" for 10-YEAR event
 Inflow = 0.31 cfs @ 12.04 hrs, Volume= 0.022 af
 Outflow = 0.10 cfs @ 12.18 hrs, Volume= 0.022 af, Atten= 68%, Lag= 8.7 min
 Discarded = 0.04 cfs @ 12.15 hrs, Volume= 0.020 af
 Secondary = 0.07 cfs @ 12.18 hrs, Volume= 0.002 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 19.78' @ 12.15 hrs Surf.Area= 132 sf Storage= 179 cf

Flood Elev= 20.10' Surf.Area= 132 sf Storage= 196 cf

Plug-Flow detention time= 39.5 min calculated for 0.022 af (100% of inflow)

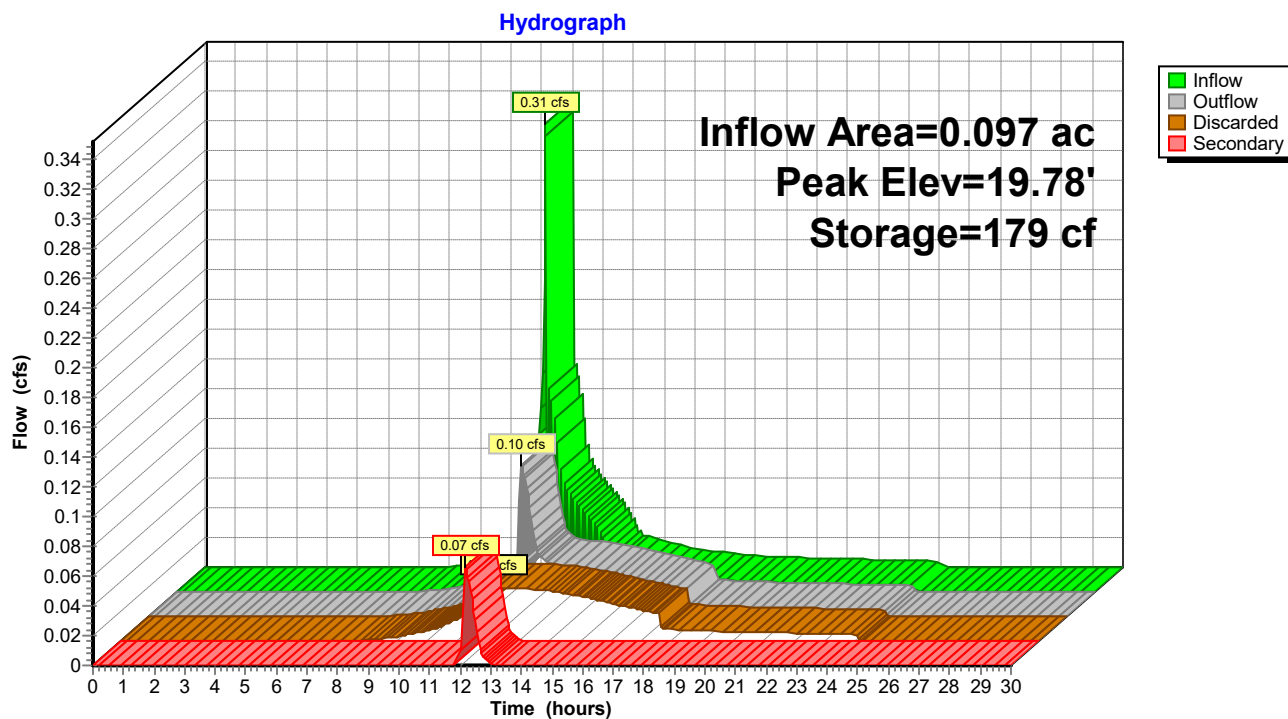
Center-of-Mass det. time= 39.4 min (879.4 - 840.0)

Volume	Invert	Avail.Storage	Storage Description
#1	16.65'	198 cf	Stone Around Infiltration Pipe (Conic) Listed below (Recalc) 521 cf Overall - 25 cf Embedded = 496 cf x 40.0% Voids
#2	18.65'	24 cf	12.0" Round 12" Infiltration Pipe Inside #1 L= 30.0' 25 cf Overall - 0.2" Wall Thickness = 24 cf
222 cf			Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
16.65	132	0	0	132
20.60	132	521	521	293

Device	Routing	Invert	Outlet Devices
#1	Discarded	16.65'	6.000 in/hr Exfiltration over Wetted area above 16.30' Excluded Wetted area = 0 sf Phase-In= 0.01'
#2	Secondary	19.60'	6.0" Round 6" Overflow to Tee L= 29.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 19.60' / 19.30' S= 0.0103 ' S= 0.0103 ' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.20 sf
#3	Device 2	18.90'	6.0" Vert. 6" Pipe at End of 12" Pipe Storage C= 0.600

Discarded OutFlow Max=0.04 cfs @ 12.15 hrs HW=19.78' (Free Discharge)↑ **1=Exfiltration** (Exfiltration Controls 0.04 cfs)**Secondary OutFlow** Max=0.06 cfs @ 12.18 hrs HW=19.77' TW=19.59' (Dynamic Tailwater)↑ **2=6" Overflow to Tee** (Outlet Controls 0.06 cfs @ 1.51 fps)↑ **3=6" Pipe at End of 12" Pipe Storage** (Passes 0.06 cfs of 0.39 cfs potential flow)

Pond 1.2P: Subsurface Detention System

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Type III 24-hr 10-YEAR Rainfall=5.60"

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Summary for Pond 2P: 6" Tee

Inflow = 0.34 cfs @ 12.12 hrs, Volume= 0.006 af
Outflow = 0.34 cfs @ 12.12 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min
Primary = 0.34 cfs @ 12.12 hrs, Volume= 0.006 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs / 2

Peak Elev= 19.69' @ 12.12 hrs

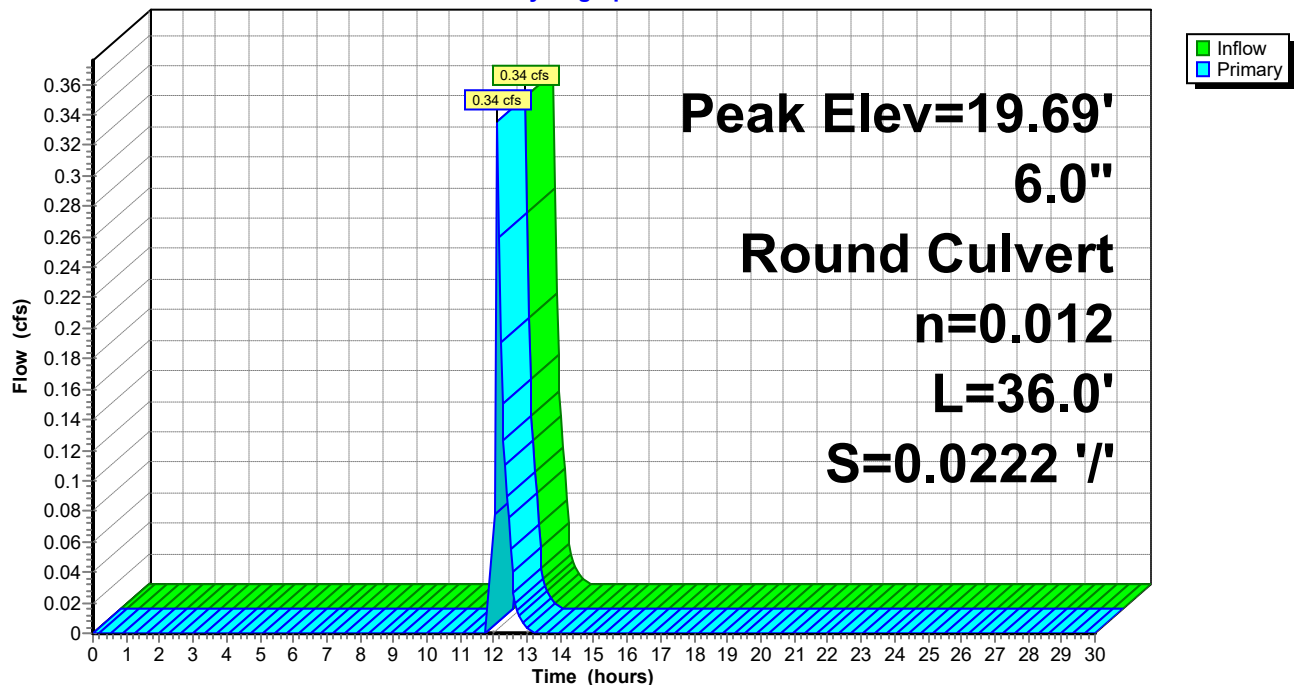
Device	Routing	Invert	Outlet Devices
#1	Primary	19.30'	6.0" Round 6" Connection to CB-1 L= 36.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 19.30' / 18.50' S= 0.0222 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.29 cfs @ 12.12 hrs HW=19.65' TW=0.00' (Dynamic Tailwater)

↑1=6" Connection to CB-1 (Inlet Controls 0.29 cfs @ 2.01 fps)

Pond 2P: 6" Tee

Hydrograph



5548-POST

Type III 24-hr 10-YEAR Rainfall=5.60"

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Summary for Pond DS1: Drip Strip

Inflow Area = 0.022 ac, 80.51% Impervious, Inflow Depth = 4.14" for 10-YEAR event
 Inflow = 0.10 cfs @ 12.09 hrs, Volume= 0.007 af
 Outflow = 0.01 cfs @ 12.62 hrs, Volume= 0.007 af, Atten= 86%, Lag= 32.0 min
 Discarded = 0.01 cfs @ 12.62 hrs, Volume= 0.007 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 19.09' @ 12.62 hrs Surf.Area= 184 sf Storage= 154 cf
 Flood Elev= 21.00' Surf.Area= 184 sf Storage= 294 cf

Plug-Flow detention time= 180.2 min calculated for 0.007 af (99% of inflow)
 Center-of-Mass det. time= 174.6 min (971.7 - 797.1)

Volume	Invert	Avail.Storage	Storage Description
#1	17.00'	294 cf	Custom Stage Data (Conic) Listed below (Recalc) 736 cf Overall x 40.0% Voids

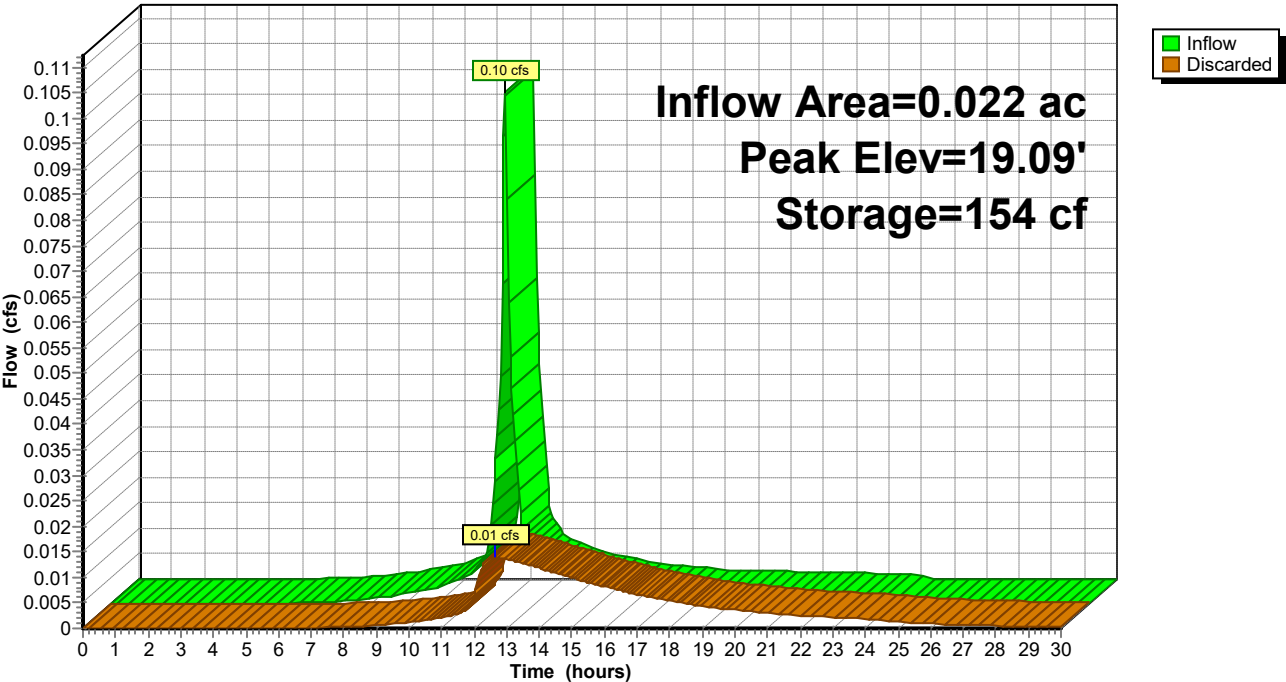
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
17.00	184	0	0	184
21.00	184	736	736	376

Device	Routing	Invert	Outlet Devices
#1	Discarded	17.00'	6.000 in/hr Exfiltration over Wetted area above 17.00' Excluded Wetted area = 184 sf Phase-In= 0.01'

Discarded OutFlow Max=0.01 cfs @ 12.62 hrs HW=19.09' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.01 cfs)

Pond DS1: Drip Strip

Hydrograph



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Type III 24-hr 10-YEAR Rainfall=5.60"

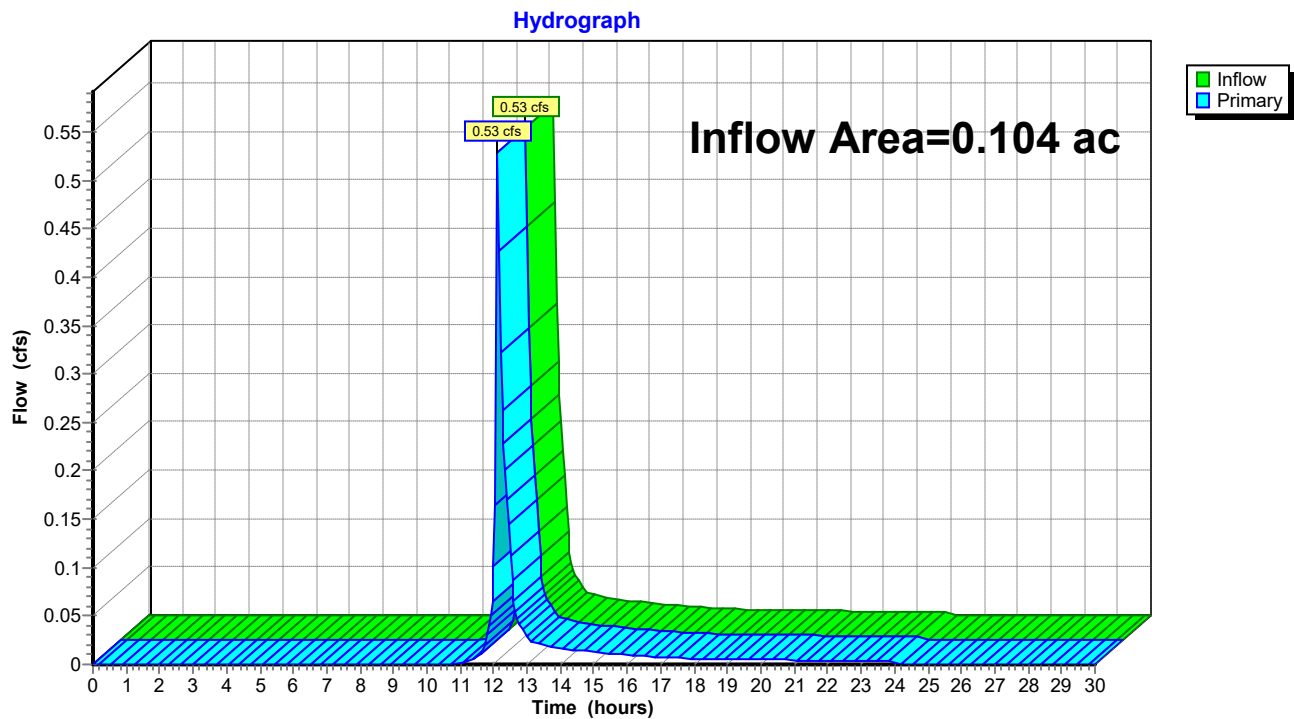
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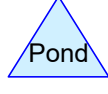
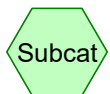
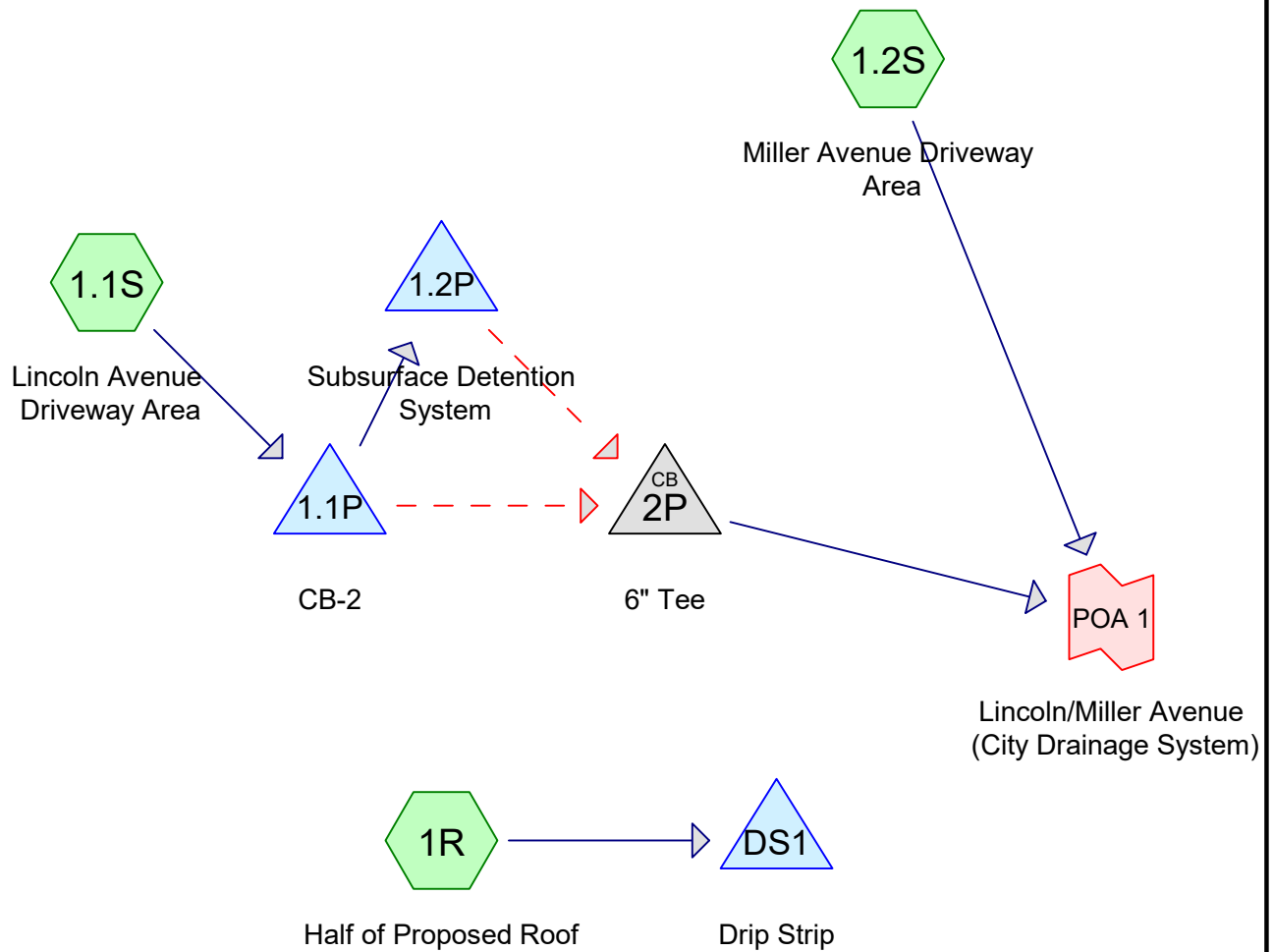
Summary for Link POA 1: Lincoln/Miller Avenue (City Drainage System)

Inflow Area = 0.104 ac, 37.35% Impervious, Inflow Depth = 2.47" for 10-YEAR event
Inflow = 0.53 cfs @ 12.12 hrs, Volume= 0.021 af
Primary = 0.53 cfs @ 12.12 hrs, Volume= 0.021 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs

Link POA 1: Lincoln/Miller Avenue (City Drainage System)





5548-POST*Type III 24-hr 25-YEAR Rainfall=7.10"*

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1.1S: Lincoln Avenue Runoff Area=4,231 sf 66.56% Impervious Runoff Depth=4.57"
Flow Length=42' Tc=6.0 min CN=78 Runoff=0.51 cfs 0.037 af

Subcatchment 1.2S: Miller Avenue Runoff Area=4,511 sf 37.35% Impervious Runoff Depth=2.77"
Flow Length=116' Tc=6.0 min CN=61 Runoff=0.32 cfs 0.024 af

Subcatchment 1R: Half of Proposed Roof Runoff Area=944 sf 80.51% Impervious Runoff Depth=5.58"
Tc=6.0 min CN=87 Runoff=0.13 cfs 0.010 af

Pond 1.1P: CB-2 Peak Elev=19.99' Storage=12 cf Inflow=0.51 cfs 0.037 af
Primary=0.21 cfs 0.029 af Secondary=0.29 cfs 0.008 af Outflow=0.49 cfs 0.037 af

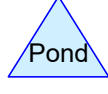
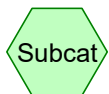
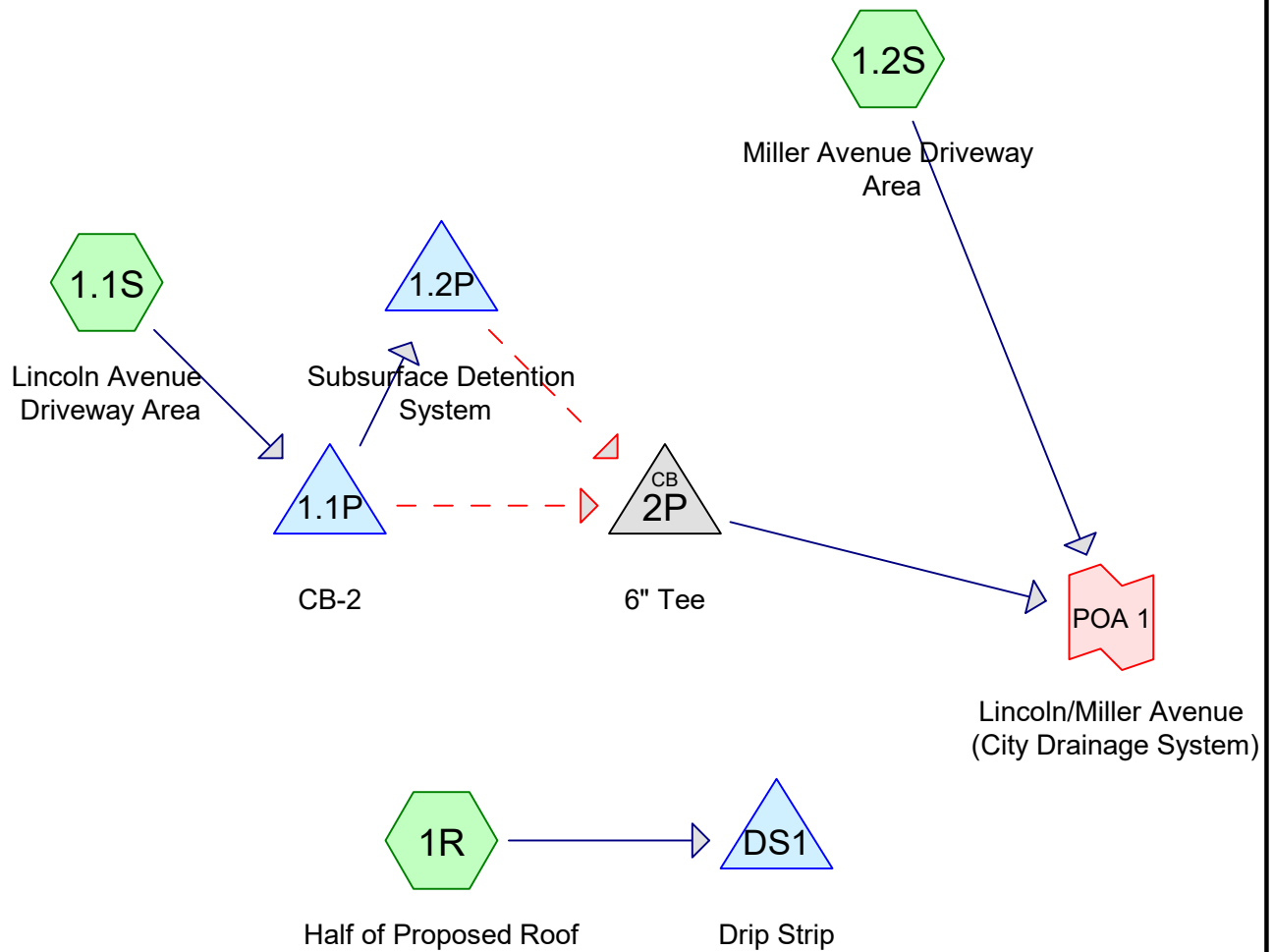
Pond 1.2P: Subsurface Detention System Peak Elev=19.93' Storage=187 cf Inflow=0.21 cfs 0.029 af
Discarded=0.04 cfs 0.024 af Secondary=0.17 cfs 0.005 af Outflow=0.20 cfs 0.029 af

Pond 2P: 6" Tee Peak Elev=19.78' Inflow=0.46 cfs 0.013 af
6.0" Round Culvert n=0.012 L=36.0' S=0.0222 '/' Outflow=0.46 cfs 0.013 af

Pond DS1: Drip Strip Peak Elev=19.82' Storage=208 cf Inflow=0.13 cfs 0.010 af
Outflow=0.02 cfs 0.010 af

Link POA 1: Lincoln/Miller Avenue (City Drainage System) Inflow=0.78 cfs 0.037 af
Primary=0.78 cfs 0.037 af

Total Runoff Area = 0.222 ac Runoff Volume = 0.071 af Average Runoff Depth = 3.83"
45.68% Pervious = 0.102 ac 54.32% Impervious = 0.121 ac



Routing Diagram for 5548-POST

Prepared by Altus Engineering, Printed 6/20/2025
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5548-POST*Type III 24-hr 50-YEAR Rainfall=8.50"*

Prepared by Altus Engineering

Printed 6/20/2025

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Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1.1S: Lincoln Avenue Runoff Area=4,231 sf 66.56% Impervious Runoff Depth=5.85"
Flow Length=42' Tc=6.0 min CN=78 Runoff=0.64 cfs 0.047 af

Subcatchment 1.2S: Miller Avenue Runoff Area=4,511 sf 37.35% Impervious Runoff Depth=3.83"
Flow Length=116' Tc=6.0 min CN=61 Runoff=0.45 cfs 0.033 af

Subcatchment 1R: Half of Proposed Roof Runoff Area=944 sf 80.51% Impervious Runoff Depth=6.94"
Tc=6.0 min CN=87 Runoff=0.16 cfs 0.013 af

Pond 1.1P: CB-2 Peak Elev=20.14' Storage=13 cf Inflow=0.64 cfs 0.047 af
Primary=0.31 cfs 0.036 af Secondary=0.32 cfs 0.011 af Outflow=0.63 cfs 0.047 af

Pond 1.2P: Subsurface Detention System Peak Elev=20.12' Storage=197 cf Inflow=0.31 cfs 0.036 af
Discarded=0.04 cfs 0.028 af Secondary=0.26 cfs 0.008 af Outflow=0.30 cfs 0.036 af

Pond 2P: 6" Tee Peak Elev=19.92' Inflow=0.57 cfs 0.019 af
6.0" Round Culvert n=0.012 L=36.0' S=0.0222 '/' Outflow=0.57 cfs 0.019 af

Pond DS1: Drip Strip Peak Elev=20.51' Storage=258 cf Inflow=0.16 cfs 0.013 af
Outflow=0.02 cfs 0.012 af

Link POA 1: Lincoln/Miller Avenue (City Drainage System) Inflow=1.02 cfs 0.052 af
Primary=1.02 cfs 0.052 af

Total Runoff Area = 0.222 ac Runoff Volume = 0.093 af Average Runoff Depth = 5.02"
45.68% Pervious = 0.102 ac 54.32% Impervious = 0.121 ac

Section 5

Precipitation Table

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	43.068 degrees North
Longitude	70.759 degrees West
Elevation	0 feet
Date/Time	Mon May 12 2025 11:46:29 GMT-0400 (Eastern Daylight Time)

Add 15% to each storm
 2 year - 3.69 inches
 10 year - 5.60 inches
 25 year - 7.10 inches
 50 year - 8.50 inches
 100 year - 10.18 inches

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	1.04	1yr	0.70	0.98	1.21	1.56	2.03	2.66	2.92	1yr	2.35	2.81	3.22	3.94	4.55	1yr
2yr	0.32	0.50	0.62	0.81	1.02	1.30	2yr	0.88	1.18	1.52	1.94	2.49	3.21	3.57	2yr	2.84	3.43	3.94	4.68	5.33	2yr
5yr	0.37	0.58	0.73	0.98	1.25	1.61	5yr	1.08	1.47	1.89	2.43	3.14	4.07	4.58	5yr	3.60	4.40	5.04	5.94	6.70	5yr
10yr	0.41	0.65	0.82	1.12	1.45	1.89	10yr	1.25	1.73	2.23	2.89	3.75	4.87	5.53	10yr	4.31	5.32	6.09	7.11	7.98	10yr
25yr	0.48	0.76	0.97	1.34	1.77	2.34	25yr	1.53	2.14	2.78	3.63	4.74	6.17	7.10	25yr	5.46	6.83	7.80	9.03	10.05	25yr
50yr	0.54	0.86	1.10	1.54	2.07	2.76	50yr	1.79	2.53	3.29	4.32	5.66	7.39	8.58	50yr	6.54	8.25	9.42	10.81	11.98	50yr
100yr	0.60	0.97	1.25	1.77	2.42	3.26	100yr	2.09	2.98	3.90	5.16	6.77	8.85	10.38	100yr	7.83	9.98	11.38	12.96	14.27	100yr
200yr	0.67	1.10	1.43	2.05	2.82	3.83	200yr	2.44	3.52	4.62	6.13	8.08	10.61	12.55	200yr	9.39	12.07	13.76	15.55	17.02	200yr
500yr	0.80	1.31	1.71	2.48	3.48	4.76	500yr	3.00	4.38	5.76	7.70	10.22	13.48	16.14	500yr	11.93	15.52	17.67	19.78	21.49	500yr

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.36	0.44	0.59	0.72	0.88	1yr	0.63	0.86	0.92	1.33	1.68	2.24	2.49	1yr	1.98	2.40	2.87	3.18	3.90	1yr
2yr	0.31	0.49	0.60	0.81	1.00	1.19	2yr	0.86	1.16	1.37	1.82	2.34	3.06	3.45	2yr	2.71	3.32	3.82	4.55	5.08	2yr
5yr	0.35	0.54	0.67	0.92	1.17	1.40	5yr	1.01	1.37	1.61	2.12	2.73	3.79	4.19	5yr	3.35	4.03	4.72	5.53	6.24	5yr
10yr	0.39	0.59	0.73	1.03	1.33	1.60	10yr	1.14	1.56	1.80	2.39	3.06	4.37	4.86	10yr	3.87	4.67	5.44	6.41	7.20	10yr
25yr	0.44	0.67	0.83	1.19	1.56	1.90	25yr	1.35	1.86	2.10	2.75	3.53	4.72	5.89	25yr	4.18	5.66	6.65	7.79	8.68	25yr
50yr	0.48	0.73	0.91	1.31	1.76	2.17	50yr	1.52	2.12	2.35	3.07	3.93	5.33	6.80	50yr	4.72	6.54	7.72	9.04	10.02	50yr
100yr	0.54	0.81	1.01	1.47	2.01	2.47	100yr	1.73	2.41	2.63	3.41	4.35	6.00	7.85	100yr	5.31	7.55	8.98	10.51	11.56	100yr
200yr	0.59	0.89	1.13	1.63	2.28	2.81	200yr	1.96	2.75	2.93	3.78	4.79	6.72	9.06	200yr	5.95	8.71	10.42	12.22	13.37	200yr
500yr	0.68	1.02	1.31	1.90	2.71	3.36	500yr	2.34	3.29	3.41	4.31	5.45	7.82	10.94	500yr	6.92	10.52	12.69	14.96	16.19	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	0.44	0.54	0.72	0.89	1.08	1yr	0.77	1.06	1.26	1.74	2.21	2.98	3.16	1yr	2.64	3.04	3.58	4.37	5.04	1yr
2yr	0.34	0.52	0.64	0.86	1.07	1.27	2yr	0.92	1.24	1.48	1.96	2.51	3.42	3.70	2yr	3.03	3.56	4.09	4.84	5.63	2yr
5yr	0.40	0.62	0.77	1.05	1.34	1.62	5yr	1.15	1.58	1.88	2.53	3.25	4.34	4.96	5yr	3.84	4.77	5.38	6.37	7.16	5yr
10yr	0.47	0.72	0.89	1.25	1.61	1.98	10yr	1.39	1.93	2.28	3.11	3.95	5.34	6.20	10yr	4.72	5.96	6.82	7.84	8.75	10yr
25yr	0.58	0.88	1.09	1.56	2.05	2.57	25yr	1.77	2.51	2.95	4.07	5.15	7.78	8.34	25yr	6.88	8.02	9.15	10.34	11.41	25yr
50yr	0.67	1.02	1.27	1.83	2.46	3.13	50yr	2.12	3.06	3.60	5.00	6.32	9.74	10.46	50yr	8.62	10.06	11.44	12.72	13.96	50yr
100yr	0.79	1.19	1.49	2.16	2.96	3.81	100yr	2.55	3.72	4.37	6.16	7.76	12.18	13.10	100yr	10.78	12.60	14.31	15.69	17.09	100yr
200yr	0.92	1.39	1.76	2.55	3.56	4.65	200yr	3.07	4.55	5.34	7.58	9.54	15.28	16.44	200yr	13.53	15.81	17.92	19.35	20.92	200yr
500yr	1.15	1.71	2.19	3.19	4.53	6.04	500yr	3.91	5.90	6.93	10.02	12.56	20.65	22.20	500yr	18.27	21.34	24.13	25.51	27.34	500yr

Section 6

NRCS Soils Report



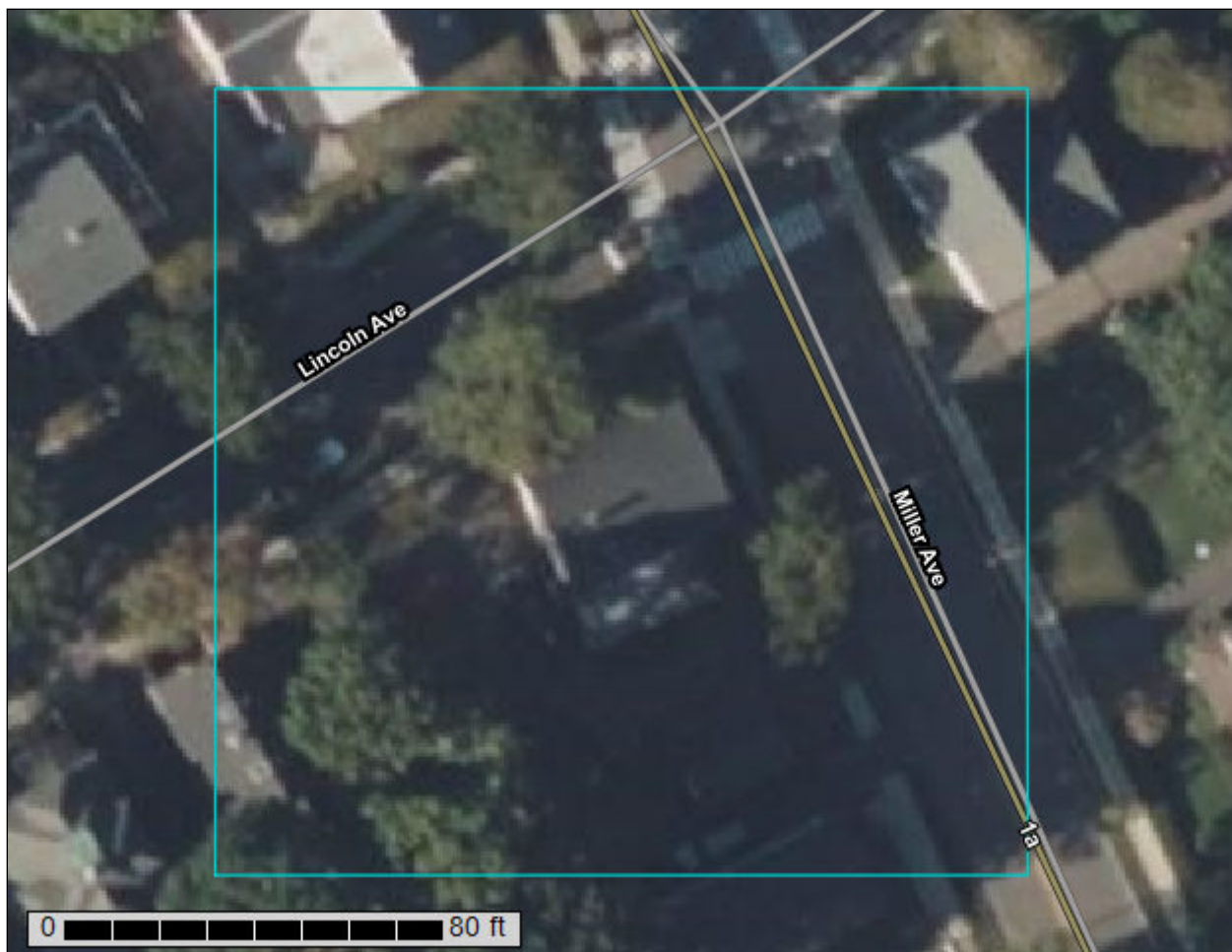
United States
Department of
Agriculture

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 Rockingham County, New Hampshire



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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Contents

Preface	2
Soil Map	5
Soil Map.....	6
Legend.....	7
Map Unit Legend.....	8
Map Unit Descriptions.....	8
Rockingham County, New Hampshire.....	10
799—Urban land-Canton complex, 3 to 15 percent slopes.....	10

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



Custom Soil Resource Report


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole


 Slide or Slip


 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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: Rockingham County, New Hampshire
Survey Area Data: Version 27, Sep 3, 2024

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
799	Urban land-Canton complex, 3 to 15 percent slopes	0.7	100.0%
Totals for Area of Interest		0.7	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.

Custom Soil Resource Report

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.

Rockingham County, New Hampshire

799—Urban land-Canton complex, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9cq0
Elevation: 0 to 1,000 feet
Mean annual precipitation: 42 to 46 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 120 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 55 percent
Canton and similar soils: 20 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton

Setting

Parent material: Till

Typical profile

H1 - 0 to 5 inches: gravelly fine sandy loam
H2 - 5 to 21 inches: gravelly fine sandy loam
H3 - 21 to 60 inches: loamy sand

Properties and qualities

Slope: 3 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): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Udorthents

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

Boxford and eldridge

Percent of map unit: 4 percent
Hydric soil rating: No

Squamscott and scitico

Percent of map unit: 4 percent

Landform: Marine terraces

Hydric soil rating: Yes

Scituate and newfields

Percent of map unit: 4 percent

Hydric soil rating: No

Chatfield

Percent of map unit: 4 percent

Hydric soil rating: No

Walpole

Percent of map unit: 4 percent

Landform: Depressions

Hydric soil rating: Yes

Section 7

Stormwater Operations & Maintenance Plan Inspection Form Stormwater Management Plan

STORMWATER INSPECTION AND MAINTENANCE MANUAL

Garage Construction

Tax Map 130, Lot 024

OWNER:

Gary B. Dodds Revocable Trust
Gary B. Dodds Trustee
300 Sagamore Road
Rye, NH 03870

Proper inspection, maintenance, and repair are key elements in maintaining a successful stormwater management program on a developed property. Routine inspections ensure permit compliance and reduce the potential for deterioration of infrastructure or reduced water quality. The following responsible parties shall be in charge of managing the stormwater facilities:

RESPONSIBLE PARTIES:

Owner:	<u>Gary B. Dodds Revocable Trust</u>	<u>(603) 475-2685</u>
	Name Company	Phone

Inspection:	<u>Gary B. Dodds Revocable Trust</u>	<u>(603) 475-2685</u>
	Name Company	Phone

Maintenance:	<u>Gary B. Dodds Revocable Trust</u>	<u>(603) 475-2685</u>
	Name Company	Phone

NOTES:

Written inspection forms and maintenance logs shall be completed yearly by a qualified inspector retained the owner or assigns. Reports shall be submitted to the Portsmouth Public Works Department on or before January 31st of each year and a copy retained at the site's administrative office.

Photographs of each stormwater BMP are to be taken at each inspection and submitted with the annual inspection reports.

Inspection and maintenance responsibilities shall transfer to any future property owner(s).

This manual shall be updated as needed to reflect any changes related to any transfer of ownership and/or any delegation of inspection and maintenance responsibilities to another entity

CULVERTS AND DRAINAGE PIPES

Function – Drainage pipes convey stormwater away from buildings, walkways, and parking areas and to closed drainage systems.

Maintenance

- Drainage pipes shall be inspected semi-annually, or more often as needed, for accumulation of debris and structural integrity. Leaves and other debris shall be removed from the inlet and outlet to insure the functionality of drainage structures. Debris shall be disposed of on site where it will not concentrate back at the drainage structures or at a solid waste disposal facility.

CATCH BASINS

Function – Catch basins collect stormwater, primarily from paved surfaces and roofs. Stormwater from paved areas often contains sediment and contaminants. Catch basin sumps serve to trap sediment, trace metals, nutrients and debris. Hooded catch basins trap hydrocarbons and floating debris.

Maintenance

- Remove leaves and debris from structure grates on an as-needed basis.
- Sumps shall be inspected and cleaned annually and any removed sediment and debris shall be disposed of at a solid waste disposal facility.

SUBSURFACE DETENTION SYSTEM

Function – Subsurface detention systems are underground stormwater storage chambers surrounded by open graded stone. They provide several important stormwater functions including infiltration and detention of stormwater to attenuate peak rates of runoff.

Maintenance:

- Inspect system for built-up sediment and debris annually. Sediment and debris accumulation in excess of 3" shall be removed.
- Sediment removal shall be done with a JetVac and vacuum truck. JetVac shall have a fixed floor rear-facing cleaning nozzle with a spread of 45 inches or more. JetVac nozzle shall be propelled down the full length of the isolation row and retrieved towards the vacuum. The process shall be repeated until the backflush water is clean.

LANDSCAPED AREAS - FERTILIZER MANAGEMENT

Function – Fertilizer management involves controlling the rate, timing and method of fertilizer application so that the nutrients are taken up by the plants thereby reducing the chance of polluting the surface and ground waters. Fertilizer management can be effective in reducing the amounts of phosphorus and nitrogen in runoff from landscaped areas, particularly lawns.

Maintenance

- Have the soil tested by your landscaper or local Soil Conservation Service for nutrient requirements and follow the recommendations.
- Do not apply fertilizer to frozen ground.
- Clean up any fertilizer spills.
- Do not allow fertilizer to be broadcast into water bodies.
- When fertilizing a lawn, water thoroughly, but do not create a situation where water runs off the surface of the lawn.

LANDSCAPED AREAS - LITTER CONTROL

Function – Landscaped areas tend to filter debris and contaminants that may block drainage systems and pollute the surface and ground waters.

Maintenance

- Litter Control and lawn maintenance involves removing litter such as trash, leaves, lawn clippings, pet waste, oil and chemicals from streets, parking lots, and lawns before materials are transported into surface waters.
- Litter control shall be implemented as part of the grounds maintenance program.

CONTROL OF INVASIVE PLANTS

Function – Invasive plants are introduced, alien, or non-native plants, which have been moved by people from their native habitat to a new area. Some exotic plants are imported for human use such as landscaping, erosion control, or food crops. They also can arrive as "hitchhikers" among shipments of other plants, seeds, packing materials, or fresh produce. Some exotic plants become invasive and cause harm by:

- becoming weedy and overgrown;
- killing established shade trees;
- obstructing pipes and drainage systems;
- forming dense beds in water;
- lowering water levels in lakes, streams, and wetlands;
- destroying natural communities;
- promoting erosion on stream banks and hillsides; and
- resisting control except by hazardous chemical.

Maintenance

During maintenance activities, check for the presence of invasive plants and remove in a safe manner as described in the attached “Methods for Disposing Non-Native Invasive Plants” prepared by the UNH Cooperative Extension.

GENERAL CLEAN UP

- Upon completion of the project, the contractor shall remove all temporary stormwater structures (i.e., temporary stone check dams, silt fence, temporary diversion swales, catch basin inlet filter, etc.). Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform to the existing grade, prepared, and seeded. Remove any sediment in catch basins and clean drainpipes that may have accumulated during construction.
- Once in operation, all paved areas of the site should be swept at least once annually at the end of winter/early spring prior to significant spring rains.

APPENDIX

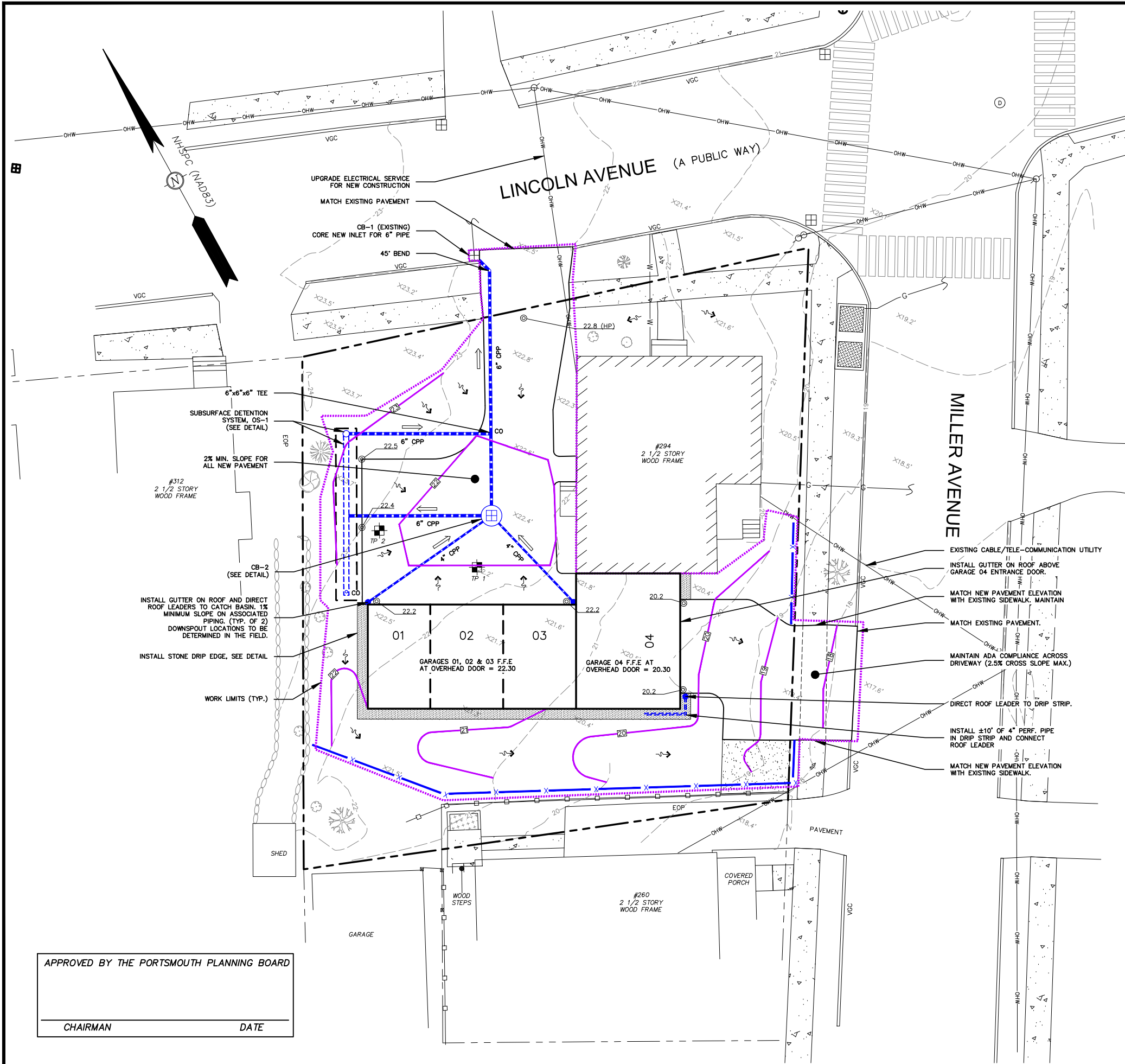
- A. Stormwater System Operations and Maintenance Report
- B. Grading, Drainage & Erosion Control Plan

STORM WATER SYSTEM OPERATION AND MAINTENANCE REPORT

General Information		
Project Name		
Owner		
Inspector's Name(s)		
Inspector's Contact Information		
Date of Inspection	Start Time:	End Time:
Type of Inspection: <input type="checkbox"/> Annual Report <input type="checkbox"/> Post-storm event <input type="checkbox"/> Due to a discharge of significant amounts of sediment		
Notes:		

General Site Questions and Discharges of Significant Amounts of Sediment			
Subject	Status	Notes	
<i>A discharge of significant amounts of sediment may be indicated by (but is not limited to) observations of the following. Note whether any are observed during this inspection:</i>			
<i>Notes/ Action taken:</i>			
1	Do the current site conditions reflect the attached site plan?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2	Is the site permanently stabilized, temporary erosion and sediment controls are removed, and stormwater discharges from construction activity are eliminated?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3	Is there evidence of the discharge of significant amounts of sediment to surface waters, or conveyance systems leading to surface waters?	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Permit Coverage and Plans				
#	BMP/Facility	Inspected	Corrective Action Needed and Notes	Date Corrected
	Drainage Pipes	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Catch Basins	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Subsurface Detention System	<input type="checkbox"/> Yes <input type="checkbox"/> No		
	Site Vegetation	<input type="checkbox"/> Yes <input type="checkbox"/> No		



DRAINAGE SCHEDULE

OS-1
15" YARD DRAIN (SEE DETAIL)
RIM: 23.00 (V.I.F.)
IN: 18.65 (6" CPP FROM SUBSURFACE DRAINAGE SYSTEM)
OUT: 19.60 (6" CPP TO 6" TEE)
L=±28' S=0.011 '/'

CB-1
4" DIA. EXISTING CITY OWNED CATCH BASIN
RIM: 22.48
IN: 18.50 (CORE NEW 6" CONNECTION FROM CB-2)
OUT: 17.80 (EXISTING) (V.I.F.)

CB-2
4" DIA. CATCH BASIN (SEE DETAIL)
RIM: 21.60 (V.I.F.)
OUT: 19.10 (6" CPP PRIMARY OUTLET TO SUBSURFACE DRAINAGE SYSTEM)
L=±26' S=0.0077 '/'
OUT: 19.60 (6" CPP SECONDARY OUTLET TO CB-1)
L=±50' S=0.022 '/'

NOTES

- THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHOWN HEREON AREA APPROXIMATE AND ARE BASED ON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (IE. CATCH BASINS, MANHOLES, WATER GATES, ETC.) AND INFORMATION COMPILED FROM PLANS PROVIDED BY UTILITY PROVIDERS AND GOVERNMENTAL AGENCIES. AS SUCH, THEY ARE NOT INCLUSIVE AS OTHER UTILITIES AND UNDERGROUND STRUCTURES THAT ARE NOT SHOWN ON THE PLANS MAY EXIST. THE ENGINEER, SURVEYOR AND OWNER ACCEPT NO RESPONSIBILITY FOR POTENTIAL INACCURACIES IN THE PLAN AND/OR UNFORESEEN CONDITIONS. THE CONTRACTOR SHALL NOTIFY, IN WRITING, SAID AGENCIES, UTILITY PROVIDERS, CITY OF PORTSMOUTH DPW AND OWNER'S AUTHORIZED REPRESENTATIVE AND CALL DIG SAFE AT 1 (800) DIG-SAFE AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION WORK.
- PRIOR TO CONSTRUCTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND FIELD VERIFY JUNCTIONS, LOCATIONS AND ELEVATIONS/INVERTS OF ALL EXISTING AND PROPOSED STORMWATER AND UTILITY LINES. CONFLICTS SHALL BE ANTICIPATED AND ALL EXISTING LINES TO BE RETAINED SHALL BE PROTECTED. ANY DAMAGE DONE TO EXISTING UTILITIES SHALL BE REPAIRED AND, IF CONFLICTS SHALL BE RESOLVED WITH THE INVOLVEMENT OF THE ENGINEER, DPW AND APPROPRIATE UTILITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE POSTING OF ALL BONDS AND PAYMENT OF ALL TAP, TIE-IN AND CONNECTION FEES.
- ALL ROAD/LANE CLOSURES OR OTHER TRAFFIC INTERRUPTIONS SHALL BE COORDINATED WITH THE PORTSMOUTH POLICE DEPARTMENT AND DPW AT LEAST TWO WEEKS PRIOR TO COMMENCING RELATED CONSTRUCTION.
- ALL CONSTRUCTION SHALL MEET THE MINIMUM CONSTRUCTION STANDARDS OF THE CITY OF PORTSMOUTH AND NHDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, LATEST EDITION. THE MORE STRINGENT SPECIFICATION SHALL GOVERN.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCHING, BEDDING, BACKFILL & COMPACTION FOR ALL UTILITY TRENCHING IN ADDITION TO ALL CONDUIT INSTALLATION AND COORDINATION OF ALL REQUIRED INSPECTIONS.
- ALL TRENCHING, PIPE LAYING AND BACKFILLING SHALL CONFORM TO FEDERAL OSHA AND CITY REGULATIONS.
- FINAL UTILITY LOCATIONS TO BE COORDINATED BETWEEN THE ARCHITECT, CONTRACTOR, APPROPRIATE UTILITY COMPANIES AND THE PORTSMOUTH DPW.
- WATER: PORTSMOUTH DPW WATER DIVISION, DOUG SPARKS, (603) 427-1409.
- SEWER: PORTSMOUTH DPW SEWER DIVISION, DOUG SPARKS, (603) 427-1409.
- TELECOMMUNICATIONS: CONSOLIDATED, JOE CONSIDINE, (603) 427-5525.
- CABLE: COMCAST, MIKE COLLINS, (603) 679-5695, EXT. 1037.
- ELECTRICAL: EVERSOURCE, JOSHUA LAHAIE, (603) 332-7551.
- GAS: UNTIL, DAVID BEAULIEU, (603) 294-5144
- DETECTABLE WARNING TAPE SHALL BE PLACED OVER THE ENTIRE LENGTH OF ALL BURIED UTILITIES, COLORS PER THE RESPECTIVE UTILITY PROVIDERS.
- WHERE WATER LINES CROSS, RUN ADJACENT TO OR ARE WITHIN 5' OF STORM DRAINAGE PIPES OR STRUCTURES, 2"-THICK CLOSED CELL RIGID BOARD INSULATION SHALL BE INSTALLED FOR FROST PROTECTION.
- CONTRACTOR SHALL PROVIDE DPW WITH DETAILS OF TEMPORARY & PERMANENT GROUNDWATER DEWATERING DESIGN IF NECESSARY.
- SEE SHEET C-1 FOR LEGEND.
- ALL UTILITIES FOR THE PROPOSED GARAGE WILL BE CONNECTED TO THE EXISTING BUILDING INTERNALLY.

TEST PIT LOGS

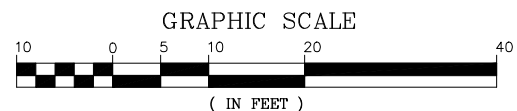
JUNE 12, 2025
LOGGED BY ERIC WEINRIEB, PE, SEPTIC DESIGNER 809

TEST PIT 1
0 - 12" GRASS MATT AND FINE SANDY LOAM
12 - 44" MIXED SAND AND GRAVEL, STONES TO 6" DIAMETER
FIRM, FRIABLE, SINGLE GRAIN

44" REFUSAL
NO OBSERVED WATER
NO SEASONAL HIGH WATER TABLE

TEST PIT 2
0 - 8" GRASS MATT AND FINE SANDY LOAM
8 - 89" MIXED SAND AND GRAVEL, STONES TO 12" DIAMETER
FIRM, FRIABLE, SINGLE GRAIN

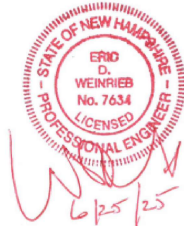
89" REFUSAL
NO OBSERVED WATER
NO SEASONAL HIGH WATER TABLE



APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN

DATE



NOT FOR CONSTRUCTION

ISSUED FOR:

PLANNING BOARD

ISSUE DATE:

JUNE 25, 2025

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL	PMJ	05/19/25
0	REV. PER TAC	PMJ	06/25/25

DRAWN BY: PMJ

APPROVED BY: EDW

DRAWING FILE: 5548-SITE.dwg

SCALE:

22" x 34" - 1" = 10'

11" x 17" - 1" = 20'

OWNER:

GARY B. DODDS
REVOCABLE TRUST
GARY B. DODDS TRUSTEE
300 SAGAMORE ROAD
RYE, NH 03870

APPLICANT:

GARY B. DODDS
REVOCABLE TRUST
GARY B. DODDS TRUSTEE
300 SAGAMORE ROAD
RYE, NH 03870

PROJECT:

GARAGE
CONSTRUCTION
TAX MAP 130 LOT 024

294 LINCOLN AVENUE
PORTSMOUTH, NH
03801

TITLE:

GRADING & DRAINAGE
PLAN

SHEET NUMBER:

C-3

Section 8

Watershed Plans

Pre-Development Watershed and Soils Plan

Post-Development Watershed and Soils Plan



LEGEND

- PROPERTY LINE
- WETLAND BOUNDARY
- EXISTING CONTOUR
- PROPOSED CONTOUR
- WATERSHED BOUNDARY
- Tc PATH
- REACH PATH
- PROPOSED TREE CLEARING LIMIT
- STREAM
- PROPOSED GROUND SLOPE DIRECTION
- SCS SOIL BOUNDARY
- SCS SOIL DESIGNATION
- SOILS - HSG A
- SOILS - HSG B
- SOILS - HSG C
- SOILS - HSG D
- SOILS - IMPERVIOUS
- SOILS - WATER
- SUBCATCHMENT/POND/REACH
- POINT OF ANALYSIS

ALTUS
ENGINEERING

133 Court Street
(603) 433-2335

Portsmouth, NH 03801
www.altus-eng.com

STATE OF NEW HAMPSHIRE
ERID
D. WEINRIEB
No. 7634
LICENSED
PROFESSIONAL ENGINEER
6/25/25

NOT FOR CONSTRUCTION

ISSUED FOR:
DRAINAGE ANALYSIS

ISSUE DATE:
JUNE 25, 2025

REVISIONS		
NO.	DESCRIPTION	BY DATE
0	INITIAL	PMJ 05/19/25
1	REV. PER TAC	PMJ 06/25/25

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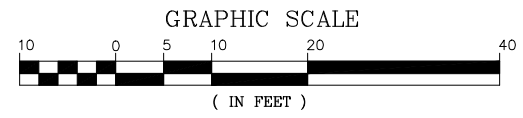
OWNER:
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GARY B. DODDS TRUSTEE
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RYE, NH 03870

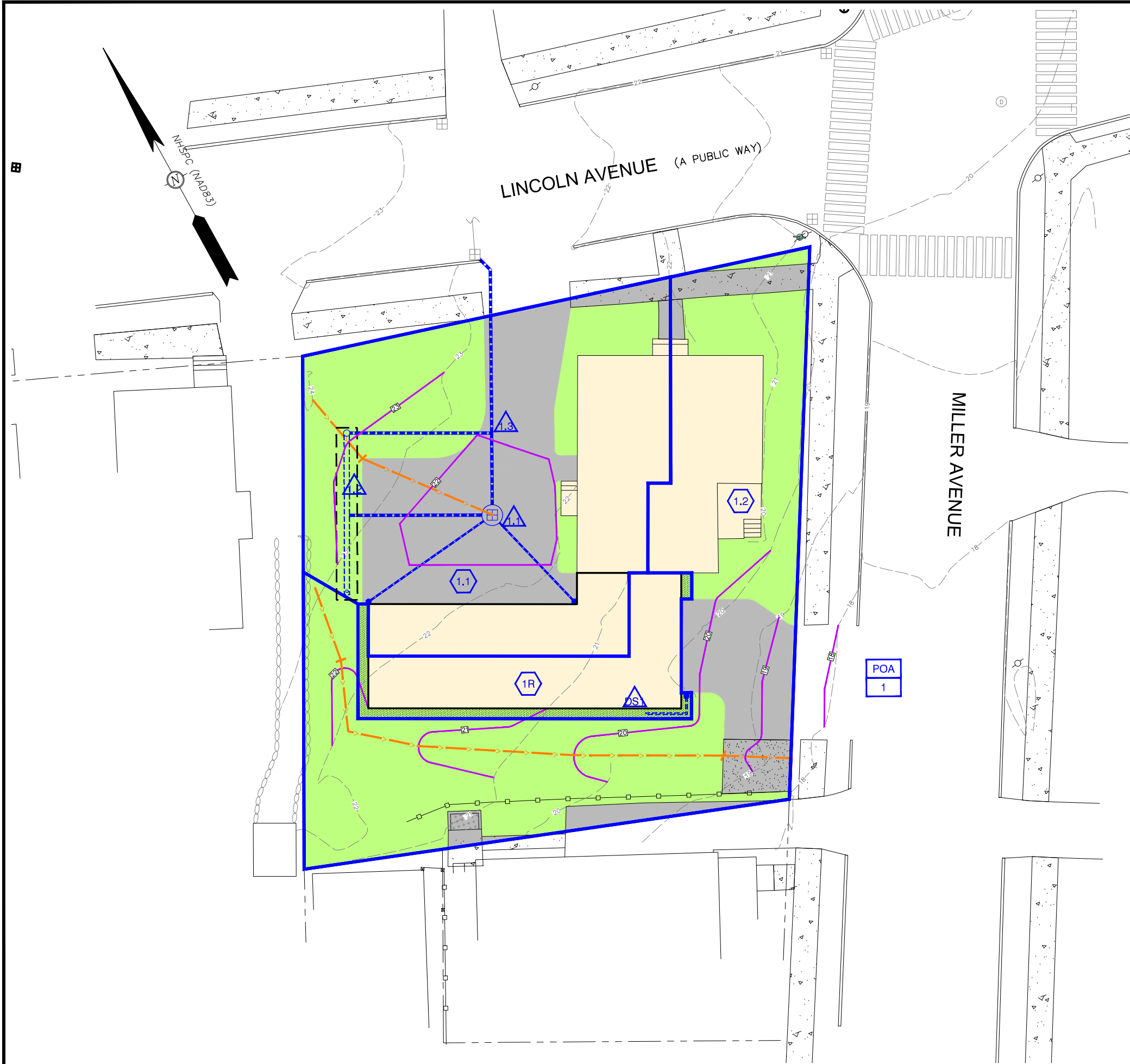
APPLICANT:
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REVOCABLE TRUST
GARY B. DODDS TRUSTEE
300 SAGAMORE ROAD
RYE, NH 03870

PROJECT:
**GARAGE
CONSTRUCTION**
TAX MAP 130 LOT 024
294 LINCOLN AVENUE
PORTSMOUTH, NH
03801

TITLE:
**PRE-DEVELOPMENT
WATERSHED AND
SOILS PLAN**

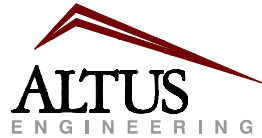
SHEET NUMBER:
WS-1



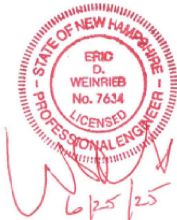


LEGEND

- PROPERTY LINE
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- EXISTING CONTOUR
- PROPOSED CONTOUR
- WATERSHED BOUNDARY
- Tc PATH
- REACH PATH
- PROPOSED TREE CLEARING LIMIT
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- PROPOSED GROUND SLOPE DIRECTION
- SCS SOIL BOUNDARY
- SCS SOIL DESIGNATION
- SOILS - HSG A
- SOILS - HSG B
- SOILS - HSG C
- SOILS - HSG D
- SOILS - IMPERVIOUS
- SOILS - WATER
- 1 1 1 SUBCATCHMENT/POND/REACH
- POA POINT OF ANALYSIS



133 Court Street
(603) 433-2335
Portsmouth, NH 03801
www.altus-eng.com



NOT FOR CONSTRUCTION

ISSUED FOR:
DRAINAGE ANALYSIS

ISSUE DATE:
JUNE 25, 2025

REVISIONS	
NO.	DESCRIPTION
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1	REV. PER TAC

BY	DATE
PMJ	05/19/25
PMJ	06/25/25

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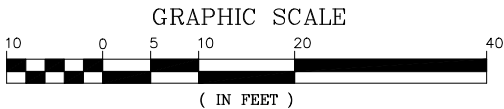
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RYE, NH 03870

PROJECT:
GARAGE
CONSTRUCTION
TAX MAP 130 LOT 024
294 LINCOLN AVENUE
PORTSMOUTH, NH
03801

TITLE:
POST-DEVELOPMENT
WATERSHED AND
SOILS PLAN

SHEET NUMBER:
WS-2



Waiver 2.5.3

b. Green building components

Best practices in using green building components.

Landscaping - Rain water will be captured off roof to minimize water usage for landscape.

Energy efficient lighting - All exterior lighting is photo sensitive and use LED bulbs for minimal power usage.

Windows- New energy efficient windows throughout garage and office. Double pane, argon gas high efficiency Simonton windows.

Plumbing - best practices for using environmentally friendly products for plumbing and wastewater to be implemented.

Building designed with high ceilings to utilize fresh air rather than A/C components. where applicable fans can be utilized.

e. Water Infrastructure

Waiver for water infrastructure

Utilizing 1" water line within the main house to supply water for the bathroom in the office area.

f. Sewer infrastructure

Waiver - tying into the existing sewer line on subject property.

Only one bathroom will be added.

j. Outdoor lighting

Waiver - Minimal amount of lighting to be placed on exterior of building to coincide with harmony of neighborhood. Motion sensors to be used to provide appropriate light for garage usage.

Waiver 2.12

Site Review Agreement, bond and third party inspection agreement

Waiver - Given the scope and size of the project being only a garage, and closely working with Altus Engineering and K & D concrete services, a request for relief for bond and inspection is requested. This is not a new development; this has been a rental property for over 40 years with a long

history of ownership and good relations with all neighbors. We will work closely with the city inspection team (building inspectors office) throughout the project.

Waiver 2.13

Request waiver; Survey has already been recorded. Size and scope of project are small. the project size and longevity of ownership does not warrant a recorded site plan.

Waiver 2.15.3

Construction management and mitigation plan

The size and scope of project is small and only garage for the current tenants.

The building has been rental property for over 40 years with the same long-term tenants. This is not a new residential building or development.

Waiver 2.16.3

As-built plan waiver

The plans that have been submitted will be adhered to; plans have already been certified and engineered by Altus Engineering. The scope of the project is relatively small.

Waiver 3.2.1-2

Waiver for traffic impact study

There is no change in occupancy. The traffic pattern has not changed. There will be no cars backing out into the street.

Waiver 3.3.2.3

Driveway shall be limited to one per lot

Requesting waiver as this lot is a corner lot with existing multiple entrances to the building and two driveway entrances have always existed. Now, the new garage has differing levels which would only allow entrances from two different street locations. No vehicles will be backing into the street.

Waiver 7.1

There is no change to impact on usage of the property.

Waiver 7.6.5

Inspection and maintenance plan

Project is very small. Minimal amount of maintenance needed for a garage.